



## PAST NEWSLETTERS

## TABLE OF CONTENTS

SR&ED Newsletter: Edition 2011-4 (Future of the SR&ED Program).....	3
SR&ED Newsletter: Edition 2011-3.....	27
SR&ED Newsletter: Edition 2011-2.....	32
SR&ED Newsletter: Edition 2011-1.....	43
SR&ED Newsletter: Edition 2010-3.....	53
SR&ED Newsletter: Edition 2010-2 (Technological Advancement Edition) .....	60
SR&ED Newsletter: Edition 2010-1.....	71
SR&ED Newsletter: Edition 2009-4.....	77
SR&ED Newsletter: Edition 2009-3.....	84
SR&ED Newsletter: Edition 2009-2.....	87
SR&ED Newsletter: Edition 2009-1 (New T661 Form – Problems & Opportunities) .....	96
SR&ED Newsletter: Edition 2008-3 (New T661 form).....	125
SR&ED Newsletter: Edition 2008-2.....	130
SR&ED Newsletter: Edition 2008-1.....	136
SR&ED Newsletter: Edition 2007-2.....	145
SR&ED Newsletter: Edition 2007-1.....	154
SR&ED Newsletter: Edition 2006-2.....	165
SR&ED Newsletter: Edition 2006-1.....	172
SR&ED Newsletter: Edition 2005-1.....	179
SR&ED Newsletter: Edition 2004-2.....	186

<b>SR&amp;ED Newsletter: Edition 2004-1.....</b>	<b>197</b>
<b>SR&amp;ED Newsletter: Edition 2003-1.....</b>	<b>206</b>
<b>SR&amp;ED Newsletter: Edition 2002-1.....</b>	<b>213</b>
<b>SR&amp;ED Newsletter: Edition 2001-2.....</b>	<b>222</b>
<b>SR&amp;ED Newsletter: Edition 2001-1.....</b>	<b>234</b>
<b>SR&amp;ED Newsletter: Edition 2000-1.....</b>	<b>248</b>

# **SR&ED Newsletter**

## **Edition 2011-4 – Future of the SR&ED Program**

Welcome to the 4<sup>th</sup> quarter 2011 edition of our newsletter regarding recent developments to Scientific Research & Experimental Development (SR&ED) project management & tax credit claims.

These newsletters, **formerly published by MEUK Corporation**, are now being published under the **RDBASE.NET consortium of SR&ED practitioners** to represent contributions of these parties.

<b>Reports on S&amp;T (business innovation) funding.....</b>	<b>4</b>
Executive Summary of Reports .....	5
I) SR&ED tax credits.....	6
II) S&T (Non-SR&ED) .....	7
III) Related Issues - not “directly” addressed.....	8
“Jenkins” report - Federal Commission.....	9
“Mowat (UofT)” – Academic POV .....	12
“Matthews” reports – VC + CATA industry association POV’s.....	14
“CD Howe / PWC” report – Private Commission POV .....	16
<b>Canada’s (Current) Federal S&amp;T Policy.....</b>	<b>17</b>
“Mobilizing Science & Technology to Canada’s Advantage — 2007” .....	18
“Mobilizing Science & Technology to Canada’s Advantage: Progress Report 2009” .....	20
Sectors likely to receive “new” funding? .....	20
““Innovation & Business Strategy: Why Canada Falls Short (CCA 2009)” .....	21
Auto sector?: innovation paradox .....	22
<b>Implications &amp; author’s opinion .....</b>	<b>25</b>
Report consistency .....	25
Objectivity .....	25
Understanding BEST practices of SR&ED before shifting funding.....	25
Understand that Venture Capital is “picking the winners” .....	26

## Reports on S&T (business innovation) funding

The Harper Government has committed to major changes in how the federal government supports business innovation. Several reports have been released each making various recommendations.

<u>Report</u>	<u>Jenkins Expert Panel</u>	<u>Mowat Centre (UofT)</u>	<u>C. D. Howe Institute</u>	<u>Matthews / CATA</u>		<u>Comment</u>
<b>Title</b>	"Innovation Canada: A Call to Action," Review of Federal Support to Research & Development – Expert Panel Report	"Canada's Innovation Underperformance: Whose Policy Problem is it?"	"Rewarding Innovation: Improving Federal Tax Support for Business R&D in Canada"	"A Review of Canada's Problems & Prospects in Today's Flat World – Can we do better?" & "CATA 2012 pre-budget commentary"		Expect changes in 2012 Federal budget
<b>Date</b>	17-Oct-11	14-Oct-11	15-Sep-11	28-Oct-11	26-Nov-11	
<b>Size</b>	148 pages	28 pages	22 pages	40 pages	8 pages	
<b>COMMON RECOMMENDATIONS:</b>						
<b>I) SR&amp;ED tax credits</b>	- <b>Move some SR&amp;ED tax credit \$ to other S&amp;T support</b>					* see III A)
	- Provide full or partial <b>refundability</b> of credits to all claimants (i.e. large, foreign & public companies)					Agree
	- Simplify calculations by focus on <b>labour costs only</b> (no materials or capital)					Agree
					<b>Reduce filing deadline</b> (from 18 to 6 months)	Agree
<b>II) S&amp;T (Non-SR&amp;ED)</b>	- new <b>funds &amp; resources</b> aimed at <b>grants, venture capital &amp; commercialization</b> (of SR&ED projects)					* III B)
	- Promote <b>Clustering</b> into 4+ "sectors" (or industries)?					* III C)
	- <b>streamline government</b> services & have " <b>industry</b> " <b>direct</b> more of the research					Agree
	-adjust <b>government purchasing &amp; immigration</b> policies to prioritize SR&ED					Agree
<b>III) Issues</b>	<b>Explanation of the issue(s)</b>		<b>Potential considerations / solutions</b>			
A) Business acceptance (grants vs. ITC's)	Why a small proportion (<25%) of SME, SR&ED tax credits claimants "indirect funding" also use IRAP grants or other "direct funding"?		Obtain industry feedback on why SR&ED favoured before shifting funds to "direct funding."			Ensure goodwill of SR&ED not lost
			Consider using SR&ED tax credit eligibility as a basis for further commercialization credits or incentives.			
B) Commercialization: SME's vs. Large co's	Reports acknowledge "LARGE" (multinational) co's have strong commercialization infrastructures & prefer to have SR&ED funding vs. SME's who need "commercialization assistance."		Consider incentive for "large co's" to act as "ANCHORS" to do SR&ED work, mentoring & commercialization with SME's on SR&ED projects.			Leverage large co. commercialization with SME development
			This could be based on previously approved SR&ED projects & consider enhanced, refundable SR&ED ITC treatment.			
C) Sectors (Clusters) to receive new funding	Sectors formally announced in Federal S&T strategy		Sectors informally contemplated via other federal publications / programs			Balance ongoing funding vs. "bailouts"
			Environment	Resource / Energy	Life Sciences	

## Executive Summary of Reports

### A hint of upcoming change:

- Minister Goodyear's report of the Jenkins Expert Panel
- the Mowat Centre at the University of Toronto
- the C. D. Howe Institute &
- CATA (Canadian Advanced Technology Association)

have each issued reports challenging one or more current components of the SR&ED program.

In addition a series of news articles by the Financial Post & Globe & Mail have raised public awareness & perhaps misconceptions about the program.

### Common terminology & issues for each study:

Much of the report focused on the balance of "direct" vs. "indirect" funding. The OECD provides some distinctions for types of government funding:

- **Direct R&D funding** includes **grants, loans & procurement.**
  - Tend to be limited in overall funding &
  - allocated by program administrators
  - to specific projects, industries or regions.
- **Indirect R&D funding** includes tax incentives such as **R&D tax credits.**
  - Tend to be open ended &
  - available to all firms.

### Common "observations" of the reports:

The reports point out that:

- **70%** of **Canadian government** support for Business R&D is through **indirect** funding (SR&ED tax credits)
- while in the **US 80%** of the support for business R&D is through **direct** funding (grants & military procurement contracts).
- Canada is more heavily weighted to credits than most countries but does have other similar providers including Italy and Ireland.

They also observe that the:

- **US government's** "contribution" to "Business Research" expenditures is almost **14%**
- vs. **Canadian government's** of roughly **4%**

with some resultant performance gaps.

### Impact of these reports:

In the author's opinion these results seem to

- "confirm" that the Harper Government's
- stated S&T policies will continue
- as planned (in 2007 & clarified in 2009).

A more detailed analysis of these policies and potential effects had been provided in the following newsletter.

## Common recommendations of the reports

### I) SR&ED tax credits

#### i) Move some SR&ED tax credit \$ to other S&T support

Author's opinion & rationale: **Need > Study**

- A shift from a successful (25,000+ claimant /year) SR&ED system accepted by industry to unproven systems needs further analysis.
- See additional analysis and recommendations in section III a) of this letter

#### ii) Provide full or partial refundability of credits to all claimants (i.e. large, foreign & public companies)

Author's opinion & rationale: **Agree**

- It has long been observed that a substantial amount of R&D is moving outside of Canada due to large corporation's inability to use non-refundable credits
- This also provides potential mechanisms to encourage work with small & medium sized enterprises (SME's) to address further issues on commercialization.

#### iii) Simplify calculations by focus on labour costs only (no materials or capital)

Author's opinion & rationale: **Agree**

This idea is **brilliant** & long overdue!

- It has been used **effectively by Quebec** for decades.
- It not only greatly **simplifies the calculations** but also
- provides an amount the **CRA can quickly review** (i.e. payroll withholdings) &
- creates a **hedged transaction**, i.e. the only way to
  - o earn more credits is to
  - o pay more Canadian wages which in turn
  - o creates the "employee income taxes"
  - o to pay the credits.
- As a result, this process is much easier to "budget" for all "stakeholders" (government & business).

### Other "Report specific" recommendations

#### iv) Reduce the filing deadline from 18 to 6 months (CATA)

Author's opinion & rationale: **Agree**

- The CRA reports that claims filed at the 18 month vs. the normal 6 month tax filing deadline are the source of most "compliance" problems.
- In a properly structured SR&ED system companies should be able to report these costs with their tax return (filing due date of 6 months from year end)
- As a related issue the CRA may in turn relax its filing requirements on a "complete claim" so as not to "punish" claimants for simple omissions or "honest" mistakes.

### Notable quote:

**"All generalizations are false,  
including this one."**

**- Mark Twain**

## **II) S&T (Non-SR&ED)**

### **i) allocate funds & resources to grants, venture capital & commercialization (of successful SR&ED projects)**

#### Author's opinion & rationale:

This could be a great source of opportunity if done properly. The real issues will come down to a matter of "balance."

In summary, investing capital into Venture Capital may have some benefits if balanced vs. other business stimulation measures however, if overly funded, it may not only play havoc with "free market" forces but also "play into" a strategy of **putting, "all of the taxpayers' eggs into very few baskets."**

### **ii) Promote Clustering into 4 + "sectors" (or industries)?**

#### Author's opinion & rationale:

Again, this could be a great source of opportunity if done with proper, "balance."

Some of the issues on determining the optimal allocations have been provide in the Industry specific commentary in the "sectors to receive new funding" section of this newsletter.

### **iii) Streamline government services & have "industry" direct more of the research**

#### Author's opinion & rationale:

Once again, this could be a great source of opportunity if done with proper, "balance" of mechanisms industry prefers. Currently this would appear to be the SR&ED tax credit process vs. the direct funding measures recommended.

### **iv) Adjust government purchasing & immigration policies to prioritize SR&ED**

#### Author's opinion & rationale:

The recognition of Canada's commitment to balance both;

- investment in tertiary (university) education &
- attracting foreign talent

appears to be adequately addressed.

### **Notable quote:**

**"My main purpose in life is**

**to make enough money**

**to create ever more inventions."**

**- Thomas Edison**

### III) Related Issues - not “directly” addressed

#### A) SME’s tend to favor SR&ED credits to grant or direct funding

##### Facts:

Statistics on the total number of IRAP claimants or any of the other “direct” programs are not publicly posted.

Perhaps the best current statistics are cited in the Jenkins report, “Among the **488 survey respondents** that had accessed a federal R&D program in the past three years,

- **73 % reported using the SR&ED** tax credit program
- **17 % IRAP.**
- **No other program** was identified (unprompted) by **more than 1 %** of the companies

In the author’s experience, even though;

- almost all successful SR&ED claimants would meet IRAP funding criteria,
- the majority are unwilling to accept IRAP’s other requirements & funding processes.

##### Author’s opinion & rationale:

Failure to understand the fundamental differences in these “delivery methods”

- could result in a shift of funds
- from “accepted” (SR&ED tax credit)
- to “less accepted” (direct funding) programs.

One potential **solution** might be the

- **use of the SR&ED** system to
- **implement** some of the
- proposed **commercialization incentives.**

Similar “commercialization models” are already used by both

- IRAP (federal) &
- Ontario's Interactive Digital Media Tax Credit (OIMDTC)
- to allocate funds for
  - o marketing & commercialization of
  - o previously approved, development projects.

### B) Commercialization assistance: SME's vs. large co's

##### Facts:

Several of the reports acknowledge that

- "large, multi-national" co's have
- strong commercialization infrastructures &
- prefer to have SR&ED funding vs.
- SME's who need commercialization assistance.

##### Author’s opinion & rationale:

Consider incentive for;

- "large co's" to act as "ANCHORS" to do
- development, mentoring & commercialization
- with SME's on SR&ED projects.

This could be;

- based on previously approved SR&ED projects &
- a basis to implement the proposed enhanced &/or
- refundable SR&ED ITC treatments.

#### C) Sectors (Clusters) to receive new funding

##### Facts:

- 4 major sectors of “strategic importance” formally announced in Federal S&T strategy (2007)
- Further defined with “subsectors” in 2009.
- Other sectors informally contemplated via other federal publications / programs.
- This is further discussed in the section on, “Canada’s current S&T policy.”

##### Author’s opinion & rationale:

This choice appears to provide both substantial opportunity and corresponding risk.

The ultimate benefit may again be a matter of “how much” of the existing resources will be shifted to these endeavors.

**Specific sections of the reports have been reproduced in the following pages.**

**Additional commentary & opinions are provided in the final section of this newsletter.**

## “Jenkins” report - Federal Commission

### **“Innovation Canada: A Call to Action,” Review of Federal Support to Research & Development – Expert Panel Report<sup>1</sup>**

#### Scope of the report

The Panel was mandated to review federal expenditure encouraging business R&D.

Based on figures provided by departments & agencies, it is estimated that [in fiscal year 2010–11];

- expenditure in support of business innovation was
- approximately \$6.44 billion,
- which comprises more than 100 programs & institutes.

The 60 programs in the review had estimated expenditure of

- approximately \$4.96 billion (excluding federal program administration costs). Of this amount,
- 70 percent (\$3.47 billion) is the SR&ED program
- 30 percent (\$1.5 billion) coming from 59 direct expenditure programs.

#### Major issues cited

##### **I) Business acceptance of “indirect” over “direct”:**

###### Facts cited:

The report acknowledges that,

“distribution of expenditure across the many **direct spending** programs is highly skewed:

- the largest 5 represent 40 % of direct expenditure,
- while the largest 15 account for about 72 %
- **Only one program — IRAP — accounted for more than 15% of direct expenditure in 2010–11.**”

“Among the **488 survey respondents**<sup>2</sup> that had accessed a federal R&D program in the past three years,

- **73 % reported using the SR&ED tax credit program,**
- **17 % IRAP,**
- **No other program** was identified by **more than 1 %** of the companies.”

This strongly suggests that federal programs are;

- not well known or
- accepted by business.

#### Recommendations:

The report does not address the issue directly. Instead it proposes to;

- create a single “1 stop” shop for
- all federal funding programs &
- co-ordinate to the extent possible with
- Universities and provincial programs
- to provide synergies instead of redundancies.

#### Author’s opinion

In the author’s opinion this is a positive step however; the proposal to allocate too much funding to these groups may not provide the intended effects with industry.

Solutions which; **identify & maintain** those **factors** which have created **business acceptance** of the **SR&ED program** would be prudent.

<sup>1</sup> [http://rd-review.ca/eic/site/033.nsf/vwapj/R-D\\_InnovationCanada\\_Final-eng.pdf/\\$FILE/R-D\\_InnovationCanada\\_Final-eng.pdf](http://rd-review.ca/eic/site/033.nsf/vwapj/R-D_InnovationCanada_Final-eng.pdf/$FILE/R-D_InnovationCanada_Final-eng.pdf)

<sup>2</sup> “Jenkins” report (Figure 5.3)

## II) VC issues – addressing the Risk Capital Gap

### Facts:

Rates of return of Canadian venture capital funds have been well below those in the US for both private & tax-assisted (“labour-sponsored”) venture capital funds.

The relatively low returns result from a number of factors, including:

- subscale venture capital funds &
- a comparatively young venture capital industry in Canada that
- “has not yet developed sufficient breadth & depth of experience to select & mentor the best potential investment candidates” (CCA 2009, p. 8).

The term “risk capital” as used in this review refers to funding of innovation-focused businesses from start-up through to maturity, when the company is ready to access public financial markets or is acquired by another firm.

### Recommendations on VC & risk capital gaps:

a) The **market** should determine the **allocation** of financing.

b) **Governments** should **co-invest with private venture capitalists** & allow the private investors to determine the investment strategy. For this to work,

- a substantial amount of funds should come from non-public sources, &
- the **government cannot micromanage** the funds in terms of investment location & types of investment.
- It is important to allow fund managers to develop strong linkages to global experts, markets & businesses.

c) That the **BDC** (Business Development Bank of Canada) set up a national **angel investment** “sidecar” fund.

- That is, a pool of committed capital that “rides along with” or invests following the lead of an investment group.
- Working with groups (instead of individuals)

## III) Lack of “business R&D Intensity”

### Facts:

The Institute for Competitiveness & Prosperity (2010, pp. 39–40) underlines two main challenges that have inhibited the willingness of Canadian businesses to ramp up investments in technology:

- relatively high **tax rates** on capital investment &
- a lack of **competitive intensity**.

Significant progress has & continues to be made, on the **tax front** — for example,

- a steady reduction in corporate tax rates,
- elimination of capital taxes
- harmonization of provincial & federal sales taxes.

The lack of **competitive intensity** in Canada is due primarily to

- a small, geographically fragmented market &
- policies that insulate sectors from international competition.

### Recommendations

Initiatives to **promote competition** ... constitute an essential foundation for innovation policy in Canada.

### Notable quote:

“Get your facts first,

then you can distort them as you please.”

- Mark Twain

#### IV) Recommendations on “Clustering”

##### Facts:

After analyzing several industry examples the report acknowledges,

“Just as there is no average sector in Canada, there is no “one size fits all” remedy to Canada’s innovation challenges.

##### Recommendations

Though the report does not make “direct” recommendations to favour sectors it does “hint” at this policy with comments such as;

“Build Sector Strategies ... there is a complementary role for programs tailored to the needs of specific sectors that the government identifies as being of strategic importance.”

“Sector-specific expertise & initiatives are paramount, & the Panel’s proposed large-scale, industry-directed & co-funded institutes could potentially serve as a catalyst in that respect.”

#### V) Streamlining government & more direction by "industry"

##### Facts:

The report provides 10 Operating Principles of the Proposed, “Industrial Research & Innovation Council”<sup>3</sup>

##### Recommendations

In the author’s opinion 2 of significant note:

2. Provide a single point of contact for Canadian businesses seeking to undertake R&D/innovation activities, & guide business “clients” to the program & service providers that best meet the timelines & supports that the industry client needs.

5. Use common definitions, a common program/project application form, & offer clear & consistent advice to Canadian business from coast to coast.

#### Summary of the report recommendations

The report closes by stating it aims to, “help new SME’s by providing start-ups, as well as established SMEs, with a wider range of support to help them bring their innovations to market through

- an expanded IRAP program,
- a new commercialization vouchers pilot program,
- a new concierge service,
- greater access to a highly skilled & entrepreneurial workforce,
- enhanced procurement programming, &
- improved access to risk capital at the start-up & later stages of growth.

#### Notable quote:

**“An investment in knowledge always pays the best interest.”**

**- Benjamin Franklin**

---

<sup>3</sup> Box 5.1 of the report

## “Mowat (UofT)” – Academic POV

### “Canada’s Innovation Underperformance: Whose Policy Problem is it?”<sup>4</sup>

#### Direct vs. indirect funding – market “neutrality”?

Research & Development tax incentives, compared to more direct forms of support such as grants & subsidies, have the advantages of being;

- non-discriminatory toward sector, technology, or region, &
- are more cost effective to administer.”<sup>5</sup>.

Moreover, they are consistent with the dominant view in Canada, as articulated in the original 1983 policy principles for SR&ED, that

- “the private sector is in the best position to determine
- the amount & type of industrial research & development that it should undertake”<sup>6</sup>

This policy preference for neutrality is an important part of the rationale for Canada’s current reliance on tax incentives.

#### Funding of “market clusters” – directly or indirectly

Instead this report focused on “directing” funding into strategic areas by building “clusters.”

This more “direct manner” of investment is often disparaged as either “corporate welfare”<sup>7</sup> or as a distortion of markets however, such investments were pivotal in building capabilities in what became leading sectors in Ontario.

While in essence it requires ‘picking winners’, it is about picking sectors & not technologies.

#### “Picking winners” - about sectors vs. technologies

This is an important distinction & one that is often lost amidst the confusion surrounding the term’s use in ideological debates over industrial policy. Indeed, ‘picking winners’ was;

- a term originally used in a paper<sup>8</sup>
- in reference to the practice of government officials
- picking specific technologies to commercialize,
- found to be the least successful form of
- government support identified in their research.

Since then the term has been inaccurately used to disparage any direct government role in economic development, irrespective of the fact that governments have long played a critical role which, while not without failure, has also brought about major successes.<sup>9</sup>

#### Examples of government success in supporting sectors

In Ontario, examples include the development of;

- a post-war petrochemical sector in Sarnia<sup>10</sup> &
- the emergence of a microchip industry in the Toronto region<sup>11</sup>.

China, Taiwan, & Singapore, are

- all testaments to such aggressive strategic investing
- having reshaped the global geography of innovation
- in knowledge intensive sectors as semiconductors.<sup>12</sup>

<sup>4</sup> By Tijs Creutzberg, 2011 Mowat Centre for Policy Innovation

<sup>5</sup> (Canada, Department of Finance Canada & Revenue Canada 1997)

<sup>6</sup> (Canada, Department of Finance Canada & Revenue Canada 1997, 42).

<sup>7</sup> (Taylor, 2008)

<sup>8</sup> Nelson & Langlois (1983)

<sup>9</sup> (Rycroft & Kash 1992)

<sup>10</sup> (Cobban 2008)

<sup>11</sup> (Creutzberg, Wolfe, & Nelles 2006)

<sup>12</sup> (Howell 2003; Leachman & Leachman 2004)

## **Report recommends 3 major “Clustering” considerations:**

### **1) Local & regional geography itself,**

This has been described as “fundamental & not incidental, to the innovation process”<sup>13</sup>.

It is fundamental to:

- the learning processes among innovation actors;
- the sharing of knowledge<sup>14</sup>;
- the concentration of specialized skills<sup>15</sup>; &
- access to supplier networks<sup>16</sup>.

In other words,

- geography, or rather proximity, facilitates access to
- key input factors that are
- important to a company’s ability to innovate.

Ultimately geography helps explain why firms seek to cluster in specific regions.

### **2) Place-based policy.**

Place-based policy emphasizes the need for governments to allow for & **recognize the importance of geography** in policy & programs related **to regional development, especially innovation.**

Policy decisions from upper levels of government have local or regional impacts whether it is recognized or not.

Policy decisions often manifest themselves with a physical presence, be it in the form of

- a commercialization facility or
- a special research program.

These investments, for example, will often

- preferentially benefit research institutions
- closest to it or
- with the necessary expertise

As a result, though federally-funded research organizations may not have a local mandate per se, they nonetheless have an economic impact & potential role in strengthening the local innovation economy particularly in the context of cluster development.

### **3) 3 levels of government making collective decisions**

Given the complexity of the innovation system as a whole, with its national & regional aspects & multitude of departments & institutions, **no one level of government** has the necessary **capacity** to effectively **support innovative regions.**

The decision-making process must therefore include whoever’s authority, expertise or resources are needed to resolve a particular public problem related to cluster development.

This is ultimately a process that includes more than one level of government & which can address cluster development issues that are both economic & social in nature<sup>17</sup>..

Making **improvements** to the vitality of the **downtown core** & to the **transportation** system can, for example, be essential to successfully **drawing highly skilled people & innovative firms** to the region.

## **Subsidiarity – basis for co-ordination?**

The report acknowledges,

“As an organizing principle at the core of federal systems that holds that matters of governance ought to be handled by the smallest, lowest or least centralized competent authority.”<sup>18</sup>

This would imply an increased level of co-ordination of the various governments than currently observed.

The report illustrates where regions such as China have benefited from “centralized” decision making which could both consider and act upon these priorities.

---

<sup>13</sup> (Asheim & Gertler 2005)

<sup>14</sup> (Lam 2000)

<sup>15</sup> (Wolfe & Lucas 2005)

<sup>16</sup> (Czarnitzki & Hottenrott 2009)

---

<sup>17</sup> (Rosenfeld 2002; Bradford 2010)

<sup>18</sup> (Halberstam 2008)

## **“Matthews” reports – VC + CATA industry association POV’s**

In addition to publishing its own commentary, one of CATA’s chief spokesmen (Sir Terrence Matthews) has also posted a report by way of a related Venture Capital Corporation.

### **I) “Canada as a Competitive Innovation Nation: What Needs to be Done” CATAAlliance - 2012 Pre-budget Comment <sup>19</sup>**

CATA, working with;

- 6 other major industry associations,
- 5 federal agencies,
- 4 provincial agencies,
- 2 universities and
- several NGOs as key partners,
- released a study of the challenges to be addressed.

The report contains 11 areas of specific recommendations. Some of particular note include;

#### **i) Shifting to labour based SR&ED claims**

The report states,

“Moving to labour based claims

- could be a **start to simplifying** administration, but
- we are unsure that much will be gained.”

In prior reports CATA also acknowledges,

“Historically, the labour based approach to SR&ED seems to be much easier for the CRA to handle.”<sup>20</sup>

#### **ii) Eliminating retroactive SR&ED claims**

Almost **one-third of claims** received by the CRA in any given year are **retrospective** claims being filed for **previous years**.

A significant portion of these claims appear to be of a

- speculative nature providing
- windfall revenues to businesses & consultants
- questionable value as incentives for the SR&ED.

#### **Notable quote:**

**“I am looking for a lot of men  
who have an infinite capacity  
to not know what can't be done.”**

**- Henry Ford**

---

<sup>19</sup> Nov 24, 2011 press release available at  
[http://www.cata.ca/Media\\_and\\_Events/Press\\_Releases/](http://www.cata.ca/Media_and_Events/Press_Releases/)

<sup>20</sup> Ibid CATA Oct press release

## II) A Review of Canada's Problems & Prospects in Today's Flat World – Can we do better?<sup>21</sup>

The following are excerpts from a report by Wesley Clover  
- Venture capital fund as posted to CATA website.

### Background

Canada remains a nation of SMEs, though it is no longer just a 'Branch Plant Economy' to the extent it once was.

- **99.8% of firms have fewer than 500 employees!**
- Many of **those over 500** are subsidiaries of foreign **multinationals** [which]
  - o contribute to our economy, but they
  - o respond first **to foreign 'Mind & Management'**

Many suggest the Canada's future will rely on a **combination** of;

- **natural resources &**
- the high tech '**Knowledge Economy**'.

### a) The good news: stability

The World Bank Group ranks Canada the 7th overall best environment (of 183) for doing business. (June 2010)

### b) The bad news: Private Sector R&D Challenge

- Effects of CAD vs. USD changes
- **BERD** (Business R&D as % GDP) **falling in Canada**
- Canada BERD 16<sup>th</sup>/34 in OECD (2006) to 18<sup>th</sup> (2008)
- BERD is **rising in**;
  - o Japan, Korea, Germany, China, Finland
  - o Current rate in **U.S. is twice** Canada's
  - o **Israel is 4 times** Canada's & growing!

### c) The end result: middle of the pack

"Why were we only

- 13 of 34 in OECD for real GDP growth 2010
- 21<sup>st</sup> in unemployment rate for 2009 &
- still just 17<sup>th</sup> by 2010?"

The reality, says the report, is **that we are "in the middle of the pack."**

### Major recommendations

- SR&ED "**refundability**" should be extended to all companies regardless of ownership.
- Establish new credit for "**pre-commercialization**"
- Focus on "**priority strengths**" of Canadian industry, rather than all comers. (i.e. **sector specific support**)<sup>22</sup>

### Other recommendations / ideas of note include:

- Have **IRAP experts decide what work qualifies**, then let **CRA** just review the **accounting**
- Provide increased direct support for R&D via,
  - o offset R&D costs (e.g. IRAP & SR&ED) &
  - o reducing 'payroll taxes' for young companies.
- Launch Federal / Provincial shared salary program
  - o 1<sup>st</sup> 3 years of new PhD & Masters grads
  - o similar to several EU nations.

<sup>21</sup> Ibid – available using CATA link above

<sup>22</sup> as defined by STIC & CCA

## “CD Howe / PWC” report – Private Commission POV

### Rewarding Innovation: Improving Federal Tax Support for Business R&D in Canada<sup>23</sup>

#### Direct vs. indirect – no preference?

The principal advantage of tax incentives is that businesses, as opposed to government officials, make decisions about R&D investments, resulting in market-driven innovations.

On the other hand, proponents of government grants argue that greater focus can be placed on R&D projects perceived to offer the highest return to society.

Reviewing the literature, Parsons & Phillips (2007) argue that the appropriate mix between grants & tax incentives **depends on a country’s policy priorities**, making the comparisons difficult, & that there is

“no evidence-based reason to choose among tax credits, grants & publicly performed R&D.”

#### Reports of abuse

A recent *Globe & Mail* article (McKenna 2011) highlights anecdotal cases of abuse, where improper or even fraudulent documentation is used to satisfy SR&ED claims.

While a more comprehensive study is required to better understand potential program abuses, the key message is

- that a lack of enforcement & documentation
- could lead to the spread of routine business activities
- that do not meet the definition of qualifying expenditures
- being incorrectly reported as SR&ED.

#### Incentive gap – large vs. small firms

Indeed, Canada has the largest gap between small & large firm R&D tax subsidy rates of all OECD countries.

Moving to a more neutral system that reduces the large swings in tax support between small & large firm R&D tax treatment would reduce this growth disincentive.

They cite similar concern raised by the OECD (2008):

“small Canadian owned firms are also unduly advantaged, which may discourage them from growing & becoming more productive.”

The current system of tax support is front-end loaded, pushing firms to undertake R&D through one of the world’s most generous tax subsidies.

At the same time, the rewards to R&D & other innovative activities are taxed, at a rate that still exceeds most OECD countries, creating a disincentive to commercialize & develop new products & services in Canada.

This likely has a negative impact on the level R&D investment & the amount of spillover benefits accruing to Canada.

#### Incentives for “commercialization” – patent boxes?

Other countries have, or are considering, moving to a system where IP income is taxable at a significantly lower rate than regular business income, a tax arrangement known as a “patent box.”

The UK, for example, recently announced that profits attributed to patents after April 2013 will be taxed at a rate of only 10 percent, well below its 26 percent general corporate income tax rate.

However, as patent boxes are relatively new, empirical evidence on their effectiveness remains sparse.

One of the few studies<sup>24</sup> found that a country introducing a patent box can;

- expect to attract more patents & patent income
- the rise in patent income is not enough to offset the lower tax rate,
- resulting in a decline in tax revenue from patent income.

There is also the **possibility** that patent boxes may increase the size of domestic **spillover benefits** from related R&D to the extent that IP is shared & further developed within the patent box country, instead of abroad.

<sup>23</sup> [http://www.cdhowe.org/pdf/Commentary\\_334.pdf](http://www.cdhowe.org/pdf/Commentary_334.pdf)

<sup>24</sup> , Griffith, Miller & O’Connell (2010) of the London-based Institute for Fiscal Studies (IFS)

## Canada's (Current) Federal S&T Policy

The most recent publication of

- Canada's Science & Technology (S&T) Policies
- is contained within **2 major reports,**

i) Industry Canada's: Mobilizing Science & Technology to Canada's Advantage — 2007 – with an update in 2009 &

ii) The Report of the Expert Panel on Business Innovation, "Innovation & Business Strategy: Why Canada Falls Short (CCA 2009)"

<b>Federal Policies on Science, Technology &amp; Business Innovation</b>		
<b>I) Industry Canada (2007 &amp; 2009 update) : Mobilizing Science &amp; Technology to Canada's Advantage</b>		
<u>Objectives</u>	<u>Stated Methods</u>	<u>Potential Results</u>
<b>1) Entrepreneurial Advantage</b>	<ul style="list-style-type: none"> <li>• Establish lowest tax rate in the G-7.</li> <li>• Have private sector identify &amp; lead new research</li> <li>• Support large-scale research &amp; commercialization centres</li> </ul>	New funding in strategic areas with objective to get industry participation
<b>2) Knowledge Advantage</b>	- Focus on areas of national interest - social & economic	Funding in 4 major sectors & streamlined external advisory system
<b>3) People Advantage</b>	<ul style="list-style-type: none"> <li>-Reduce personal income tax</li> <li>- Enhance immigration to required skills</li> <li>- Foster excellence in / access to, post-secondary education.</li> <li>- Reducing barriers to labour mobility &amp; credentials recognition</li> </ul>	Incentives for human & technology capital: development, deployment & commercialization
<b>Principles to administer funding</b>		
Enhancing <b>Accountability</b> : stronger <b>governance &amp; reporting</b> practices to deliver & demonstrate results.		
Promoting <b>World-Class Excellence</b> : foster healthy <b>competition</b> to ensure that funding supports the best ideas.		
Focusing on <b>Priorities</b> : supporting research in <b>areas of strength</b> & opportunity.		
Encouraging <b>Partnerships</b> : support S&T collaborations involving the <b>business, academic, &amp; public sectors, at home &amp; abroad.</b>		

## “Mobilizing Science & Technology to Canada's Advantage — 2007”<sup>25</sup>

The report summarizes;

- 3 objectives,
- 4 principles &
- related “methods” to achieve them.

### Objectives (advantages):

- 1) **Entrepreneurial Advantage,**
- 2) **Knowledge Advantage, &**
- 3) **People Advantage:**

Canada must translate knowledge into commercial applications that generate wealth for Canadians & support the quality of life we all want in order to create an **Entrepreneurial Advantage**.

Canadians must be positioned at the leading edge of the important developments that generate health, environmental, societal, & economic benefits in order to create a **Knowledge Advantage**.

Canada must be a magnet for the highly skilled people we need to thrive in the modern global economy with the best-educated, most-skilled, & most flexible workforce in the world in order to create a **People Advantage**.

### Principles:

These **advantages** will be supported by the federal policy commitments which will be guided by **four core principles**:

#### **Promoting World-Class Excellence.**

The Government of Canada will ensure that its policies & programs inspire & assist Canadians to perform at world-class levels of scientific & technological excellence.

The government will foster an environment of healthy competition to ensure that funding supports the best ideas.

#### **Focusing on Priorities.**

The Government of Canada will continue to play an important role in supporting basic research across a broad spectrum of science.

To enhance our success, we will also be more focused & strategic — targeting more basic & applied research in areas of strength & opportunity.

#### **Encouraging Partnerships.**

The Government of Canada will support S&T collaborations involving the business, academic, & public sectors, at home & abroad.

Partnerships are essential to lever Canadian efforts into world-class successes & to accelerate the pace of discovery & commercialization in Canada.

Through partnerships, the unique capabilities, interests, & resources of various & varied stakeholders can be brought together to deliver better outcomes.

#### **Enhancing Accountability.**

The Government of Canada will implement stronger governance & reporting practices to deliver & demonstrate results.

Accountability is important because it puts the responsibility on those who are supported by public funds to demonstrate to taxpayers that results are being achieved.

<sup>25</sup> Industry Canada – download at [http://www.ic.gc.ca/eic/site/ic1.nsf/eng/h\\_00856.html](http://www.ic.gc.ca/eic/site/ic1.nsf/eng/h_00856.html)

## **Proposed methods to achieve objectives:**

### **To create an Entrepreneurial Advantage by:**

- Establishing the lowest tax rate on new business investment in the G-7.
- Having the private sector identify & lead new research networks that address their priorities under the Networks of Centres of Excellence Program.
- support large-scale research & commercialization centres

### **To create a Knowledge Advantage:**

Canada's federal government will focus strategically on research in areas that are in the national interest from a social & economic perspective. We will focus more of our energies & resources in the following areas:

- Environmental science & technologies.
- Natural resources & energy.
- Health & related life sciences & technologies.
- Information & communications technologies.

A more **streamlined** external advisory system, with a broad & clear mandate, is required to strengthen the voice of external science advice & help the government address complex S&T issues.

In order to achieve these objectives, the federal government will consolidate the roles & responsibilities of the

- Advisory Council on Science & Technology,
- Council of Science & Technology Advisors, &
- Canadian Biotechnology Advisory Committee

into the **new Science, Technology & Innovation Council (STIC)**.

### **To create a People Advantage:**

Canada's federal government will continue to reduce personal income tax to ensure Canada attracts & retains the highly skilled workers necessary to foster innovation & growth.

We will enhance the immigration & temporary foreign workers systems so that they provide Canadian firms with improved access to people with the skills our modern economy needs.

We will work with provinces & territories to foster excellence in, & improved access to, post-secondary education.

We will increase opportunities for all to participate in the workforce by modernizing labour market programming & reducing barriers to labour mobility & credentials recognition

## **Notable quote:**

**“Everything comes to him who**

**hustles while he waits.”**

**- Thomas Edison**

<b>Sectors of "strategic importance" for expanded "Innovation" incentives</b>				
<b>I) APPROVED: Sectors targetted for support by Industry Canada (2007 &amp; 2009)</b>				
<b><u>Priorities (2007)</u></b>	<b><u>Environmental Sciences/Technologies</u></b>	<b><u>Natural Resources &amp; Energy</u></b>	<b><u>Health &amp; Related Life Sciences/Technologies</u></b>	<b><u>Information &amp; Communications Technologies</u></b>
<b>Sub-priorities (2009)</b>	<ul style="list-style-type: none"> <li>•Water (health, energy &amp; security)</li> <li>•Cleaner production &amp; use of hydrocarbon fuels</li> </ul>	<ul style="list-style-type: none"> <li>•Oil sands energy production</li> <li>•Arctic (resource production, climate change adaptation &amp; monitoring)</li> <li>•Biofuels, fuel cells &amp; nuclear energy</li> </ul>	<ul style="list-style-type: none"> <li>Regenerative medicine</li> <li>•Neuroscience</li> <li>•Health in an aging population</li> <li>•Biomedical engineering &amp; medical technologies</li> </ul>	<ul style="list-style-type: none"> <li>•New media</li> <li>•Animation &amp; games</li> <li>•Wireless networks &amp; services</li> <li>•Broadband networks</li> <li>•Telecom equipment</li> </ul>
<b>II) POTENTIAL: Sectors Identified for potential "strategic support" CCA (2009)</b>				
<b>Strategic sectors</b>	Auto sector	Life sciences	Banking	Information & communication technologies (ICT)
<b>Issues</b>	"weak R&D, but strong productivity"	"great promise, but mixed results"	"balancing stability vs. radical innovation"	"a catalytic role for government, banking, & ICT."

**“Mobilizing Science & Technology to Canada's Advantage: Progress Report 2009”<sup>26</sup>**

**Sectors likely to receive “new” funding?**

The initial 2007 Industry Canada reports were;

- augmented in 2009<sup>27</sup> to further identify
- a series of “sub-Priorities” for
- the design of Canada's research support programs.

In addition the **Report of the Expert Panel on Business Innovation** (by the CCA) includes

- case studies of four sectors that
- highlight the great diversity of circumstances.

**Notable quote:**

**“We don't know a millionth of one percent about anything.”**

**- Thomas Edison**

<sup>26</sup> Industry Canada [http://www.ic.gc.ca/eic/site/ic1.nsf/eng/h\\_00231.html](http://www.ic.gc.ca/eic/site/ic1.nsf/eng/h_00231.html)

<sup>27</sup> Industry Canada website as of Nov 12, 2011 - <http://www.ic.gc.ca/eic/site/ic1.nsf/eng/04719.html>

## **“Innovation & Business Strategy: Why Canada Falls Short (CCA 2009)”<sup>28</sup>**

This **Report of the Expert Panel on Business Innovation** was prepared for the Government of Canada in response to a request from the Minister of Industry.

It was undertaken by the Council of Canadian Academies (CCA) with members are drawn from the:

- Academies of Arts, Humanities and Sciences
- Canadian Academy of Engineering (CAE) and
- Canadian Academy of Health Sciences (CAHS),
- as well as from the general public.

### **Notable statements**

Individual sectors are important when considering the nation’s objectives for innovation.

As a small country, **Canada** cannot expect to compete globally across all sectors & **should focus** instead on a **limited number** in which it can be among the world leaders.

The **four sectors addressed** were chosen as examples because

- **innovation** tends to be an **important** business strategy in each &,
- taken together, they **illustrate most** of the innovation **issues** that arise in the economy.

The report underscores that

- no sector in Canada is “average.”
- Each characterized by a wide array of features
- stemming from a multiplicity of social, economic, cultural, historical & other factors.

### **Case studies on 4 “strategic” industries**

To illustrate, the report includes case studies of four sectors that highlight the great diversity of circumstances.

It then summarized each in a phrase as follows.

- Auto sector — “weak R&D, but strong productivity”
- Life sciences — “great promise, but mixed results”
- Banking — “balancing stability vs. radical innovation”
- Information & communication technologies (ICT)— “a catalytic role for government, banking, & ICT.”

### **Notable quote:**

**“When one door closes another door opens”**

**- Alexander Graham Bell**

---

<sup>28</sup> CCA link to report at: [http://www.scienceadvice.ca/uploads/eng/assessments%20&%20publications%20&%20news%20releases/inno/\(2009-06-11\)%20innovation%20report.pdf](http://www.scienceadvice.ca/uploads/eng/assessments%20&%20publications%20&%20news%20releases/inno/(2009-06-11)%20innovation%20report.pdf)

## Auto sector: innovation paradox?

### Background

It is one of the country's largest employers & in 2007 had exports of \$77 billion, almost 17% of Canada's merchandise total.

The Canadian automotive sector presents an innovation paradox;

- low R&D intensity
- accompanied by strong productivity growth &,
- until recently, significant success in export trade.

The low level of automotive R&D spending in Canada has not translated into poor productivity performance.

For example, in 2008 four Canadian plants in the top 10 in North America on the basis of hours required per vehicle<sup>29</sup>.

Average labour productivity in the Canadian auto industry has exceeded U.S. levels by a margin of 10% or more<sup>30</sup> in recent years, making this **one of the few manufacturing industries in which Canada enjoys a productivity advantage**.

### Problems

Canadian engineers & scientists are relatively cost efficient, but the appeal of Canada as a location for globally sourced R&D programs has been undermined by the **appreciation of the Canadian dollar** in recent years.

The Canadian context with its

- unusually **high reliance** on sectors that are
- components of **global supply chains** &
- do not necessarily require significant R&D spending
- to achieve greater productivity.

The experience of Canada's auto industry shows that it is possible to build a **successful, competitive industry without a strong base of domestic R&D**.

The structure of this sector in Canada has instead driven innovation strategies that focus on **process efficiency** & workplace practices (i.e. **assembly vs. design**).

### Opportunities

The **global success** of;

- **parts makers such as Magna & Linamar** shows,
- ambitious Canadian firms can expand from
- their base in a Canada-U.S. supply chain
- to serve the world market.

This raises the question as to **whether public policies** could be designed to;

- **foster** productivity gains not only in "assembly" but
- also in the development of the "**designs**" &
- if so, how such lessons might be applied to resource industries?

### Best methods of funding

**Direct support specific to sector or cluster:** This support is targeted & often in the form of subsidies to firms in selected sectors or regions.

Such strategic investments are in **some instances discretionary & ad hoc**, as in the case of the **2008 bailout of the auto sector**.

This in turn raises questions on whether these types of

- "one time" vs.
- "regular" funding

should be considered when allocating research funding by industry.

## Notable quote:

**"Invention breeds invention."**

**- Ralph Waldo Emerson**

<sup>29</sup> the Harbour Report (the leading industry review of plant-level productivity performance)

<sup>30</sup> Source CAW, 2008

## Pharmaceuticals:

Public policies should seek to **increase links** among industry participants:

- **global pharma**s with sophisticated product management & marketing competencies;
- biotech & medical **devices companies** with creative new products, but regulatory & marketing challenges; &
- **universities** & research centres with great ideas, but few links to the marketplace.

## Banking:

Financial services;

- contribute almost **7% of Canada's GDP**, but
- play an even more important **economic role** as
- facilitating **transactions** for goods & services.

The degree of financial sector development is thus of paramount importance for productivity growth.<sup>31</sup>

The recent turmoil in the banking industry globally has created a **window of opportunity** for Toronto to become a major North American / Worldwide innovation centre for the financial services industry.

## Notable quote:

**“The computer is a great invention.**

**There are as many mistakes as ever,**

**but now they're nobody's fault.”**

- **Anonymous**

## ICT:

The globalization of innovation in the PC industry is only one example of how different industries can evolve.

A series of studies on changes in U.S. competitiveness & innovation in multiple industries, note that each has developed unique characteristics.<sup>32</sup>

The evolution of **semiconductors**, for example, has

- produced a **separation of manufacturing & design**.
- While **fabrication** of chips has migrated to **Asia**,
- “fabless” firms developed that design not fabricate.
- The **United States** has dominated the fabless **design** business, with
- 475 firms (almost **75% of the global** total) in 2002.
- **Canada** was **second**, with 30 firms just ahead of,
- Israel's 29 firms at the time.<sup>33</sup>

### Sector complexities – flat panels vs. semiconductors:

For **semiconductors**,

- the **manufacturing** is relatively **standard** with many competing suppliers, while
- the **products themselves** are highly **specialized**.

Most of the innovation (& value) in a semiconductor chip is in its design & its ability to serve a particular function.

By contrast, the innovation in **flat panel** displays

- is mostly in the manufacturing process
- both to enable larger & better resolution displays &
- to improve efficiency.

Thus the locus of innovation has migrated with production.

In the case of **flat panel displays**, much of the innovation has followed manufacturing production to Taiwan, South Korea & China<sup>34</sup>.

The main driver appears to be in the “**key locus of value**” in a particular product type.

---

<sup>31</sup> (Levine et al., 2000)

---

<sup>32</sup> Macher & Mowery (2008)

<sup>33</sup> (Macher et al., 2008)

<sup>34</sup> (Hart, 2008)

## Conclusions of the report

The panel has approached innovation as an *economic process* rather than as a primarily science & engineering activity.

The analysis provides a long-term perspective on the fundamental factors **that connect business strategy, innovation activity & productivity growth.**

The panel's analysis leads to the following **two principal conclusions:**

**1) The persistently lagging growth of labour productivity in Canada is due primarily to the weak innovation performance of the business sector.**

The main quantitative evidence in support of this conclusion is

- (i) Canada's slow growth of **multifactor productivity**, which has been documented since the early 1960s; &
- (ii) more recently, the **failure** by many Canadian businesses to **invest in information & communications technologies** to nearly the extent seen in the United States & in several other peer group countries in the OECD.

The report shows that

- the growth of **MFP over long periods** of time
- is appropriate measure of **business innovation**
- the combination of **human & capital** resources
- in new or more efficient ways to create value.

**2) The weak innovation performance of Canadian business is due to the fact that relatively few Canadian companies adopt innovation-based business strategies.**

The principal factors that influence that decision can be categorized broadly as:

- particular structural characteristics (e.g., related to sector or foreign control);
- competitive intensity;
- climate for new ventures (e.g., availability of early-stage finance);
- public policies that encourage or inhibit innovation;
- &
- business ambition (e.g., entrepreneurial aggressiveness & growth orientation).

## Major recommendations:

Are to support areas of particular Canadian strength & opportunity through focused,

- sector-oriented strategies,
- such as was done in the past in, for example,
- the automotive, aerospace & ICT industries.

## Notable quote:

**“Results!**

**Why man, I have gotten a lot of results.**

**I know several thousand things**

**that won't work.”**

**- Thomas Edison**

## Implications & author's opinion

### Report consistency

The reports appear consistent in recommendations on at least 75% of issues are already outlined in the Federal S&T policies

The obvious extrapolation is that;

- the reports will be
- used to justify the current strategy.

### Objectivity

Many of the recommendations tend to favour large corporations.

The people chairing the committees are often major shareholders of such ventures.

Notable examples include;

- Thomas Jenkins, CEO of Open Text Corp
- Sir Terrence Matthews, CEO of
  - o March Networks &
  - o Wesley Clover (VCC)
- PWC – Accountants to many large firms
- Globe & Mail – owned by BCE
- Financial Post – owned by Postmedia Network Inc.

These factors;

- should always be considered
- in evaluating related recommendations.

### Understanding BEST practices of SR&ED before shifting funding

Many of the recommendations suggest shifting funds from SR&ED tax incentives to other types of direct funding.

It is hoped that policy makers;

- Endeavor to understand the reason(s) for
- **Business's strong (5:1) preference** of the
  - SR&ED tax credit program over
  - All other programs/ forms of direct funding &
- Ensure that these variables are considered in any new programs

### Notable quote:

**“I am long on ideas, but short on time.**

**I only expect to live only about 100 years.”**

**- Thomas Edison**

## Understand that Venture Capital is “picking the winners”

### Canada’s VC market vs. the world

The specific numbers of deals in Canada is not widely published & varies significantly from year to year however, each year the **Canadian VC industry** is typically<sup>35</sup> **less than**

- **400 total VC deals** / year representing
- **< \$1.5 billion** of capital invested

for which the investing VC firms are looking **for annual rate of return of 40% +** on their investment.

“Investments made by **VC firms in Canada** have focused **primarily in three areas** of strength for Canada:

- IT,
- Biotechnology &
- clean tech,
- with **IT alone** accounting for approx. **50%**”<sup>36</sup>

Furthermore, 2008 was a record year with \$1.4 billion in total **VC funding** however **recent years** have seen total investments of under **the \$1 billion level**.

### What is (not) venture capital ready investment

Perhaps a relevant overview of the North American “Venture Capital” industry is provided by Wikipedia,

- Venture capitalists are typically **very selective** in deciding what to invest in;
- looking for the **extremely rare**, yet sought after, qualities, such as;
  - o innovative technology,
  - o potential for rapid growth,
  - o a well developed business model,
  - o an impressive management team &
  - o exceptionally high growth potential
  - o generally **40%+ return on investment**.

<sup>35</sup> Source: Tech capital & CVCA websites  
[http://www.techfinance.ca/modules/database\\_summary/active.php?type=0&year=2010](http://www.techfinance.ca/modules/database_summary/active.php?type=0&year=2010)

<sup>36</sup> Think Canada, Presentation by CVCA (Canada’s Venture Capital & Private Equity Association, October, 2010  
[http://www.cvca.ca/files/Downloads/Think\\_Canada\\_Again\\_Web\\_Version\\_FINAL.pdf](http://www.cvca.ca/files/Downloads/Think_Canada_Again_Web_Version_FINAL.pdf)

### VC Results to date – USA - few investments but big results

According to the US National Venture Capital Association,

- 11% of private sector jobs come from venture backed companies &
- venture backed revenue accounts for 21% of US GDP.

### USA model vs. other countries

In the year of 2008, while VC fundings were still majorly dominated by

- U.S. money (\$28.8 billion invested in over 2550 deals in 2008),
- compared to international fund investments (\$13.4 billion invested elsewhere),

Geographical differences can be significant.

For instance, in the U.K., 4% of British investment goes to venture capital, compared to about 33% in the U.S.

### Author’s opinion – double edged sword

While the prospects of success are significant, many Venture Capital Corporations claim that only 10% of their investments wind up successful.

Thus many would argue that;

- government employees
- no matter how smart or experienced
- cannot adequately choose good companies or
- subsectors to which to provide handouts.<sup>37</sup>

<sup>37</sup> “Handbacks, not handouts”, Neil Seeman, Financial Post · Oct. 18, 2011



## SR&ED Newsletter Edition 2011-3

Welcome to the third 2011 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>Recent SR&amp;ED tax cases &amp; related issue(s).....</b>	<b>28</b>
Soneil – evidence of hypotheses and experiments – lose .....	28
Global Enviro Inc. – criminal charges for false claim - lose .....	29
<b>2 new “SR&amp;ED”articles in the Globe &amp; Mail.....</b>	<b>30</b>
Canada slips further in innovation rankings (June 28, 2011) .....	30
Time for action on Innovation, not more study (July 3, 2011) .....	30
<b>Recent CRA pronouncements.....</b>	<b>31</b>
DRAFT Policy on the Eligibility of Work for SR&ED (June 20, 2011).....	31
<b>Reviews and reports to watch for.....</b>	<b>31</b>
Review of Federal Support to R&D [Jenkins panel] – Oct 2011 .....	31
Taxpayers' Ombudsman – fall 2011 .....	31

## Recent SR&ED tax cases & related issue(s)

The main issues and potential implications are outlined in the following pages. Copies of the tax court judgments are available from the Tax Court of Canada's website.<sup>38</sup>

### Soneil – evidence of hypotheses and experiments – lose<sup>39</sup>

#### Facts:

This case represented an appeal to a prior (2007 judgment).

The claimant and primary developer Mr. Jain holds Master of Science in controlled system engineering

Mr. Jain stated, in cross-examination, that he did not produce any new components when conducting his work on the four projects.

He also acknowledged that each of the projects involved areas where;

- products performing similar functions &
- a wide body of knowledge already existed

He stated that, while the Appellants used existing parts and components, the research was with respect to the application of the parts and components.

Types of evidence provided:

- The only evidence provided with respect to the Power Optimization Project was a single page plan contains 11 items in point form.  
Inhibitor Project
- Four pages handwritten notes- two are simple diagrams.
- The pages do not contain any details with respect to the nature or results of the tests.
- Mr. Jain was uncertain/ unclear who prepared the notes or when they were prepared (via the company or a subcontractor)

#### Issue(s):

Whether the work constituted SR&ED, as that term is defined in subsection 248(1) of the *Income Tax Act* (the "Act").

The CRA argued that the,  
"Appellant failed to demonstrate a systematic investigation through experiment or analysis performed to resolve any scientific or technical uncertainties."

#### Relevant legislation

##### Income tax act

**SR&ED** is defined for income tax purposes<sup>40</sup>, as follows:

**"scientific research and experimental development** means **systematic investigation** or search that is carried out **in a field of science or technology** by means of **experiment or analysis and** that is

(a) basic research...

(b) applied research,.. or

(c) **experimental development**, namely, work undertaken **for the purpose of achieving technological advancement** for the purpose of **creating new, or improving existing**, materials, devices, **products or processes**, including incremental improvements thereto,..."

##### Case law:

In addition to the quotations from the cases of CW Agencies & Northwest Hydraulics (see prior newsletter 2011-2) the judge also cited several other precedents;

"As noted by my colleague Justice Little in *Zeuter Developments*, at paragraph 28:

... While not absolutely necessary, it is beyond doubt that a taxpayer who creates a well-supported claim will facilitate the process in determining whether something qualifies as SR&ED.

As stated in *RIS-Christie*, the only reliable method of demonstrating that scientific research was undertaken in a systematic fashion is to produce documentary evidence."

<sup>38</sup> Tax Court of Canada website [www.tcc-cci.gc.ca]

<sup>39</sup> SONEIL INTERNATIONAL LIMITED, V. THE QUEEN, 2011 TCC 261

<sup>40</sup> in subsection 248(1) of the Act

## Analysis:

Based upon the testimony of Mr. Jain, it appears that the Appellants **did not maintain a detailed record of the testing of any hypothesis formed** for the projects or of the results of the testing, as the work progressed

## Ruling & rationale:

In this case the judge commented,

Mr. Jain did not provide evidence of the Appellants encountering change or of what any change meant with respect to a specific hypothesis, nor did he indicate whether a change in the hypothesis was required.

As a result he concluded

the Appellants did not provide the Court with sufficient evidence to support a finding that their work was characterized by;

- trained and systematic observation,
- measurement and experiment and
- the testing and modification of hypotheses.

## Implications and author's commentary

In the author's view the results of this case are clear and the lesson obvious, you must record;

- the results or the "experiments" then
- illustrate related "analysis of hypotheses
- also referred to as technological uncertainties."

## Notable quote:

**"You can't just ask customers what they want and then try to give that to them. By the time you get it built, they'll want something new."**

- Steve Jobs

## Global Enviro Inc. – criminal charges for false claim - lose<sup>41</sup>

### Facts:

This was an appeal from a prior 2009 conviction.

It took place in Alberta Criminal court rather than the tax court of Canada.

In this case the company filed a claim for the May 31, 2002 taxation year. Some of the costs in the claim were related to prior taxation years.

The CRA then notified the client that (due to the filing deadlines) only costs related to the 2002 and subsequent years would be claimable.

The company then, "provided documentation to the CRA after this meeting that was intentionally misleading and designed to continue to pursue the claim."

The company and its President were each fined \$250,000 representing approximately 77% of the total tax benefit "falsely claimed."

### Issue(s):

The original 2009 case dealt with the criminal issue. The appeal dealt with an attempt to lower or reduce the fines.

### Relevant legislation and analysis:

Section 239(1.1)(g)(ii) of the *Income Tax Act* provides for a fine on summary conviction of, "not less than 50% and not more than 200% of the amount ... entitled".

### Ruling & rationale:

The \$250,000 fine imposed on each Appellant is approximately 77% of this amount. This is on the low end of the range set out in the *Income Tax Act* and, in my view, there is no reason to reduce it"

### Implications and author's commentary

In the author's discussions to date, these fines and related enforcement measures are actually being perceived and seen

<sup>41</sup> R. v. Global Enviro Inc., and Ian George McIntyre, 2011 ABQB 32

as a positive step by most “ honest” claimants and claim preparers.

## 2 new “SR&ED” articles in the Globe & Mail

Recently the **Globe and Mail** has run a series of articles regarding SR&ED tax credit industry and related policies.

## Notable quote:

“The most successful people are those who are good at Plan B.”  
- James Yorke

### Globe & Mail SR&ED related articles by Barrie McKenna

- 11-Mar-11 **Flawed R&D scheme costs taxpayers billions**  
5 pages Issue #1 - % of cost paid to consultants  
Issue #2 – net “benefits” for every \$ of taxes  
Issue #3 – certain industries don’t advance technology & others automatically do  
Issue #4 – that CRA risk controls aren’t working  
Issue #5 – alternatives to refundable credits
- 28-Jun-11 **Canada slips further in innovation rankings**  
2 pages New issue #1 - Canada higher in credits vs. direct grants  
Issue #2 – should focus on clusters
- 3-Jul-11 **Time for action on Innovation, not more study**  
3 pages New issue #1 - Canada declined some performance 2008 to 2010  
Issue #2 – more funds for venture capital & commercialization  
Issue #3 – let politicians pick the clusters

The first of these article, “Flawed R&D scheme costs taxpayers billions,” was detailed in our prior [SR&ED Newsletter 2011-2](#).

### **Time for action on Innovation, not more study (July 3, 2011)**<sup>43</sup>

The following 2 articles make additional proposals on how polices should be set.

### **Canada slips further in innovation rankings (June 28, 2011)**<sup>42</sup>

- 1) Should Canada shift form credits to grants?  
- Discussed in prior newsletter
- 2) Should we focus on clusters vs. all technologies?  
- If so who should pick?

- 1) Causes of performance decreases from 2008 to 2010?  
- Certain indicators have decreased slightly vs. other OECD countries but much can be attributed to recession.
- 2) Providing more funds for VC and commercialization – good idea?  
- In the author’s opinion this is a good idea to augment the commercialization SR&ED related projects.
- 3) Let politicians pick the clusters – good idea? Any risks?  
- In the author’s opinion the “free market” is better suited to determine this via SR&ED to ALL technology industries.

<sup>42</sup> View at: [http://license.icopyright.net/3.8425?icx\\_id=/icopyright/?artid=2077788](http://license.icopyright.net/3.8425?icx_id=/icopyright/?artid=2077788)

<sup>43</sup> View at: [http://license.icopyright.net/3.8425?icx\\_id=/icopyright/?artid=2084968](http://license.icopyright.net/3.8425?icx_id=/icopyright/?artid=2084968)

## **Recent CRA pronouncements**

One June 20, 2011 the CRA released a series of 6 papers for public feedback. Three of these deal with overhead allocation issues, 2 with contract payments and the final with the “eligibility of work for SR&ED.”

After a review of the 6 draft documents I believe that 5 of them re-iterate current CRA practices and thus warrant little comment.

### **DRAFT Policy on the Eligibility of Work for SR&ED (June 20, 2011)**

Our firm does however see a variety of problems and issues within the, "DRAFT Policy on the Eligibility of Work for SR&ED (June 20, 2011)."

Basically the core issue stems from the use of the term "technological advancement" in the project description, box 240.

We propose they should INSTEAD be asking for: a) benchmarks of standard practice & b) quantified objectives going beyond these limits.

The "technological advancements" are then illustrated by; \* the "conclusions" on "variables of technological uncertainty"

\* at the final stage of the "scientific method / process."

A copy of this submission is available for download at:

[http://www.meuk.net/Resources\\_Hot\\_Issues.aspx](http://www.meuk.net/Resources_Hot_Issues.aspx)

#### **Author's commentary:**

What is a “hypothesis?”

What does this mean for SR&ED?

We discuss these issues in depth in the above noted submission.

To summarize: the best evidence may be a “test matrix” of the variables under examination & experimentation.

## **Reviews and reports to watch for**

### **Review of Federal Support to R&D [Jenkins panel] – Oct 2011**

The report of the independent Expert Panel led by Tom Jenkins that is reviewing federal support to R&D. It is expected to be released in October, 2011.

There are over 200 submissions which are available for review at:

[http://rd-review.ca/eic/site/033.nsf/eng/h\\_00006.html](http://rd-review.ca/eic/site/033.nsf/eng/h_00006.html)

Some of the more consistent &/or notable recommendations are:

Improve the level of consistency from auditor to auditor.

- Provide full or partial refundability to all claimants
- Simplify & streamline the program
- Consistency / permanence - Avoid too many small programs
- Provide consistency on reviews
- Provide for commercialization of successful products – similar to IRAP

In the author's opinion the best summary” recommendation comes from the Canadian Council of Chief Executives:<sup>44</sup>

According to the OECD, it is important

“to avoid inefficiencies arising from operating too many schemes at too small a scale. In our view, Canada's system of direct support programs for business R&D suffers from precisely that problem:

Too many small programs targeted at individual sectors, regions and constituencies, with insufficient coordination and, in some cases, poorly defined program objectives.

We therefore recommend that the federal government adopt a clear policy framework in support of business innovation.”

The author proposes the panels current, “innovation frameworks,”<sup>45</sup> appear to address these issues.

### **Taxpayers' Ombudsman – fall 2011**

- The report of the Taxpayers' Ombudsman on the systemic review of the SR&ED Program is also expected to be released this summer or fall.

<sup>44</sup> download at: <http://rd-review.ca/eic/site/033.nsf/eng/00096.html>

<sup>45</sup> Innovation frameworks: <http://rd-review.ca/eic/site/033.nsf/eng/00027.html>



## SR&ED Newsletter Edition 2011-2

Welcome to the second 2011 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>Recent SR&amp;ED tax cases &amp; related issue(s) .....</b>	<b>33</b>
Jentel – Illustrating “Technological Advancement” - lose .....	33
Table 1 - Jentel – “What if?” = eligibility.....	35
<b>Responsible “SR&amp;ED”- preparers &amp; journalists .....</b>	<b>36</b>
Globe & Mail issue #1 - % of cost paid to consultants .....	36
Issue #2 – net “benefits” for every \$ of taxes.....	39
Issue #3 – that certain industries don’t advance technology & others automatically do .....	40
Issue #4 – that CRA risk controls aren’t working .....	41
Issue #5 – alternatives to refundable credits .....	41
<b>Recent CRA pronouncements.....</b>	<b>42</b>
SR&ED Lease Expenditures Policy – draft .....	42

## Recent SR&ED tax cases & related issue(s)

The past year has witnessed a release of a variety of smaller cases. The main issues and potential implications are outlined in the following pages. Copies of the judgments are available from the Tax Court of Canada's website.<sup>46</sup>

### Jentel – Illustrating “Technological Advancement” - lose<sup>47</sup>

#### Facts:

The appellant (Jentel) develops and manufactures engineered thermoformed plastic products.

In previous fiscal years, Jentel had developed Multi-Bins, a small-parts storage system.

The SR&ED work in question aimed to improve the existing product with respect to: size, weight, load, modularity & fastening methods.

Jentel grouped the work into four SR&ED “activities”:

- a. Bin Front and Back Panels
  - a. Tested “various” molding conditions
  - b. using 8 different plastic materials then
  - c. tested 2 plastics re. thickness vs. strength
- b. Stands
  - a. Built prototypes using combinations of wood, plastic & aluminum
  - b. Load tests showed aluminum best
- c. Sliders
  - a. tested “various” shapes and forms of sliders.
  - b. none worked satisfactorily
- d. Dividers
  - a. performed tests to mold a groove in the front panel
  - b. Including 3 molds,
  - c. each of different casting material &
  - d. “many” different groove designs
  - e. all failed to meet consistency

In respect to this work both sides agreed that,

- “contemporaneous records of this work were kept &
- the work was performed in a systematic manner.”

#### Issue(s):

Whether the work constituted SR&ED, as that term is defined in subsection 248(1) of the *Income Tax Act* (the “Act”).

The CRA argued that the,  
“Appellant failed to demonstrate a systematic investigation through experiment or analysis performed to resolve any scientific or technical uncertainties.”

#### Relevant legislation

##### Income tax act

**SR&ED** is defined for income tax purposes<sup>48</sup>, as follows:

“**scientific research and experimental development** means **systematic investigation** or search that is carried out **in a field of science or technology by means of experiment or analysis and** that is

(a) **basic research...**,

(b) **applied research... or**

(c) **experimental development**, namely, work undertaken **for the purpose of achieving technological advancement** for the purpose of **creating new, or improving existing,** materials, devices, **products or processes**, including incremental improvements thereto,...

#### Case law:

1) **CW Agencies:** In this case the judged noted,

“Five criteria have been used by the Courts to assist in determining whether a particular activity constitutes SR&ED ... (in **C.W Agencies**) summarized as follows<sup>49</sup>:

1. Was there a **technological risk or uncertainty** which could not be removed by routine engineering or standard procedures?
2. Did the person claiming to be doing SRED formulate **hypotheses** specifically aimed at reducing or eliminating that technological uncertainty?

<sup>46</sup> Tax Court of Canada website [www.tcc-cci.gc.ca]

<sup>47</sup> JENTEL MANUFACTURING LTD.,  
V. THE QUEEN, 2011 TCC 261

<sup>48</sup> in subsection 248(1) of the Act

<sup>49</sup> Federal Court of Appeal in *C.W. Agencies Inc. v. The Queen*, 2001 FCA 393, 2002, DTC 6740, paragraph 17

3. Did the procedure adopted accord with the total discipline of the scientific method including the formulation **testing and modification of hypotheses**?

4. Did the process result in a **technological advancement**?

5. Was a detailed **record of the hypotheses tested**, and results kept as the work progressed?

2) **Northwest Hydraulic**: “In discussing whether a **technological risk or uncertainty** existed, Justice Bowman (as he then was) noted the following in the **Northwest Hydraulic** decision at paragraph 16:

a. Implicit in the term “technological risk or uncertainty” in this context is the requirement that it be a type of uncertainty that **cannot be removed by routine engineering or standard procedures** ... If the resolution of the problem is **reasonably predictable** using standard procedure or routine engineering there is no technological uncertainty as used in this context.

b. What is “routine engineering”? It is this question, (as well as that relating to technological advancement) that appears to have divided the experts more than any other. Briefly it **describes techniques, procedures and data** that are **generally accessible to competent** professionals in the field.

### Analysis:

Having reviewed the;

- evidence provided by the appellant vs.
- the clear **requirement to illustrate “hypotheses”**
- the judge cited the obvious weaknesses
- the **claimant provided RESULTS (i.e. what worked)**
- rather than **CONCLUSIONS (i.e. why this worked better than the other options)**

### Ruling & rationale:

In this case the judge concluded,

“The argument fails for the simple reason that the **Appellant did not establish a prima facie case that it was attempting technological advancement.**”

### Implications and author’s commentary

We hate to say we told you so but our [SR&ED newsletter 2010-2 \(Technological Advancement Edition\)](#) outlined

- exactly how this scenario would unfold
- if/when the claimant omits ANY of the **5 criteria**,
- forming the basis of **“technological advancement.”**

We propose that;

- typically several specific performance objectives
- will “stack up” to create technology objectives
- that require we put forward hypotheses as to
- the “key variables” effecting the outcome.

Perhaps this case lacked sufficient technical specificity?

### **Resources NOT cited:**

CRA’s “Plastics Guidance Document” provides 18 examples of “eligible projects” within the, Plastics Materials, Processing, Equipment & Tool Making industries.

In the author’s opinion this paper provided multiple examples of “hypotheses” which represent “valid” technological uncertainties with this or similar fields of technology.

### **Re-Write- how this project MIGHT have qualified**

Using these examples & concepts we have taken the facts provided in the case and outlined this project under 2 scenarios ( **next page**):

- 1) A **failing application** (i.e. as viewed by the judge) &
- 2) **Recast to eligibility** by illustrating,
  - **“technological advancement” including,**
  - **“hypotheses and conclusions.”**

### **Notable quote:**

**“If it can't be expressed in figures, it is not science; it is opinion.”**

**- Lazarus Long / Robert Heinlein**

**Table 1 - Jentel – “What if?” = eligibility**

**Jentel - revisited using the RDBASE.NET suggested SR&ED project description structure**

	<b>ELIGIBILITY: WHAT IF:?</b>	<b>Negative indicators</b>	<b>Positive indicators of eligibility</b>
<b>I</b>	<b>PROJECT OBJECTIVE BEYOND STANDARD PRACTICE: (THINKING OUTSIDE THE BOX)</b>		
i)	<b>Benchmarking Existing technology: sources</b>	Relied on verbal representations of the company's owner regarding the state of existing technology.	Provided specific <b>evidence of known technology limits</b> via: articles, competitive products, expert opinions, patent searches, prior in house failures, blogs, etc.
ii)	<b>Objective(s)</b>	Testing of known plastic characteristics vs. known production techniques	Ideally we would provide <b>quantified objectives</b> such as cost, strength, weight, tolerances, failure rates.... which " <b>stack up</b> " to require " <b>experimentation</b> " in areas beyond "standard practice" (such as); 1) different configurations on measured structural integrity, 2) effects of plastic melting process conditions, 3) additive reagents &/or 4) modifying extrusion/forming techniques on produced plastic physico-chemical characteristics.
<b>II</b>	<b>TECHNOLOGICAL UNCERTAINTIES</b>	No alteration of process or formulations = comparative assessment of knowns	a " <b>matrix</b> " of <b>variables (parameters)</b> were identified for testing under different described conditions. <b>HYPOTHESES</b> = can we improve the existing predictive model for effects re: altered <b>temperature of melt, mix time, order of reagent addition, type of reagents, rate of cooling, etc.</b> influence on measured final plastic characteristics/parameters.
<b>III</b>	<b>EXPERIMENTATION (SYSTEMATIC INVESTIGATION)</b>	Focus on <b>RESULTS</b> (What happened?) <b>INSTEAD of CONCLUSIONS</b> (Why it happened?)	Provide evidence of " <b>testing or analysis</b> " to resolve <b>ANY</b> of the stated <b>VARIABLES of "technological uncertainty."</b>
<b>Jentel grouped the work into four SR&amp;ED “activities”: we have reproduced the first 2</b>			
	<b>1) Bin Front and Back Panels</b>	No alternate designs contemplated	<b>Analyzed or tested</b> effects of differing part geometries and structures on overall performance
	a. Tested “various” molding conditions	Tried the 3 methods used on other similar parts without understanding <b>WHY</b> they performed differently	<b>178 samples tested</b> to examine how the plastic melting process could be modified to optimize the combination of backpressure, altered max temperature, temperature profile in relation to mix time, mix speed, uniformity of the resin, melt & fibre distributions, order of reagent addition, etc. then <b>CONCLUDED why one better</b> (e.g. hi temp melt fibres proved optimal but only if we held max temp to 300 Deg C and increased mix time by 40% to ensure adequate fibre distribution)
	b. using 8 different plastic materials then	Used 8 different sheets without understanding <b>WHY</b> each performed differently	<b>Identified, analyzed or tested</b> expected causes of performance differences: e.g.. Viscosity, rheology, ...etc. A <b>CONCLUSION</b> would also help but it is <b>NOT</b> necessary to have on <b>EVERY</b> activity.
	c. tested 2 plastics re. thickness vs. strength	Testing to provide a "result" (e.g.. Plastic 1 is better) vs. a conclusion (i.e. why it's better)	<b>Analyzed or tested</b> thickness vs. strength vs. variables in the part design above for example: extrusion temperature, cooling time, humidity effects on embrittlement, flex or other characteristics (system uncertainty). <b>CONCLUDED</b> why one better (e.g. HDPE sample proved effective but required 17% more cooling time in order to maintain flex. We attribute this to a combination of the molding pressure and chemical effects of a new resin.)
	<b>2) Stands</b>		
	a. Built prototypes using combinations of wood, plastic & aluminum	Did mock-ups without a test matrix of alternatives & "extremely accurate measurements"	<b>Analyzed or tested</b> effects of differing part geometries (shape of parts, angles, thicknesses) vs. materials (specify gauges of metal, etc.) & fastening methods (clamping, adhesives, snap fit, ...)
	b. Load tests showed aluminum best	"load bearing strength" the only measured parameter	<b>Concluded</b> that a combination of 10 gauge polished aluminum had the optimum rigidity to support our newly designed plastic insert while maintaining price and load requirements.

## Responsible “SR&ED”- preparers & journalists

Recently the CRA identified the **an increase in ineligible claims** which it attributed largely to a recent appearance of a **new type of “rogue” SR&ED consultants** who urge ineligible clients to attempt SR&ED claims.

This was detailed in our prior [SR&ED Newsletter 2011-1](#) (page 9).

To further “sensationalize” this issue **the Globe and Mail** ran an article entitled, [Flawed R&D scheme costs taxpayers billions](#),<sup>50</sup> which, **in the author’s opinion**,

- a) Provided examples of specific (inappropriate) practices used by one of these Rogue consultants
- b) presented “opinions” which may mislead readers.

### Globe & Mail issue #1 - % of cost paid to consultants

The article stated,

“This year, **Ottawa and the provinces will dispense \$4.7-billion** to more than 20,000 Canadian companies.

**But a third or more of that cash is being wasted and paid to consultants** as a result of hazy rules on what’s legitimate R&D and limited government auditing resources,

**according to dozens of interviews** with consultants, claimants and government officials.”

### Notable quote:

**“Some people change their ways when they see the light; others when they feel the heat.”**

**- Caroline Schoeder**

### Additional sources of information:

Statistics on Compliance costs<sup>51</sup>;

A 1996 survey conducted by Industry Canada<sup>52</sup> (reproduced in table 2 below) quoted “total compliance” costs ranging from 30% for small firms to <1% for large firms.

An additional report from the OECD quoted “total compliance” costs ranging from 15% for small companies to less than 7% for larger companies.

**Table 2: Compliance Cost % of SR&ED Claim**

\$ Claimed	Cost as a % of Claim	
	Mean	Median
<\$200K	29.50%	14.60%
\$200K-\$1M	4.30%	2.90%
\$1-10M	2.80%	2.10%
>\$10M	0.90%	0.70%
All firms	9.10%	2.80%

### Author’s commentary:

The majority of SR&ED funds is paid to about 4,000 of the 20,000 total claimants. These represent “large” claimants who qualify for a 20% federal credit.

In the author’s experience these large and relatively sophisticated companies are unlikely to spend more than 5% of the credits received in consulting or compliance fees.

Consulting Fees of 30+% may exist in the “Qualified CCPC” market but, as illustrated by the chart below, this represents less than 1/3 of the total government tax \$ invested each year.

As a result the **author proposes the claim that 1/3 of the \$4.7 billion “wasted on consultants” somewhat dubious.**

It would be interesting to evaluate the sources of this information including how many “large claimants” were included in their sample.

<sup>50</sup> Globe & Mail, March 11, 2011 Link to article; <http://www.theglobeandmail.com/report-on-business/flawed-rd-scheme-costs-taxpayers-billions/article1939418/>

<sup>51</sup> [www.ic.gc.ca/eic/site/eas-aes.nsf/vwapj/wp06e.pdf/\\$FILE/wp06e.pdf](http://www.ic.gc.ca/eic/site/eas-aes.nsf/vwapj/wp06e.pdf/$FILE/wp06e.pdf)  
*Canadian Tax Journal* 1996 Vol. 43, No. 6

<sup>52</sup> MEASURING THE COMPLIANCE COST OF TAX EXPENDITURES: THE CASE OF RESEARCH AND DEVELOPMENT INCENTIVES, Industry Canada, 2006

**Table 3: Companies claiming SR&ED credits<sup>53</sup>**

	Credits Earned by Rate			By Number of Corporations			
	By Value of Credits - \$ millions			By Number of Corporations			
	Earned at 35% rate	Earned at 20% rate	Total credits earned	Earning at 35% rate	Earning at 20% rate	Earning Both 35% & 20% rates	Total corporations earning credits
2002	865	2,397	3,262	11,603	4,133	325	16,061
2003	954	2,238	3,193	13,418	4,309	339	18,066
2004	1,083	2,271	3,354	15,295	4,051	339	19,685

**Table 4: Comparing R&D funding by country<sup>54</sup>**

If we want to make a rough comparison of Canada's funding vs. other industrialized countries we can use a ration named the "Beta Index" ( B-Index).

It is calculated as:

the After Tax Cost of \$1 of R&D / (1- the tax rate)

Simply stated the:

B-Index = before-tax income needed to break even on one dollar of R&D outlay.

The lower the B-Index the more favorable it is for a company to perform R&D in a particular country.

As we can see from this comparative Canada does in fact have one of the lowest B-Indices however, **many countries provide other "direct" funding** instead of "tax incentives."

The OECD report provides a further comparison of the total % of "business expenditures on research & development" (BERD) which are financed by the government.

This table (Table 5 – figure 1) indicates that the Canadian government finances approximately 4% of total business research whereas most other countries are significantly higher (e.g France, US & UK are all >10%).

As a result it appears that the Canadian government is not nearly as generous as other countries in funding SR&ED. Despite this fact the SR&ED credit appears to have created a scenario where a smaller amount of funding is in fact creating a significant amount of SR&ED.

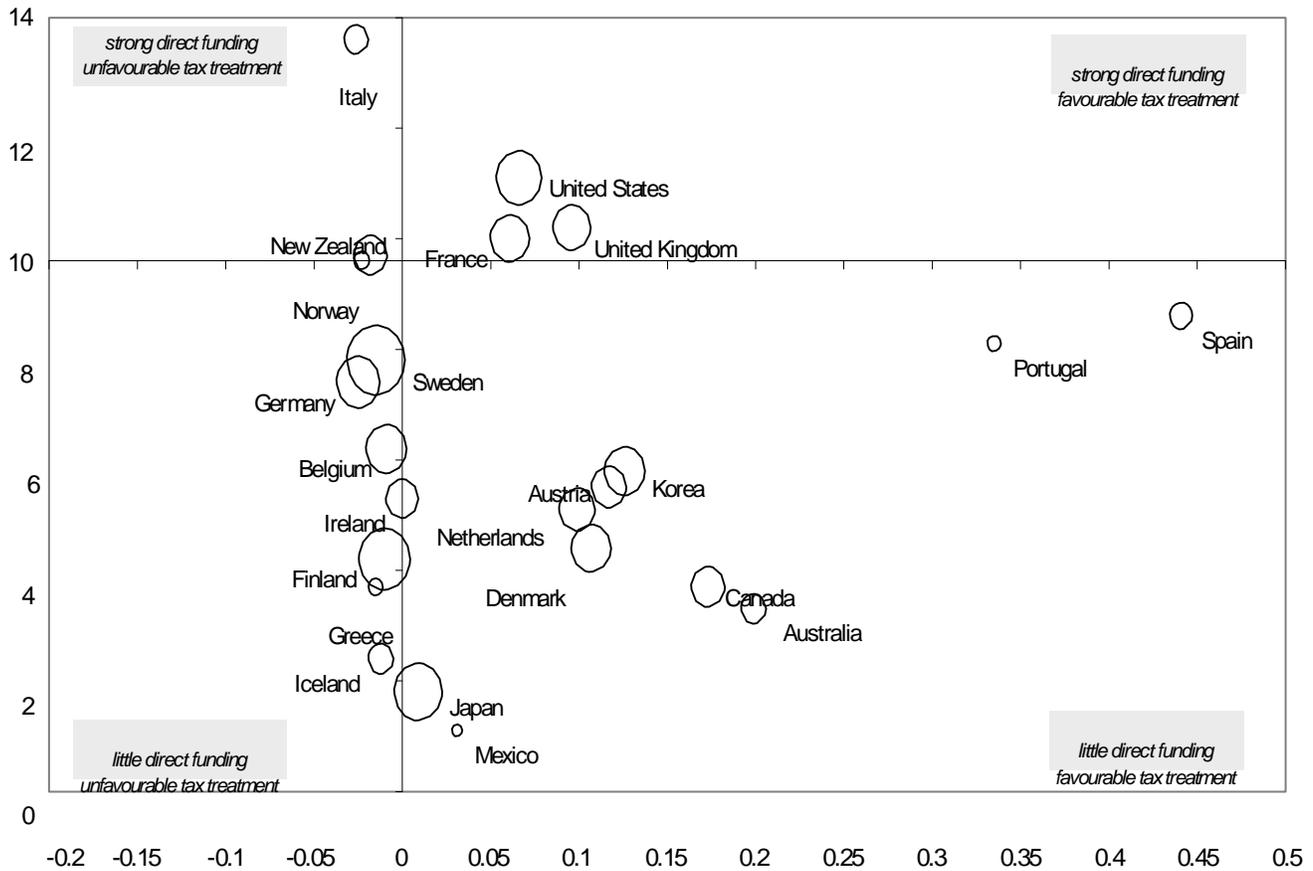
Comparing the value of B-indexes 2002		
(manufacturing companies, by country)		
Country	Large company	Small company
Australia	0.801	0.801
Austria	0.875	0.875
Belgium	1.009	1.006
<b>Canada</b>	<b>0.827</b>	<b>0.678</b>
Denmark	0.893	0.893
Finland	1.01	1.01
France	0.939	0.939
Germany	1.025	1.025
Greece	1.015	1.015
Iceland	1.012	1.012
Ireland	1	1
Italy	1.026	0.557
Japan	0.991	0.879
Korea	0.874	0.821
Mexico	0.969	0.969
Netherlands	0.901	0.647
New Zealand	1.023	1.023
Norway	1.018	0.768
Portugal	0.665	0.665
Spain	0.559	0.559
Sweden	1.015	1.015
Switzerland	1.01	1.01
United Kingdom	0.904	0.894
United States	0.934	0.934

<sup>53</sup> Tax Incentives for Scientific Research and Experimental Development, October 2007 consultation Paper, Department of Finance Canada

<sup>54</sup> TAX INCENTIVES FOR RESEARCH AND DEVELOPMENT: TRENDS AND ISSUES, OECD, 2002

**Table 5 - Direct and indirect government funding of business (OECD)**

Percentage of BERD financed by government, 2000 or latest year



Relative generosity of tax treatment (1 - B-index)

**Notes:**

The size of the bubble indicates the ratio BERD/DPI

B-Index = before-tax income needed to break even on one dollar of R&D outlay;

BERD = business expenditures on research and development ;

DPI = business value-added. Source: OECD.

**Notable quote:**

**“If it can't be expressed in figures, it is not science; it is opinion.”**

**- Lazarus Long / Robert Heinlein**

## Issue #2 – net “benefits” for every \$ of taxes

The Globe Article stated,

“The result, experts said, is that Canadian taxpayers are spending billions on a program that too often delivers little or no new R&D...”

In fact, the government's own studies have found the program generates almost no economic benefits.”

### Additional sources of information:

#### ‘1) Canadian Department of Finance

Finance Canada estimates for every dollar of assistance provided via the SR&ED ITC, there is a net economic gain of 11 cents.<sup>55</sup>

Thus, with about \$3.4 billion in assistance provided each year, the annual net economic gain is about \$370 million.

#### ‘2) In its report, the European Commission concluded,

- “One can say with some caution that fiscal incentives stimulate business R&D.
- It is difficult to evaluate the amount of additional R&D per unit of forgone public revenue.
- Evaluations show a positive, but moderate, level of additionality
- Additional potential R&D spillovers would strengthen the positive impact of any tax credit”

#### ‘3) In the 2002 report by the OECD<sup>56</sup> stated,

- “Depending on national circumstances, R&D tax incentives can be an effective instrument for inducing a certain degree of private sector research.
- Studies show that, depending on their design, tax incentives can **increase private research spending by an amount equal to the loss in tax revenue** on average.
- Most studies also find that **social returns to such R&D far outweigh private returns.**

<sup>55</sup> Parsons, Mark and Nicholas Phillips. “An Evaluation of the Federal Tax Credit for Scientific Research and Experimental Development.” Department of Finance Working Paper 2007-08. September 2007.

<sup>56</sup> OECD, *Tax Incentives for Research and Development: Trends and Issues* (2002) 25 (“OECD 2002 Report”); available at: <http://www.oecd.org/dataoecd/12/27/2498389.pdf>.

According to the 2006 OECD report, “Econometric studies find that;

- **social rates of return to R&D**
- **can be up to five times higher**
- **than private rates** of return..

The report sites these **social “spillovers”** of value since;

- ideas once produced,
- can diffuse widely and be used by
- other firms, industries & countries.

**Table 6: Comparing R&D payback per tax \$<sup>57</sup>**

OECD summary: Effectiveness of R&D Tax Credits			
Study	Estimated Elasticity of R&D to Tax Credit	Period of Analysis	Country
Australian Bureau of Industry Economics (1993)	-1	1984-94	Australia
McFetridge and Warda (1983)	-0.6	1962-82	Canada
Mansfield and Switzer (1985)	-0.04 to -0.18	1980-83	Canada
Bernstein (1986)	-0.13	1981-88	Canada
Bernstein (1996)	-0.14 (short run) -0.3 (long run)	1964-92	Canada
Mansfield (1986)	-0.35	1981-83	United States
Berger (1983)	-1.0 to -1.5	1981-88	United States
Bally and Lawrence (1987, 1992)	-0.75	1981-89	United States
Hall (1993)	-1.0 to -1.5	1981-91	United States
McCutchen (1993)	-0.28 to -1.07	1982-85	United States
Hines (1993)	-0.28 to -1.07	1984-89	United States
Nadri and Mamuneaus (1996)	-0.95 to -1.0	1966-88	United States
Bloom, Griffith and Van Reemen (1999)	-0.16 (short run) -1.1 (long run)	1979-94	G7 and Australia

#### Author’s commentary:

Though the Canadian government funding seems to represent a larger proportion of “tax credits” vs. other incentives, **MOST other countries provide other forms of “incentive” specifically for R&D (tables 4 & 5).**

Even though the studies show that there is approximately

- **“equal” economic payback** of tax \$ invested (**table 6**)
- in direct tax revenues **BUT**
- **another 500% social return** on this investment by way of **“spillovers!”**

Mathematically speaking the “full picture” **indicates up to 600% (economic + social) return of every tax \$ invested.**

<sup>57</sup> Ibid OECD 2002

### **Issue #3 – that certain industries don't advance technology & others automatically do**

- a) Could food & material sciences involve “technological advancement?”

The Globe Article stated,

“Money is often paid out to decidedly low-tech and routine manufacturing, such as

- baking gluten-free cake,
- making injection-moulded auto parts or
- growing potted roses.”

Author's commentary:

The Canada Revenue Agency has in fact

- [published sector-specific guides](#)
- containing examples of eligible work
- for EACH of these industries
- **because they may conduct eligible work.**

### **Notable quote:**

**“The essence of science: ask an impertinent question, and you are on the way to a pertinent answer.”**

**- Jacob Bronowski**

- b) Do other industries automatically qualify for “technological advancement?”

The Globe Article stated,

“Toronto-based iSkin Inc., which developed antimicrobial covers and wireless accessories for iPads and iPhones, recently ran into the CRA's get-tough policy.

The company applied for \$1.8-million in tax credits, but was **rejected** after an audit on the grounds that its work amounted to **routine engineering**.

“The act is vague to begin with, and interpretive,” complained Ron Juliani, iSkin's **director of business affairs**. “One company can get approved for something minor, while another like us, is summarily dismissed ... We should be the poster child for R&D, yet we're punished for it.”

There seems to be a **"mandate from the top" to reduce the number of claims**, whether they're legitimate or not, Mr. Juliani said.”

Author's commentary:

A number of companies assume that they “automatically qualify” due to the industry they are in.

In the article above we have an opinion from the **“director of business development”** that the system is “unfair.”

The author would be much more convinced if, **instead** the company provided representations from **the “director of research”** providing examples of specific technological **hypotheses** or advancements.

The author proposes that this company's SR&ED submission likely contained weaknesses similar to those illustrated in the Jentel case (earlier in this newsletter).

In the author's experience the **CRA;**

- **reviews** are based on **objective criteria &**
- **do not** attempt to reduce legitimate claims.

**Issue #4 – that CRA risk controls aren't working**

The Globe Article stated,

“The result is that CRA is rubber stamping large volumes of smaller claims that look legitimate because more thorough reviews are too costly and time consuming.

Meanwhile, many larger claims are being arbitrarily scaled back or rejected.”

Author's commentary:

In the author's experience the CRA risk criteria are effective at isolating the companies who do NOT meet the eligibility criteria.

While some of the smaller claims may require less detail the review criteria appears to be consistent.

**Issue #5 – alternatives to refundable credits**

The Globe Article stated,

“Mr. Hearn of Scitax suggested that **a better alternative to refundable credits for all companies would be a flow-through share scheme**, similar to those currently offered in the mining and resource sector.”

Author's commentary:

While the author does NOT claim to be an economist we propose that the following table provides a basic summary of the political and economic question to be addressed.

It summarized the pros & cons of;

- fiscal incentives (tax credits) vs.
- direct financial support (R&D grants),

reproduced as Table5.

**Table 5: Comparative R&D funding measures<sup>58</sup>**

<b>Direct Financial Support (Grants)</b>	<b>Fiscal Incentives (tax credits)</b>
More targeted	More neutral
- Social return >>> Private return	- Business knows better
	- Avoid picking winners
	- Market friendly
Better budget control	More predictable for
	Wider reach
	Administrative cost can be very low
	More accessible

**Notable quote:**

**“Celebrate what you want to see more of.”**

**- Tom Peters**

<sup>58</sup> B Van Pottelsberghe, S Nysten and E Megally, *Evaluation of Current Fiscal Incentives for Business R & D in Belgium* (Working Paper; Solvay Business School; Universite Libre de Bruxelles; 2003); available at: <http://www.belspo.be/belspo/stat/rap/fiscRDJune03.pdf>

## Recent CRA pronouncements

During 2011 the CRA release a series of 4 DRAFT policy papers.

- Salary & wages
- Capital equipment
- Leases &
- Shared use equipment

In the author's opinion these papers do not contain any significant changes. They do however, illustrate or clarify a few concepts which are worth highlighting.

### SR&ED Lease Expenditures Policy – draft<sup>59</sup>

#### 3.5 Meaning of “building”

**Building** is a broad term covering any structure with walls and a roof affording protection and shelter that is affixed to the land. For example, a mobile home would be considered a building if the wheels, the trailer hitch, brakes and emergency lights are removed and the unit is **affixed to cement pads on the ground and services**, such as hydro and water, are installed.

**Portable shelters** such as housing, office and other service units are regarded as buildings if they are **installed and intended to remain** in a particular location.

Property that is **attached to a building**, however firmly, is included in capital cost allowance (CCA) Class 8 if it is acquired exclusively for those purposes stated in CCA Class 8.

For example,

Concrete footings, foundations and structural steel exclusively for the support of machinery are regarded as CCA Class 8 property.

Stairs and platforms, the sole purpose of which is to provide access to machinery, also fall within CCA Class 8, whether they are attached to the building or the machinery.

#### **Bandwidth allowed as lease of equipment under proxy method<sup>60</sup>**

It may be difficult to determine whether the lease of **bandwidth is an overhead** expenditure covered by the proxy amount **or the lease of equipment**.

The Tax Court of Canada dealt with a similar issue in the case of *Data Kinetics*. In this case the claimant used the proxy method to calculate its SR&ED expenditures and included the cost to lease a dedicated telephone line and a mainframe located outside of Canada.

The Judge concluded that the amount represented the lease of equipment.

Applying the principles asserted in *Data Kinetics*, the cost associated with bandwidth would be allowed as a lease of equipment under the proxy method because it was dedicated for SR&ED.

#### Author's commentary:

Based on a quick read of this information it appears there may be **opportunities** to claim;

- **Structural costs related to SR&ED machinery &**
- **“leases” for bandwidth**

which may not have been claimed previously.

#### Notable quote:

**“I have made this letter longer than usual, only because I have not had the time to make it shorter.”**

**- Blaise Pascal**

<sup>59</sup> SR&ED Lease Expenditures Policy – draft released Mar 19, 2011

<sup>60</sup> Paragraph 4.3.1



## **SR&ED Newsletter** **Edition 2011-1**

Welcome to the first 2011 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>Recent SR&amp;ED tax cases &amp; related issue(s).....</b>	<b>44</b>
SPECTROL INC. – time extension for objection or appeal - win.....	44
SUNATORI – accruing wages payable – win + lose?.....	45
<b>Recent CRA Pronouncements .....</b>	<b>46</b>
SR&ED Filing Requirements Policy – DRAFT .....	46
Third-Party Payments Policy - DRAFT.....	48
SR&ED claim average CRA Processing Times .....	50
Potential for penalties to be levied on “frivolous” claims .....	51
T661 – Part B: More space for project descriptions (50/100 lines).....	52

## Recent SR&ED tax cases & related issue(s)

The past year has witnessed a release of a variety of smaller cases. The main issues and potential implications are outlined in the following pages. Copies of the judgments are available from the Tax Court of Canada's website.<sup>61</sup>

### SPECTROL INC. – time extension for objection or appeal<sup>62</sup> - win

#### Facts:

The Appellant had filed its 2003 and 2004 tax returns within the time specified

The assessment for 2003 was not issued until March 26, 2008 and the assessment for 2004 was not issued until May 7, 2008.

The President of the Appellant stated that the appellant did not receive the notice of assessments for 2003 and 2004 until after an inquiry was made in 2009.

Shortly after the Appellant received a copy of the notice of assessment for 2003 in April 2009, the Appellant filed the document which is stated to be a notice of appeal (to the Tax Court of Canada) rather than a Notice of Objection (to the Canada Revenue Agency).

#### Issue(s):

The CRA claimed it did not receive a notice of objection or an application for an extension of time to serve a notice of objection in relation to either assessment until May 5, 2010 – more than two years after the initial assessment.

#### Relevant legislation and analysis:

The procedure to follow if a taxpayer wants to object to an assessment (or a reassessment) is set out in the Act. Subsection 165(1) of the Act provides that:

“A taxpayer who objects to an assessment under this Part may serve on the Minister a notice of objection, in writing, setting out the reasons for the objection .... on or before the day that is 90 days after the day of mailing of the notice of assessment.”

The proper procedure to follow to request an extension of time to file a notice of objection is to make such request to the Minister, not the tax Court.

If the Minister refuses the application or 90 days have elapsed without a decision from the Minister, then (and only then) the taxpayer may apply to this Court to have the application granted to extend the time within which a notice of objection may be served.

In order to grant the Appellant's application for an order to extend the time to serve a notice of objection the requirements of subsection 166.2(5) of the Act must be satisfied.

The first requirement is that the application be made within one year after the end of the time period within which a notice of objection could have been served.

This condition was satisfied as the application was sent to the CRA in April 2009 and the one year time period referred to above would not have expired until June 2009 (which would be 90 days plus one year after March 26, 2008 - the date of the assessment for 2003).

#### Ruling & rationale:

The judge stated,

“It seems... more likely than not that the Appellant sent to the CRA in April 2009 the same document that was filed with this Court at that time.

Since this document was formatted and set up as a Notice of Appeal to this Court it could easily not have been recognized by the CRA as an application to extend the time to serve a notice of objection and hence not entered into their records as such.

It seems to me that it is just and equitable in the circumstances that the application be granted.”

#### Implications and author's commentary

In the author's opinion this case illustrates;

- a) the importance of understanding **the proper procedures for “objections” (to the CRA) vs. “appeals” (to the Tax Court) &**
- b) leniency of the courts if relevant information has been filed (even if improper in format).

<sup>61</sup> Tax Court of Canada website [www.tcc-cci.gc.ca]

<sup>62</sup> SPECTROL INC., v. THE QUEEN, 2010TCC390

## SUNATORI – accruing wages payable<sup>63</sup> – win + lose?

### Facts:

The Appellant was a professional engineer and the sole shareholder and employee of the company at all relevant times.

In its SR&ED claims the company paid the Appellant a salary on December 31 of each of the subject years as follows:

- i) \$44,000 for 2004;
- ii) \$46,000 for 2005;
- iii) \$48,000 for 2006; and
- iv) \$50,000 for 2007.

The method of payment of the salaries was by delivery of a cheque to the Appellant on December 31 of each of the subject years.

On the same day, the Appellant gave the company a cheque for the same amount as a loan.

Neither cheque was ever presented for payment but the Appellant believes the end result is that the salary was paid and the loan back was effected.

On the same day as these cheques were delivered, a determination was also made by the Appellant, in his personal capacity as a creditor, that the loan to the company was a bad debt.

The related EI and CPP withholdings and remittances were made by the company however, based on the fact that an ABIL<sup>64</sup> was claimed there were likely income taxes deducted.

### Issue(s):

Among several other issue the CRA questioned whether the loan was, “bona fide.” The result of this issue would have other tax implications including whether they were, “bad debts” (or ABIL) for income tax purposes.

### Relevant legislation and analysis:

The income tax act prevents a deduction or credit on any amounts which are “incurred” but never “paid.” This requires an “add-back” to income for any such amounts

which remain unpaid 180 days from the taxation year end.<sup>65</sup>

### Ruling & rationale:

Based on the scenario presented the judge commented that;

“I can only add in closing that it seems to me that the Appellant may have misunderstood any CRA suggestion **that salaries need not be funded in order to give rise to the targeted refundable investment tax credits.**

It is **the incurrence of the expense, not the payment of the expense that generates an SR&ED expenditure** that generates the refundable credits.

That is, the company need only have incurred the salary expenses on the accrual basis to obtain refundable credits.”

On this basis the judge did NOT allow the loans in question to be treated as ABIL’s.

### Implications and author’s commentary

In the author’s opinion, it does not appear reasonable that the company could claim the debt as “bad” the moment it was issued and continue this practice for 4 years in a row.

This case illustrates an “unfortunate” scenario where the taxpayer was unaware of the proper mechanism to accrue unpaid salary and wages via line 315 of the T661 form.

This strategy is discussed in further detail in our SR&ED newsletter 2004-1.<sup>66</sup>

### Notable quote:

**“Sometimes when you win you lose.  
Sometimes when you lose you win.”**

**- Anonymous**

<sup>63</sup> GO SIMON SUNATORI v. THE QUEEN, 2010 TCC 346

<sup>64</sup> ABIL - an allowable business investment loss

<sup>65</sup> ITA subsection 78(4)

<sup>66</sup> Newsletter 2004-1 available at;

[http://www.meuk.net/Newsletters\\_and\\_Publications.aspx](http://www.meuk.net/Newsletters_and_Publications.aspx)

## Recent CRA Pronouncements

On December 1, 2010 the following 2 draft documents have been posted for feedback on the CRA Web site. The deadline for such feedback was January 15, 2011.

We have provided excerpts and commentary on what we feel to be the most relevant sections.

## SR&ED Filing Requirements Policy – DRAFT<sup>67</sup>

In order to earn an ITC, a claimant **must**;

- **file a prescribed form**
- **containing prescribed information**
- in respect of an ITC amount, earned on an outlay, expense, or expenditure for SR&ED,
- on or before the day that is 12 months after the claimant's income tax return filing due date
- for the year in which the expenditure was incurred.

A claimant must also have met the filing requirements for SR&ED expenditures before an ITC can be earned.

**Form T661** is the **prescribed form** for the purposes of determining **SR&ED expenditures**.

**Schedule T2SCH31** is the **prescribed form** for corporations to claim **SR&ED ITC's**.

**For Form T661, Schedule T2SCH31, or Form T2038(IND), the CRA proposes that;**

- **prescribed information means**
- **the information requested**
- **on the prescribed form.**

### Other “potentially” prescribed forms

**Prescribed information will also include any attachments** or schedules necessary to provide the information requested on Form T661, including, **if applicable, forms T1145, T1146, T1174, and T1263. Briefly, these are for;**

•Form T1145, Agreement to Allocate Assistance Between Persons Not Dealing at Arm's Length for (SR&ED)

•Form T1146, Agreement to Transfer Non-Arm's Length (SR&ED) Expenditures

•Form T1174, Agreement Between Associated Corporations to Allocate Salary or Wages of Specified Employees for (SR&ED)

•Form T1263, Third-party payments for Scientific Research and Experimental Development (SR&ED)

•Schedule T2SCH49, Agreement Among Associated Canadian-Controlled Private Corporations to Allocate the Expenditure Limit

### Date received

- **Hand-delivered** claims will be considered filed on that day.
- **First-class mail** considered filed on the date of the postmark. If reporting deadline **Saturday, Sunday or a statutory holiday**, extended to **next business day**.
- **E-file<sup>68</sup>**: filing date established **when electronic signature validated**. It will remain in effect as long as
  - **any errors** in transmission are **corrected** & the filer retransmits the return
  - **within five business days**.
  - **If > five business days** to successful validation, the filing date is **date confirmation number** issued.

### Implications and author's commentary

The proposed requirements include **ALL fields of ALL relevant forms to be completed in ALL cases!**

In the author's opinion, **if these rules are enforced narrowly** they could result in the denial of many “valid” claims in which the company has not submitted information within the 18 month corporate filing deadline.

Examples of **problem areas** might include:

- Project descriptions – what if information on;
  - o only 2 of the to 3 employees was listed on one of the projects
  - o the business number of one of the subcontractors or collaborators was omitted?
  - o Would you lose on the costs for the project, the subcontractor or perhaps the entire claim?

<sup>67</sup> Available for download at:

<http://www.cra-arc.gc.ca/txcrdt/sred-rsde/pblctns/ntr-sr0912b-eng.html>

<sup>68</sup> CRA's Corporation Internet Filing service

#### Examples of **problem areas (ctnd.):**

- Paper copies of attachments: examples include;
  - o the signed directors resolutions which
  - o accompany forms T1145, T1146 & T1174.
  - o What if the returns are e-filed on time but the resolutions are not acknowledged as “received” on time?
- Lack of awareness (claimant): examples
  - o If “proxy” method for overhead allocation must calculate the “proxy cap” based on total, non-prescribed expenses.
  - o The limit for wages of a specified employee's is 5 x YMPE<sup>69</sup>. must be allocated among the associated group. Form T1174 provides this information and **thus must be filed** with Form T661.
  - o What if these were missed?

In the author’s experience **the CRA tends to frown** on claims which are not filed with the original tax returns (i.e. as **amendments**) particularly as they approach the **18 month** corporate filing deadline.

As a result it would not be surprising to see a large number of the claims filed beyond the 15 month “safe filing deadline” to be rejected for “completeness” issues.

#### **Additional clarifications via Q&A [summarized]:**

##### Question 2 – file claim without tax return

What happens when an SR&ED claim is filed without an income tax return?

Response: Claimant will meet the filing requirements for SR&ED expenditures & ITC, but processing of claim delayed until income tax return filed.

##### Question 6 – “safe filing deadline”<sup>70</sup> (90 days early)

When does an SR&ED claim need to be filed in order for the CRA to review and advise the claimant of any deficiencies in the SR&ED claim?

Response: If an SR&ED claim is filed at least 90 days before the reporting deadline, the CRA should have sufficient time to advise the claimant of any deficiencies in the claim.

##### Question 7 – will all or part of claim be denied?

Will the CRA disallow the entire claim for not meeting the filing requirements?

Response: [Example] A claimant has filed expenditures for 25 projects, but supplied the project information for only 20. The other relevant prescribed information was provided.

The CRA will not disallow the entire claim.

- The CRA will **not accept any information** with respect to **the five missing projects** after the reporting deadline, and all the associated costs will not be allowed as SR&ED expenditures.
- The relevant prescribed information for the **other 20** projects was provided by the reporting deadline and the **CRA will accept this portion** of the claim.

#### **Implications and author’s commentary**

Based on the responses above it seems that;

- issues which can be **isolated to the “project” level** (i.e. Part 2 of form T661) may only jeopardize the eligibility of those projects whereas,
- issues at the **claim level** (e.g. list of contact persons, fax numbers, number of projects claimed, etc.) could jeopardize the entire claim.
- It would be in every claimant’s interest to **file the SR&ED claims within the “safe filing deadline”** to earn a “second chance” to provide missing information.

<sup>69</sup> the year's maximum pensionable earnings

<sup>70</sup> Term developed by MEUK Corporation defined as 90 days of the SR&ED filing deadline

## Third-Party Payments Policy - DRAFT<sup>71</sup>

Some of the most significant clarifications are:

### Eligible types of entities (to perform work)

- A entity – Corporations resident in Canada;
- B-F entity – Approved associations, universities & non-profit research corporations.

### Payments must be for SR&ED

- To be considered as a third-party payment, a payment made by the claimant must be for the purposes of SR&ED.
- The **claimant's obligation is to show** that the payments are **made for SR&ED**.
- Third-party payments must be made only for SR&ED work. When a payment is made for a **combination of SR&ED work and non-SR&ED work**, the payment **would not qualify** as a third-party payment.
- An exception to this rule in “research chairs,” where a portion of a payment for SR&ED is allowed.

### Types of third-party payments that qualify

Payments could be direct financial contributions, funding of students or employees doing the SR&ED, or payments in kind.

#### Payments in kind

If property or a service is supplied for the prosecution of SR&ED, a claimant may be able to claim the **fair market value** as a payment. There are two issues to consider for payments of this nature:

#### 1) Valuation of the property or service provided

The **claimant is responsible** to provide evidence indicating the fair market value of the property or service.

#### 2) Conditions under which property or service provided

The property or service [should] be provided to the university or college, without any conditions involving direct or indirect payments back to the claimant.

Where payments in kind involve property or services that are provided conditionally, the amount that may be claimed will be determined on a case-by-case basis.

#### 3) Cost of a building

In general, a claimant cannot claim the cost of a building for SR&ED unless it is a, “prescribed special-purpose building.”<sup>72</sup>

However, there are **exceptions where** third-party payments;

- to certain recipient entities
- may be used to **acquire a building, a leasehold interest in a building or,**
- to pay an amount in respect of the **rental expense**
- as long as the building is to be committed **solely for SR&ED in Canada.**

### Author's commentary: Provincial vs. CRA definitions

In the author's opinion there is a significant problem with the determination of eligible type B through F entities.

For example, the **Ontario OBRI approved list vs. CRA approved entities are inconsistent.**

- eg. Mount Sinai Hospital and 20+ other institutions are listed as eligible Ontario Business Research Centres
- but NOT listed as federal (CRA) approved entities

In the author's experience the administrators of these institutions are themselves confused on how these situations came about and how best to resolve them.

In the author's view one of the main benefits of harmonization would be the elimination of such “double standards” and “ambiguities.” As a result this should be standardized.

<sup>71</sup> sr0912b-eng THIRD PARTY PAYMENTS DRAFT DEC. 1, 2010

<sup>72</sup> ITA Regulation 2900(3)

Characteristic	Third-party payment	Contract expenditures for SR&ED performed on the claimant's behalf
<b>Control of SR&amp;ED</b>	Performer	Payer
<b>Rights</b>	Non-exclusive (generally published) but preferential right to exploit results is required	Exclusive
<b>Number of funders</b>	Usually more than one payer	Usually limited to one payer
<b>Type of SR&amp;ED</b>	Often basic or applied research	Commercially focused
<b>Tax treatment</b>	Generally cash basis	Accrual

### Third-party vs. Contract expenditures for SR&ED

The paper proposes the following distinctions:

#### 1) Control

- Payments are generally made to **contractors for tasks** or pieces of work. In such cases, the **claimant** rather than the contractor **would control** the work.
- For **third-party payments**, the **claimant generally does not control** the work performed.

#### 2) Rights (vs. results)

- **In a contract situation**, SR&ED services are performed for a **payer** who **receives the rights** to the SR&ED. The entitlement to the SR&ED tax incentive occurs at the time the SR&ED is performed.
- In comparison, a third-party payment situation gives the **payer entitlement only to the results** of the SR&ED.

#### 3) Tax treatment

- with the exception of payments to an A entity
- third-party payments become eligible for the SR&ED at the time the payment is made (cash basis), rather than at the time the SR&ED is performed (accrual basis)

### Implications and author's commentary

In the author's opinion there are still **several situations** where the determination of **"subcontractor" vs. "third party"** payment is **unclear**.

An example might be;

- a software developer being
- paid by a machinery developer
- to provide code to control a machine more accurately.

In this case,

- Arguably the software developer controls the work &
- The machinery developer may only receive results (eg. Perhaps ideas why it did not work).

1. Would such a scenario be a "third party payment?"
2. How much weight does the criteria related to "multiple funding" parties weigh against the other criteria?
3. What if you file as a third party payment and the CRA challenges this position beyond the 18 month corporate filing deadline?

## SR&ED claim average CRA Processing Times

April 1, 2010 to December 31, 2010

<b>Type of Claim</b>	<b>CRA Success Rate</b>	<b>Average Days within CRA's control</b>	<b>Average Days outside CRA's control</b>	<b>Total Average Time (days)*</b>
Refundable claims 120 Days	96%	39	29	68
Refundable claimant- adjusted claims 240 Days	97%	100	43	143
Non-Refundable claims 365 Days	97%	96	91	187
Non-Refundable claimant- adjusted claims 365 Days	96%	145	126	271
All claims	97%	69	48	118

In January 2011, the CRA released the results, to the end of 2010, of its ability to deliver the SR&ED credit against its service level standards. The CRA's service level standards for the SR&ED program are as follows<sup>73</sup> from receipt of a complete claim:

- (1) Refundable claims -- 120 calendar days
- (2) Non-refundable claims -- 365 calendar days
- (3) Claimant-requested adjustments to refundable claims -- 240 calendar days
- (4) Claimant-requested adjustments to non-refundable claims -- 365 calendar days

## Implications and author's commentary

While it appears that the CRA is fairly consistent in meeting its stated standards (95+% of the time) it is also important to understand what these numbers do NOT tell us:

- how many claimants are assessed in less that 10 days?  
We have witnessed several clients (who e-filed returns) being assessed within 48 hours!

- how many claimants correspondingly waiting the full 120 or 240 days? Does this vary in relation to the size of the claims?

### **Notable quote:**

**“The most important thing in communication is to hear what isn't being said.”**

**- Peter Drucker**

<sup>73</sup> Source CRA 2010Annual Report to Parliament

## Potential for penalties to be levied on “frivolous” claims

During the CRA’s Ontario Region - 14th Annual Tax Practitioner Information Session, Jan. 12, 2011 - Royal Botanical Gardens the CRA proposed that;

- a) there has been a increasing number of claims filed without any supporting documentation available
- b) when the claimant is prompted for more information the claim is being withdrawn &
- c) the CRA feels that it’s resources are being unduly wasted.

As a result they are proposing to begin charging both claimants and claim preparers with “penalties” for misfiling.

Though the CRA did not get into details as to the level of penalties they are contemplating, we felt that it would be worthwhile to outline the typical levels of penalties contemplated within the income tax act.

### Penalties to taxpayers & preparers:

Section 163 of the income tax act outlines a series of penalties which can be levied by the CRA for “False statements or omissions.”

It provides for **penalties to both the person signing the tax return and to any “third party advisors”** which may have assisted in the “misrepresentation.”

These **penalties** are fairly broad and **start at**

- **25% of the credits obtained or claimed** <sup>74</sup>

**Plus additional penalties upon conviction:**

- **up to 200% of the credits claimed &/or**
- **imprisonment for a term not exceeding 2 years!** <sup>75</sup>

### Implications and author’s commentary

In the author’s opinion the;

- **2010 (e.g. e-filing) and**
- **2011 changes** (completeness requirements, penalties, etc.)

represent the **most significant** changes in the **history of the SR&ED program!**

It is becoming clear that there is a “tightening” of the program to the point that;

- **claimants with strong SR&ED tracking systems will benefit** while
- **those lacking** these systems will soon be “**extinct!**”

### Notable quote:

**“Do or do not. There is not try!”**

**- Yoda**

<sup>74</sup> ITA 163 (various subsections)

<sup>75</sup> ITA 239(1.1) Offences and Punishment

## **T661 – Part B: More space for project descriptions (50/100 lines)**

Beginning Nov. 25, 2010 there is more space provided on the electronic versions of the income tax returns for T661 Part 2 “Project information.”<sup>76</sup>

In accordance with the new CRA requirements, changes have been made to increase the maximum number of lines ... from 35 to 50 or from 70 to 100, in the Section B fields as follows:

- 240 (standard practice/objectives) - 50 lines
- 242 (technological uncertainty) - 50 lines
- 244 (investigation & conclusions) - 100 lines

Similarly, for those claimant who opt to use the Section C “Basic or Applied Research” format

- 250 (advancement) - 50 lines
- 252 (investigation/ conclusions) - 100 lines

On the paper copy, the lines have been numbered so you can more easily ensure that your text does not exceed the maximum limit.

## **Implications and author’s commentary**

Remember that each one of these lines can contain a maximum of 78 characters.

Furthermore the **word limits (350 & 500) are still in place!**

In this author’s opinion this is a **positive step** which will;

- **allow claimants to provide data in table format (where appropriate)**
- **without unduly restricting them to less than the allotted word limits (350 / 500).**

This was often the case in prior claims where claimants explained data in a tabular format with the result that they;

- used up so much space that the actual word count was <50% of the prescribed 350/500 word limits &/or
- they were forced to condense the data to a point where it became difficult to read.

---

<sup>76</sup> Nov 25th, CCH Taxprep 2010 v2.0 releaseotes :  
<http://tc.cch.ca/cchservices/download/files/documents/TXP/RNTXPT2201020EN.pdf>



## SR&ED Newsletter 2010-3

Welcome to the third 2010 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

- I) Recent CRA pronouncements**..... Error! Bookmark not defined.
- A) Technical review guides – versions for CRA staff & for claimants **Error! Bookmark not defined.**
    - i) Claim Review Manual for CRA R&T Advisors ..... **Error! Bookmark not defined.**
    - ii) SR&ED Technical Review: A Guide for Claimants..... **Error! Bookmark not defined.**
  - B) New Guide to form T661 ..... **Error! Bookmark not defined.**
    - Evidence types from page 40 of new form t4088-10e (next page)... **Error! Bookmark not defined.**
- II) Federal SR&ED Legislation** ..... Error! Bookmark not defined.
- A) New proposals: Aggressive tax planning - reporting of “contingent fees” **Error! Bookmark not defined.**
    - Potential implications to SR&ED claim preparers..... **Error! Bookmark not defined.**
  - B) Prior proposals status at June 30, 2010..... **Error! Bookmark not defined.**

## **D) Recent CRA pronouncements**

Recently the **CRA** has released a series of new documents related to conduct of “technical reviews.”

The first of these guides (the Claim Review Manual) is intended to be used internally by CRA staff.

The second (SR&ED Technical Review: A Guide for Claimants) aims to provide claimants with an outline and planning recommendations to streamline key components of the review process.

### **A) Technical review guides – versions for CRA staff & for claimants**

#### **i) Claim Review Manual for CRA R&T Advisors**

The Claim Review Manual for Research and Technology Advisors is a new SR&ED internal procedural manual.

Effective June 1, 2010, the Claim Review Manual and The SR&ED Technical Review: A Guide for Claimants (Draft) cancel and replace the Guide to Conducting a Scientific Research and Experimental Development Review Part 1: The Technical Review dated January 14, 2000.

The Claim Review Manual is written for Research and Technology Advisors (RTAs) and outlines their requirements concerning review procedures.

#### **ii) SR&ED Technical Review: A Guide for Claimants**

The SR&ED Technical Review: A Guide for Claimants (Draft) is a concise version of The Claim Review Manual. However, it is written from the perspective of the claimants who would like an overview of the claim review process to help them better prepare for the technical review.

The SR&ED Technical Review: A Guide for Claimants (Draft):

- i. **summarizes the procedural steps** that an RTA is expected to follow in completing a technical review, when a claim is selected for a detailed technical review;
- ii. **outlines how RTAs will work** with claimants and how claimants can work with RTAs during the review process;
- iii. **identifies best practices** that claimants and RTAs can adopt to ease the review process.

### **Some key items**

In the author’s opinion some of the most relevant sections of this paper include;

#### **Recording of meeting with CRA**

Requests by a Claimant to Video or Audio Record Although claimants and their representatives may take notes during a meeting, **the RTA must not consent** to being recorded by any video or audio recording equipment.

If the RTA discovers that the claimant is recording a meeting, **they must immediately terminate the meeting**, and inform the claimant that CRA management will be in contact with them to discuss the issue and make other arrangements.

#### **Timing of reviews**

When planning the review, note that the time allotted is for the complete review, not just the technical review. **The RTA should complete their work early enough to allow sufficient time for the FR** to review the SR&ED Review Report, perform the financial review of expenditures claimed, prepare the Proposal Package, and for the TC to complete the (re)assessment.

#### **Documentation by CRA reviewers**

The T2020 form is used as a general-purpose log or diary used by all CRA staff to record all conversations, decisions and actions concerning the file.

TF98 file A file folder for keeping all the information related to the Technical review.

The top page of the TF98 file is the Table of Contents/Index, which is a chronological list of every document in the file. Each document is identified by date and number of pages, a brief (one or two line) description and the source of the document;

#### **Records of Communications**

It is recommended that the T2020 form be used as a universal log or diary for this purpose, so that any subsequent reader/user has a single source to identify events that occurred during the review.

## Communication by reviewers

The RTA is not required to give premature decisions. If the RTA cannot provide a decision at the end of the site visit, then they should at least give the claimant an outline of the next steps and the time frame within which a decision can be expected.

The RTA may also remind the claimant that they will have an opportunity to address any concerns that arise because of the detailed analysis, or if anything arises because of the parallel financial review.

## Avoiding disputes

Ask the claimant to explain their concerns. If the claimant is upset, allow them to express themselves without arguing with them or raising your voice.

Listen and calmly try to bring the discussion back to the facts at hand such as what was done rather than opinions. If the discussion becomes heated, suggest that a short break be taken so that the claimant's concerns can be discussed in a productive manner.

When you speak, do so calmly and try to ensure that the discussion centres on facts rather than opinions. For example, explain what information you require to resolve issues as the first step and why.

One of the most effective ways of dealing with disputes is to engage in practices that prevent disputes from occurring in the first place.

According to the results of an internal national survey of RTAs, (Advisors) RTMs (Managers) and ADs, (Assistant directors) there was an overwhelming consensus that **open, early and effective communication was the key to preventing or resolving disputes.**

## Leads to Other CRA Programs

A lead is information in any form that identifies potential non-compliance activities and indicates that an audit may be required.

The RTA does not have a mandate to be familiar with or look for potential non-compliance activities in areas outside the SR&ED Program. However, **if the RTA, incidentally to their work, identifies questionable items, inconsistencies or noncompliance outside the SR&ED Program, the RTA should inform the FR and RTM.**

## Active Objections

### Objections for a Prior Year:

Depending on the nature of the issues under objection, one of the following **three options** may apply:

1) **If no issues** or projects relate to the objection, the review can **proceed normally**

**If some issues or projects relate to the objection**, the claimant should be given these two options:

2) **Delaying the entire review** until the Appeals decision(s) are available. In this case, a delay code would be added OR,

3) Review the issues and projects not affected by the objection and **treat the affected issues the way they were earlier treated by the RTA.** The claimant would be informed that after the assessment they could then file an objection for the disputed work.

Similar recommendations are in place for treating disputes on the current vs. prior year (i.e. assess on agreed amounts and allow client to object to unresolved issues).

In the author's opinion the **potential for small issues to delay subsequent year claims is a serious issue** to consider when contemplating the **"true cost" of an objection or appeal.**

## B) New Guide to form T661

The CRA also recently update the guide for the T661 form. In substance this guide is similar in content to the prior version with a few minor changes.

In the author's opinion the most useful of these is the detail on how the various types of "supporting documentation" apply across the various sections of the claim. This table could prove useful in identifying any "weak" points of the submission.

### Evidence types from page 40 of new form t4088-10e (next page)

**Chart - Evidence types from page 40 of new form t4088-10e**

## II) Federal SR&ED Legislation

### A) New proposals: Aggressive tax planning - reporting of “contingent fees”

Recently a Department of Finance press release<sup>77</sup> dated May 7, 2010 has several proposals which **may require SR&ED claim preparation services done by “contingent fees” to require additional reporting to the CRA.**

#### **Reportable transaction**

Under these proposals, a reportable transaction would be a transaction entered into by or for the benefit of a taxpayer that is **classified within the existing definition of an “avoidance transaction” and that bears at least two of the following three hallmarks:**

1. A promoter or tax advisor in respect of the transaction is entitled to **fees that** are to any extent ◦attributable to the amount of the tax benefit from the transaction;
  - contingent upon the obtaining of a tax benefit** from the transaction; or
  - attributable to the number of taxpayers who participate in the transaction or who have been provided access to advice given by the promoter or advisor regarding the tax consequences from the transaction.
2. A **promoter or tax advisor** in respect of the transaction requires **“confidential protection”** with respect to the transaction.
3. The **taxpayer** or the person who entered into the transaction for the benefit of the taxpayer **obtains “contractual protection”** in respect of the transaction (otherwise than as a result of a fee described in the first hallmark).

#### **Application date**

These proposals, as modified to take into account the public consultations, would apply to avoidance transactions entered into after 2010, as well as avoidance transactions that are part of a series of transactions that commenced before 2011 and was completed after 2010.

## Definitions

The following are general descriptions of definitions that would apply for the purpose of these proposals.

#### **Avoidance Transaction**

The existing definition of an “avoidance transaction” for the purposes of the General Anti-Avoidance Rule (GAAR) in the Income Tax Act would apply. Therefore, an avoidance transaction would mean any transaction

- that, but for the GAAR, would result, directly or indirectly, in a tax benefit, unless the transaction may reasonably be considered to have been undertaken or arranged primarily for bona fide purposes other than to obtain the tax benefit...

#### **Confidential Protection**

A “confidential protection” with respect to a transaction would **mean any limitation on disclosure to any other person, including the Canada Revenue Agency**, that is placed by a promoter or tax advisor on the taxpayer, or on a person who entered into the transaction for the benefit of the taxpayer, in respect of the details or structure of the avoidance transaction that give rise to any tax benefit.

This would not extend to a requirement that the advisor’s professional liability exists only towards the taxpayer in the capacity of client and according to which a third party may not, for its own purposes, rely on the opinion given by the advisor to the client.

#### **Contractual protection**

A “contractual protection” with respect to a transaction would mean **any form of insurance** (other than standard professional liability insurance), indemnity or compensation that

- protects against a failure of the transaction** to result in any portion of the tax benefit being sought from the transaction;
- pays for or **reimburses any expenses** to be incurred in respect of a tax benefit arising from a transaction; **or**
- is intended to **guarantee a return of, or in respect of, the cost of any property acquired** by the taxpayer in the course of the transaction.

<sup>77</sup> Press release and Backgrounder are also available on the Department of Finance Canada Web site at <http://www.fin.gc.ca/n10/10-043-eng.asp>

## **Potential implications to SR&ED claim preparers**

Arguably undertaking SR&ED claims on a contingent fee basis will continue to **be exempt from reporting**, provided that there is no;

- “avoidance transaction,” **or**
- confidentiality agreement **&**
- contractual guarantees involved.

Interpreting if and when these provisions might apply has created concern among the SR&ED preparation community.

For instance- what if the company purchase and asset on the assumption they will earn the related SR&ED ITC's? Under what, if any, circumstances might this be considered a “contractual protection?”

Currently there are inquiries to the Department of Finance to determine whether SR&ED claim preparation services would be “typically” included or exempt.

In the author’s opinion, given that the specific contracts for such services can vary it will likely require some general guidelines and examples of “reportable” vs. “non-reportable” transactions and the application of such criteria will likely require professional judgment.

The form for reporting is to be developed and released by the CRA after discussions. Comments may be submitted to the Tax Legislation Division at the Department of Finance at [consultations245@fin.gc.ca](mailto:consultations245@fin.gc.ca).

### **Notable quote:**

**“The greatest danger for most of us is not that our aim is too high and we miss it, but that it is too low and we reach it.”**

**- Michelangelo**

## **B) Prior proposals status at June 30, 2010**

Generally speaking the current form T661-E(10) contemplates that all proposed legislation pre-2008 has been passed.

In reality many of these proposals are still awaiting Royal Assent to become law. A list of such proposals and related status is provided on the following page.

The following table tracks the progress of outstanding federal draft legislation amending the Income Tax Act (ITA) that impacts on the Scientific Research and Experimental Development (SR&ED) Program.

Former Bill C-10 ceased to exist with the dissolution of the 39th Parliament on September 7, 2008, and has not presently been reintroduced to the 40th Parliament.

Despite this fact the CRA will administer the proposed amendments as if they are law.

### **Implications to claimants**

While most issues seem to be in the clients interest to follow there are select items in which a claimant may choose not to follow the CRA’s direction.

An example might be claims for “stock option benefits” which technically have been ineligible since November 2005 however, as illustrated on the following chart, this legislation is not in force.

### **Author’s commentary**

Sadly the long delays in passing much of this legislation is due to the fact that it becomes parceled into bills which cannot be passed due to other “non –SR&ED” related proposals.

As such, in the author’s opinion, the failure to pass this legislation is less due to acceptance by our elected officials as much as the inefficiencies we have structured into passing new laws under our current political system.

### **Notable quote:**

**“There are many things of which a wise man might wish to be ignorant.”**

**- Ralph Waldo Emerson**

## Federal Legislative Proposals Status as of June 30 ,2010

Provision	Description
37(8)(a)(ii)(B)(V) "Materials transformed" can now be claimed under the proxy method.	<b>Materials under the proxy method</b> Under the proxy method, the phrase "materials consumed" is changed to "materials consumed or transformed." Also, there reference in the French version of subclause 37(8) (a)(ii)(B)(V) to "materiel" is changed to "materiaux" in the ITA. Effective Date: For costs incurred after February 23, 1998.
127(27)(b),(c),(e),(f) Originally part of the December 20, 2002 Notice of Ways and Means Motion.	<b>ITC can be recaptured on unpaid shared use equipment (SUE)</b> Technical amendments include having an ITC recapture on a property even though the expenditure for the property was unpaid; this include SUE. Also for the purposes of ITC recapture, "cost" was amended to "cost or a portion of costs" and there was clarification for the calculation of ITC recapture on first-term SUE and second-term SUE. <b>Effective Date: For dispositions and conversions that occur after December 20, 2002</b>
<b>New section 143.3</b> Stock option benefits can no longer be an expenditure.	<b>Stock option benefit denial of expenditure</b> The value of an option granted by a taxpayer is not considered to be an expenditure for income tax purposes. Also, the increase between the option price and the exercised share price is not an expenditure per paragraph 143.3(3)(b). Original release Technical Notes: 2005-08 <b>Effective Date: November 17, 2005</b>
<b>New subsection 220 (2.2)</b> Requests for ministerial discretion to file the prescribed Form T661 or prescribed information past the 18 months can no longer be considered.	<b>Removal of subsection 220(2.1) discretion</b> Under proposed subsection 220(2.2), subsection 220(2.1) does not extend to a prescribed form...or prescribed information filed on or after the day specified in subsection 37(11) or paragraph (m) of the definition of "investment tax credit" in subsection 127(9). The effect of new subsection 220(2.2) is that a person cannot deduct an SR&ED expenditure under section 37, or claim an investment tax credit in respect of an expenditure, if the person takes more than the additional 12 months allowed to make a claim with the Minister. Original release Technical Notes: 2005-080 <b>Effective Date: November 17, 2005</b>
<b>248(1)</b> Definition of Scientific Research and Experimental Development (SR&ED), French version of the ITA	<b>"Engineering"</b> work is among the work listed in paragraph 248(1)(d).The French version of paragraph (d) of the definition is <b>changed to refer to "travaux de génie" instead of "travaux techniques."</b> It was never intended for there to be a difference between the English and French versions of the ITA. <b>Effective Date: Upon Royal Assent</b>
<b>2902(e)</b>	The provisions of paragraph 2902(e), defines a <b>prescribed expenditures</b> to include, among other things, an expenditure for SR&ED where a claimant received or was entitled to receive a reimbursement. The proposed amendments to paragraph 2902(e) are consequential to the amendments to the <b>definition of "contract payment", in subsection 127(9), which renders the provisions of paragraph 2902(e), as redundant</b> for ITC purposes. <b>Effective Date: applicable for amounts that became receivable after December 20, 1991</b>



## SR&ED Newsletter

### 2010-2: (Technological Advancement Edition)

Welcome to the second 2010 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>I) Facts: Recent increase in CRA challenges to “Technological Advancement” (TA) .....</b>	<b>61</b>
<b>II) Issue(s): TA has 3-5 major components – need to be specific .....</b>	<b>61</b>
<b>III) Relevant legislation and CRA directives: .....</b>	<b>61</b>
III a) Legislative definition of SR&ED.....	61
III b) Tax court definition of “TA” ( 5 components) .....	62
III c) CRA definition of a “project” .....	62
III d) CRA Definition of “TA” .....	63
Step 1 a): Benchmark “standard practice” .....	63
Step 1 b): Quantified Objectives outside of “standard practice”.....	63
Step 2): Identify “technological uncertainty”.....	64
Step 3 a): Ensure “experimentation” done “systematically” .....	64
Step 3b): Clarifying the “technological conclusions / advancements” .....	65
<b>IV) Analysis – how to meet the CRA project &amp; TA requirements.....</b>	<b>66</b>
<b>COMPILING THE DATA: Template to identify and quantify the required elements: .....</b>	<b>66</b>
Goal 1a): Ensure proper definition of existing knowledge at the outset: .....	67
Goal 1 b): Quantification of objectives vs. standard practice .....	67
Goal 2): Correlation of the research steps to specific, technical uncertainties: .....	67
Goal 3a): Ensuring work was done “systematically” & costs correctly identified .....	68
Goal 3b): Clarifying the “technological conclusions / advancements” .....	68
<b>V) REVIEWING THE FINAL DATA - “key criteria summary”.....</b>	<b>69</b>
The SR&ED “Key Criteria summary” – 5 components of TA.....	69
“SR&ED key criteria” examples – plant breeding, machinery & chemistry projects: .....	70

## **I) Facts: Recent increase in CRA challenges to “Technological Advancement” (TA)**

Recently the CRA has appeared to increase its scrutiny on SR&ED claimants based on one basic challenge **claiming that they:**

**“Do not see the technological advancement.”**

## **II) Issue(s): TA has 3-5 major components – need to be specific**

In the author’s opinion this is like taking your car to the mechanical and claiming, “it doesn’t work right.”

A (Properly trained) mechanic would likely start a conversation like;

Mechanic: “What happens when you turn the key in the ignition? Does it start?”

Client: “Sure it starts fine.”

Mechanic: “Does the engine run?”

Client: “Sure it runs fine.”

Mechanic: “What happens when you put the transmission in gear? Does it move?”

Client: “Sure it moves but it jerks and sometimes backfires.”

Mechanic: “Okay. That will be \$500 for not just telling me the problem in the first place!”

To many this situation seems almost foolish since most people would just tell the mechanic the specific problem in the first place.

Ironically when it comes to explaining “technological advancement” some CRA officials appear to provide similar lack of detail in their feedback to SR&ED claimants.

In the author’s opinion a more acceptable and useful answer would be to clarify **which of the 5 major components** (illustrated below) were lacking in the clients project description.

## **III) Relevant legislation and CRA directives:**

### **III a) Legislative definition of SR&ED**

SR&ED is defined for income tax purposes<sup>78</sup>, as follows:

“**scientific research and experimental development** means **systematic investigation** or search that is carried out **in a field of science or technology** by means of **experiment or analysis** **and** that is

(a) **basic research**, namely, work undertaken for the advancement of scientific knowledge without a specific practical application in view,

(b) **applied research**, namely, work undertaken for the advancement of scientific knowledge with a specific practical application in view, **or**

(c) **experimental development**, namely, work undertaken **for the purpose of achieving technological advancement** for the purpose of creating new, or improving existing, materials, devices, products or processes, including incremental improvements thereto,...

### **Notable quote:**

**“Intellectuals solve problems; geniuses prevent them.”**

**- Albert Einstein**

<sup>78</sup> in subsection 248(1) of the Act

### III b) Tax court definition of “TA” ( 5 components)

The Tax Court of Canada has stated;

"The addition of these words [ "**including incremental improvements thereto**" ] in 1995 applicable to taxation years ending after December 2, 1992 appears to have been in response to a concern that the achievement or attempted achievement of slight improvements was not covered.

I should not have thought it was necessary to say so. **Most scientific research involves gradual, indeed infinitesimal, progress. Spectacular breakthroughs are rare and make up a very small part of the results of SR&ED in Canada.**"<sup>79</sup>

"Did the person claiming to be doing SRED formulate hypotheses specifically aimed at reducing or eliminating that technological uncertainty?"

This involves a **five stage process**:

- (a) the **observation** of the subject matter of the problem;
- (b) the formulation of a clear **objective**;
- (c) the identification and articulation of the **technological uncertainty**;
- (d) the formulation of an **hypothesis** or hypotheses designed to reduce or eliminate the uncertainty;
- (e) the methodical and **systematic testing** of the hypotheses."<sup>80</sup>

### III c) CRA definition of a “project”

"To establish whether or not the work you claim is eligible, we have to examine eligibility **at the project level**. You must present your claim showing your work organized as SR&ED projects."

"**An SR&ED project consists of a set of interrelated activities** that meet the **three criteria** of SR&ED defined in the current version of Information Circular 86-4, *Scientific Research and Experimental Development*. This means that the set of activities must be necessary for:

1. the attempt to achieve specific scientific or **TA** and
2. overcome scientific or **technological uncertainty**, and
3. must be pursued through a **systematic investigation** by means of experiment or analysis performed **by qualified individuals**."<sup>81</sup>

#### Notable quote:

**"The great thing about a computer notebook is that no matter how much you stuff into it, it doesn't get bigger or heavier."**

**- Bill Gates**

<sup>79</sup> NORTHWEST HYDRAULIC CONSULTANTS LTD., v THE QUEEN – Tax Court of Canada - (Date: 1998/05/01 - Docket: 97-531(IT))

<sup>80</sup> IBID - NORTHWEST HYDRAULIC CONSULTANTS LTD., v THE QUEEN

<sup>81</sup> Excerpts from CRA form T4088<sup>81</sup>- the Guide to completing an SR&ED claim

### III d) CRA Definition of “TA”

The CRA provides a general definition as follows;

“**Technological advancement** – means the generation of information or the discovery of technical knowledge that advances the understanding of the underlying technologies. Seeking a technological advancement means attempting to increase the technology base or level of the company from where it was at the beginning of the systematic investigation or search by experiment or analysis.”<sup>82</sup>

**This is just the starting point however since the CRA then provides a list of criteria, each of which must be met, in order to meet the criteria of “technological advancement.”**

We propose to:

- explore the CRA published directives on “technological advancement”
- within the framework of the 5 components of an SR&ED project
- as proposed by the Tax Court of Canada in the case of Northwest Hydraulics
- combining these terms with
- the concepts envisioned in the CRA project documentation requirements as follows;

#### Step 1 a): Benchmark “standard practice”

“Commonly available sources of knowledge or experience are those that can reasonably be assumed to be **readily available to those with basic training** or experience in the field of concern. These resources enable them to be sufficiently qualified to participate in SR&ED. They also include knowledge that is available **in the business context of the firm**. ...An enterprise may **not have practical access to information proprietary to a competitor**, or known in specialist or academic circles.”<sup>83</sup>

“Evidence of TA could include **credible third party literature** or comparisons of the capabilities sought against those previously available from the

taxpayer himself. As in a court of law, there are no rigid definitions of what constitutes credible evidence.”<sup>84</sup>

“**Technology base or level** – is the existing state of the technology. It embodies knowledge from both of the following sources:

- 1) All the technological resources within the business, which include the existing level of technology, the proprietary technological “know-how”, and education, training and experience of the personnel.
- 2) All the knowledge on the technology that can be gained from **publicly and readily available sources**. Publicly and readily available sources generally include published scientific papers, industry specific publications, journals, textbooks and internet based information sources.”<sup>85</sup>

#### Step 1 b): Quantified Objectives outside of “standard practice”

Furthermore the CRA requires that the scientific or **technological objectives** you state:

- “be **quantifiable or verifiable**,
- contemplate a reasonable timeframe (generally <= 3years)” &<sup>86</sup>
- “be clearly stated at an early stage in the project’s evolution”<sup>87</sup>.

“Essentially, the presence of a technological uncertainty puts the project into **the realm of experimental development** when solutions cannot be based on standard practice alone. A claim for qualifying expenditures should clearly explain all **departures from standard practice** in the experimental development activity.”<sup>88</sup>

<sup>82</sup> CRA Clickable Form T661 (08) – Glossary

<sup>83</sup> CRA IC 86-4R3 – glossary

<sup>84</sup> Excerpt from, “Guidance on Eligibility of Software projects for the SR&ED tax Credits,” as published by the CRA in co-operation with CATA & the software industry, September 2000.

<sup>85</sup> CRA Clickable Form T661 (08) - Glossary

<sup>86</sup> CRA form T4088, part 2, paragraph A – Guide to the T661 form.

<sup>87</sup> Information Circular 86-4R3, paragraph 2.10.3

<sup>88</sup> CRA IC 86-4R3 paragraphs 4.3 & 4.4

## Step 2): Identify “technological uncertainty”

The CRA recognizes two specific sources of eligible “technical uncertainty” for SR&ED:

“Specifically, **scientific or technological uncertainty** may occur in either of two ways:

[**scientific uncertainty**] it may be uncertain whether the goals can be achieved at all ; or

[**system uncertainty**] the taxpayer may be fairly confident that the goals can be achieved, but may be **uncertain which of several alternatives (i.e.**

- **paths,**
- **routes,**
- **approaches,**
- **equipment configurations,**
- **system architectures,**
- **circuit techniques, etc.)**

will either work at all, or be feasible to meet the desired **specifications or cost targets**, or both of these...

Work on **combining** standard **technologies**, devices, and/or processes is **eligible if** non-trivial combinations of established (well-known) technologies and **principles for their integration carry a major element of technological uncertainty**; this may be called a "system uncertainty."<sup>89</sup>

In summary, “technological obstacles/uncertainties – are the shortcomings and/or limitations of the current state of technology that prevents you from developing the new or improved capability.”<sup>90</sup>

## Step 3 a): Ensure “experimentation” done “systematically”

Systematic investigation or search

“A systematic investigation or search entails going from identification and articulation of the scientific or technological obstacles/uncertainties, hypothesis formulation, through testing by experimentation or analysis, to the statement of logical conclusions.

In a business context, this requires that the objectives of the scientific research or experimental development work must be clearly stated at an early stage in the evolution of the project, and the method of addressing the scientific or technological obstacle/uncertainty by experimentation or analysis must be clearly set out.<sup>91</sup>

The CRA further requires work **to be supervised by personnel with appropriate technical backgrounds** and clarifies that in describing activities performed.

“It **must demonstrate the presence of analysis or experiment** in the methodology you used to carry out the work. It **must also include the results you obtained and the conclusions you made.**”<sup>92</sup>

“The improvement of existing technologies or methodologies using well-established "routine engineering or routine development" would be ineligible if the outcome is predictable. However,...if the .. **activity is carried out in support of an eligible** experimental development project, then the activity **is eligible.**”<sup>93</sup>

<sup>89</sup> CRA IC 86-4R3 paragraph 2.10.2

<sup>90</sup> CRA Clickable Form T661 (08) - Glossary

<sup>91</sup> CRA Clickable Form T661 (08) - Glossary  
Form T4088 – Guide to form T661

<sup>93</sup> Excerpt from IC 86-4R3 paragraph 2.13

**Step 3b): Clarifying the “technological conclusions / advancements”**

Components: “Achieving a **technological advance** would require removing the element of **technological uncertainty** through a process of **systematic investigation**... For an experimental development activity to be eligible the **technological advance** achieved **has only to be slight.**”<sup>94</sup>

Conclusions: “**The search for a meaningful advance** ... is satisfied whether or not the activity is successful. In other words, **determining that a hypothesis is incorrect also represents a scientific or technological advance.**”<sup>95</sup>

Conclusions outside SP: “In the context of experimental development, scientific or **TA is the knowledge acquired in carrying out the SR&ED project**, which advances the understanding of the underlying scientific relations or technology.”<sup>96</sup>

**Notable quote:**

**“What is now proved, was once only imagined.”**

**- William Blake**

**Notable quote:**

**“Success is on the far side of failure.”**

**- Thomas Watson Sr.**

---

<sup>94</sup> Excerpt from CRA, IC 86-4R3 paragraph 2.13

<sup>95</sup> Excerpt from CRA, IC 86-4R3 paragraph 2.12

<sup>96</sup> Excerpt from IC 86-4R3 paragraph 2.13

**IV) Analysis – how to meet the CRA project & TA requirements**

**COMPILING THE DATA: Template to identify and quantify the required elements:**

**THE THREE COMPONENTS OF AN SR&ED PROJECT**

**FORMAT: ITEM:**

**MAX: 350 WORDS**



**WHAT?**

I) A) LIST **State of Existing technology: Benchmarking methods & sources for citations**

	<u>Number of</u>	
i)	_____	Internet / Google Searches
ii)	_____	Articles
iii)	_____	Patent searches
iv)	_____	Competitive methods
v)	_____	Similar in-house technologies
vi)	_____	Potential components
vii)	_____	Queries to experts
viii)	_____	Other

B) TABLE **Performance Objective(s) (up to top 5)**

		<u>Benchmark 1</u>	<u>Benchmark 2 ...</u>	<u>Benchmark 3 ...</u>
i)	Existing performance	_____	_____	_____
ii)	Unit of measure	_____	_____	_____
iii)	Objective	_____	_____	_____
iv)	<i>Result (III B i) *</i>	_____	_____	_____

**MAX: 350 WORDS**



**WHY?**

II) LIST **Technological Uncertainties (up to top 5 variables)**

i)	_____	<i>Variable 1</i>
ii)	_____	<i>Variable 2 ....</i>
iii)	_____	<i>Variable 3 ....</i>

**MAX: 700 WORDS**



**WHO,  
WHEN,  
WHERE &  
HOW?**

III) A) LIST **Experimentation method (for EACH activity )**

	<u>Number of</u>	
i)	_____	Alternatives analyzed or simulated (Theoretical)
ii)	_____	Process trial runs (Physical or software)
iii a)	_____	Complete prototypes (Physical or Software releases)
iii b)	_____	Revisions to prototypes (in III a)

B i) TABLE **Results - tie to performance objective benchmarks TABLE I B) above \***

B ii) LIST **Conclusions - compare Results to expectations & explain via Variables LISTED in II) above\*\***

B iii) LIST **Technical documentation retained (list of 12 items per CRA T661 form)**

\* + Software Industry - should clarify total lines of code: written vs. scrapped during current period

**Goal 1a): Ensure proper definition of existing knowledge at the outset:**

The "advancement" section of the grid again focuses not so much on "product" advancements but on the **methods to achieve such advancements** and the fact that they have been **benchmarked against existing standard practice**.

We find that we often use this basis of "advancement" to recommend renaming of the project away from "product" descriptions and towards "methodology" objectives. As indicated above, the "advancement" section is **not** the primary focus of the grid but only a double check to insure that:

- 1) Standard practice "knowledge" for this industry was defined (by at least 1 benchmark), &
- 2) That the solution was not a "routine" implementation of this "existing" knowledge.

If these two issues are evidenced, **no matter how small the incremental improvement maybe**, the grid can then correlation of research steps to technical uncertainties.

**Goal 1 b): Quantification of objectives vs. standard practice**

Whenever possible we attempt to **benchmark the quantifiable performance objectives against existing performance standards**.

**Goal 2: Correlation of the research steps to specific, technical uncertainties:**

Use of these grids then allows the reviewer to scan through the projects and identify those **research steps which clearly contemplate resolving the technical uncertainties and alternatives. This is what differentiates SR&ED work from "routine engineering."**

The need for any further routine, supporting work can then be briefly mentioned but needs no further explanation. This support work will be eligible to the extent that it was "commensurate with the needs and directly in support of [the eligible research<sup>97</sup>]."

**Notable quote:**

**"Life is trying things to see if they work."**

**- Ray Bradbury**

---

<sup>97</sup> ' Excerpt from the definition of "scientific research and experimental development" as defined in subsection 248(1) of the income Tax Act.

**Goal 3a): Ensuring work was done  
“systematically” & costs correctly identified**

- One of the key indicators of eligibility is the ability to provide a detail of the **number of experiments performed** and alternatives analyzed.
- It also describes the **method of the work;**
  - **Analysis (least time consuming)**
  - **Process trials & /or**
  - **Prototypes (most time consuming)**This will support both the reasonableness of the costs claimed and the existence of, “experimentation.”
- Projects can accumulate separate uncertainties each with any unlimited number of research activities. Often **portions of the “business” project do not qualify** for SR&ED (i.e. not necessary to resolve the stated uncertainties). These would be excluded from the summary since they would not correlate with the resolution of a pre-stated uncertainty.

**Goal 3b): Clarifying the “technological conclusions / advancements”**

Finally, we illustrate the final stage of the process by clarifying which of the variables of “technology uncertainty” we believe to have made a **conclusion** (=technological advancement) upon.

**Notable quote:**

**“In theory there is no difference between theory and practice. In practice there is.”**

**- Jan van de Snepscheut**

**Notable quote:**

**“One can show the following: given any rule, however fundamental or necessary for science, there are always circumstances when it is advisable not only to ignore the rule, but to adopt its opposite..”**

**- Paul Feyerabend**

# V) REVIEWING THE FINAL DATA - “key criteria summary”

## SR&ED "Key Criteria summary"

Cell	<u>I) Departure from "Standard"</u>		<u>II) Uncertainties</u>	<u>III) Systematic Investigation</u>		<u>DIRECT COSTS - by project &amp; activity</u>		
	<u>I a) Standard Practice (SP)</u>	<u>I b) Objective - Quantified vs. Standard paractice</u>		<u>III a) Research steps</u>	<u>III b) Conclusions</u>			
<i>Format:</i>	<i>Number</i>	<i>Number</i>	<i>Text (5 boxes - max 25 characters each)</i>	<i>Number</i>	<i>Boolean (Y/N)</i>	<i>NUMBER</i>	<i>NUMBER</i>	<i>NUMBER</i>
<i>Details:</i>	<i>Number of existing methods benchmarked at outset</i>	<i>Objective vs. existing performance benchmarks</i>	<i>MAIN VARIABLES: - VARIABLE 1 - VARIABLE 2 (top 5 only)</i>  <i>repeat for each uncertainty</i>	<i>HOW MANY ALTERNATIVES ___ did you "analyze" to resolve the stated uncertainty? (i.e. <b>how many</b> tests, how different &amp; why?)</i>  <i>repeat for each activity</i>	<i>WHICH OF THE VARIABLES OF UNCERTAINTY DID WE CONCLUDE ON THIS YEAR?</i>  <i>follow through each variable cited</i>	<i>Manhours</i>	<i>Subcontractors</i>	<i>Materials</i>

## The SR&ED “Key Criteria summary” – 5 components of TA

The “key Criteria summary” structure provides a simple overview of the “key variables of uncertainty” and therefore illustrate that the development work was:

- a) NOT “**routine engineering**” (i.e. without any significant technological uncertainty) and instead was
- b) “**systematic investigation**” into alternate solutions and their effects on other components in the system.

It then provides a full correlation of costs to assess the reasonableness.

**As a result we believe that this summary can be used by managers & claim preparers to assert that all required components of a “technological advancement” have been met.**

### Notable quote:

**“The uncreative mind can spot wrong answers, but it takes a very creative mind to spot wrong questions.”**

**- Anthony Jay**

## “SR&ED key criteria” examples – plant breeding, machinery & chemistry projects:

### 703 - Agriculture - Plant breeding

**Benchmarks:** Patent searches: 2 patents  
Competitive products or processes: 14 products

**Objectives:** Yield: 550 kg/acre  
Lodging resistance: 8 % infection  
root rot resistance: 12 % infection

**Uncertainty:** 1 - feasibility of genetic traits

**Key Variables:** determination of genes, optimal methods to transfer genes

Activity	Testing Methods	Results - % of Objective	Variables Concluded	Hours	Materials \$	Subcontractor \$	Fiscal Year
1 - Experimental crosses	Process trials: 10000 runs / samples	Yield: 1400 kg/acre (1800 %)	determination of genes	517.00	6,075.00	1,405.45	2008
2 - Disease testing	Process trials: 400 runs / samples	Lodging resistance: 3 % infection (350 %) root rot resistance: 14 % infection (0 %)	determination of genes	1,409.66	1,500.00	2,500.00	2008
3 - Disease testing (cntd.)	Process trials: 400 runs / samples	root rot resistance: 11 % infection (150 %)	determination of genes optimal methods to transfer genes	350.00	0.00	0.00	2009

### 801 - Machinery - improve compounding equipment

**Benchmarks:** Internet searches: 35 sites / articles  
Patent searches: 2 patents  
Potential components: 14 products  
Queries to experts: 2 responses

**Objectives:** Temperature variance: 3 Deg C  
Output: 130 output/minute  
Shear: 12 tons/sq.inch  
Dispersivity: 1.0 mm

**Uncertainty:** 1 - Temperature Control

**Key Variables:** device locations, optimal measurement devices, vibrations

Activity	Testing Methods	Results - % of Objective	Variables Concluded	Hours	Materials \$	Subcontractor \$	Fiscal Year
1 - Thermocouples	Analysis / simulation: 19 alternatives Process trials: 46 runs / samples	(none)	vibrations	1,247.00	20,000.00	45,000.00	2008
2 - Fibre Optic system	Analysis / simulation: 1 alternatives Process trials: 5 runs / samples	Temperature variance: 1 Deg C (150 %) Output: 112 output/minute (40 %) Shear: 13 tons/sq.inch (150 %) Dispersivity: 0.6 mm (20 %)	device locations optimal measurement devices	975.00	0.00	10,000.00	2008

### 803 - Chemicals - Optimize DA Catalyst Recipe

**Benchmarks:** Internet searches: 33 sites / articles  
Competitive products or processes: 7 products

**Objectives:** Catalyst Efficiency: 169 kgPE/gTi.h  
Bulk Density: 0.45 g/cm<sup>3</sup>  
Powder Morphology: 4900 cm<sup>2</sup>/g

**Uncertainty:** 1 - Modeling of catalyst fabrication conditions

**Key Variables:** bulk density, catalyst efficiency, metal ratio, powder morphology, zinc concentration

Activity	Testing Methods	Results - % of Objective	Variables Concluded	Hours	Materials \$	Subcontractor \$	Fiscal Year
1 - Catalyst test trials	Analysis / simulation: 10 alternatives Process trials: 10 runs / samples	Catalyst Efficiency: 140 kgPE/gTi.h (62 %) Bulk Density: 0.45 g/cm <sup>3</sup> (100 %)	bulk density catalyst efficiency powder morphology	1,030.18	0.00	0.00	2008



## SR&ED Newsletter Edition 2010-1

Welcome to the first 2010 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>Basic principles for determining the value of a business .....</b>	<b>72</b>
Definition of “Fair Market Value” .....	72
Methods to estimate value .....	72
1) Value of net assets .....	72
2) Present value of future income or cash flows .....	72
3) Percentage of revenues (sales).....	72
Factors to maximize perceived value of a company? .....	72
Company size.....	72
Growth potential .....	72
Industry sector.....	72
Proprietary advantage(s) .....	72
Current economic environment.....	72
Special purchasers.....	72
Operating margins.....	72
Market Value Comparative Summaries.....	73
Hi vs. low technology stock values.....	73
Author’s commentary: Implications of “technology” on perceived shareholder value .....	73
<b>Identifying and valuing development costs .....</b>	<b>74</b>
Development vs. research expenses.....	74
Implications to financial statement readers: .....	74
Example of Development cost disclosure in Financial statements (F/S’s).....	74
Step 1: Determining if technology capitalization criteria met.....	75
Step 2: F/S disclosure of technology “development costs” .....	75
Results & implications to F/S users:.....	75
<b>CRA’s SR&amp;ED watchdog .....</b>	<b>76</b>
SR&ED Ombudsmen request for feedback .....	76

## **Basic principles for determining the value of a business**

### **Definition of “Fair Market Value”**

“The price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arms length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts.”<sup>98</sup>

### **Methods to estimate value**

There are three primary methods to estimate the “value” of a particular business:

#### **1) Value of net assets**

This is usually the bottom end of the valuation scale (i.e. what could I sell the assets for and how much is left after I pay out the liabilities). Even within this framework the values could vary significantly based on various assumptions (e.g. forced vs. orderly liquidation).

#### **2) Present value of future income or cash flows**

Perhaps the most common basis of comparison is based on an estimate of the future earnings or cash flows, typically supported by historical figures.

#### **3) Percentage of revenues (sales)**

The third common basis for valuation is to use a percentage of the annual sales (i.e. revenues).

### **Factors to maximize perceived value of a company**

Generally speaking the estimate of value for a corporation is done by:

- stock market analysts for “public” companies (i.e. listed on stock exchanges) &
- certified business valuers (CBV’s) for other “privately owned” businesses.

Some of the major factors they might consider in estimating the value of a particular business typically include:

#### **Company size**

Often larger companies (i.e. those publicly listed) trade for multiples higher than similar smaller companies in the same industry.

#### **Growth potential**

Ultimately it is the expected future income of the business which drives the current value in the market.

#### **Industry sector**

Certain industries trade at earnings and revenue multiples many times higher than others. In particular three industries T.M.T. (Technology, Media and Telecommunication) tend to trade at very high premiums in relation to their actual performance.

#### **Proprietary advantage(s)**

What makes you able to beat the competition? Perhaps one of the best ways to inform shareholders of new technical improvements is through the proper disclosure of “development costs” under Canadian “Generally Accepted Accounting Principles” (discussed further in the next article).

#### **Current economic environment**

An uncharacteristically harsh operating environment has been experienced during the past two years. This has affected all industries however some appear to be more volatile than others.

#### **Special purchasers**

Can a purchaser of the business add additional synergies (e.g. technologies, distribution networks, etc.) which will allow it to obtain additional profits?

#### **Operating margins**

High profit margin companies typically have higher earnings multiples.

#### **Notable quote:**

**“A thing is worth precisely what it can do for you, not what you choose to pay for it.”**

**- John Ruskin**

<sup>98</sup> As defined by the Canadian Institute of Certified Business Valuers ([www.cicbv.ca/Glossary](http://www.cicbv.ca/Glossary))

## Market Value Comparative Summaries

### Market Value Comparative: Technology vs. heavy mfg. : May 2000 (pre- "Dot com" crash) & 2009 (present)

Industry / Company	Stock market listing symbol (NASDAQ)	Market Value \$ Billions		Revenues \$ Billions		Value/ Revenues		Net Income \$ billions		Value/ Income	
		2000	2009	2000	2009	2000	2009	2000	2009	2000	2009
<b>Technology</b>											
Oracle Corporation	ORCL	224.0	107.3	9.3	22.4	24.0	4.78	1.4	5.5	155.3	19.4
Sun Microsystems Inc.	JAVA	139.0	7.2	13.1	13.9	10.6	0.52	1.3	0.4	108.5	17.7
Microsoft Corp.	MSFT	366.0	209.9	22.4	58.4	16.4	3.59	8.7	14.6	41.8	14.4
<i>Average</i>		<b>252.5</b>	<b>108.1</b>	<b>14.9</b>	<b>31.6</b>	<b>13.5</b>	<b>3.0</b>	<b>3.8</b>	<b>6.8</b>	<b>101.9</b>	<b>17.2</b>
<b>Heavy Mfg. - U.S. Auto</b>											
Ford Motor Co.	F	60.0	25.8	162.6	146.0	0.4	0.18	7.2	-14.7	8.3	-1.8
DaimlerChrysler AG	DAI	56.0	34.2	150.4	135.1	0.4	0.25	5.8	2.0	9.7	17.1
General Motors Corp.	GRM(@NYSE)	56.0	0.5	176.6	149.0	0.3	0.003	6.0	-30.9	9.3	-0.01
<i>Average</i>		<b>57.3</b>	<b>30.2</b>	<b>163.2</b>	<b>215.1</b>	<b>0.4</b>	<b>0.1</b>	<b>6.3</b>	<b>-14.5</b>	<b>9.1</b>	<b>5.1</b>

### Hi vs. low technology stock values

Not all industries are created equal. Stock values of various types of industries vary in relation to their actual revenues and earnings.

The table above compares the value of selected "technology" vs. "heavy manufacturing" (U.S. automotive) stocks from 2000 to 2009, examining the volatility of these markets.

In the author's opinion these values are typical for the industries in question and provide a basis for several observations:

- The Market rejects "mature industries"- Major U.S. Automakers each had profits in excess of \$3 billion during 2000, revenues in excess of \$150 billion yet none exceeded \$61 billion in market capitalization!
- Market nurtures "new industries"- In May 2000 (the peak of the "Dot Com" boom) the three **selected technology stocks** (Oracle, Sun & Microsoft) had market capitalization (values) of:
  - 13.5 x revenue (vs. 0.4 for US auto) &
  - 102 x net income (vs. 9 for US auto).

### Author's commentary: Implications of "technology" on perceived shareholder value

- Dependent on the overall strength of the market, **technology and media companies** sell at values of roughly 3 to 10 times that of other industries.
- Due to the lack of "real earnings" to bolster their values, the "technology" sector exhibits considerable **volatility** in stock pricing.

Implications to today's high-tech companies are multiple, but clearly outline some of the potential economic benefits from keeping shareholders informed of the "technology value" of a company.

### Notable quote:

**"If you can dream it, you can do it."**

**- Walt Disney**

## Identifying and valuing development costs

### Development vs. research expenses

Canadian “generally accepted accounting principles” (GAAP) require that costs be matched to their expected earnings streams.

With respect to “research” expenses, there are several criteria to be used in determining the respective “earnings streams” of the resultant products or processes.

When, at year end, the “research asset” created meets all five of the following criteria all research costs **MUST BE** capitalized as “development costs” and amortized over their expected revenue streams.

- (a) the **product** is clearly **defined and the costs** attributable to it can be identified;
- (b) the **technical feasibility** of the product has been established;
- (c) management has indicated an **intention to produce** and market the products resulting from each project;
- (d) management has been able to **identify a market** for the products resulting;
- (e) management has indicated that **adequate financial resources** are expected to be available to complete the project.

### Implications to financial statement readers:

As an investor in a technology based company, the principal value of the investment is likely attributable to the technologies developed to date rather than the value of tangible assets (i.e. furniture and computer equipment) disclosed on the financial statements.

If the statements indicate that expenses were research rather than development the financial statement user may be misled into assuming that work to date was not “successful” when in fact it was.

They may in turn, perhaps justifiably, sue management and the auditor of the company for misrepresentation in cases where they sold the stock without the benefit of this knowledge.

As a result, in the author’s opinion, the entire **capital market** for investing in **technology based companies** in Canada is **inefficient**: in other words,

- investors are required to seek additional information on the company’s products and processes since,
- this information is **NOT** being disclosed in the financial statements (as originally intended under GAAP).

### Example of Development cost disclosure in Financial statements (F/S’s)

In particular the **preparers of the SR&ED claims** are in an excellent position to provide further **guidance** to management on **which projects** in question have met the **“technical feasibility”** criteria and therefore should be considered for disclosure as “development costs” in the financial statements.

An example of how a company might then capitalize and amortize development costs is provided in the following schedule (next page).

### Notable quote:

**“The way to get good ideas is to get lots of ideas and throw the bad ones away.”**

**- Linus Pauling**

**Step 1: Determining if technology capitalization criteria met**

**Universal Research Corporation  
Identification of development vs. research costs for financial statement disclosure  
for the fiscal year ended December 31, 2009**

**Capitalization criteria per CICA handbook section 3450.21 \***

Project #:	Name:	start	end	Net costs to date @ Dec. 31, 2009:	1) product defined & costs identified	2) technical feasibility established at year end	3) mgmt. intent to market the product	4) future market clearly defined	5) adequate resources exist to bring to market	Devel. Cost (Y / N)?
901	Widget development	Jan-08	Jun-10	\$315,582	Y	Y	Y	Y	Y	Y
902	Widget improvement	Jan-09	Aug-10	\$24,131	Y	Y	Y	Y	Y	Y

**Notes:**

\* - MUST capitalize & amortize costs if ALL 5 "development cost" capitalization criteria have been met at year end.  
This is performed EACH taxation year. In this example, project 901 had met the criteria for both the 2008 and 2009 taxation years

**Step 2: F/S disclosure of technology "development costs"**

Project / product	Amount	Total Cost	Year	ITC on expenses*	Total capitalized cost*	Amortization			NBV 2009
						start	rate**	Accumulated Amort'n2009	
901 Widget development	\$66,000	\$66,000	2008	\$27,390	\$38,610	2008	20.00%	\$7,722	\$315,582
	<u>\$512,000</u>	\$578,000	2009	\$212,480	\$404,130	2009	20.00%	<u>\$80,826</u>	
902 Widget improvement	\$55,000	\$55,000	2009	\$22,825	\$32,175	2009	25.00%	\$8,044	\$24,131
Totals	<u>\$633,000</u>	<u>\$699,000</u>		<u>\$262,695</u>	<u>\$474,915</u>			<u>\$96,592</u>	<u>\$339,713</u>

**Notes:**

\* The capitalized costs should be net of related grants &/or SR&ED investment tax credits on this research  
\*\* Amortization rate - straight line over estimated economic life of the technology (5 years) with NO half year provision

**Results & implications to F/S users:**

In the author's view this will allow users to ask questions such as:

In the case above the company would have:

- the net book value (NBV) of these development costs
- disclosed on the balance sheet (i.e. as an asset)
- rather than in the "retained earnings" of the company.
- Does the world need this widget (i.e. demand)?
- What advantage does this technology represent in the marketplace &
- How much is it worth?

## CRA's SR&ED watchdog

### SR&ED Ombudsmen request for feedback

As part of a performance review of the Canada Revenue Agency's overall management of the SR&ED program the Ombudsmen has requested feedback on **5 main questions** for claimant & preparer feedback:

Re. Post Feb. 21/07 SR&ED claims:

- Did CRA adequately inform taxpayers about the recent changes to the T661 form?
- Has the cost of filing and defending an SR&ED claim changed?
- Did CRA accept your request for a "second opinion"?
- Did CRA review and audit your claim in a professional and courteous manner?
- Has any CRA person ever attempted to dissuade you from retaining professional advice?

#### Notable quote:

**“A committee is a cul-de-sac down which ideas are lured and then quietly strangled.”**

- **Sir Barnett Cocks**

The Forms for submission are available at:

<http://www.taxpayersrights.gc.ca/frm-fil-eng.pdf>

#### Author's commentary:

While the firm has found that virtually all CRA SR&ED officials operate in the most professional of manners there have likely been isolated incidences of complaints which have resulted in the creation of the “ombudsman” as a mechanism to prevent any abuse (real or perceived).

Though the events in question are likely few and isolated, in the author's opinion it indicates a strong commitment by the federal government to maintaining (perhaps enhancing) the integrity of the program with respect to;

- objectivity of the reviewers
- consistency of review procedures &
- overall professionalism of conduct.

As a result we encourage claimants and claim preparers to provide feedback on any issues they deem appropriate.



## SR&ED Newsletter Edition 2009-4

Welcome to the fourth 2009 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>Recent CRA Directives on filing new T661 SR&amp;ED forms .....</b>	<b>78</b>
Questions and Answers - New SR&ED Claim Form and Guide (Addendum) [released 2009-06-04] .....	78
Q.2 If neglect to tick a certain box or I tick the wrong box on Form T661, will claim be denied? 78	78
A.2 No, with one exception. ....	78
Q.5 Can I submit (IRAP) project summaries instead of completing Part 2 of Form T661? .....	78
A.5 No. ....	78
Q.6 Will the CRA disallow a project based on the technical content or quality of the narratives provided on lines 240 to 252? .....	78
A.6 No. ....	78
APP 2004-02r2-eng Filing Requirements for Claiming SR&ED (June 11, 2009).....	79
CRA accepts 20 largest SR&ED projects (for taxation years ending before 2010).....	79
Transitional Measures for Filing Form T661 .....	80
Q.1 How can claimants using commercial tax software file a previous version of Form T661? ...	80
A.1 - 3 main options .....	80
<b>Calculation of Ontario's new ORDTC .....</b>	<b>81</b>
ORDTC IS reduced by the OITC.....	81
OITC is NOT reduced by the ORDTC .....	82
Manual entry required for Taxprep and Profile .....	82
<b>Issue: timing of tax on proxy amount .....</b>	<b>83</b>
Tax mechanics of issue: received vs. receivable .....	83
CRA – APP 2000-3 .....	83
Legislative support for deferral.....	83
Income Tax Act .....	83
Results & filing implications / planning .....	83

## Recent CRA Directives on filing new T661 SR&ED forms

### Questions and Answers - New SR&ED Claim Form and Guide (Addendum) [released 2009-06-04]<sup>99</sup>

Since the publication in November 2008 of the new Form T661, Scientific Research and Experimental Development (SR&ED) Expenditures Claim, and T4088, Guide to Form T661, the CRA has consulted extensively with SR&ED claimants and stakeholders across the country. The following answers are in response to the most commonly identified questions on the new Form T661 and Guide (T4088).

#### Q.2 If I neglect to tick a certain box or I tick the wrong box on Form T661, will claim be denied?

##### A.2 No, with one exception.

A number of new tick boxes have been added to Version (08) of Form T661 that did not exist on previous versions, particularly in Parts 2 and 7 of the Form. The CRA added these tick boxes to the Form to assist claimants in providing as much pertinent information as possible to the CRA, the intent of which is to enhance the quality of claims received, and thus to expedite the processing and review of claims by the CRA.

**Your claim will not be denied, nor will your projects or expenditures be disallowed because you did not tick a box or because you ticked a wrong box.** If you neglect to tick the appropriate box when your claim is initially filed, you can provide the information to the CRA reviewer during the review of the claim **even if the SR&ED reporting deadline (18-months after tax year end for corporations, 17.5 months for individuals) has expired.**

**Exception: You must tick one of the boxes at line 160 or 162 to select the traditional or proxy method.**

For additional details on choosing the method to calculate SR&ED expenditures and on the SR&ED filing requirements, see the T4088, Guide to Form T661, Interpretation Bulletin IT-151R5 (Consolidated), Scientific Research and Experimental Development Expenditures, and Application Policy 2004-02R, Filing Requirements for Claiming SR&ED.

#### Q.5 Can I submit (IRAP) project summaries instead of completing Part 2 of Form T661?

##### A.5 No.

All claimants are required to complete Part 2 of Form T661. IRAP (Industrial Research Assistance Program) summaries, statements of work and progress reports may be helpful in completing Section B or C of Part 2 of Form T661 and could serve as useful documentation to support the claim in the event of a review.

#### Q.6 Will the CRA disallow a project based on the technical content or quality of the narratives provided on lines 240 to 252?

##### A.6 No.

The CRA will not disallow a project based on the quality or technical content of the narratives for these lines. Lines 240 to 252 are designed to encourage shorter and more direct responses to assist claimants in providing the information needed to meet the eligibility requirements. The information contained in the answers to Part 2 of Form T661 is intended for the CRA to carry out an initial review of the work that has been claimed. Clear and concise descriptions will allow the CRA to expedite the review and process the claim as quickly as possible.

If the narratives lack sufficient or pertinent technical detail, we will refer the claim to a CRA Research and Technology Advisor (RTA) for further review. **Claimed work can only be considered ineligible after a detailed review by an RTA.** A detailed review will **usually involve a site visit** and discussion with the claimant for further clarification and additional information.

The claimant will have an opportunity to provide any further information that may be required by the CRA. The claimant will also be able to discuss recommendations on how to ensure that future narratives provide sufficient and pertinent technical detail within the word limits allowed.

**It is important to note that the CRA will disallow a project if no project details are provided on lines 240 to 252 by the reporting deadline.** However, if the claimant files the SR&ED claim at least 90 days before the reporting deadline, the CRA will have sufficient time to review the claim and advise the claimant of any deficiencies in the claim before the reporting deadline. (Please refer to AP2004-02R, Filing Requirements for Claiming SR&ED.)

<sup>99</sup> <http://www.cra-arc.gc.ca/txcrdt/sred-rsde/pblctns/qstns2-eng.html>

**APP 2004-02r2-eng Filing**  
**Requirements for Claiming SR&ED**  
**(June 11, 2009)**

**CRA accepts 20 largest SR&ED projects (for taxation years ending before 2010)**

Since the November 2008 launch of Form T661(08), Scientific Research and Experimental Development (SR&ED) Expenditures Claim, the CRA has consulted widely with SR&ED claimants and other stakeholders.

The vast majority of claimants have indicated that they are pleased with the CRA's undertaking to simplify and streamline the new form and reduce the administrative burden related to claiming SR&ED investment tax credits. However, **claimants with more than 20 projects have requested more time to adapt to the new requirement** of submitting Part 2 of Form T661 for all projects claimed instead of only the 20 largest projects in dollar value.

To respond to this concern, the CRA is extending the time to adapt to this new requirement. Effective immediately, claimants can continue to provide Part 2 of **Form T661 for only the 20 largest projects in dollar value for tax years ending before 2010.** However, during a CRA review of the claim, information on all claimed projects may be required, as has always been the case.

For tax years ending in 2009 or later, claimants must use Form T661(08) and conform to all other guidelines and requirements associated with this version of the form.

For tax years ending in 2010 or later, claimants are required to file Part 2 of Form T661(08) for all projects claimed.

The CRA has updated the SR&ED Application Policy 2004-02R2, Filing Requirements for Claiming SR&ED accordingly.

**The table below summarizes the revised requirements.**

**Notable quote:**

**“The stone age didn’t end because they ran out of stones.”**

– **unknown**

	If my tax year ends in:		
	2008 or earlier	2009	2010 or later
Which version of Form T661 can I use?	Form T661 (07) <b>or</b> Form T661(08)	Form T661(08)	Form T661(08)
Which format can I use to file my project information?	Form T661 (07) or (08) formats	Form T661(08) Part 2	Form T661(08) Part 2
If I have more than 20 projects, how many project narratives must I submit to the CRA?	The 20 largest projects in dollar value	The 20 largest projects in dollar value	All projects claimed

## **Transitional Measures for Filing Form T661<sup>100</sup>**

According to Question 5 in the November 10, 2008 Questions and Answers regarding the new SR&ED Claim Form T661, the CRA further clarified that claimants have the option of using the previous version (07) of Form T661 for tax years ending in 2008 or earlier and included the following directions for preparation.

### **Q.1 How can claimants using commercial tax software file a previous version of Form T661?**

#### **A.1 - 3 main options**

To file a previous version of Form T661 for tax years ending in 2008 or prior, claimants have several options:

- i) Claimants can use a previous version of commercial tax preparation software to prepare Form T661.
- ii) Claimants can file a paper copy of Form T661. All previous versions are available on the CRA Web site on the page containing Form T661 under the heading "Previous year versions".
- iii) Claimants can file version (08) of Form T661 and attach the previously required free-flowing project descriptions.

#### **Notable quote:**

**“We can lick gravity, but sometimes the paperwork is overwhelming.”**

**- Werner von Braun**

#### **Notable quote:**

**“The most exciting phrase to hear in science - the one that heralds new discoveries - is not "Eureka!" but "That's funny..."”**

**- Isaac Asimov**

---

<sup>100</sup> <http://www.cra-arc.gc.ca/txcrdt/sred-rsde/pblctns/tqstns-eng.html#q3>  
(ADDENDUM TO T661 QUESTIONS AND ANSWERS)

# Calculation of Ontario's new ORDTC

Several practitioners have question with respect to how both of the current tax programs (Profile and Taxprep) are calculating the new ORDTC.

## QUESTION

How can I ensure that the program is correctly calculating the amounts at lines 429b and 429b2 of Form T661 in respect of the Ontario innovation tax credit and the Ontario research and development tax credit?

## ORDTC IS reduced by the OITC

Answer:<sup>101</sup>

- Complete Schedule 508, Ontario Research and Development Tax Credit, but don't enter any amount at line 105 of the schedule.
- Enter, at line 105 of Schedule 508, the government assistance, non-government assistance or a contract payment amount for eligible expenditures, **but exclude the amounts calculated at lines 513b2 and 514b2 of Form T661.**

The screenshot shows the 'Section C - Calculation of pool of deductible SR&ED expenditures (to the nearest dollar)' in the Corporate Taxprep 2009 v.1 software. The interface includes a menu bar (File, Edit, View, Go, Forms, Tools, Transmission, Help), a toolbar, and a sidebar with icons for Professional Centre, Client Manager, and Tax Return. The main window displays a calculation table with columns for descriptions, amounts, and a running total. The table shows the following values:

Capital Expenditures (see guide for what qualifies for SR&ED)	390	+	0	=	0
<b>Total allowable SR&amp;ED expenditures (add lines 380 and 390)</b>	<b>400</b>	=			<b>0</b>
<b>Section C - Calculation of pool of deductible SR&amp;ED expenditures (to the nearest dollar)</b>					
Amount from line 400	420				0
<b>Less</b>					
Québec tax credit for R&D	429a		0		
Ontario innovation tax credit (OITC), excluding the portion of the prescribed proxy amount	429b		0		
Ontario business-research institute tax credit (OBRITC)	429b1		0		
Ontario SR&ED tax credit (ORDTC), excluding the portion of the prescribed proxy amount	429b2		0		
British Columbia tax credit for SR&ED, excluding the portion of the prescribed proxy amount	429c		0		
Alberta SR&ED tax credit, excluding the portion of the prescribed proxy amount	429d		0		
other provincial government assistance for expenditures included on line 400	429e		0		
provincial government assistance for expenditures included on line 400	429	-	0		0
other government assistance for expenditures included on line 400	431	-	0		0
non-government assistance for expenditures included on line 400	432	-	0		0
SR&ED ITCs applied and/or refunded in the prior year (see guide)	435	-	0		0
sale of SR&ED capital assets and other deductions	440	-	0		0
<b>Subtotal (line 420 minus lines 429 to 440)</b>	<b>442</b>	=			<b>0</b>
<b>Add</b>					
repayments of government and non-government assistance that previously reduced the SR&ED expenditure pool	445	+	0		0
prior year's pool balance of deductible SR&ED expenditures (from line 470 of prior year T661)	450	+	0		0
SR&ED expenditure pool transfer from amalgamation or wind-up	452	+	0		0
amount of ITC recaptured in the prior year	453	+	0		0
<b>Subtotal (if the amount is negative, carry over to line 231 of Schedule 1. If the amount is positive, carry over to line 455 below.)</b>		=			<b>0</b>
<b>Amount available for deduction (add lines 442 to 453)</b>	<b>455</b>	=			<b>0</b>
(enter positive amount only, include negative amount in income)					
Deduction claimed in the year	460	-	0		0
(Tip: Corporations should enter this amount on line 411 of schedule T2SCH1)					
<b>Pool balance of deductible SR&amp;ED expenditures to be carried forward to future years (line 455 minus 460)</b>	<b>470</b>	=			<b>0</b>

\* Form T1263, Third-Party Payments for Scientific Research and Experimental Development (SR&ED)

**Part 4 - Calculation of qualified SR&ED expenditures for investment tax credit (ITC) purposes**  
The resulting amount is used to calculate your refundable and/or non refundable ITCs.

<sup>101</sup> Corporate Taxprep 2009 v.1.0 - frequently asked questions August 2, 2009

## OITC is NOT reduced by the ORDTC

Enter, in Schedule A of schedule 566 (OITC claim form), the government assistance, non-government assistance or a contract payment for eligible expenditures for the current expenditures and capital expenditures, **but exclude the amounts calculated at lines 513b, 513b1 and 513b2** of Form T661 for the current expenditures, and the lines 514b, 514b1 and 514b2 for the capital expenditures.

## Manual entry required for Taxprep and Profile

Currently the program does NOT calculate this amount and requires this adjustment to be done manually.

**In the author's opinion this add-back will likely be omitted / missed by a large number of SR&ED claim preparers.**

Untitled1. 209 - Tax Return - Corporate Taxprep 2009 v.1 (Jan. 2007 - Oct. 2009)

File Edit View Go Forms Tools Transmission Help

Tax Shortcuts Tax Return Form Manager Client: Client 1

568 661

### Enter the breakdown between current and capital expenditures

		Current Expenditures	Capital Expenditures
<b>Total expenditures for SR&amp;ED</b> (from line 380 and 390)	492	0	496
<b>Add</b>			
◆ payment of prior years' unpaid amounts (other than salary or wages)	500 +	0	
◆ prescribed proxy amount (complete Part 5) (Enter "0" if you use the traditional method)	502 +	0	
◆ expenditures on shared-use equipment (see guide)			504 +
◆ qualified expenditures transferred to you (complete Form T1146**)	508 +	0	510 +
<b>Subtotal</b> (add lines 492 to 508, and add lines 496 to 510)	511 =	0	512 =
<b>Less</b>			
Québec tax credit for R&D	513a	0	514a
Ontario innovation tax credit (OITC)	513b	0	514b
Ontario business-research institute tax credit (OBRITC)	513b1	0	514b1
Ontario SR&ED tax credit (ORDTC)	513b2	0	514b2
British Columbia tax credit for SR&ED	513c	0	514c
Alberta SR&ED tax credit	513d	0	514d
other provincial government assistance	513e	0	514e
◆ provincial government assistance	513	0	514
◆ other government assistance	515	0	516
◆ non-government assistance and contract payments	517	0	518
◆ current expenditures (other than salary or wages) not paid within 180 days of the tax year end	520	0	
◆ amounts paid in respect of an SR&ED contract to a person or partnership that is not taxable supplier	528	0	
◆ prescribed expenditures not allowed by regulations (see guide)	530	0	532
◆ other deductions (see guide)	533	0	535
◆ non-arm's length transactions			540
– assistance allocated to you (complete Form T1145*)	538	0	540
– expenditures for non-arm's length SR&ED contracts (from line 345)	541	0	
– purchases (limited to costs) of goods and services from non-arm's length suppliers (see guide)	542	0	543
– qualified expenditures you transferred (complete Form T1146**)	544	0	546
<b>Subtotal</b> (line 511 minus lines 513 to 544 and line 512 minus lines 514 to 546)	557 =	0	558 =
<b>Qualified SR&amp;ED expenditures</b> (add lines 557 and 558)			559 =
<b>Add</b>			
◆ repayments of assistance and contract payments made in the year			560 +

2008-06-30: N/A

## Issue: timing of tax on proxy amount

### Tax mechanics of issue: received vs. receivable

Several tax programs defer taxation of the "proxy portion" of the Ontario Innovation Tax Credit (OITC) and the new Ontario research and development tax credit (ORDTC) until the subsequent taxation year.

What the program and CRA are doing is reducing the current years government assistance for the amount of assistance earned on the **Prescribed Proxy Amount (PPA)** and treating it as income the following year by making the adjustment on schedule 1.

In other word the **government assistance on the PPA is being treated as taxable only when actually received.**

### CRA – APP 2000-3

The CRA has gone further in SR&ED Application Policy Paper SR&ED 2000-03 to state the following:

“In determining the amount of assistance in the pool of deductible SR&ED expenditures the amount of provincial or territorial tax credits which relates to the PPA is not considered to be assistance that reduces the SR&ED allowable expenditures under paragraph 37(1)(d).

As the PPA is not an expenditure under paragraphs 37(1)(a) or subparagraph (b)(i), but is a notional amount which is used in lieu of the actual overhead expenditures in the calculation of the ITC, the PPA is not added to the SR&ED expenditure pool.

Consequently, the portion of the provincial or territorial tax credits which relates to the PPA should be included in income under section 9 or paragraph 12(1)(x) of the Act ...”

### Legislative support for deferral

#### Income Tax Act

The amount is taxable under paragraph 12(1)(x) of the *Income Tax Act*. When reading this section and comparing it to the definition of government assistance under 127(9) there is a strikingly similar set of words:

“... grant, subsidy, forgivable loan, **deduction from tax**, investment allowance, or any other form ...” that is “... from a government, municipality, or other public authority...”

Therefore, government assistance is always taxable. But what about the timing of when it is taxable?

The amount taxable under 37(1)(d) as a reduction to expenditures is to be reported on the basis of

“... at the taxpayer’s filing-due date for the year, the taxpayer has received, is entitled to receive, or can reasonably be expected to receive,”

the government assistance on the expenditures. Therefore, the amount is included in income as it is earned, as it is based on the amount receivable.

However, the wording of 12(1)(x) states that

“... any particular **amount received** by the taxpayer in the year, in the course of earning income from a business or property, ...”

The net result being that **government assistance on the PPA is only taxable when actually received.**

### Results & filing implications / planning

**As previously stated, the government assistance on the PPA is only taxable when actually received.** Note that the CRA and the **tax software will assume this amount is actually received the following year.** While this may not be the case (especially those that file their SR&ED claim close to the 18 month deadline), for simplicity this assumption is normally followed **however, the opportunity exists for further deferral of the taxation of this amount when not received in the subsequent year.**

Example:

- For a 2008 claimed filed in 2009
- the amount may not be received until fiscal 2010 or even 2011 and
- the company would be entitled to defer recognition of the proxy related ITC until this time!.

This could be a major advantage to a firm who had exceeded income limits to the extent it faced a partial phase out its enhanced Investment Tax Credits (ITC’s).



## SR&ED Newsletter Edition 2009-3

Welcome to the third 2009 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>Factoring SR&amp;ED credits .....</b>	<b>85</b>
Selected SR&ED funding / factoring agents in the Golden Horseshoe area .....	85
6 W's of factoring SR&ED credits .....	86
What is factoring? .....	86
When to consider it? .....	86
Who to use? .....	86
Where does the money go? .....	86
Why (or why not) to factor? .....	86
How to start the process? .....	86
Considerations for SR&ED claim preparers.....	86
Level of involvement .....	86
Quicker payment .....	86
Referral fees .....	86

## Factoring SR&ED credits

The past year has an economic downturn which we have found has increased the number of requests for claimants to explore new methods of getting their SR&ED funds as early as possible.

### Selected SR&ED funding / factoring agents in the Golden Horseshoe area

## Notable quote:

**“The pessimist complains about the wind; the optimist expects it to change; the realist adjusts the sails.”**

- William Arthur Ward

<u>Comparative Factor</u>	<u>Goldeye</u>	<u>TCE</u>	<u>New Solutions</u>	<u>Triumph</u>
Initial Fees:	\$3,000	0.7% of funding + legal (\$2,000)	1% of funding upon acceptance of Commitment Letter	\$0
Monthly fees:	N/A (Factor fee)	2-2.25%	3%	3%
Minimum fee:	10%	6%	4%	12%
Minimum funding:	\$100,000	\$250,000	\$100,000	\$70,000
% advanced up to:	70%	70%		75%
Submitted Claims			65%	
Approved Claims			90%	
Repayment if claim fails:	No	Yes	Yes	Yes
Typical approval time:	7-14 days	5-7 days	3-10 days	10 days
Established:	2007	1992	1999	2009
Industries served:	All	All	All	All
# claims financed to date:	DND	>100	>25	<100
Personal guarantees req'd:	No	Yes	Yes	None if due diligence completed
Restrictions:	No start-ups	None	Trustee required if Initial SR&ED	None
Website:	goldeyecapital.com	tcecapital.com	newsolcapital.com	triumphrci.com
Contact person:	Dan Gregory <a href="mailto:dangregory@goldeyecapital.com">dangregory@goldeyecapital.com</a> 416.709.9266	Glen Dalzell <a href="mailto:gdalzell@tcecapital.com">gdalzell@tcecapital.com</a> 416-496-7065	Patrick Wieland <a href="mailto:pwieland@newsolcapital.com">pwieland@newsolcapital.com</a> 905-279-1355	Darlene Sarmiento <a href="mailto:darlene.sarmiento@triumphrci.com">darlene.sarmiento@triumphrci.com</a> 905-352-2990

## **6 W's of factoring SR&ED credits**

### **What is factoring?**

Factoring is basically selling any amounts receivable (in this case the SR&ED credits) to a third party for funding today.

### **When to consider it?**

The typical time to receive a refund of Federal and Ontario credits can range from 30-240 days. Often clients with great new products can get tremendous returns on investment if they can get funding at an early stage of their growth.

### **Who to use?**

The chart on the previous page illustrates what the author believes to be the major funding parties for SR&ED credits in the Southern Ontario region and the comparative factors most relevant to choosing the supplier which best meets the borrowers needs.

### **Where does the money go?**

Typically these firms will advance funding but require the actual refunds (from the CRA and the provinces) to be assigned to them. Once the money is received they tend to pay the companies any amounts due after recovering their fees.

### **Why (or why not) to factor?**

To many companies the cost of factoring may seem excessive however, to those with presold products or significant profit potential these costs of borrowing may be easily justified.

### **How to start the process?**

The funding applications are typically filled out online, via fax or email.

These funding parties typically have their own technical and financial teams which will consider;

- the history of prior claim success &
- the merits of the current claims

They may also consider the merits of the products or services developed as a **basis for further funding!**

## **Considerations for SR&ED claim preparers**

### **Level of involvement**

SR&ED claim preparers can become an integral part of this process including such functions as:

- Explaining the preparation process and rationale for positions taken on significant issues &
- Referrals of the funding parties

### **Quicker payment**

Many SR&ED claim preparers work on a "contingency fees" basis meaning:

- they receive a % of their clients SR&ED credits &
- they do not get paid until their clients get their money.

Most of these "funding" firms are willing to contemplate payout of the consultants portion of these fees once any funding is approved.

### **Referral fees**

Some of the parties will pay an SR&ED consultant fees for pre-qualification and referral of qualified borrowers.

Others will consider a reduction of their fee for the involvement of SR&ED claim preparers who's clients have a proven track history with their firm.

## **Author's commentary**

In the author's opinion these SR&ED factoring agents represent a valuable source of "fast cash" which can be a "necessarily lifeline" to a fast growing, technology based firm.

### **Notable quote:**

**"The most important thing in communication is to hear what isn't being said."**

**- Peter Drucker**



## SR&ED Newsletter Edition 2009-2

Welcome to the second 2009 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>Recent SR&amp;ED tax cases &amp; related issue(s).....</b>	<b>88</b>
Advanced Agricultural – Eligibility of clinical trials .....	88
Ruling & rationale: LOSS - NOT SR&ED since lacked “hypotheses” .....	89
Advanced Agricultural – revoking “proxy” election once filed .....	89
Ruling & rationale: LOSS - NO ability to revoke election .....	89
Spasic – “hobby” vs. “carrying on business” .....	90
Ruling & rationale: LOSS - carrying on business requires “documentation” .....	90
<b>New T661 form – problems &amp; opportunities (update).....</b>	<b>91</b>
Unresolved issues: .....	91
Each box printing on a separate page – each description now 7 pages .....	91
Potentially resolved issues: .....	91
Providing documentation via website .....	91
Resolved issues: .....	91
Profile (corporate tax software) word limits too low .....	91
<b>Recent CRA pronouncements.....</b>	<b>92</b>
2009 budget – enhanced incentives .....	92
i) Expenditure Limit – now \$3 million (Feb. 25/08 – prorated).....	92
ii) Taxable Income Phase-Out Limit – to \$500- 800K (2010 prorated).....	93
iii) Taxable Capital Phase-Out Limit to \$50 million (Feb. 25/08 prorated).....	93
Graphs & Mechanics of the new phase-out formulas.....	93
Summary of credits by Province:.....	94
Qualified corporations (enhanced ITC’s).....	94
Other claimants .....	94
<b>Recent Provincial pronouncements.....</b>	<b>95</b>
Ontario 2009 budget – enhanced incentives .....	95
New phase out limit (\$500-800K) – effective Dec.31/09 .....	95
Non-refundable 4.5% credit - effective Dec.31/08 .....	95
Alberta – 2009 new 10% refundable SR&ED ITC.....	95
Effective after Dec 31, 2008.....	95

## Recent SR&ED tax cases & related issue(s)

The past year has witnessed a release of a variety of smaller cases. The main issues and potential implications are outlined in the following pages. Copies of the judgments are available from the Tax Court of Canada's website.<sup>102</sup>

### Advanced Agricultural – Eligibility of clinical trials<sup>103</sup>

#### Facts:

The first series of issues dealt with the admissibility of the work performed on three sets of separate clinical trials as SR&ED.

#### Trial #48:

- The claimant Advanced Agricultural Testing [appellant] undertook a **research contract for another company (Schering-Plough)** under which it bought 250 heifers and 250 steers.
- The cattle were divided into random groups, weighed and implanted with one of the implants to be tested.
- The **protocol** for this trial was **prepared by Schering-Plough**.
- Having **collected the data** throughout the trial, which consisted of the weights of the animals and the observations as to the existence of abscesses in their ears, they turned it over to Schering-Plough.
- There is **no evidence** that the appellant made any statistical **analysis** of the data.

#### Trial #49:

The CRA's expert witness was critical of trial #49 on a number of grounds related to its design and execution.

- The three pastures used for the study were of poor and uneven quality;
- the animals at the start were of very different weights, varying between 509 and 587 lbs.;
- the **animals were weighed only twice** in the pasture phase, at the beginning and at the end.

#### Trial #50:

<sup>102</sup> Tax Court of Canada website [www.tcc-cci.gc.ca]

<sup>103</sup> ADVANCED AGRICULTURAL TESTING INC., Citation: 2009TCC190, April 7, 2009

A postgraduate student at the University of Guelph, required a topic for her doctoral thesis and her faculty advisor, who had funding available for a study of corona virus, was able to connect the student with the appellant as a client for the project.

The technical support provided by the staff of Advanced Agricultural Testing included;

- provision of cattle for the study, handling cattle for purposes of data
- collection, identification, and recording of diagnoses according to profiles &
- handling and treatment of sick cattle.

#### Issue(s):

- 1) To what extent does work on performing clinical trials qualify as SR&ED?

#### Relevant legislation and analysis:

With respect to the evidence provided by both **expert witnesses** (CRA & Claimant) the **judge found;**

“...evidence **less useful** than it should have been:”

“**If** they had been asked to **give their opinion as scientists as to what constitutes “systematic investigation or search”** then their evidence **could have been helpful**, particularly in relation to trial #49.

**Instead they** were all asked the most general of questions, and thereupon launched into lengthy and rambling speeches in which they **purported to answer the ultimate question [i.e. is the work SR&ED]** that is before me in respect of each trial, rather than confining themselves to scientific opinion..... [which] **leave(s) me reluctant** to give significant weight to any of the opinion evidence.”

**Routine testing:** The definition of SR&ED specifically excludes work with respect to,

“quality control or **routine testing** of materials, devices, products or processes...”<sup>104</sup>

“One **purpose of this exclusionary provision** clearly is to **prevent** claims in respect of products that have already been developed, where the work done is simply to **put existing products to use rather than to develop a new** product or to improve an existing one.”

<sup>104</sup> Definition of SR&ED per ITA 248(1)

## **Ruling & rationale: LOSS - NOT SR&ED since lacked “hypotheses”**

In the judge’s view, there were two fundamental reasons that the various trials **cannot qualify as SR&ED**:

### **1) Analysis (lack of):**

The **first** is that its **purpose and effect** was simply to **compile the results**.

To this extent the judge commented,

“Trial 48: His [the appellants] ideas on the subject may have contributed in some measure to the development of the protocol, but the **research was that of Schering-Plough**, from the protocol through to the statistical analysis.

“Trial 50: The evidence overwhelmingly demonstrates that it was Dr. Martin and colleagues at the **University of Guelph who did the research,....**

[In both cases] The **appellant’s role .. was limited to data collection**, which is specifically excluded...”

### **2) Hypothesis (lack of):**

The **second** fundamental problem is the, “**inability** of the appellant to point to anything in the evidence that can properly be called a **hypothesis to be tested, or a protocol by which to conduct the trial.**”

To provide support the judge commented,

“The stated objectives..., rather than formulating a hypothesis to be tested, amount **simply to a proposed comparison of the effectiveness** of the four implants tested during the pasture phase of the trial, and of the bolus.

There was **no variation in the way that the implants were used** in the pasture phase; the single difference was the particular product that was applied to each group.

Neither do I find that the appellant has **formulated a hypothesis** to be tested.

Nor am I satisfied that before the trial took place the appellant **had any plan** that could be described as a protocol for systematic investigation to test a hypothesis.

It **simply used four different commercial products** at the pasture stage, and one at the feedlot stage, **to compare their effectiveness.**”

## **Implications and author’s commentary**

In the author’s view this case outlines the critical importance of;

- documenting all hypotheses, test results
- related analysis &
- conclusions.

**If the claimant had** been able to show;

- more **input into design of the protocol &**
  - **analysis / interpretation of the results**
- the claim would likely have succeeded.

## **Advanced Agricultural – revoking “proxy” election once filed**<sup>105</sup>

### **Facts:**

The Minister takes the position that bedding for the cattle and diesel fuel are overhead items, and so not accountable separately under the proxy reporting method.

The appellant’s position is that they are both direct costs. If unsuccessful in this respect the appellant wished to revoke the “proxy” election for overhead allocation and to use the “traditional” method which would in turn allow such expenses.

### **Issue:**

Ability to revoke proxy election once made.

### **Relevant legislation and analysis:**

The claimant argued that ITA subsection 220(3.2) and Regulation 600 specifically provide authority for the Minister to permit revocation of certain elections made under the Act.

Since the Regulation 600 provisions do not include an election made under subsection 37(10), the Minister has no such power.

## **Ruling & rationale: LOSS - NO ability to revoke election**

The Minister’s power to permit revocation of an election made under the Act is limited to those election provisions that have been named in Regulation 600, and they do not include subsection 37(10).

---

<sup>105</sup> ADVANCED AGRICULTURAL TESTING INC., Citation: 2009TCC190, April 7, 2009

## Implications and author's commentary

This case outlines the importance of **comparing** the effects of the **proxy election to the traditional overhead** method **before filing** of each year.

It should also be cautioned that the **traditional overhead** method merely **requires a "reasonable" basis of allocation** however, agreeing with the CRA as to what is "reasonable" is not always a simple process and can hold up assessments for additional weeks or months.

## Spasic – "hobby" vs. "carrying on business",<sup>106</sup>

### Facts:

Mr. Spasic is employed full-time at Ford Motors as a millwright.

In his time off work Mr. Spasic hopes to be able to develop a transducer that is sensitive enough that it can form part of a sonic imaging device capable of producing three-dimensional images.

He had begun his venture in 1999. In each of the years since then through 2007, Mr. Spasic claimed a business loss equal to the full amount of his expenses.

In the years in question, 2003 through 2005, Mr. Spasic was in the early stages of pursuing his desire. At some stage he built a simple transducer but not one with the capabilities needed to pursue his projects.

In the three years in question, these were in the range of \$20,000, \$10,000 and \$6,000 respectively.

The taxpayer's pursuits were in the early stages. In his own words, he had performed research and development in his basement workshop and he was working towards a research and development business.

He **did not track** of or record his **experimental efforts** or results.

Mr. Spasic never received any revenues from his pursuits.

### Issue:

Whether or not Mr. Spasic "carried on a business" in the years 2003 through 2005 and as a result, whether he was entitled to deduct business losses?

## Relevant legislation and analysis:

The Court's former Chief Justice Bowman in his 1998 decision in *Kaye v. The Queen*<sup>107</sup>, described the test to be applied simply as,

"In answering this question the hypothetical reasonable person would look at such things as capitalization, knowledge of the participant and time spent.

He or she would also consider whether the person claiming to be in business has gone about it in an **orderly, businesslike way** and in the way that a business person would normally be expected to do."

### Ruling & rationale: LOSS - carrying on business requires "documentation"

Upon analyzing the evidence and related legislation the judge concluded;

"Based upon the totality of the evidence, I am simply unable to conclude that Mr. Spasic had started to carry on a business in any of the years in question.

The **underlying commerciality** of an endeavour can often best be **recognized by the organized or methodical approach** with which the endeavour is pursued.

I do **not think a business person, a scientist or an engineer** could describe Mr. Spasic's pursuits as business-like."

## Implications and author's commentary

In the author's view this case reiterates the extreme importance of **documenting**:

- all **SR&ED activities** &
- all **shareholder transactions**.

Often business owners take "short-cuts" in documentation which would not be present in normal "business transactions."

These short-falls leave them open to "re-interpretations" on a variety of issues (e.g. whether a payment is salary (eligible) or bonus (ineligible)).

<sup>106</sup> Joavan Spasic v. The Queen - Citation: 2009TCC193, April 7, 2009

<sup>107</sup> *Kaye v. The Queen*, 98 DTC 1659

## **New T661 form – problems & opportunities (update)**

In our prior SR&ED Newsletter (2009-1) we provided an in-depth analysis of the problems and opportunities within the new T-661 claim form (released Nov. 10, 2008). Since this release we have the following issue updates:

### **Unresolved issues:**

#### **Each box printing on a separate page – each description now 7 pages**

A review of the project printout illustrates that each box currently prints out on a single page. As a result each project description (when we include the other portions of the form) is now approximately 7 pages.

In the author's opinion, this is very confusing for the taxpayer to review before submission and hardly results in a concise (2 page) description as provided in the CRA example.

### **Potentially resolved issues:**

#### **Providing documentation via website**

Another key issue for claimants is the loss of the ability to attach technical documents.

In many cases these documents allowed the project author to concisely explain his or her problems (i.e. a picture tells a thousand words).

The author posed a question to the CRA's Director General of SR&ED (Helene Dompierre):

Question(s): Can the claimant:

- a) upload project descriptions to a secure website,
- b) refer to them in the current project description and
- c) expect to have the CRA reviewer examine them?

Response: Yes.

### **Resolved issues:**

#### **Profile (corporate tax software) word limits too low**

- Previously we could only upload 3,948 characters to box 244
- With the newest release (version 2008-4.1 released March 20, 2009) we can now upload 5,660 characters to box 244 which makes it similar to other tax software on the market (e.g. Taxprep)
- Given the 700 word limit for this section the average word length (with spaces) is now 7.8 characters (vs. 4.5 prior)

#### **Author's recommendations:**

##### 7 page project description

Recommendation: Just learn to live with it ☺. Paper is cheap and electronic filing is just around the corner (estimated for March 2010).

##### Providing pictures and documents via website

Recommendation: Despite the recommendation to provide links to pictures/ supporting documents, the author would caution any claimants filing beyond 15 months from year end to ensure that the projects can "stand alone" (i.e. make sense even without the pictures in question) and use the additional information for "clarification purposes."

Interested parties may also wish to review our R&D Base, SR&ED project tracking system ([www.rdbase.net](http://www.rdbase.net)) which provides this functionality.

##### Use of different tax software packages

Recommendation: The differences in the software packages appear to have been mitigated with the latest release however, tax preparers should be vigilant as to when and how information is being "truncated."

It may also still be advisable to attach an extra copy of the description (in traditional format) where specific printing problems are encountered.

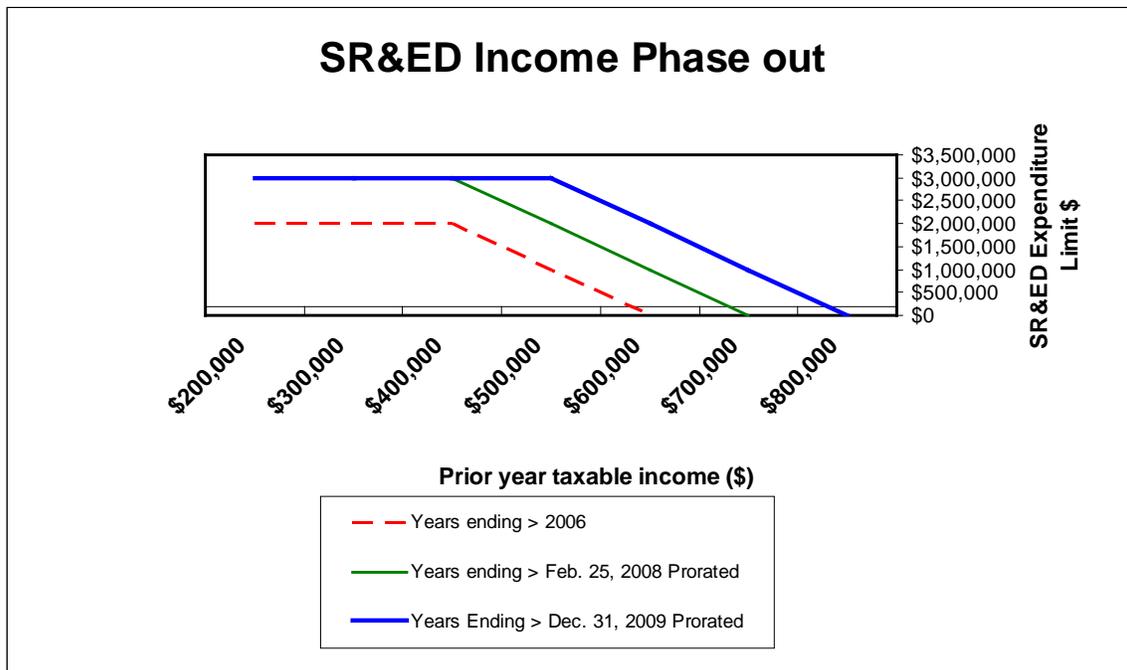
### **Notable quote:**

***"There is nothing wrong with change, if it is in the right direction"***

**-- Sir Winston Churchill**

## Recent CRA pronouncements

### 2009 budget – enhanced incentives<sup>108</sup>



There are two rates of federal investment tax credits (ITC's) for SR&ED;

- a general rate of 20 per cent and
- an enhanced rate of 35 per cent for small Canadian-controlled private corporations (CCPC's).

CCPC's are eligible to claim the enhanced ITC rate of 35 per cent on up to \$2 million of qualified SR&ED expenditures annually. Unused ITC's are fully refundable in respect of the first \$2 million of current expenses per year.

Previously (up to 2008) the \$2 million expenditure limit is phased out for CCPC's whose;

- taxable income for the previous taxation year is between \$400,000 and \$600,000 or
- taxable capital [assets] employed in Canada for the previous taxation year is between \$10-15 million.

The 2008 and 2009 budgets;

- increase the expenditure limit for the enhanced ITC rate of 35 per cent, and
- increasing the phase-out ranges on taxable income and taxable capital as follows:

#### **i) Expenditure Limit – now \$3 million (Feb. 25/08 – prorated)**

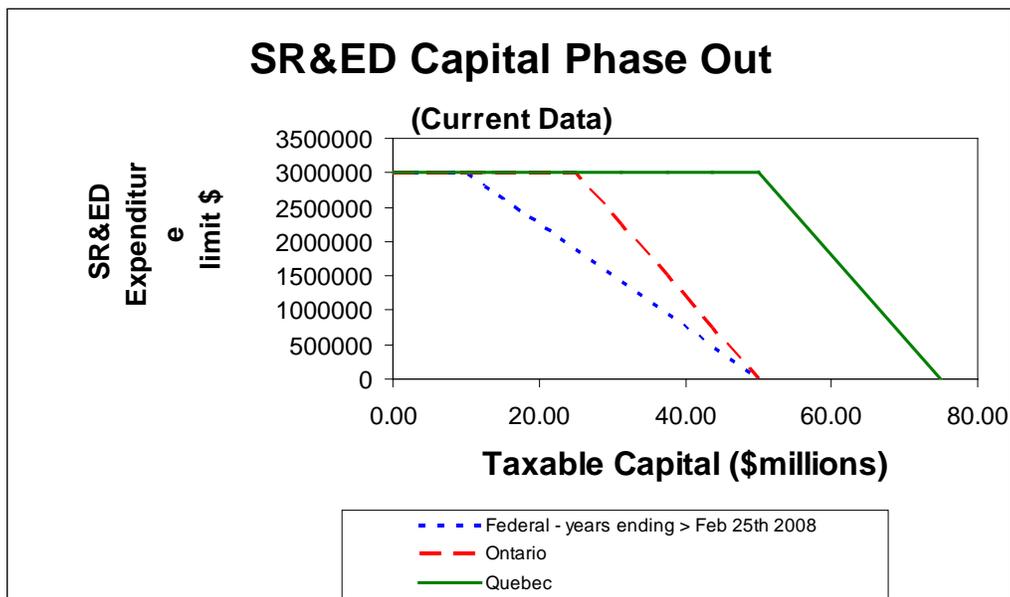
For taxation years ending after **Feb. 25, 2008** the maximum qualified expenditures on which the enhanced 35 per cent rate can be earned has increased to \$3 million from \$2 million. For **years which straddle** this date the increase will be **prorated**.

#### **Notable quote:**

*"The pessimist complains about the wind; the optimist expects it to change; the realist adjusts the sails."*

**-- William Arthur Ward**

<sup>108</sup> Complete Budget document available at [www.budget.gc.ca/2008/pdf/plan-eng.pdf](http://www.budget.gc.ca/2008/pdf/plan-eng.pdf)



As a result of the increase in the expenditure limit to \$3 million, the maximum amount of **fully refundable SR&ED ITC's** available for qualifying CCPC's will increase **from \$700,000 to \$1.05 million.**

#### **ii) Taxable Income Phase-Out Limit – to \$500- 800K (2010 prorated)**

To increase the **upper limit** of the phase-out range for prior-year taxable income to \$800,000 from \$700,000 (for 2008) and \$600,000 (pre-2008).

The expenditure limit will continue to be reduced by \$10 for each \$1 by which taxable income for the previous taxation year exceeded \$500,000.

#### **iii) Taxable Capital Phase-Out Limit to \$50 million (Feb. 25/08 prorated)**

To increase the upper limit of the phase-out range for prior-year taxable capital to \$50 million from \$15 million.

#### **Notable quote:**

*"Be the change you want to see in the world."*

-- Mahatma Gandhi

#### **Graphs & Mechanics of the new phase-out formulas**

The proposed legislation<sup>109</sup> provides the following formula;

"...a particular corporation's **expenditure limit for the 2010 and subsequent taxation year** is the amount determined by the formula

**(\$8 million - 10A) × (\$40 million - B)/\$40 million where**

**A is the greater of**

- (a) \$500,000, and
- (b) the amount that is
  - (i) ....the particular corporation's **taxable income** for its immediately **preceding taxation year** ...

**B is**

- (a) nil, if the following amount is less than or equal to \$10 million:
  - (i) ...the amount that is its taxable capital employed in Canada ... for its immediately preceding taxation year" or
- (b) in any other case, the lesser of \$40 million and the **amount by which** the amount determined under subparagraph (a)(i) [**i.e taxable capital**]... exceeds **\$10 million.**

#### **Author's commentary:**

Though the wording of this legislation seems complex these new provisions **represent a significant enhancement to the SR&ED program** and will have a **significantly positive effect on medium sized clients.**

<sup>109</sup> ITA proposed subsection 127(10.2)

## Summary of credits by Province:

### Qualified corporations (enhanced ITC's)

Qualified CCPC*				
Provinces & Territories	Prov./Terr. Credit	Prov./Terr. Refundable? <i>(Federal is refundable)</i>	Federal Credit Refundable (reduced by Prov./Terr. credit)	Combined
AB	10%	Yes	31.50%	41.50%
BC	10%	Yes	31.50%	41.50%
MB	20%	No	28.00%	48.00%
NB	15%	Yes	29.75%	44.75%
NL	15%	Yes	29.75%	44.75%
NS	15%	Yes	29.75%	44.75%
<b>ON</b>	<b>10%</b>	<b>Yes</b>		
<b>ON</b>	<b>4.5%</b>	<b>No</b>	<b>29.93%</b>	<b>44.43%</b>
PEI	0%	N/A	35.00%	35.00%
QC	20%	Yes	28.00%	48.00%
SK	15%	No	29.75%	44.75%
YK	15%	Yes	29.75%	44.75%
NWT	0%	N/A	35.00%	35.00%
NV	0%	N/A	35.00%	35.00%

### Other claimants

Other companies (non Qualified CCPC)				
Provinces & Territories	Prov./Terr. Credit	Prov./Terr. Refundable? <i>(Federal is non-refundable)</i>	Federal Credit Non-refundable (reduced by Prov./Terr. credit)	Combined
AB	10%	Yes	18%	28%
BC	10%	No	18%	28%
MB	20%	No	16%	36%
NB	15%	Yes	17%	32%
NL	15%	Yes	17%	32%
NS	15%	Yes	17%	32%
<b>ON</b>	<b>10%*</b>	<b>Yes</b>		
<b>ON</b>	<b>4.5% **</b>	<b>No</b>	<b>17.10%</b>	<b>31.60%</b>
PEI	0%	N/A	20%	20%
QC	10%	Yes	18%	28%
SK	15%	No	17%	32%
YK	15%	Yes	17%	32%
NWT	0%	N/A	20%	20%
NV	0%	N/A	20%	20%

#### Notes:

\* - Ontario allows foreign and public companies to claim the 10% (OITC) as long as they meet the income & size tests.

\*\* - The new Ontario 4.5% (ORDTC) credits is effective for costs incurred after Dec 31, 2008.

## Recent Provincial pronouncements

### Ontario 2009 budget – enhanced incentives<sup>110</sup>

#### New phase out limit (\$500-800K) – effective Dec.31/09

The OITC is currently subject to a **graduated phase-out where taxable income exceeds \$400,000** and is fully **eliminated at \$700,000** of taxable income. The Budget proposes to **increase these thresholds to \$500,000 and \$800,000 respectively.**

It is intended that the effective date of these changes parallel that of the federal amendments announced in the 2009 federal Budget.

Accordingly, they will be **effective for taxation years ending after 2009** with a pro-ration for taxation years that straddle December 31, 2009.

#### Non-refundable 4.5% credit - effective Dec.31/08

The Ontario research and development tax credit (ORDTC) is a 4.5% non-refundable tax credit on eligible expenditures incurred in a taxation year that ends after 2008.

This credit is meant to replace the existing Ontario SR&ED incentive relating to the treatment (i.e. non-taxability in Ontario) of the federal SR&ED ITC's.

### Notable quote:

*“Our enemies are innovative and resourceful, and so are we. They never stop thinking about new ways to harm our country and our people, and neither do we.”*

-- George Bush

### Alberta – 2009 new 10% refundable SR&ED ITC<sup>111</sup>

#### Effective after Dec 31, 2008

The Alberta Scientific Research and Experimental Development (SR&ED) tax credit program provides;

- a **10% fully refundable** tax credit to [ANY] **corporations,**
- with a permanent establishment in Alberta,
- that carry on **SR&ED activities in Alberta &**
- incur **eligible expenditures after December 31, 2008.**

#### Other details:

- Expenditures by a partnership, trust, or individual are not eligible for this program (i.e. **only corporations**).
- There is a **\$4 million expenditure limit** (among associated corporations) prorated for days in a year which straddle January 1, 2009 (i.e. maximum ITC is \$400K / year)
- There is a **filing deadline** similar to the Federal SR&ED credits (18 months from year end).
- There are **NO ownership, income or taxable capital limits** in order to qualify for this credits (i.e. all corporations including foreign, public and large companies can qualify)

<sup>110</sup> Complete Budget document available at [www.budget.gc.ca/2008/pdf/plan-eng.pdf](http://www.budget.gc.ca/2008/pdf/plan-eng.pdf)

<sup>111</sup> Alberta Bill 48 has taken effect December 1, 2008



## SR&ED Newsletter – 2009-1

### New T661 form – problems & opportunities

On November 10, 2008 the Canada Revenue Agency released a new SR&ED form including a sample project description which has been analyzed to address problems and opportunities specific to the major tax preparation software packages (Taxprep and Profile) as outlined below:

<b>CRA software project COMMENTARY (2 pages) .....</b>	<b>97</b>
Comments on the current CRA description (Pros & Cons) .....	99
Box 240: The square - define “standard practice” .....	99
Box 242: The triangle - define “technological uncertainty” (obstacles).....	101
Box 244: The circle - identify “experimentation performed” .....	103
<b>Template to identify and quantify the required elements:.....</b>	<b>66</b>
Sample CRA software project – key SR&ED components via template.....	108
Sample CRA software project – rewritten to remove existing documentation shortfalls (3 pages) .....	109
WORD COUNT VS. RELATED MAXIMUMS: CRA, TAXPREP & PROFILE .....	112
<b>TAXPREP - CRA software project – rewritten to remove documentation shortfalls (3 pages) .....</b>	<b>113</b>
TAXPREP - specific problems to preparing descriptions .....	116
Column width (too small @ 78 characters?) .....	116
<b>PROFILE CRA software project – rewritten to remove documentation shortfalls (3 pages).....</b>	<b>117</b>
PROFILE - specific problems to preparing descriptions .....	120
1) Form allows <60% of characters vs. Taxprep.....	120
2) Contents of form do not fully print .....	120
3) Column width (too wide @ 141 characters?).....	121
4) Each box printing on a separate page – each description now 7 pages .....	121
<b>CRA feedback &amp; potential filing strategies related to new forms.....</b>	<b>122</b>
1) CRA response to problems cited – corrections coming.....	122
2) Providing technical documents via website.....	122
<b>Appendix A: Best practices for isolating SR&amp;ED “key criteria” .....</b>	<b>123</b>

# CRA software project COMMENTARY (2 pages)

## Part 2 – Project information

CRA Internal form identifier 060  
Code 0801

Complete a separate Part 2 for each project claimed this year.

**Section A – Project Identification**

**200** Project title (and identification code if applicable)  
Data warehouse management – Project code 98-0001

**202** Project start date: 2008 Mar  
**204** Completion or expected completion date: 2008 Nov.  
**206** Field of science or technology code (See guide for list of codes): 1.02.03

**208**  Continuation of a previously claimed project  
**210**  First claim for the project

**218** Was any of the work done jointly or in collaboration with other businesses? ..... 1  Yes 2  No

If you answered yes to line 218, complete lines 220 and 221.

<b>220</b> Names of the businesses	<b>221</b> BN
1	
2	
3	

The work was carried out (check any that apply)

**222**  By analysis only  
**223**  In a laboratory  
**224**  In a dedicated research facility

**225**  In a commercial plant or facility  
**226**  Others, specify **228**

Purpose of the work

**230**  To achieve technological advancement for the purpose of creating new or improving existing materials, devices, products or processes. (Go to Section B – Experimental development)  
**232**  For the advancement of scientific knowledge. (Go to Section C – Basic or applied research)

**Section B – Experimental development**

The technological advancement you are trying to achieve with this work will result in:

	Materials, devices, or products	Processes
The development of new	<b>235</b> <input type="checkbox"/>	<b>236</b> 1 <input type="checkbox"/>
The improvement of existing	<b>237</b> <input checked="" type="checkbox"/>	<b>238</b> 1 <input type="checkbox"/>

**240** What technological advancements were you trying to achieve? (Maximum 850 words)

**I** The technological objective of this project was to improve data warehouse management techniques by concentrating on the compression of relational database tables. At the time this work began, numerous database compression methods were available and many of these had been commercialized in larger software applications. However, practically all of the methods relied on data being uniformly distributed and static in nature. **Pro 1a) - defined "Standard practice" technology benchmarks**

**II** By contrast, the overwhelming proportion of data entering data warehouses could not be assumed to be uniformly distributed and was almost certainly dynamic in character. We assumed that conventionally available data compression methods, such as the loss-less dictionary approach, could be surpassed by developing methods that would exploit the unique properties of those data sets that were not uniformly distributed and were dynamic. A technological advancement was therefore sought in this project through the development of data compression algorithms based on an analysis of the dynamic character and non-uniform distribution of the data sets entering the data warehouse. This work generated new technological knowledge regarding: **Pro 1b) - identify benchmark method(s) + related objective**

**III**

- the discovery and use of column value frequency of initial tables rows to create a block-based compression dictionary;
- the use of a table-wide list of most frequent values for the compression dictionary;
- the restriction of query/update/refresh operations to compressed blocks rather than entire tables;
- the organization and control of compression dictionaries in the buffer cache when calls are made to uncompress multiple blocks.

**Pro 1c) - Identified "new methods" to achieve objectives**      **Con 1a) - WRONG TENSE! Should link to Uncertainties & Activities**

**IV** The performance of the various prototypes developed in this work was benchmarked using a number of measures based on CPU utilization and data throughput for operations including parallel load, delete/update operations, full table scan, and table access by row ID. One additional outcome of this work was that the dynamic, non-uniform data compression method developed here actually provided performance improvements for data backup and recovery operations when applied to very large databases in excess of 2.5 million rows (1.3 GB) such as those encountered in data warehouses.  
**Pros 1d) - Describes "Experimentation" & "Quantifies" results**      **Cons 1b,c&d)-Beyond Objective, Wrong tense & Activities in box 244**

242	What technological obstacles did you have to overcome to achieve those advancements? (Maximum 350 words)
	There were a number of specific technological obstacles that drove the systematic investigations described further.
I	We were looking for an appropriate methodology of modeling our dynamic, non-uniform data distribution in real data for the purposes of the compression prototypes. <b>Con 2a) - Repetition - We have already identified these issues in box 240</b>
	There were no methodologies, techniques, or models available to us to characterize dynamic, non-uniform data. Our review of available techniques revealed in the early phase of the project that we had to undertake investigation leading to the development of a dataset model suitable to reflect in an efficient way our specific dataset characteristics. The second technological shortcoming was that we did not know and we could not find any technique or methodology related to the data compression, which would specifically deal with this data model related to dynamic, non-uniform data. We realized that if we develop a suitable model to characterize dynamic, non-uniform data then we would find no established techniques to be applied to the data compression aspect that would effectively and efficiently exploit the general features of this abstract data model previously mentioned. The effectiveness of each feature had to be verified in terms of data integrity and benchmark performance comparisons. Once a series of candidate compression algorithms became available the subsequent technical shortcomings were associated with the possibility of implementing a dynamic compression technique for dataset additions and/or updates on a batch basis. Finally, we were planning to develop an acceptable and valid methodology of setting up some general rules related to an optimal data table compression-block size applicable to both the initial data set analysis and the dynamic analysis. We felt that such a relationship should exist and we decided to undertake an investigation to be able to prove it. We also realized that such methodology is not readily available so we would have to address this issue and develop a technique potentially leading to determining an optimal data-block size. <b>Pro 2a) - Illustrates System Uncertainty: compression vs. data model</b>
II	
III	
IV	[314 words] <b>Pro &amp; Con 2b) - Describes experimental method BUT Activities s/b in box 244</b>
	<b>Pro 2c) - identifies development of "new methods" to resolve "technology variable" - optimal block size</b>
244	What work did you perform in the tax year to overcome those technological obstacles? (Summarize the systematic investigation) (Maximum 700 words)
	Following a review of available software methods and dataset characterization techniques, beginning in March 2008 the first phase of the investigations focused on the analysis of a very large data set (known to be dynamic with a non-uniform distribution) in relational database form. This analysis involved a number of investigations, using selected well-known methods in software engineering, with the aim of creating a generalized model of a data set. This also included the extraction of a number of dataset-specific conclusions regarding row and column correlations and distributions, some of which are briefly outlined above in the technological advancements section. At the end of this first phase we found that a reasonably accurate data set model could be created. This was further tested and the data set model accuracy was verified and validated against several concrete smaller-sized relational databases available to us in the data warehouse. <b>Pro &amp; Con 3a) - Described work performed BUT should QUANTIFY number of alternatives contemplated</b>
I	
	In the second phase, starting in May 2008, a number of compression methods were developed in prototype forms to exploit the general features of the data model. Each prototype carried a set of specific assumptions regarding how the dataset characteristics might be exploited and each was subsequently verified for integrity and then benchmarked for performance. This benchmarking was done through measures of CPU utilization and data throughput for parallel load, delete/update operations, full table scan, and table access by row ID. In direct support of this work, several test scripts were written to test the compression algorithm. Although the development of these scripts included no significant technological challenge, they were necessary to benchmark the new algorithms and determine the most appropriate solution. The benchmarking results were documented and are available for further review if requested. <b>Pro &amp; Con 3b) - Correlates ACTIVITIES to UNCERTAINTIES &amp; DOCUMENTS BUT did NOT QUANTIFY # of compression "methods" tested</b>
II	
III	The third phase was carried out in June and July 2008. Three candidate compression algorithms were modified to include an implementation of several different dynamic compression techniques for dataset additions and/or updates. Each of these again had the data integrity verified and performance benchmarked, the latter now including update/refresh-specific performance measures. In August 2008, a final prototype was selected for widespread commercial implementation ending this aspect of the experimental development. <b>Pro &amp; Con 3c) - Quantified # of compression "algorithms" tested (3) BUT did NOT # of compression "techniques" tested</b>
IV	During October 2008 the implemented prototype was used to determine whether or not an optimal data table compression-block size could be determined by both the initial data set analysis and the dynamic analysis. However, this work failed to establish that such a relationship existed and was subsequently abandoned, ending the project in November 2008. <b>Pro &amp; Con 3d) - Illustrates "uncertainty" BUT should try to clarify "WHY" (i.e. conclusions vs. just results) wrt "variables" of uncertainty</b>
V	As part of this effort the Company engaged an outside contractor for a period of two months to extend the data compression method to a wider range of common data warehouse operations in September 2008. Included in this work was an exploration into use of the implemented compression prototype for data backup and recovery operations. As the result of this work it was found out and further documented that the prototype provided measurable performance improvements when applied to very large databases in excess of 2.5 million rows (1.3 GB) such as those typically encountered in data warehouses. Subsequent investigations revealed that this was primarily due to the construction of the compression dictionary rather than the data blocks. [521 words] <b>Pro &amp; Con 3e) - Provides QUANTIFICATION BUT appears to be beyond beyond the originally stated objective - perhaps a new project?</b>
	(Go to Section D)

## Comments on the current CRA description (Pros & Cons)

### Box 240: The square - define "standard practice"

#### Pros (things done right)

Pros 1 a): Defined Standard Practice benchmarks for existing technology

**Project detail:** "...practically all of the [existing] methods relied on data being uniformly distributed and static in nature."

**CRA directive:** "Evidence of Technological Advancement could include credible third party literature or comparisons of the capabilities sought against those previously available from the taxpayer himself. As in a court of law, there are no rigid definitions of what constitutes credible evidence."<sup>112</sup>

**Author's comment:** It appears that the example attempts to benchmark technologies (i.e. all for "uniform" and "static" data) as a base from which to develop "new methods."

Pros 1 b): Identified benchmarking method & related objectives

**Project detail:** "...technological advancement...development of data compression algorithms based on an analysis of the dynamic character and non-uniform distribution of the data sets entering the data warehouse."

**CRA directive:** "Note that an advancement in technology can rarely be described by listing software functions and features at an "end-user" level. Advances are typically made through innovation in software architectures, designs, algorithms, techniques or constructs within the field of information technology or computer science."<sup>113</sup>

**Author's comment:** It appears that the example attempts to benchmark technologies and objectives "methods that would exploit the unique properties of those data sets that were not uniformly distributed and were dynamic," as required.

Pros 1 c): identified new "methods" to achieve objectives

**Project detail:** "This work generated new technological knowledge regarding:

- use of column value frequency...to create a block-based compression dictionary;
- the restriction of query/update/refresh operations to compressed blocks rather than entire tables;
- the organization and control of compression dictionaries in the buffer cache when calls are made to uncompress multiple blocks."

**CRA directive:** "Identify any constraints resulting from considerations of;

- Inter-operability
- Conformance to standards
- Performance (step response, throughput)
- Concurrency
- Footprint
- Scale-ability
- Stability

---

<sup>112</sup> Excerpt from, "Guidance on Eligibility of Software projects for the SR&ED tax Credits," as published by the CRA in co-operation with CATA & the software industry, September 2000.

<sup>113</sup> Excerpt from, "Guidance on Eligibility of Software projects for the SR&ED tax Credits," as published by the CRA in co-operation with CATA & the software industry, September 2000.

- 3rd party components &
- Legacy requirements”<sup>114</sup>

**Author’s comment:** The example cites several new “**methods** ...[for] data sets that were not uniformly distributed and were dynamic.”

These included technological alternatives such as: methods to restrict certain operations, control of buffer cache, etc.

Pro 1d): Describes “experimentation” & “quantifies” results

**Project detail:** “...performance of the various prototypes ... benchmarked using ... **measures based** on CPU utilization and data throughput for operations including parallel load, delete/update operations, full table scan, and table access by row ID...improvements ... databases in excess of 2.5 million rows (1.3 GB)...”

**CRA directive:** R&D related court cases stress that SR&ED, “...theories must be tested against empirical data. This testing is accomplished through **controlled experimentation**, and must be done **with extremely accurate measurements**. **Without the presence of these elements, an activity will not meet the requirements ...**”<sup>115</sup>

**Author’s comment:** This is the only portion of the project example which provides evidence of any such “measurements” (i.e. 2.5 million rows or 1.3 GB). Sadly this appears to be beyond the stated project objective (see Con 1b).

In the authors opinion the project likely provided additional **opportunities to quantify** various objectives (e.g. **response time, compression ratios, optimal block sizes**, etc.) This type of quantification has been provided in our “rewritten” example.

### Cons (areas for improvement)

Con 1a): Wrong tense - advancements “contemplated” should be “future oriented”

**Project detail:** “This work **generated** new technological knowledge regarding:...”

**CRA directive:** “Achieving a **technological advance** would require removing the element of **technological uncertainty** through a process of **systematic investigation**... For an experimental development activity to be eligible the **technological advance** achieved **has only to be slight**.”<sup>116</sup>

**Author’s comment:** As we can see from this definition the “**term technological advancement**” is the *result of three separate components*.

The “technological advancements” are the result of the entire process (boxes 204-244) and are represented by the “conclusions” made at the end of the experimentation.

Box 240 of the description requires an outline of the, “technological advancements you are **trying to** achieve?” In other words the technical description requires an outline of the advancements **contemplated at the start** of the project.

<sup>114</sup> Excerpt from, “Guidance on Eligibility of Software projects for the SR&ED tax Credits,” as published by the CRA in co-operation with CATA & the software industry, September 2000.

<sup>115</sup> (source - Canalerta Technologies v. MNR - Tax Court of Canada (1992))

<sup>116</sup> Excerpt from CRA, IC 86-4R3 paragraph 2.13

In the author's opinion the "results and conclusions" should not be stated at the opening of the project description (box 240) since it is as a result of the work performed (i.e. disclosed in box 244).

The current description starts by describing the "results and conclusions" **rather than** focussing on **benchmarks of standard practices vs. initial technical objectives**. As a result it becomes much harder to illustrate technical uncertainties faced and the project becomes needlessly repetitive.

Cons 1 b): Data back-up work - Beyond objective

**Project detail:** "One **additional outcome** of this work was that the dynamic, non-uniform data compression method developed here actually provided performance **improvements for data backup and recovery operations** when applied to very large databases in excess of 2.5 million rows (1.3 GB)."

**CRA directive:** The CRA requires that, "the scientific or **technological objectives** you state:

- be **quantifiable or verifiable**,
- contemplate a reasonable timeframe (generally  $\leq 3$  years)" <sup>117</sup> &
- "be **clearly stated at an early stage** in the project's evolution"<sup>118</sup>.

**Author's comment:** While the work on the data back-up was the only effort which provided "quantifiable results" (which is good) sadly, it is arguably beyond the original stated objective of the project (i.e. "to improve data warehouse management techniques by concentrating on the compression of relational database tables.")

As a result the author would propose that this work could (should) be submitted as a **separate project** which might meet the eligibility requirements as a "stand alone" project (process improvement). In the author's opinion the current project example might be **misleading** to claimants who may now feel that they can **claim activities extending beyond the stated project objectives**.

Cons 1 c): "Experimental activities" should be described in box 244

**Project detail: Project detail:** "Performance of the various prototypes ... benchmarked using ... measures based on CPU utilization and data throughput for operations including parallel load, delete/update operations, full table scan, and table access by row ID..."

**CRA directive:** A large portion of the current description in box 240 (section IV) provides details of the:

- a) Experimental method,
- b) Activities performed,
- c) Results &
- d) Conclusions.

**Author's comment:** In the author's opinion this information is more correctly outlined in box 244 (experimentation performed).

### **Box 242: The triangle - define "technological uncertainty" (obstacles)**

#### **Pros (things done right)**

Pro 2a) - Illustrates System Uncertainty: compression vs. data model

---

<sup>117</sup> CRA form T4088, part 2, paragraph A – Guide to the T661 form.

<sup>118</sup> Information Circular 86-4R3, paragraph 2.10.3

**Project detail:** “The second technological shortcoming ... We realized that if we develop a suitable model to characterize dynamic, non-uniform data then we would find no established techniques ...data compression aspect ... of this abstract data model previously mentioned.”

**CRA directive:** “Work on combining standard technologies, devices, and/or processes is **eligible if** non-trivial combinations of established (well-known) technologies and **principles for their integration carry a major element of technological uncertainty**; this may be called a "system uncertainty.”<sup>119</sup>

**Author’s comment:** In the author’s opinion the example provides a strong illustration of system uncertainty beginning with the optimization of the “modeling techniques” for the data which, once successful, required additional development of related “compression techniques.”

Pro 2b): Describes experimentation method

**Project detail:** “Once a series of candidate compression algorithms became available the subsequent technical shortcomings were associated with the possibility of implementing a dynamic compression technique for dataset additions and/or updates on a batch basis.”

**CRA directive:** “Systematic investigation connotes the existence of **controlled experiments** and of **highly accurate measurements** and involves testing of one’s theories against empirical evidence.”<sup>120</sup>

**Author’s comment:** In this case we outline the testing method (abstract data model, test features for data integrity & benchmark performance + test compression batch vs. dataset additions basis) however, as per con 1c) this information may be better placed in box 244 (circle).

Pro 2c) - identifies development of "new methods" to resolve "technology variable" - optimal block size

**Project detail:** “Finally, we were planning to **develop** an acceptable and valid **methodology** of setting up some general rules related to an optimal data table compression-block size applicable to both the initial data set analysis and the dynamic analysis.”

**CRA directives:** As stated in Pros 1b) & 1c)

**Author’s comment:** In the author’s opinion the project provides strong evidence with respect to the development of “new methods.”

### **Cons (areas for improvement)**

Con 2a) Repetition: We have already identified these issues in box 240

**Project detail:** “We were looking for an appropriate methodology of modeling our dynamic, non-uniform data distribution in real data for the purposes of the compression prototypes”

**CRA directive:**  
In this case we are repeating issue with respect to “characterization of dynamic non-uniform data.”

**Author’s comment:** As noted in con 1 a) the current description starts by describing the “results and conclusions” meaning that the project becomes needlessly repetitive.

---

<sup>119</sup> CRA IC 86-4R3 paragraph 2.10.2

<sup>120</sup> *Sass Manufacturing Limited v. M.N.R.* – Tax Court of Canada - 88 DTC 1363

Cons 2b): “Experimental activities” should be described in box 244

**Project detail:** As stated in Pro 2b).

**CRA directive:** As stated in Pro 2b) we outline the testing method however, we do not explicit outline the related variables (since already partially sited in box 240).

**Author’s comment:** As noted in con 1 c), in the author’s opinion, this information is more correctly outlined in box 244 (experimentation performed).

Furthermore, in the author’s opinion, the claimant should also try to identify the top 3-5 “variables” of uncertainty & ranked them in order of technical significance.

We should then attempt to provide 1:1 correlation to specific research steps and conclusions (box 244) for each “variable” stated (in box 242).

### **Box 244: The circle - identify “experimentation performed”**

#### **Pros (things done right)**

Pro 3a) - Described work performed

**Project detail:** “analysis involved a number of investigations ...aim of creating a generalized model of a data set ...included ... dataset-specific conclusions regarding row and column correlations and distributions...”

**CRA directive:** “It [systematic investigation] **must demonstrate the presence of analysis or experiment** in the methodology you used to carry out the work. It must also include the results you obtained **and the conclusions you made.**”<sup>121</sup>

**Author’s comment:** In the author’s opinion, this description outlines the relevant experimentation however it could benefit from further quantification (see Con 3a).

Pro 3b) - Correlates ACTIVITIES to UNCERTAINTIES & DOCUMENTS

**Project detail:** The description stated, “benchmarking was done through

- measures of CPU utilization & data throughput for parallel load via:
- delete/update operations,
- full table scan, and
- table access by row ID [with]
- several test scripts were written to test the compression algorithm”

**CRA directive:** As per Pro 3a).

**Author’s comment:** In the author’s opinion, this information provides strong evidence that:

- experimentation was performed,
- quantifiable variables identified (e.g. CPU utilization & data throughput) &
- measurements were taken (and hopefully recorded).

---

<sup>121</sup> Form T4088 – Guide to form T661

Pro 3c) - Quantified # of compression "algorithms" tested (3)

**Project detail:** "Three candidate compression algorithms were modified to include an implementation of several \_\_\_\_ [QUANTIFY] different dynamic compression techniques for dataset additions and/or updates."

**CRA directive:** As per Pro 2b).

**Author's comment:** In the author's opinion, it is critical that a project description outline the number or experiments attempted:

- 5, 50, 500?
- Were they all similar or completely different?
- If different, how so and why?

This in turn provides the technical reviewer to accurately judge the "reasonableness" of time and cost spent.

**Furthermore, all such work typically falls into 3 main categories:**

- i) **Alternatives analyzed** or simulated (Theoretical)
- ii) **Process trial runs** (Physical or software)
- iii a) **Complete prototypes** (Physical or Software releases)  
b) **Revisions to prototypes** (in III a)

Lastly, the **ability to outline a "matrix" of "cause and effect"** (e.g. effects of compression techniques vs. different algorithms) would provide **strong evidence of "system uncertainty."**

Pro 3d) - Illustrates "uncertainty" via failure

**Project detail:** "...prototype was used to determine whether or not an optimal data table compression-block size could be determined by both the initial data set analysis and the dynamic analysis. However, this work **failed to establish** that such a relationship..."

**CRA directive:** "The search for a meaningful advance ... is satisfied whether or not the activity is successful. In other words, determining that a hypothesis is incorrect also represents a scientific or technological advance."<sup>122</sup>

**Author's comment:** In the author's opinion the fact that they were unable to find a correlation of:

- an optimal data table compression-block size
- via the initial data set analysis and
- the dynamic analysis

represents a potential "technological advancement.

Pro 3e) - Provides QUANTIFICATION & conclusions

**Project detail:** "...prototype provided measurable [QUANTIFY] performance improvements when applied to very large databases in excess of 2.5 million rows (1.3 GB) ... primarily due to the construction of the compression dictionary rather than the data blocks."

**CRA directive:** "Most scientific research involves gradual, indeed infinitesimal, progress. Spectacular breakthroughs are rare and make up a very small part of the results of SR&ED in Canada."<sup>123</sup>

<sup>122</sup> Excerpt from CCRA, IC 86-4R3 paragraph 2.12

<sup>123</sup> NORTHWEST HYDRAULIC CONSULTANTS LTD., v THE QUEEN – Tax Court of Canada - (Date: 1998/05/01 - Docket: 97-531(IT))

**Author's comment:** In the author's opinion, the attempt to quantify the number of experiments and results has been attempted however, it could be improved considerably (see Pro 3c & Con 3a).

Another positive aspect is the attempt to explain "why" the results were witnessed (i.e. "primarily due to the construction of the compression dictionary rather than the data blocks.")

### **Cons (areas for improvement)**

Con 3a) - should QUANTIFY number of alternatives contemplated

**Project detail:** The first paragraph missed various opportunities to provide useful quantification, including:

- \_\_\_[QUANTIFY] available software methods...
- \_\_\_[QUANTIFY] number of investigations...
- extraction of a number \_\_\_\_ [QUANTIFY] of dataset-specific conclusions
- reasonably \_\_\_[QUANTIFY] accurate data set model could be created validated against several \_\_\_\_ [QUANTIFY] concrete smaller-sized \_\_\_\_ [QUANTIFY] relational databases.

**CRA directive:** As per Pro 2b).

**Author's comment:** Based on the rationale outlined in Pro 3c), failure to quantify the number of "compression methods" tested (5, 50, 500 & how) provides less information for the CRA's technical reviewer to accurately judge the "reasonableness" of time and cost spent.

Con 3b) - did NOT QUANTIFY # of compression "methods" tested

**Project detail:** "...starting in May 2008, a number [QUANTIFY \_\_\_] of compression methods were developed..."

**CRA directive:** As per Pro 2b).

**Author's comment:** As per Con 3a).

Con 3c) - did NOT # of compression "techniques" tested

**Project detail:** "Three candidate compression algorithms were modified to include an implementation of several [QUANTIFY \_\_\_] different dynamic compression techniques for dataset additions and/or updates."

**CRA directive:** As per Pro 2b).

**Author's comment:** As per Con 3a) & Pro 3c).

Con 3d) - try to clarify "WHY" (i.e. conclusions vs. just results) with respect to "variables" of uncertainty

**Project detail:** As per Pro 3d) "...whether or not an optimal data table compression-block size could be determined .... However, this work **failed to establish** that such a relationship..."

**CRA directive:** “It [systematic investigation] ... must also include the results you obtained **and the conclusions you made.**”<sup>124</sup>

**Author’s comment:** In the author’s opinion provide technical conclusion(s) or hypotheses about WHY a result was witnessed.

It is therefore also advantageous to **compare the results to initial expectations** and try to explain using the variables cited. This has been attempted in the “rewritten project example.”

Con 3e)- appears beyond stated objective

**Project detail:** “As part of this effort the Company engaged an outside contractor for a period of two months to **extend the data compression method to a wider range** of common data warehouse operations...”

**CRA directive:** As stated in Con 1 b), The CRA requires that the scientific or **technological objectives** you state:

- “- be **quantifiable or verifiable**,
- contemplate a reasonable timeframe (generally <= 3years)”<sup>125</sup> &
- “- be **clearly stated at an early stage** in the project's evolution”<sup>126</sup>.

**Author’s comment:** In the author’s opinion the example hints that we may be incorporating further costs related to another potentially eligible project which goes beyond the initial objectives of this project.

---

<sup>124</sup> Form T4088 – Guide to form T661

<sup>125</sup> CRA form T4088, part 2, paragraph A – Guide to the T661 form.

<sup>126</sup>Information Circular 86-4R3, paragraph 2.10.3

# Template to identify and quantify the required elements:

## THE THREE COMPONENTS OF AN SR&ED PROJECT

**FORMAT: ITEM:**

MAX: 350  
WORDS

I) A) LIST State of Existing technology: Benchmarking methods & sources for citations



**WHAT?**

	<u>Number of</u>	
i)	_____	Internet / Google Searches
ii)	_____	Articles
iii)	_____	Patent searches
iv)	_____	Competitive methods
v)	_____	Similar in-house technologies
vi)	_____	Potential components
vii)	_____	Queries to experts
viii)	_____	Other

B) TABLE Performance Objective(s) (up to top 5)

		<u>Benchmark 1</u>	<u>Benchmark 2 ...</u>	<u>Benchmark 3 ...</u>
i)	Existing performance	_____	_____	_____
ii)	Unit of measure	_____	_____	_____
iii)	Objective	_____	_____	_____
iv)	<i>Result (III B i) *</i>	_____	_____	_____

MAX: 350  
WORDS

II) LIST Technological Uncertainties (up to top 5 variables)



**WHY?**

i)	_____	Variable 1
ii)	_____	Variable 2 ....
iii)	_____	Variable 3 ....

MAX: 700  
WORDS

III) A) LIST Experimentation method (for EACH activity )



**WHO,  
WHEN,  
WHERE &  
HOW?**

	<u>Number of</u>	
i)	_____	Alternatives analyzed or simulated (Theoretical)
ii)	_____	Process trial runs (Physical or software)
iii a)	_____	Complete prototypes (Physical or Software releases)
iii b)	_____	Revisions to prototypes (in III a)

B i) TABLE Results - tie to performance objective benchmarks TABLE I B) above \*

B ii) LIST Conclusions - compare Results to expectations & explain via Variables LISTED in II) above\*\*

B iii) LIST Technical documentation retained (list of 12 items per CRA T661 form)

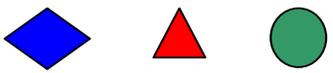
\* + Software Industry - should clarify total lines of code: written vs. scrapped during current period

*\* See Appendix A for further discussion on "best practices" for use of this template.*

**Sample CRA software project – key SR&ED components via template**

**Key Criteria Summary**

<b>804 Software (Data Warehouse development)</b>	<b>Benchmark methods:</b> 33 internet sites, 14 articles, 6 competitive products, 2 in house technologies, 3 queries to experts & > 100 potential components														
	<b>Objectives:</b> CPU utilization (70%), Response time (15 seconds), Data compression (15:1)														
<b>Uncertainty I:</b> Non-uniform dataset determination	<b>Key Variables:</b> CPU utilization, Definition and construction of data blocks, Methods to characterize non-uniform data, Use of compression dictionary														
<b>Experimentation - methods - results &amp; conclusions</b>															
<b>Activity</b>	<b># Tests/ Testing method</b> <b>Results - % of objective</b> <b>Variables Concluded</b>														
<b>1</b> Phase I: Develop generic data model	10 Alternatives analyzed      Definition and construction of data blocks														
<b>2</b> Phase II: Develop compression methods	10 Complete prototypes      CPU utilization, Definition and construction of data blocks														
<b>3</b> Phase III: Compression algorithm with dynamic techniques	3 Complete prototypes      CPU Utilization - 116% 12 Iterations to prototypes      Optimal block size - 80% Data compression - 90%														
<b>4</b> Phase IV: Extend data compression methods	102 Process trial runs      CPU utilization, Definition and construction of data blocks, Use of compression dictionary														
<b>5</b> Phase V: Correlate compression block size with initial data set	22 Alternatives analyzed      CPU utilization, Definition and construction of data blocks, Methods to characterize non-uniform data														
<table border="1"> <thead> <tr> <th colspan="2"><b>Costs / Activity</b></th> </tr> <tr> <th>Hours</th> <th>Materials Contract \$</th> </tr> </thead> <tbody> <tr> <td>320</td> <td>0 0</td> </tr> <tr> <td>670</td> <td>0 0</td> </tr> <tr> <td>1,640</td> <td>0 0</td> </tr> <tr> <td>73</td> <td>0 17,000</td> </tr> <tr> <td>230</td> <td>0 0</td> </tr> </tbody> </table>		<b>Costs / Activity</b>		Hours	Materials Contract \$	320	0 0	670	0 0	1,640	0 0	73	0 17,000	230	0 0
<b>Costs / Activity</b>															
Hours	Materials Contract \$														
320	0 0														
670	0 0														
1,640	0 0														
73	0 17,000														
230	0 0														
<b>Other details - supporting documentation &amp; benchmarks for time spent (recommended for software industry claims)</b>															
Total lines of code writ	<u>Written</u> 1,220,000 <u>Replaced</u> 748,000 <u>% of code scrapped</u> 61%														



# Sample CRA software project – rewritten to remove existing documentation shortfalls (3 pages)

<b>Project Name:</b>	Software (Data Warehouse development)	<b>Start Date:</b>	2008-06-01
<b>Project Number:</b>	804	<b>Completion Date:</b>	2009-03-31

---

## **Scientific or Technological Objectives:**

Performance measures: Existing benchmark Units of measure Performance objective

CPU utilization	95	% busy	70
-----------------	----	--------	----

Response time	60	seconds	15
---------------	----	---------	----

Data to compression	5 to 1	ratio	15 to 1
---------------------	--------	-------	---------

MAJOR TECHNOLOGICAL OBJECTIVES WERE TO: Reduce CPU load on dual core 2.8 Mhz machine with 2 GB of RAM, reduce current response times and achieve a compression ratio of up to 15:1 on raw binary data.

We assumed that conventionally available data compression methods, such as the loss-less dictionary approach, could be surpassed by developing methods that would exploit the unique properties of those data sets that were not uniformly distributed and were dynamic.

We were also planning to develop an acceptable and valid methodology of setting up some general rules related to an optimal data table compression-block size applicable to both the initial data set analysis and the dynamic analysis.

## **Technology or Knowledge Base Level:**

Benchmarking methods & sources for citations:

Potential components: examined over 100 database compression methods all methods relied on a) static or b) uniform data - identified "loss less" dictionary approach as starting basis for improvement

Queries to experts: 3 responses contacted 3 experts from internet forums and blogs

There were no methodologies, techniques, or models available to us to characterize dynamic, non-uniform data. Our review of available techniques revealed in the early phase of the project that we had to undertake investigation leading to the development of a dataset model suitable to reflect in an efficient way our specific dataset characteristics.

The second technological shortcoming we could not find any technique or methodology related to the data compression, which would specifically deal with this data model related to dynamic, non-uniform data.

We realized that if we develop a suitable model to characterize dynamic, non-uniform data then we would find no established techniques to be applied to the data compression aspect that would effectively and efficiently exploit the general features of this abstract data model.

## **Primary Field of Technology:**

201 -- Information Technology

## **Scientific or Technological Advancement:**

### ***Uncertainty #1: Non-uniform dataset determination***

We are uncertain as to how and whether it is possible to develop a method to identify and exploit the unique properties of non-uniform data sets. We are also uncertain whether we can use compressed data blocks vs entire tables to traverse the database and how much of a performance improvement this will result in.

In our opinion the most significant, underlying, technological VARIABLES were:

- Methods to characterize non-uniform data
- Optimal use of compression dictionary
- Definition and construction of data blocks &
- CPU utilization

### **Activity #1-1: Phase I: Develop generic data model**

#### **Description of work performed in Fiscal Year 2008:**

Beginning in March 2008 the first phase of the investigations focused on the analysis of a very large data set (known to be dynamic with a non-uniform distribution) in relational database form.

Experimentation method: Number of tests - Comments

Analysis / simulation: 10 alternatives - identified most common frequency values & evaluated use of column value frequencies to create prototype compression dictionary - using a relational dbase environment

#### **RESULTS:**

At the end of this first phase we found that a reasonably accurate data set model could be created. This was further tested and the data set model accuracy was verified and validated against several concrete smaller-sized relational databases available to us in the data warehouse.

#### **Conclusions:**

Model proved feasible - developed table-wide list of most frequent values for compression dictionary

Concludes on: Definition and construction of data blocks

### **Activity #1-2: Phase II: Develop compression methods**

#### **Description of work performed in Fiscal Year 2008:**

Starting in May 2008, a number of compression methods were developed in prototype forms to exploit the general features of the data model.

Experimentation method: Number of tests - Comments

Physical prototypes: 10 samples - Developed test scripts to compared CPU utilization, integrity and data throughput for operations including: parallel load, delete/update operations, full table scan & access by row.

#### **Conclusions:**

We determined it is best to restrict query/refresh options to compressed blocks vs. entire tables

Concludes on:

- Definition and construction of data blocks
- CPU utilization

### **Activity #1-3: Phase III: Compression algorithm with dynamic techniques**

#### **Description of work performed in Fiscal Year 2008:**

The third phase was carried out in June and July 2008.

Experimentation method: Number of tests - Comments

Physical prototypes: 3 samples - Examined use of buffer cache to organize & control compression dictionaries when calls made to uncompress multiple blocks

Prototype revisions: 12 revisions - 2 of the 3 sample compression algorithms selected for further experimentation to include 12 different dynamic compression techniques for dataset changes. Each

of these had the data integrity verified and performance benchmarked, the latter now including update/refresh-specific performance measures.

In August 2008, a final prototype was selected for widespread commercial implementation ending this aspect of the experimental development.

**Results:**

Performance measures	Result	Vs. Expectations
CPU utilization	66%	exceeded by 4%
block size (optimal)	22	80% met
Data compression	13:1	90% met

**Conclusions:**

This development lead to the discovery that we could use the column value frequency of initial tables rows to create an effective block-based compression dictionary.

Use of the buffer cache also proved successful and resulted in reduced response times by 80% when uncompress multiple blocks.

**Concludes on:**

- Definition and construction of data blocks
- CPU utilization
- Use of compression dictionary

**Activity #1-4: Phase IV: Extend data compression methods**

**Description of work performed in Fiscal Year 2008:**

September & October 2008

Experimentation method: Number of tests - Comments

Process trials: 102 runs / samples- Used external consultant - exploration into use of the implemented compression prototype for data backup and recovery operations.

**Results:**

As the result of this work it was found out and further documented that the prototype provided measurable performance improvements [QUANTIFY] when applied to very large databases in excess of 2.5 million rows (1.3 GB) such as those typically encountered in data warehouses.

**Conclusions:**

Success attributed primarily to compression dictionary vs. data blocks

**Concludes on:**

- Use of compression dictionary
- Definition and construction of data blocks
- CPU utilization

**Activity #1-5: Phase V: Correlate compression block size with initial data set**

**Description of work performed in Fiscal Year 2008:**

October and November 2008

Experimentation method: Number of tests - Comments

Analysis / simulation: 22 alternatives - the implemented prototype was used to determine whether or not an optimal data table compression-block size could be determined by both the initial data set analysis and the dynamic analysis

**Conclusions:**

Could NOT correlate compression block size with initial data set & dynamic analysis.

**Concludes on:**

- Methods to characterize non-uniform data

- Definition and construction of data blocks
- CPU utilization

## WORD COUNT VS. RELATED MAXIMUMS: CRA, TAXPREP & PROFILE

	<u>Box 240</u> <u>(Square)</u>	<u>Box 242</u> <u>(Triangle)</u>	<u>Box 244</u> <u>(Circle)</u>	<u>Total</u>
<b><u>CURRENT DATA WAREHOUSE</u></b>				
<b><u>PROJECT EXAMPLE</u></b>				
WORDS	332	93	674	1099
CHARACTERS (with spaces)	2367	622	4612	7601
CHARACTERS (no spaces)	1838	536	3933	6307
LINES	43	12	115	170
<b><u>MAXIMUMS:</u></b>				
I) <b><u>PER CRA</u></b>				
WORDS	350	350	700	1400
II) <b><u>TAXPREP</u></b>				
CHARACTERS (with spaces)	2730	2730	5460	10920
MAX CHARACTERS / WORD	7.8	7.8	7.8	
LINES	35	35	70	140
III) <b><u>PROFILE</u></b>				
CHARACTERS (with spaces - INPUT)	2730	2730	3948	9408
CHARACTERS (with spaces -OUTPUT - DELL laser printer)	2200	2200	3108	7508
CHARACTERS (with spaces -OUTPUT - Adobe PDF)	2600	2600	3770	8970
MAX CHARACTERS / WORD (WORST CASE)	6.29	6.29	4.44	17.02
LINES	20	20	28	68

*\* See additional examples and explanations of Taxprep and Profile Word count limitations on pages 25-27.*

# TAXPREP - CRA software project – rewritten to remove documentation shortfalls (3 pages)

NEW T661 forms Meuk RnD Base case study 2009 examples- Nov 2 2009-01-01  
2009-01-20 19:19

MEUK Corporation  
99999 9996 RC0001

## Part 2 - Project information (continued)

Complete a separate Part 2 for each project claimed this year.

Section A – Project identification			
<b>200</b> Project title (and identification code if applicable)			
804 - Software (Data Warehouse development)			
<b>202</b> Project start date	<b>204</b> Completion or expected completion date	<b>206</b> Field of science or technology code (See guide for list of codes)	
2008-06 Year Month	2009-03 Year Month	1.02.01	Computer sciences
Project history			
<b>208</b> 1 <input type="checkbox"/> Continuation of a previously claimed project		<b>210</b> 1 <input checked="" type="checkbox"/> First claim for the project	
<b>218</b> Was any of the work done jointly or in collaboration with other businesses? ..... 1 <input type="checkbox"/> Yes 2 <input checked="" type="checkbox"/> No			
If you answered yes to line 218, complete lines 220 and 221.			
<b>220</b> Names of the businesses			<b>221</b> BN
1			
The work was carried out (check any that apply)			
<b>222</b> 1 <input type="checkbox"/> By analysis only		<b>226</b> 1 <input checked="" type="checkbox"/> In a commercial plant or facility	
<b>223</b> 1 <input type="checkbox"/> In a laboratory		<b>228</b> 1 <input type="checkbox"/> Others, specify <b>229</b>	
<b>224</b> 1 <input type="checkbox"/> In a dedicated research facility			
Purpose of the work			
<b>230</b> 1 <input checked="" type="checkbox"/> To achieve technological advancement for the purpose of creating new or improving existing materials, devices, products or processes. (Go to Section B – Experimental development)		<b>232</b> 1 <input type="checkbox"/> For the advancement of scientific knowledge (Go to Section C – Basic or applied research)	

Section B – Experimental development				
The technological advancement you are trying to achieve with this work will result in:				
	Materials, devices, or products		Processes	
The development of new	<b>235</b>	1 <input type="checkbox"/>	<b>236</b>	1 <input type="checkbox"/>
The improvement of existing	<b>237</b>	1 <input type="checkbox"/>	<b>238</b>	1 <input checked="" type="checkbox"/>

<b>240</b> What technological advancements were you trying to achieve? (Maximum 35 lines)
STANDARD PRACTICE – BENCHMARKING METHODS & SOURCES:
i) POTENTIAL COMPONENTS: Examined over 100 database compression methods all methods relied on a) static or b) uniform data - identified "loss less" dictionary approach as starting basis for improvement
ii) QUERIES TO EXPERTS: Contacted 3 experts from internet forums and blogs confirmed there were no methodologies, techniques, or models available to us to characterize dynamic, non-uniform data.
FIRST technological shortcoming: Our review of available techniques revealed that we had to undertake development of a dataset model suitable to efficiently reflect our specific dataset characteristics.
SECOND technological shortcoming: We could not find any technique or methodology related to the data compression, which would specifically deal with this data model related to dynamic, non-uniform data. We realized that if we develop a suitable model to characterize dynamic, non-uniform data then we would find no established techniques to be applied to the data compression aspect that would effectively and efficiently exploit the general features of this abstract data model.

<b>240</b> What technological advancements were you trying to achieve? (Maximum 35 lines)			
MAJOR TECHNOLOGICAL OBJECTIVES WERE TO: Reduce CPU load on dual core 2.8 Mhz machine with 2 GB of RAM, reduce current response times and achieve a compression ratio of up to 15:1 on raw binary data. We assumed that conventionally available data compression methods, such as the loss-less dictionary approach, could be surpassed by developing methods that would exploit the unique properties of those data sets that were not uniformly distributed and were dynamic. We were also planning to develop an acceptable and valid methodology of setting up some general rules related to an optimal data table compression-block size applicable to both the initial data set analysis and the dynamic analysis.			
Performance: Existing benchmark Units Objective			
CPU utilization	95	% busy	70
Response time	60	seconds	15
Data to compression	5 to 1	ratio	15 to 1

<b>242</b> What technological obstacles did you have to overcome to achieve those advancements? (Maximum 35 lines)			
Uncertainty #1: Non-uniform dataset determination			
We are uncertain as to how and whether it is possible to develop a method to identify and exploit the unique properties of non-uniform data sets. We are also uncertain whether we can use compressed data blocks vs entire tables to traverse the database and how much of a performance improvement this will result in.			
In our opinion the most significant, underlying, technological VARIABLES were:			
-Methods to characterize non-uniform data			
-Optimal use of compression dictionary			
-Definition and construction of data blocks &			
-CPU utilization			

<b>244</b> What work did you perform in the tax year to overcome those technological obstacles? (Summarize the systematic investigation) (Maximum 70 lines)			
ACTIVITY #1-1: Phase I: Develop generic data model			
Beginning in March 2008 the first phase of the investigations focused on the analysis of a very large data set (known to be dynamic with a non-uniform distribution) in relational database form.			
EXPERIMENTATION included simulation of 10 alternatives. We thereby identified most common frequency values & evaluated use of column value frequencies to create prototype compression dictionary - using a relational dbase environment			
RESULTS: At the end of this first phase we found that a reasonably accurate data set model could be created. This was further tested and the data set model accuracy was verified and validated against several concrete smaller-sized relational databases available to us in the data warehouse.			
CONCLUSIONS: Model proved feasible - developed table-wide list of most frequent values for compression dictionary Concludes on:-Definition and construction of data blocks			
ACTIVITY #1-2: Phase II: Develop compression methods			
Starting in May 2008, a number of compression methods were developed in prototype forms to exploit the general features of the data model.			
EXPERIMENTATION included 10 Physical prototypes and related test scripts to compared CPU utilization, integrity and data throughput for operations including: parallel load, delete/update operations, full table scan & access by row.			
CONCLUSIONS: We determined it is best to restrict query/refresh options to compressed blocks vs. entire tables - Concludes on :-Definition and construction of data blocks -CPU utilization			

**244** What work did you perform in the tax year to overcome those technological obstacles? (Summarize the systematic investigation) (Maximum 70 lines)

ACTIVITY #1-3: Phase III: Compression algorithm with dynamic techniques - Jun/Jul'08.

EXPERIMENTATION included 3 Physical prototypes. Each examined use of buffer cache to organize & control compression dictionaries when calls made to uncompress multiple blocks.

12 Prototype revisions: 2 of the 3 sample compression algorithms selected for further experimentation to include 12 different dynamic compression techniques for dataset changes. Each of these had the data integrity verified and performance benchmarked, the latter now including update/refresh-specific performance measures. In August 2008, a final prototype was selected for widespread commercial implementation ending this aspect of the experimental development.

RESULTS: Performance measures	Result	Vs. Expectations
CPU utilization	66%	exceeded by 4%
Response time	22 secs	80% met
Data compression	13:1	90% met

CONCLUSIONS: This development lead to the discovery that we could use the column value frequency of initial tables rows to create an effective block-based compression dictionary. Use of the buffer cache also proved successful and resulted in reduced response times by 80% when uncompressing multiple blocks. Concludes on: -Definition and construction of data blocks -CPU utilization -Use of compression dictionary

ACTIVITY #1-4: Phase IV: Extend data compression methods - Sept&Oct 2008

EXPERIMENTATION included: 102 Process trial runs. We used an external consultant - exploration into use of the implemented compression prototype for data backup and recovery operations.

RESULTS: As the result of this work it was found out and further documented that the prototype provided measurable performance improvements [QUANTIFY] when applied to very large databases in excess of 2.5 million rows (1.3 GB) such as those typically encountered in data warehouses.

CONCLUSIONS: Success attributed primarily to compression dictionary vs. data blocks Concludes on: -Use of compression dictionary -Definition and construction of data blocks -CPU utilization

ACTIVITY #1-5: Phase V: Correlate compression block size & initial data set Oct/Nov'08 EXPERIMENTATION included: Analysis of 22 alternatives - the implemented prototype was used to determine whether or not an optimal data table compression-block size could be determined by both the initial data set analysis and the dynamic analysis.

CONCLUSIONS: Could NOT correlate compression block size w initial data set & dynamic analysis Concludes on: -Methods to characterize non-uniform data -Definition and construction of data blocks -CPU utilization

**Section C – Basic or applied research**

**250** Describe the scientific knowledge that you were trying to advance. (Maximum 35 lines)

**252** Summarize the work performed in the tax year, and explain how that work contributed to the advancement of scientific knowledge. (Summarize the systematic investigation) (Maximum 70 lines)

## **TAXPREP - specific problems to preparing descriptions**

### **Column width (too small @ 78 characters?)**

The column width is restricted to 78 characters meaning that the text appears to “wrap” halfway through the column. This makes it difficult to include tables or other forms of “structured” information since the layout is not typical of a normal page.

On the “flip side” of this argument the smaller column width allows the description to “separate paragraphs” by adding extra lines. As can be seen from the reporting parameters outlined on page 18, we have a total of 70 rows in box 244 (vs. only 28 using Profile). The result is that the Taxprep project is “easier to read” once entered.

## PROFILE CRA software project – rewritten to remove documentation shortfalls (3 pages)

240 What technological advancements were you trying to achieve? (Maximum 350 words)

STANDARD PRACTICE - BENCHMARKING METHODS & SOURCES:

i) POTENTIAL COMPONENTS: Examined over 100 database compression methods all methods relied on a) static or b) uniform data - identified "loss less" dictionary approach as starting basis for improvement

ii) QUERIES TO EXPERTS: Contacted 3 experts from internet forums and blogs confirmed there were no methodologies, techniques, or models available to us to characterize dynamic, non-uniform data.

FIRST technological shortcoming: Our review of available techniques revealed that we had to undertake development of a dataset model suitable to efficiently reflect our specific dataset characteristics.

SECOND technological shortcoming: We could not find any technique or methodology related to the data compression, which would specifically deal with this data model related to dynamic, non-uniform data. We realized that if we develop a suitable model to characterize dynamic, non-uniform data then we would find no established techniques to be applied to the data compression aspect that would effectively and efficiently exploit the general features of this abstract data model.

MAJOR TECHNOLOGICAL OBJECTIVES WERE TO: Reduce CPU load on dual core 2.8 Mhz machine with 2 GB of RAM, reduce current response times and achieve a compression ratio of up to 15:1 on raw binary data. We assumed that conventionally available data compression methods, such as the loss-less dictionary approach, could be surpassed by developing methods that would exploit the unique properties of those data sets that were not uniformly distributed and were dynamic. We were also planning to develop an acceptable and valid methodology of setting up some general rules related to an optimal data table compression-block size applicable to both the initial data set analysis and the dynamic analysis.

Performance: Existing benchmark Units Objective

242 What technological obstacles did you have to overcome to achieve those advancements? (Maximum 350 words)

Uncertainty #1: Non-uniform dataset determination

We are uncertain as to how and whether it is possible to develop a method to identify and exploit the unique properties of non-uniform data sets. We are also uncertain whether we can use compressed data blocks vs entire tables to traverse the database and how much of a performance improvement this will result in.

In our opinion the most significant, underlying, technological VARIABLES were:

- Methods to characterize non-uniform data
- Optimal use of compression dictionary
- Definition and construction of data blocks &
- CPU utilization

**244** What work did you perform in the tax year to overcome those technological obstacles? (Summarize the systematic investigation) (Maximum 700 words)

**ACTIVITY #1-1: Phase I: Develop generic data model** -Beginning in March 2008 the first phase of the investigations focused on the analysis of a very large data set (known to be dynamic with a non-uniform distribution) in relational database form. **EXPERIMENTATION** included simulation of 10 alternatives. We thereby identified most common frequency values & evaluated use of column value frequencies to create prototype compression dictionary - using a relational dbase environment **RESULTS:** At the end of this first phase we found that a reasonably accurate data set model could be created. This was further tested and the data set model accuracy was verified and validated against several concrete smaller-sized relational databases available to us in the data warehouse. **CONCLUSIONS:** Model proved feasible - developed table-wide list of most frequent values for compression dictionary Concludes on:-Definition and construction of data blocks

**ACTIVITY #1-2: Phase II: Develop compression methods** - Starting in May 2008, a number of compression methods were developed in prototype forms to exploit the general features of the data model. **EXPERIMENTATION** included 10 Physical prototypes and related test scripts to compared CPU utilization, integrity and data throughput for operations including: parallel load, delete/update operations, full table scan & access by row. **CONCLUSIONS:** We determined it is best to restrict query/refresh options to compressed blocks vs. entire tables - Concludes on :-Definition and construction of data blocks -CPU utilization

**ACTIVITY #1-3: Phase III: Compression algorithm with dynamic techniques** - Jun/Jul/08. **EXPERIMENTATION** included 3 Physical prototypes. Each examined use of buffer cache to organize & control compression dictionaries when calls made to uncompress multiple blocks. 12 Prototype revisions: 2 of the 3 sample compression algorithms selected for further experimentation to include 12 different dynamic compression techniques for dataset changes. Each of these had the data integrity verified and performance benchmarked, the latter now including update/refresh-specific performance measures. In August 2008, a final prototype was selected for widespread commercial implementation ending this aspect of the experimental development.

**RESULTS: Performance measures Result Vs. Expectations**

CPU utilization	66%	exceeded by 4%
Response time	22 secs	80% met
Data compression	13:1	80% met

**CONCLUSIONS:** This development lead to the discovery that we could use the column value frequency of initial tables rows to create an effective block-based compression dictionary. Use of the buffer cache also proved successful and resulted in reduced response times by 80% when uncompressing multiple blocks. Concludes on: -Definition and construction of data blocks -CPU utilization -Use of compression dictionary

**ACTIVITY #1-4: Phase IV: Extend data compression methods** - Sept&Oct 2008 - **EXPERIMENTATION** included: 102 Process trial runs. We used an external consultant - exploration into use of the implemented compression prototype for data backup and recovery operations. **RESULTS:** As the result of this work it was found out and further documented that the prototype provided measurable performance

## **PROFILE - specific problems to preparing descriptions**

### **1) Form allows <60% of characters vs. Taxprep**

As we can see from the table below (also reproduced on page 17) Profile currently provides far less space to input the required information.

	<b><u>Box 240</u></b> <b><u>(Square)</u></b>	<b><u>Box 242</u></b> <b><u>(Triangle)</u></b>	<b><u>Box 244</u></b> <b><u>(Circle)</u></b>	<b><u>Total</u></b>
<b><u>CURRENT DATA WAREHOUSE</u></b>				
<b><u>PROJECT EXAMPLE</u></b>				
WORDS	332	93	674	1099
CHARACTERS (with spaces)	2367	622	4612	7601
CHARACTERS (no spaces)	1838	536	3933	6307
LINES	43	12	115	170
<b><u>MAXIMUMS:</u></b>				
I) <b><u>PER CRA</u></b>				
WORDS	350	350	700	1400
II) <b><u>TAXPREP</u></b>				
* CHARACTERS (with spaces)	2730	2730	5460	10920
MAX CHARACTERS / WORD	7.8	7.8	7.8	
LINES	35	35	70	140
III) <b><u>PROFILE</u></b>				
CHARACTERS (with spaces - INPUT)	2730	2730	3948	9408
* CHARACTERS (with spaces -OUTPUT - DELL laser printer - Worst case)	2200	2200	3108	7508
CHARACTERS (with spaces -OUTPUT - Adobe PDF)	2600	2600	3770	8970
MAX CHARACTERS / WORD (WORST CASE - Dell Laser)	6.29	6.29	4.44	
LINES	20	20	28	68
* <b>Profile - % of Taxprep space</b>	<b>81%</b>	<b>81%</b>	<b>57%</b>	

The result being that the original CRA example (as reproduced on pages 2-3) box 244 will NOT fit into the current Profile program (section 5 gets cut off)!

Given that this section is only 508 words it would appear that current claimants will NOT be able to submit a 700 word description (box 244) and should aim at developing descriptions with <500 words (vs. 700 words) in box 244.

### **2) Contents of form do not fully print**

With Profile (box 244 was tested and fit up to 3948 characters (28 lines of 141 characters).

When printing the form not all of the character fit in the printed version. When the form is printed to the Dell colour laser 5110, only 3108 characters fit in the printed box (28 lines of only 111 characters). That's a difference of 840 characters between what was typed in to Profile and what was actually printed.

When the form is printed to the Dell 1700 printer, much like with the 5110 printer, not all of the characters entered in Profile are printed. The only difference is that with the Dell 1700 printer, 3388 characters (28 lines of 121 characters) are printed making the difference between what was entered and what was printed only 560 characters.

To sum everything up, no matter how the form is printed from Profile what is entered in Profile will not all be printed.

**As a result a claimant (or tax preparer) may erroneously submit an incomplete claim despite correctly inputting all required data!**

### **3) Column width (too wide @ 141 characters?)**

As previously mentioned with Profile (box 244) can hold up to 28 lines (of 141 characters each). As a result it becomes "costly" to separate paragraphs using spaces (i.e. loss of 141 characters each time.)

The net result is that all of the information must be condensed into a massive paragraph that will likely prove difficult for "humans" to read.

### **4) Each box printing on a separate page – each description now 7 pages**

A review of the project printout illustrates that each box currently prints out on a single page. As a result each project description (when we include the other portions of the form) is now approximately 7 pages.

In the author's opinion, this is very confusing for the taxpayer to review before submission and hardly results in a concise (2page) description as provided in the CRA example.

# **CRA feedback & potential filing strategies related to new forms**

## **1) CRA response to problems cited – corrections coming**

The author has notified the CRA of the shortcomings in Profile and Taxprep and they are “addressing the issue.”

As a result we can likely expect some of these issues to be corrected with an upcoming software release.

Attachment of “original descriptions” in addition to those in the program

Until Profile has corrected the current system to allow a “reasonable number of characters” to be input it may be advisable when using the new forms to:

- a) complete the description using the new form &
- b) also attach a copy of the description using the traditional reporting method (i.e. dual copies).

Author’s commentary: While this solution is not intended to circumvent the new word limits for descriptions the author believes that it would be prudent for the **next release of the software to allow a “generous” allocation of the number of characters deemed = 700 words** (i.e. perhaps 10 character/ word) to allow for adequate spacing.

The current allocations (4.45 characters / word in Profile & 7.8 characters / word in Taxprep) still appear to severely limit the layout of projects with over 500 words.

## **2) Providing technical documents via website**

Another key issue for claimants is the loss of the ability to attach technical documents.

In many cases these documents allowed the project author to concisely explain his or her problems (i.e. a picture tells a thousand words).

The author posed a question to the CRA’s Director General of SR&ED (Helene Dompierre):

Question(s): Can the claimant:

- d) upload project descriptions to a secure website,
- e) refer to them in the current project description and
- f) expect to have the CRA reviewer examine them?

Response: Yes.

Author’s commentary: As above, while this solution is not intended to circumvent the new word limits for descriptions it does appear that the CRA is willing to be flexible in allowing claimants to provide relevant information.

Having said this, the author would caution any claimants filing beyond 15 months from year end to ensure that the projects can “stand alone” (i.e. make sense even without the pictures in question) and use the additional information for “clarification purposes.”

**Interested parties may also wish to review our R&D Base, SR&ED project tracking system ([www.rdbase.net](http://www.rdbase.net)) which provides this functionality.**

## Appendix A: Best practices for isolating SR&ED “key criteria”

### “Key Criteria summary” Methodology & Purpose

To conclude this newsletter we will try to summarize the key lessons.

In the author’s opinion the key components of an optimal project description are threefold:

- 1) to ensure that we’ve **defined the company’s existing knowledge** on a topic at the outset.
- 2) to **correlate efforts made with** concise summaries of significant, **technical uncertainties**, and
- 3) to provide a basis to recognize significant **conclusions (i.e. technological advancements)**.

#### Goal 1: ensure proper definition of existing knowledge at the outset :

The "advancement" section of the grid again focuses not so much on "product" advancements but on the **methods to achieve such advancements** and the fact that they have been **benchmarked against existing standard practice**.

We find that we often use this basis of “advancement” to recommend renaming of the project away from "product" descriptions and towards "methodology" objectives. As indicated above, the “advancement” section is **not** the primary focus of the grid but only a double check to insure that:

- 1) Standard practice “knowledge” for this industry was defined (by at least 1 benchmark), &
- 2) That the solution was not a “routine” implementation of this “existing” knowledge.

If these two issues are evidenced, **no matter how small the incremental improvement maybe**, the grid can then correlation of research steps to technical uncertainties.

#### Goal 2: correlation of the research steps to specific, technical uncertainties:

Use of these grids then allows the reviewer to scan through the projects and identify those **research steps which clearly contemplate resolving the technical uncertainties and alternatives**.

**This is what differentiates SR&ED work from “routine engineering.”**

The need for any further routine, supporting work can then be briefly mentioned but needs no further explanation. This support work will always be eligible to the extent that it was "commensurate with the needs and directly in support of [the eligible research<sup>127</sup>].”

#### Goal 3: Providing concise summaries of experimentation performed:

We have found that there are several advantages to having concise summaries of the “activity level” data.

- projects can accumulate separate uncertainties each with any unlimited number of research activities. Often

---

<sup>127</sup> Excerpt from the definition of "scientific research and experimental development" as defined in subsection 248(1) of the income Tax Act.

**portions of the “business” project do not qualify** for SR&ED (i.e. not necessary to resolve the stated uncertainties).

- One of the key indicators of eligibility is the ability to provide a detail of the **number of experiments performed** and alternatives analyzed..
- It has been our experience that these grids provide an adequate degree of detail, particularly for someone already familiar with work in question, to skim the database and ensure that **all costs were required to resolve the state uncertainties..**

Summary of how to use these grids for submission:

As discussed above, I believe that the grids provide a simple overview of the “key variables of uncertainty” and therefore illustrate that the development work was:

- a) **NOT “routine engineering”** (i.e. without any significant technological uncertainty) and instead was
- b) **“systematic investigation”** into alternate solutions and their effects on other components in the system.



## SR&ED Newsletter –2008-3 – New T661 form

On November 10, 2008 the Canada Revenue Agency released a new form and related guide for claiming SR&ED tax credits. In the author’s opinion, the most significant changes are outlined below:

<b>Part 1 – General information.....</b>	<b>126</b>
Contact information for technical & financial people in charge.....	126
Partnership information .....	126
<b>Part 2 - Project information.....</b>	<b>126</b>
Section A – project identification .....	126
Fields of science – new table to classify .....	126
Identify new vs. continuing projects .....	126
Identify SR&ED collaborators and partners .....	126
Clarify - development environment & methodology.....	126
Sections B & C - Project descriptions - can NOW elect from 2 formats.....	126
i) Section B - Experimental Development format – 3 sections (350-700 words ea.) .....	126
Clarify if: A) Products vs. Processes & B) New vs. Improved .....	126
ii) Section C - Basic or applied research format – 2 sections (350-700 words ea.) .....	127
Section D – Additional project information .....	127
SR&ED project descriptions - preparer information.....	127
Technical documentation retained – sort into 11 categories .....	127
Section E – Project cost .....	127
<b>Part 3 - Calculation of SR&amp;ED expenditures .....</b>	<b>127</b>
Section A: Choice of overhead method (unchanged) .....	127
Section B: Calculation of allowable SR&ED expenditures.....	127
Identify wages for work outside Canada.....	127
Traditional overhead costs – new table.....	127
New form for Third Party Payments (Universities) .....	127
<b>Part 4 – Calculation of qualified SR&amp;ED expenditures for ITC purposes (unchanged)....</b>	<b>128</b>
<b>Part 5 – Calculation of prescribed proxy amount (PPA) (unchanged) .....</b>	<b>128</b>
<b>Part 6 – Additional information (unchanged) .....</b>	<b>128</b>
<b>Part 7– Claim checklist (unchanged).....</b>	<b>128</b>
<b>Part 8 – Certification.....</b>	<b>128</b>
Identification of T661 “form preparer” moved to the certification section .....	128
<b>Summary – Author’s commentary on overall effects of new form .....</b>	<b>128</b>
Timing - required for year ends in 2009 or later.....	128

## **Part 1 – General information**<sup>128</sup>

### **Contact information for technical & financial people in charge**

Lines 100 & 115 The form now requires the contact information for the person in charge of the technical submission and the person in charge of the financial submission.

### **Partnership information**

It also requires details on each of the partners in the event that the work is done in partnership.

## **Part 2 - Project information**

### **Section A – project identification**

#### **Fields of science – new table to classify**

Line 206 continues to require the fields of science however new appendix A provides a list of eligible fields along with related code numbers.

#### **Identify new vs. continuing projects**

Lines 208 to 210 now requires you to clarify if it's a continuing project (i.e. claimed in the prior year) or a new project

This should simplify the review of ongoing projects since the standard practice, objective and uncertainties sections can remain consistent from year to year and only the ongoing activities need to be reviewed. As a result ongoing projects can go through a streamlined review process.

#### **Identify SR&ED collaborators and partners**

Lines 218 to 221 now require a list of all collaborating businesses (i.e. joint venturers or partners) including the name of the business and related business number.

Likely intent of this section is to allow concurrent audits and perhaps even allocation of common technical reviewers to claims were collaborative work of this nature was performed.

### **Clarify - development environment & methodology**

Lines 222 - 228 now request details on the method and location of the experimentation including whether it was;

- by analysis only,
- in a laboratory,
- a dedicated research facility,
- a commercial plant / facility, or
- another location (which is to be specified).

### **Sections B & C - Project descriptions - can NOW elect from 2 formats**

Perhaps the most significant changes come in the actual project description structure itself.

There are now two potential types of project descriptions: one for, “experimental development” and one for, “basic or applied research.”

#### **i) Section B - Experimental Development format – 3 sections (350-700 words ea.)**

The project description requirements for "experimental development" follow a structure similar to that used previously with respect to technological:

- advancements (350 words max.),
- uncertainties or “obstacles” (350 words max.) &
- research performed (700 words max.).

#### **Clarify if: A) Products vs. Processes & B) New vs. Improved**

Lines 235 - 238 now require breakdown of whether the project was aimed at;

- developing new devices including materials and products or processes and
- then further requires for the detail regarding whether these were
  - new products or
  - improvements to existing products or processes.

**This is only required in the “experimental development” project format.**

<sup>128</sup> Form T661E(08) and related Guide (T4088(E) Rev. 08) – available at <http://www.cra-arc.gc.ca/txcrdt/sred-rsde/whstnw-eng.html>

## **ii) Section C - Basic or applied research format – 2 sections (350-700 words ea.)**

The new project format for "basic or applied research" has been reduced to only two (vs. three traditional) sections regarding technological:

- advancements made" (350 words max.) &
- research performed (700 words max.).

In the author's opinion the second format may be more relevant to

- large-scale operations or
- work done within a university or government research context
- where the limits of the existing "fields of science" have been clearly documented.

## **Section D – Additional project information**

### **SR&ED project descriptions - preparer information**

Lines 253-259 now require you to identify;

- who prepared the technical descriptions and
- in the event that an employee prepared the descriptions,
- whether they were directly involved in the research.

The form also requires you to clarify;

- if an external consultant prepared the project description responses and
- if so the name and firm of this consultant.

In the author's opinion this should expedite the technical review process by allowing queries to be directed at the appropriate parties.

### **Technical documentation retained – sort into 11 categories**

Lines 270-281 now provide 11 checkboxes to identify the specific types of evidence available to support the claim.

In the author's opinion this will help to force claimants to consider and identify the most relevant forms of documentation.

## **Section E – Project cost**

The form NOW requires "current project cost information";

- wages,
- materials,
- contractors and
- overhead

to be submitted with the project description rather than a separate table.

In the authors opinion this should help to ensure that the technology is the driving force behind the claim rather than their accounting system.

This should in turn result in more accurate claims. It is still clear however whether the costs should be included in a separate spreadsheet or appended to each of the project descriptions (or both).

## **Part 3 - Calculation of SR&ED expenditures**

### **Section A: Choice of overhead method (unchanged)**

No significant changes.

### **Section B: Calculation of allowable SR&ED expenditures**

#### **Identify wages for work outside Canada**

Lines 307-309 now require that you identify wages for employees for work performed outside Canada. It also requires that this be segregated by specified employees and non-specified employees.

#### **Traditional overhead costs – new table**

Line 360 – Traditional overhead costs however the new Guide<sup>129</sup> provides a new direction on how to allocate certain costs under the traditional overhead method including which types of costs must be specifically allocated versus those that can use a reasonable allocation method.

#### **New form for Third Party Payments (Universities)**

<sup>129</sup> Form T4008(E) Rev.08 (Page 18, Table 5)

There is a new form for third-party payments for T1263 which replaces previous schedule A of the T661 form.

- a well contemplated attempt to simplify the form requirements
- while obtaining more relevant information.

## **Part 4 – Calculation of qualified SR&ED expenditures for ITC purposes (unchanged)**

No significant changes in this area.

At this time the author believes that significant, unresolved issues include;

- further definitions of “Experimental development” vs. “Applied research” &
- the fact that all line numbers are NOT sequential which may indicate the benefit of renumbering.

## **Part 5 – Calculation of prescribed proxy amount (PPA) (unchanged)**

No significant changes in this area.

## **Timing - required for year ends in 2009 or later**

The questions and answers section of the CRA website<sup>130</sup> clarify that the form,

- becomes mandatory for
- claims “with a fiscal year 2009 or later.”

We welcome questions or comments on this analysis.

## **Part 6 – Additional information (unchanged)**

No significant changes in this area.

## **Part 7– Claim checklist (unchanged)**

No significant changes in this area.

## **Part 8 – Certification Identification of T661 “form preparer” moved to the certification section**

The purpose of this move could be to ensure that;

- this issue is properly reviewed by the ultimate signing authority &
- all required disclosures provided.

## **Summary – Author’s commentary on overall effects of new form**

In the author’s opinion the new form represents;

<sup>130</sup> <http://www.cra-arc.gc.ca/txcrdt/sred-rsde/pblctns/qstns-eng.html>

## Summary Chart - T661 changes and major effects

<u>Part</u>	<u>Section</u>	<u>Line #'s</u>	<u>Issue / Major changes</u>	<u>Implications to prep. &amp; review process</u>	<u>Significance</u> Low- Med-Hi
1		10-157	General information		
		100 & 115	Contact information for technical & financial people in charge	Simplifies review set-up time	M
			Partnership information	Identify partners to simplify review	L
2		200-289	Project information		
	A		Project identification		
		206	Fields of science - new table to classify	New table of classifications will force claimants to accurately define relevant fields of science.	M
		208-210	Identify new vs. continuing projects	Objectives and uncertainties can remain unchanged on on-going projects - simplifies review	M
		218-220	Identify SR&ED collaborators and partners	avoid duplicate claims + where to aim technological questions	L
		222-228	Clarify - development environment & methodology	Tailor review processes to relevant issues & types of documentation	L
	B&C	230 & 232	Project descriptions - can NOW elect from 2 formats	ATTEMPT TO MIGRATE TO SIMPLER REPORTING FORMAT	H
	B	235-244	i) Experimental development format - 3 sections (350-700 words ea.)	Need to focus on key issues for Conciseness	H
		235-238	Clarify if: A) Products vs. Processes & B) New vs. Improved	This will assist in determining appropriate "standard practice" benchmarks.	M
	C	250-250	ii) Basic or applied research format - 2 sections (350-700 words ea.)	Ability to condense info & eliminate entire stage of documentation process	H
	D	253-281	Additional project information		
		253-261	SR&ED project descriptions - preparer information	Ability to focus technical review questions to appropriate parties	H
		270-281	Technical documentation retained - sort into 11 categories	Increase preparers focus on maintaining relevant documentation	M
	E	285-289	Project cost (now within project description)	Need to refine current project reporting format?	M
3		160-470	Calculation of SR&ED expenditures		
	A	160-162	Choice of overhead method	(unchanged)	N/A
	B		Calculation of allowable SR&ED expenditures		
		307-309	Identify wages for work outside Canada	Keep records of weeks outside Canada on SR&ED	M
		360 + Guide	Traditional overhead costs - new table	Additional guidance on details required based on type of expenses	M
		370	New form for Third Party Payments (Universities)	moved information outside of T-661 form	L
4		492-570	Calculation of qualified SR&ED expenditures for ITC	(unchanged)	N/A
5		810-820	Calculation of prescribed proxy amount (PPA)	(unchanged)	N/A
6		605-638	Additional information (unchanged)	(unchanged)	N/A
7		N/A	Claim checklist (unchanged)	(unchanged)	N/A
8		165-175	Certification		
		175	Identification of T661 "form preparer" moved to the certification section	Increase focus on full disclosure of preparer information	M

**Author's Note:** The line numbers are not sequential. As a result we may expect additional renumbering of the lines in the future.



## SR&ED Newsletter Edition 2008-2

Welcome to the second 2008 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>Recent CRA pronouncements.....</b>	<b>131</b>
New T661 form in Fall 2008 .....	131
<b>SR&amp;ED program usage &amp; spending statistics .....</b>	<b>131</b>
Federal & provincial SR&ED funding .....	131
Expenditures by Province .....	131
Number of companies claiming SR&ED credits .....	132
Credits earned by “rate of ITC’s” .....	132
Credits earned by “size of corporation” .....	132
Credits earned by “industry sector” .....	133
<b>International comparisons of R&amp;D incentives.....</b>	<b>134</b>
Marginal effective tax rates on investments in R&D assets .....	134
<b>SR&amp;ED – dispute resolution - appeals and objections.....</b>	<b>135</b>

## Recent CRA pronouncements

### New T661 form in Fall 2008

A recent Canada Revenue Agency (CRA) publication<sup>131</sup> announced that during the Fall of 2008;

- A new, simplified SR&ED claim form will be released including:
  - an enhanced “Complete Claim Checklist” &
  - a clear format for submitting project details.
- Samples of completed claim forms and project descriptions will be available on the SR&ED Web site.

Author’s commentary:

It will be interesting to see whether the form includes any “substantive” changes with expect to content since most of the announced changes appear to deal with clarifications of what the CRA expects with respect to filing, “a prescribed form containing prescribed information.”<sup>132</sup>

## SR&ED program usage & spending statistics

### Federal & provincial SR&ED funding<sup>133</sup>

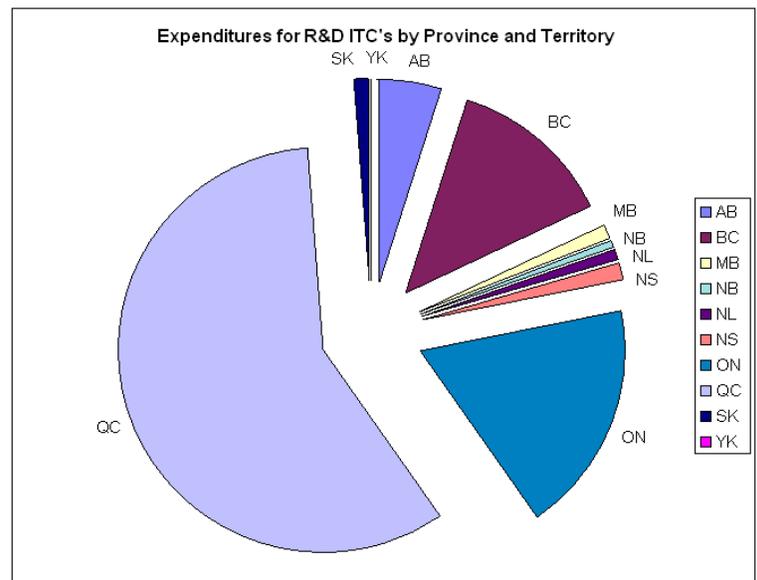
The most recent Federal and Provincial budgets indicate the Canada SR&ED program has now reached funding levels of nearly \$6 billion annually!

These annual spending levels are illustrated on the following charts which illustrate;

- the **federal government (CRA) provides** almost \$4.8 of the total \$5.9 billion of SR&ED ITC’s representing over **80% of funding**
- \$1.6 billion (or 33%) of the CRA’s expected 2008 ITC’s payouts are non-refundable ITC’s from prior years
- **Quebec SR&ED credits** (\$689 million) represent almost **60% of total provincial spending.**

Budgeted Expenditures for R&D Tax Credits		
	2008 Expenditures	
	(\$ Millions)	
<b>Federal</b>		
Earned & Claimed in Current Year	3,000	
Claimed Current Year but Earned in Prior Years	1,655	
Earned current year but carried back to prior years	100	
<b>Total</b>	<b>4,755</b>	<b>4,755.0</b>
<b>Provinces / Territories</b>		
AB	60	
BC	150	
MB	15	
NB	4.6	
NL	12.1	
NS	14	
ON	215	
PEI	0	
QC	689	
SK	12	
YK	0.2	
NWT	0	
NV	0	
<b>Total</b>		<b>1,171.9</b>
<b>Total Expenditures in Canada</b>		<b>5,926.9</b>

## Expenditures by Province



<sup>131</sup> CRA - SR&ED Small Business Action Plan – June 2008

<sup>132</sup> As required under ITA subsection 37(11)

<sup>133</sup> For sources of information please go to [www.meuk.net](http://www.meuk.net) / tax credit rates

**Number of companies claiming  
SR&ED credits<sup>134</sup>**

**Notable quote:**

*"We must beware of needless innovations, especially when guided by logic."*

-- Winston Churchill

**Credits Earned by Rate**

**By Value of Credits - \$ millions**

	Earned at 35% rate	Earned at 20% rate	Total credits earned
--	--------------------	--------------------	----------------------

**By Number of Corporations**

	Earning at 35% rate	Earning at 20% rate	Earning Both 35% & 20% rates	Total corporations earning credits
--	---------------------	---------------------	------------------------------	------------------------------------

2002	865	2,397	3,262	11,603	4,133	325	16,061
2003	954	2,238	3,193	13,418	4,309	339	18,066
2004	1,083	2,271	3,354	15,295	4,051	339	19,685

**Credits earned by "rate of ITC's"**

The enhanced ITC's earned by smaller Canadian Controlled Private Corporations (CCPC's) at a rate of 35 per cent made up 32 per cent of total credits earned, while refunds of ITC's to these performers accounted for 29 per cent of total credits earned in 2004.

**Credits earned by "size of corporation"**

While small CCPC's account for around 80 per cent of corporate SR&ED performers, they account for only 35% of allowable SR&ED ITC's.

These small CCPC's also represent the largest "growth" segment of the population.

**Distribution of Credits Earned by Corporation Size**

**By Value of Credits**

	2002	2003	2004
--	------	------	------

*% of total credits earned*

**By Number of Corporations**

	2002	2003	2004
--	------	------	------

*% of total corporations earning credits*

CCPCs, by taxable income

(\$000)

0 - 400	31.7	34.8	35.6	79.1	80.8	81.8
400 - 600	0.7	0.9	1.2	1.9	2.3	2.4
600 - 1,000	0.9	0.8	1.0	2.0	1.8	1.9
1,000 +	4.7	4.2	4.4	4.4	4.0	4.1
Total CCPCs	38.1	40.8	42.1	87.4	88.9	90.1
All other corporations	61.9	59.2	57.9	12.6	11.1	9.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

CCPCs, by taxable capital

(\$000,000)

0 - 10	31.3	35.0	n/a	82.8	84.7	n/a
10 - 15	1.3	1.1	n/a	1.5	1.5	n/a
15 - 25	1.4	1.2	n/a	1.4	1.1	n/a
25 - 50	2.0	1.3	n/a	1.0	0.9	n/a
50 - 75	0.5	0.5	n/a	0.3	0.3	n/a
75+	1.6	1.7	n/a	0.3	0.3	n/a
Total CCPCs	38.1	40.8	42.1	87.4	88.9	90.1
All other corporations	61.9	59.2	57.9	12.6	11.1	9.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: Due to changes in reporting requirements, detailed breakdowns by taxable capital are not available for 2004.

<sup>134</sup> Tax Incentives for Scientific Research and Experimental Development, October 2007 consultation Paper, Department of Finance Canada

## Distribution of Credits Earned by Sector

	<u>By Value of Credits</u>			<u>By Number of Corporations</u>		
	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>
<b>Industrial Sector</b>	<i>% of total credits earned</i>			<i>% of total corps. earning credits</i>		
Agriculture, forestry, fishing	1.4	1.6	2.1	7.1	9.0	10.3
<b>Manufacturing</b>	<b>47.0</b>	<b>47.7</b>	<b>47.6</b>	<b>41.7</b>	<b>41.2</b>	<b>40.5</b>
Construction	0.6	0.7	0.7	2.4	2.4	2.5
Transportation/warehousing	0.5	0.4	0.3	0.7	0.7	0.7
<b>Information/cultural industries</b>	<b>12.9</b>	<b>11.8</b>	<b>11.6</b>	<b>3.6</b>	<b>3.4</b>	<b>3.1</b>
Utilities	0.1	0.1	0.1	0.1	0.1	0.1
Wholesale trade	4.2	4.7	4.6	7.3	7.4	7.8
Retail trade	0.8	0.8	0.8	1.6	1.7	1.7
Financial intermediaries	1.0	1.3	1.3	1.3	1.3	1.4
Management companies	0.6	0.4	0.5	1.1	1.0	1.0
<b>Other services</b>	<b>27.8</b>	<b>27.3</b>	<b>26.7</b>	<b>30.7</b>	<b>29.6</b>	<b>28.7</b>
Oil and gas	2.3	2.5	2.7	1.0	0.9	0.8
Mining	0.4	0.7	0.5	0.3	0.3	0.2
Other	0.2	0.3	0.6	0.8	1.0	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

## Credits earned by “industry sector”

### Manufacturing = 50%

The manufacturing sector is the largest beneficiary of the SR&ED ITC's, accounting for nearly one-half of ITC's earned. Within the manufacturing sector,

- computer and computer product manufacturing,
- transportation equipment manufacturing &
- chemical manufacturing

are the largest users of the SR&ED program.

### Service & Information Technology > 35%

Service industries particularly;

- professional,
- scientific
- technical &
- information

industries are also significant users of SR&ED tax credits comprising the majority of “non-manufacturing” claimants.

### Author's commentary:

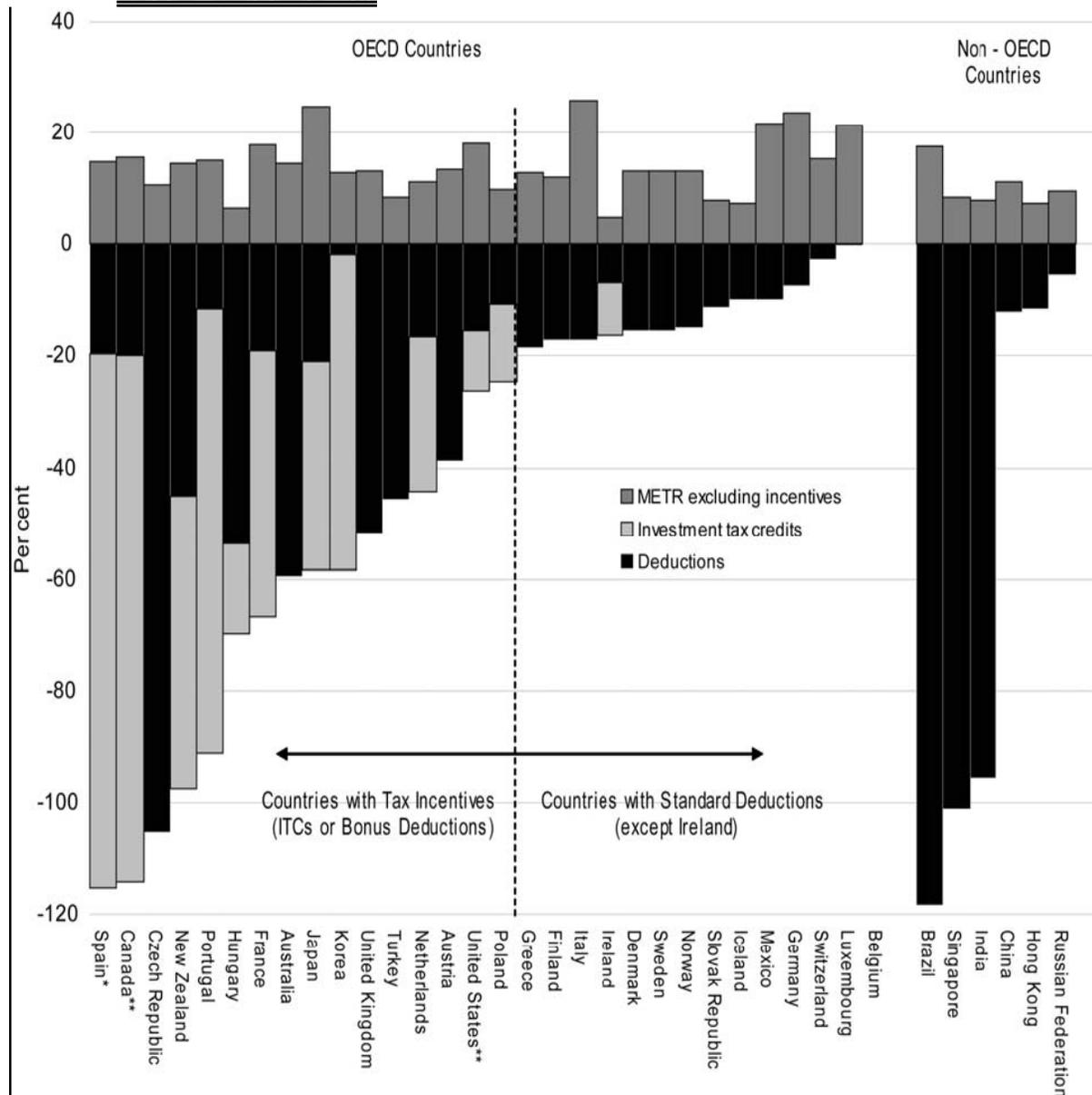
Despite much of the current news regarding the “death of manufacturing” due to offshore competition it is interesting to note that nearly 50% of the SR&ED spending by Canadian industry is aimed at developing competitive (i.e. knowledge) advancement in this area.

### Notable quote:

*"If you're not failing every now and again, it's a sign you're not doing anything very innovative."*

**-- Woody Allen**

## International comparisons of R&D incentives



### Marginal effective tax rates on investments in R&D assets

Until 2007 the **B-index**<sup>135</sup> was the chosen tool to measure & compare the relative value of R&D tax incentives, however, it **does not account for** other important features of the corporate tax system, including **profit-insensitive taxes** such as capital taxes, and deductions allowed for interest payments on loans.

A more comprehensive indicator of the **overall tax burden on a marginal investment** that accounts for these features is the marginal effective tax rate (**METR**).

<sup>135</sup> B-index = After tax cost of SR&ED / (1- income tax rate).

A recent working paper from the Department of Finance<sup>136</sup> compares METRs on R&D investment made by a large profitable firm across thirty OECD countries and six key emerging and transition economies.

The results show **Canada has one of the lowest METRs** on new investments in R&D in the OECD in 2011, and the lowest METR in the G7.

<sup>136</sup> Tax Incentives for Scientific Research and Experimental Development, October 2007 consultation Paper, Department of Finance Canada

## SR&ED – dispute resolution - appeals and objections

Generally speaking there are a series of steps which taxpayers can take to address issues of contention with the CRA.

The normal “negotiation process” could include:

### Typical dispute resolution steps & timelines

<u>Step</u>	<u>Party(ies)</u>	<u>Expected timeframe</u>
1 Negotiate with CRA reviewer	CRA & client	30 days
2 2nd administrative review	CRA & client	180 days
3 Objection	CRA & client	365 days
4 Appeal (TCC)	CRA, Dept. of Justice & client	2-3 years

### Author’s commentary:

- Where the CRA reviewers have any proposed adjustments they will generally provide the claimant with an explanation letter providing the opportunity for feedback / negotiation within 30 days.
  - In the author’s opinion this “30 day window” is the most effective time to negotiate issues of contention.
- The next step is to request a “second administrative review” with the CRA reviewer + a manager.
  - In the author’s experience this process has mixed results and may be cancelled in the near future.
- The third step is a formal objection – which means the case still remains with CRA officials to decide.
  - In the author’s experience the CRA officials are unlikely to reverse and of their prior decisions.
- The final stage is to appeal to the Tax Courts (TCC, Court of Appeal or Supreme Court)
  - A Crown Counsel will consider the legislation independently.
  - This may be the best chance for taxpayers to have the ITA legislation (vs. CRA guides) examined re. positions taken.

### Legal Timeframes of Tax Appeal Process:

<u>Step:</u>	<u>Time limits on the:</u>		<u>Notes:</u>
	<u>Taxpayer</u>	<u>Minister</u>	
Receive notice of assessment	-	-	
File notice of objection	90 days	-	
Receive notice of reassessment	-	-	1
File notice of Appeal with TCC	-	-	2
File Reply to NofA w TCC	-	60 days	3
Send Reply to NofA to Taxpayer	-	65 days	3*
Taxpayer can Answer the Reply	30 days	-	4
Exchange - list of documents	30 days	30 days	5
Discovery	-	-	6
Hearing before the Court	-	-	7
Trial & findings	-	-	8
Appeal to Federal Court of Appeal	-	-	9

### Notes to tax appeal process timelines:

- 1) taxpayer can appeal directly to Tax Court of Canada (TCC) if issue not addressed by CRA within 90 days of filing its Notice of Objection.
- 2) NofA served to TCC which in turn serves it to: Revenue Canada & Dept. of Justice via a Deputy Attorney.
- 3) If Minister does not file reply the taxpayer can file for default judgement.
- 4) This is optional for the taxpayer however, beyond this point the taxpayer can not submit any further documents without the Minister's consent.
- 5) Both parties have to list the evidence they intend to rely upon & disclose this to each other.
- 6) The discovery process has no set time limit & can drag on for years.**
- 7) An application for hearing must be filed including the pleadings and admissions of fact. The courts may request a pre-hearing conference.
- 8) Costs are then allocated to respective parties at the discretion of the courts.
- 9) Appeals must be filed within 30 days of the day of judgement from the TCC.



## SR&ED Newsletter Edition 2008-1

Welcome to the first 2008 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>Recent SR&amp;ED tax cases &amp; related issue(s).....</b>	<b>137</b>
White star - representation by officer vs. legal counsel.....	137
Ruling & rationale: denied - self-representation not warranted .....	137
Chichkov – non arm’s length payments & carrying on business.....	137
Ruling & rationale: no SR&ED & NAL payment (ineligible) .....	138
Foster - LPs eligibility & frivolous appeal.....	138
Ruling & rationale: clearly limited partner –fined \$3,000 in costs .....	139
Lilly v. Novopharm – Patent defence – requirement to define Standard Practice.....	139
Ruling & rationale: quantified comparison to “standard practice” required .....	140
<b>Recent CRA pronouncements.....</b>	<b>141</b>
2008 budget – enhanced incentives .....	141
i) Expenditure Limit – now \$3 million.....	141
ii) Taxable Income Phase-Out Limit – to \$700,000.....	141
iii) Taxable Capital Phase-Out Limit to \$50 million.....	141
Graphs & Mechanics of the new phase-out formulas.....	141
iv) SR&ED wages outside Canada – eligible up to 10% - if no foreign taxes paid .....	142
Carry-back of non-refundable ITC – restriction on refunds .....	142
<b>Ontario SRED credits - recent changes.....</b>	<b>143</b>
Ontario Business Research Institute (OBRI) Tax Credit – pre-approval requirement waived.....	143
Ontario harmonization - The Transitional Debit/Credit .....	144
Harmonization – scheduled for April 3, 2008.....	144
Example of the (5+7=) 12 year deferral for SR&ED.....	144
Harmonization of phase out based – Ontario and federal definitions .....	144

## **Recent SR&ED tax cases & related issue(s)**

The past year has witnessed a release of a variety of smaller cases. The main issues and potential implications are outlined in the following pages. Copies of the judgments are available from the Tax Court of Canada's website.<sup>137</sup>

### **White star - representation by officer vs. legal counsel**<sup>138</sup>

#### **Facts:**

The company sought leave of the Court, to allow representation by John Patrick Sheridan P. Eng., a Director and President of the company rather than engaging legal counsel in the conduct of its appeal.

The company was publicly traded but de-listed in approximately 1998. The company has 500 to 600 shareholders.

#### **Issue(s):**

Under what circumstances is "self-representation" warranted and prudent?

#### **Relevant legislation and analysis:**

The Tax Court of Canada Rules (General Procedure) states:

"Where a party to a proceeding is not an individual, that party shall be represented by counsel except with leave of the Court and on any conditions that it may determine."<sup>139</sup>

There are really four factors relevant to the determination of whether special circumstances exist:

1. whether the Corporation can pay for a lawyer;
2. whether the proposed representative will be required to appear as advocate and as witness;
3. the complexity of the legal issues to be determined (and therefore whether it appears that the representative will be able to handle the legal issues); and
4. whether the action can proceed in an expeditious manner.

<sup>137</sup> Tax Court of Canada website [www.tcc-cci.gc.ca]

<sup>138</sup> WHITE STAR COPPER MINES LIMITED,

Citation: 2007TCC669 November 7, 2007

<sup>139</sup> Rule 30.(2) of the Tax Court of Canada Rules (General Procedure)

The court then considered the following evidence as to the ability of the Corporation to pay a lawyer is as follows:

1. The Corporation owns property;
2. The property, according to the Corporation's President, Mr. Sheridan is valuable;
3. The Corporation has sufficient funds to pay its taxes;
4. The Corporation does not want to encumber its assets in order to fund appeal.

Furthermore the judge noted that,

"There was no evidence provided with respect to the efforts of the Corporation to raise money to hire legal counsel."

### **Ruling & rationale: denied - self-representation not warranted**

The court quoted additional pronouncements stating,

"Because it is a technical creation of the law, by its very nature a corporation should be represented by a lawyer in court in all but very exceptional circumstances."<sup>140</sup>

As a result the court concluded,

"The Appellant [White Star] has not adduced evidence sufficient to convince me that special circumstances have been established, necessary to justify the Court in exercising discretion, to permit to Mr. Sheridan to represent the Appellant."

### **Implications and author's commentary**

In the author's view this case illustrates the seriousness with which the tax courts demand that proper tax court procedures be followed. As a result it would appear imprudent to forgo the use of qualified legal counsel in all but the most extreme of circumstances.

### **Chichkov – non arm's length payments & carrying on business**<sup>141</sup>

#### **Facts:**

Mr. Chichkov declared he entered into a legitimate contract with Mlle Nobert. She was not his business partner since it was his business. Also, he denied any common law or conjugal relationship with Mlle Nobert.

<sup>140</sup> Kobetek Systems Ltd. v. Canada, [1998] F.C.J. No. 16

<sup>141</sup> MICHEL CHICHKOV v. 2007TCC337 April 13, 2007

The relevant programming agreements between Mlle Nobert and Mr. Chichkov are dated January 1, 2002 and January 1, 2003. Programming tasks to be performed by Mlle Nobert are described in the agreements.

The projected schedule for completion of Mlle Nobert's work was December 31, 2002 in the agreement dated January 1, 2002 and December 31, 2003 for the agreement of January 1, 2003.

The fees, \$26,940 in 2002 and \$29,310 in 2003 are set out in each agreement. The fee was to be paid in "cash, certified cheque or equivalent" within 45 days of invoice. The agreements provided for its termination by either party.

Mr. Chichkov testified in his cross-examination that he paid Mlle Nobert for her services under the contract in cash and received no receipt.

No invoice was sent by Mlle Nobert to Mr. Chichkov. The reason for the lack of documentation, according to Mr. Chichkov, was that "we were living close enough". Each trusted the other. Mr. Chichkov did "transfer" some funds to her, but "substantially" all was paid to Mlle Nobert in cash.

The contracts with Mlle Nobert were back dated and, it appears, the contract price was wholly dependent on the appellant's tax liability for the year.

#### Issue(s):

- 1) Were the payment to Mlle Norbert arm's length?
- 2) Was the company "carrying on business?"

#### Relevant legislation and analysis:

Issue 1: Is the company carrying on business

The court noted that Mr. Chichkov;

- has not invested any funds into a business,
  - has no suppliers,
  - has no potential clients,
  - has no business address,
  - has no bank account for his business,
  - has no business telephone,
  - has no business card,
  - has no business assets, and
  - has no balance sheet for a business,
- indicating he had not commenced a business;

Issue 2: Non-arm's length status

Mr. Chichkov had filed his personal tax returns claiming Mlle Norbert as his common law spouse. As a result this

would make her a "related person"<sup>142</sup> and indicate that there was no negotiation between arm's length persons.

### **Ruling & rationale: no SR&ED & NAL payment (ineligible)**

As a result of the evidence presented the judge concluded

"I have great doubt that Mr. Chichkov was carrying on a business during the years in appeal. I am leery of his testimony;

I fear his testimony was wanting in credibility, among other things. If anything, the work was preliminary to a commencement of a business."

"What I am concerned with is whether, in fact, he was carrying on a business and I conclude that he did not. If a

business was being carried on, it began in 2006"

Since,

- i) no business was carried on by Mr. Chichkov during the years in appeal and
- ii) because he and Mlle Nobert were not dealing at arm's length,

he did not incur any SR&ED expenditures that may be deducted in computing income.

#### Implications and author's commentary

In the author's view this case illustrates several lessons:

- i) taxpayers should document non-arm's length transactions with the same diligence used for arm's-length transactions &
- ii) the importance of keeping all documentation of research performed during the years in question.

As a result the case is likely of moderate long-term significance.

### **Foster - LPs eligibility & frivolous appeal**<sup>143</sup>

#### Facts:

The Appellant (Mr. Foster) had claimed \$2,000 credit for a \$10,000 investment.

The funds were invested in Système ALH Enr. (hereinafter "ALH"), a partnership that did scientific research and experimental development work (hereinafter "SRED").

<sup>142</sup> Per ITA section 251

<sup>143</sup> JOHN FOSTER v QUEEN., 2007tcc659

Mr. Foster invested in SRED projects in 1988 and 1989 through his broker.

In his testimony, he admitted that he;

- never attended any ALH partnership meeting,
- was never engaged in any research project of the partnership &
- his only involvement was his initial investment \$10,000.

This case was further complicated by the fact that the partnership itself was found not to have carried on the research it had proposed to investors.

### Issue(s):

Was Mr. Foster a “limited partner” who would not be eligible to claim SR&ED tax credits?

### Relevant legislation and analysis:

The CRA proposed that Mr. Foster was either a “specified member”<sup>144</sup> or “limited partner”<sup>145</sup> (“the Act”).

The judge concluded that Mr. Foster,

“essentially knew nothing about his interest in ALH. He did everything through a broker.”

### **Ruling & rationale: clearly limited partner – fined \$3,000 in costs**

“If I had found that there was a partnership carrying on a business, I would also have concluded that, on a balance of probabilities, both appellants were passive specified members of the partnership.

Furthermore though the Appellant is entitled to bring matters before the courts .... he did not study law and that he might not be familiar with the rules of procedure or have experience in advocacy.”

Despite these facts the judge stated,

“In my opinion, this **additional time taken to make his case constitutes an abuse of process.**

By his **unacceptable and reprehensible conduct**, the Appellant showed indifference, not only to the Court, with respect to the amount of time that it had to devote to this matter, but also to the opposing party [the CRA]. . . .”

As a result he concluded,

“I am satisfied that the circumstances of the instant case justify the exercise of the discretion conferred upon me, and I order the Appellant to pay costs to the Respondent in the lump sum of \$3,000.”

### Implications and author’s commentary

Though this case was an informal appeal it shows that the tax courts will not tolerate cases based on frivolity where the taxpayer should have known that their arguments were unfounded.

In the author’s opinion the taxpayer (Mr. Foster) was likely trying to delay payment of the taxes owing and that the court costs which he was fined were in excess of his tax bill.

As a result this case (much like the case of White Star) clearly outlines the importance of following proper court procedures and protocols in all appeals (informal and formal).

## **Lilly v. Novopharm – Patent defence – requirement to define Standard Practice**<sup>146</sup>

### Facts:

This case **does not deal with income taxes** however, in the authors opinion, it outlines issues which are relevant to the SR&ED claim process – **specifically documentation of “standard practices.”**

Eli Lilly Canada Inc. asked the Court to prohibit the Minister of Health from issuing a Notice of Compliance to Novopharm Limited in respect of tablets for oral administration of drugs containing olanzapine until the expiry of Canadian Letters Patent.

The patent in question is a classical improvement/selection patent. This type of patent is commonplace and is recognized throughout the world in the chemical, pharmaceutical, biotechnology and agrifood industries.

Improvement/selection patents are granted when an inventor elucidates that one or more members of a previously known class have some previously unknown advantage.

<sup>144</sup> “specified member” per subsection 248(1) of the Income Tax Act (ITA)

<sup>145</sup> “limited partner” per ITA subsection 96(2.4)

<sup>146</sup> Eli Lilly Canada Inc. v. Novopharm Limited, 2007 FC 596 – available at <http://decisions.fct-cf.gc.ca>

Here, the patent claims a new compound and its uses. The patent stated the advantages that form the basis for the improvement/selection, from animal and clinical studies, but did not include what would have been thousands of pages of supporting data.

### Issue(s):

Is a patent insufficient if it does not provide comparative data to prove the advantages that are the basis for the improvement/selection?

### Relevant legislation and analysis:

A number of issues have been raised in these proceedings.

- a) Who Bears the Burden
- b) Construction
- c) Sufficiency
- d) Section 53
- e) Anticipation
- f) Obviousness
- g) Double Patenting
- h) Utility

Novopharm argued that it is common practice throughout the world to draft improvement/selection patents without data. Very many patents have been granted, including in Canada, for improvement/selection patents that state the advantages of the claimed invention without including the supporting data to prove the advantage.

They further argued that to require such data exceeds the patent requirements and therefore conflicts with Canada's international treaty obligations (under the Patent Cooperation Treaty - "PCT") which state that the patent shall,

"disclose the invention in a manner sufficiently clear and complete for the invention to be carried out by a person skilled in the art."<sup>147</sup>

In other words, the patent must teach how to make and use the invention, but need not prove any advantages of the invention.

Furthermore they argued that the treaty states that no nation shall make a requirement for the content of a patent that is "different from or additional to" those set out in the PCT.

Thus, the decision is inconsistent with the highest-level Court in Canada. The decision is also inconsistent with other Federal Court of Canada and Federal Court of Appeal decisions.<sup>148</sup>

The decision is also inconsistent with the law of other countries, including the European Union and the United States. For example,

- under U.K. law, a patent is insufficient only if it does not tell the skilled person how to make and use the invention. The inclusion of data is not required.
- Likewise, there is no requirement to include comparative data in a patent under U.S. law.<sup>149</sup>

### **Ruling & rationale: quantified comparison to "standard practice" required**

"Evidence has been led, such as through Drs. Rosenheck and McEvoy, authors of the recent CATIE study as to whether olanzapine is truly any better than other drugs on the market directed to such purposes and whether its use causes cholesterol increase and weight gain in patients.

It is not necessary to resolve such evidence in view of the findings as to sufficiency. If the specification does not sufficiently set out what the invention is or the intended results, then no proper assessment can be made as to whether the utility promised for those results can be achieved.

The Court finds that Lilly has not demonstrated that Novopharm's allegations as to sufficiency are not justified and for that reason, the application is dismissed."

The end result being that, "It is unnecessary to consider the allegations as to utility in view of the findings as to sufficiency."

### Implications and author's commentary

Many patent practitioners are alarmed by this judgment in that the Judge has minted a new requirement for an improvement/selection patent and that this position is in conflict with international treaties. As a result it will likely be addressed again in the near future.

With respect to the SR&ED claim documentation process this illustrates the importance of;

- benchmarking standard practice (i.e. existing) performance criteria &
- illustrating advancements upon these benchmarks.

As a result this case will likely be of long-term significance.

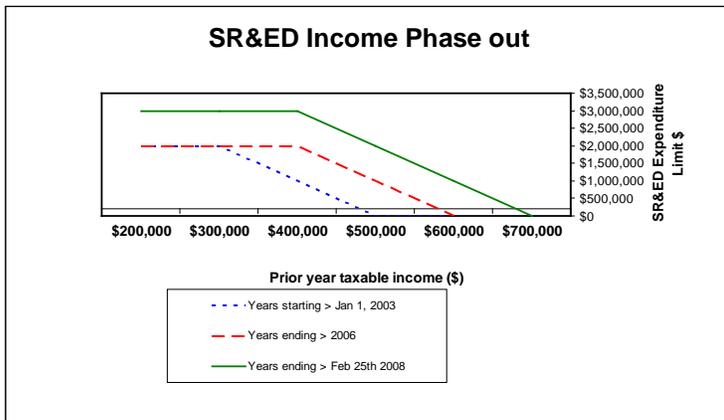
<sup>147</sup> The Patent Cooperation Treaty ("PCT"), Article 5

<sup>148</sup> Wellcome Foundation Ltd. v. Aponte Inc. (1991), 39 C.P.R. (3d) 289 at 336 (F.C.T.D.); Janssen-Ortho Inc. v. Novopharm, 2006 FC 1234 at paras. 126-127;

<sup>149</sup> MPEP 716.01 to 716.06. A manual used by Patent Examiners & Attorneys.

## Recent CRA pronouncements

### 2008 budget – enhanced incentives<sup>150</sup>



There are two rates of federal investment tax credits (ITC's) for SR&ED;

- a general rate of 20 per cent and
- an enhanced rate of 35 per cent for small Canadian-controlled private corporations (CCPC's).

CCPC's are eligible to claim the enhanced ITC rate of 35 per cent on up to \$2 million of qualified SR&ED expenditures annually. Unused ITC's are fully refundable in respect of the first \$2 million of current expenses per year.

Currently the \$2 million expenditure limit is phased out for CCPC's whose;

- taxable income for the previous taxation year is between \$400,000 and \$600,000 or
- taxable capital [assets] employed in Canada for the previous taxation year is between \$10-15 million.

The 2008 budget proposes to;

- increase the expenditure limit for the enhanced ITC rate of 35 per cent, and
- increasing the phase-out ranges on taxable income and taxable capital as follows:

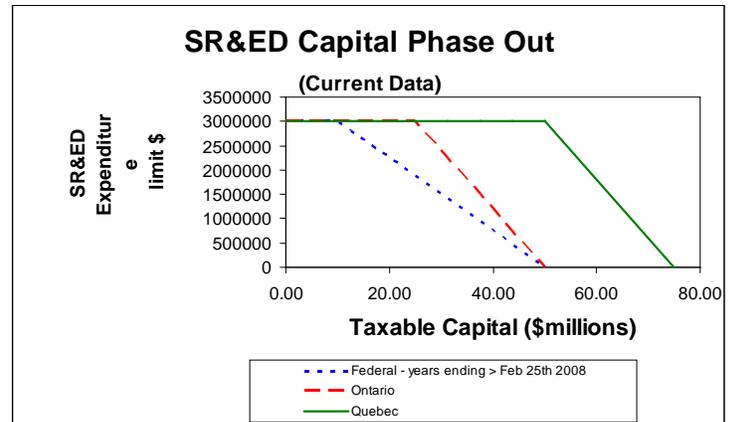
#### i) Expenditure Limit – now \$3 million

To increase the maximum qualified expenditures on which the enhanced 35 per cent rate can be earned to \$3 million from \$2 million.

### Notable quote:

*"The milk of disruptive innovation doesn't flow from cash-cows"*

-- David Isenberg



As a result of the increase in the expenditure limit to \$3 million, the maximum amount of fully refundable SR&ED ITC's available for qualifying CCPC's will increase from \$700,000 to \$1.05 million.

#### ii) Taxable Income Phase-Out Limit – to \$700,000

To increase the upper limit of the phase-out range for prior-year taxable income to \$700,000 from \$600,000.

The expenditure limit will continue to be reduced by \$10 for each \$1 by which taxable income for the previous taxation year exceeded \$400,000.

#### iii) Taxable Capital Phase-Out Limit to \$50 million

To increase the upper limit of the phase-out range for prior-year taxable capital to \$50 million from \$15 million.

### Graphs & Mechanics of the new phase-out formulas

The proposed legislation provides the following formula;

"...a particular corporation's expenditure limit for a particular taxation year is the amount determined by the formula

$(\$7 \text{ million} - 10A) \times (\$40 \text{ million} - B) / \$40 \text{ million}$   
where

<sup>150</sup> Complete Budget document available at [www.budget.gc.ca/2008/pdf/plan-eng.pdf](http://www.budget.gc.ca/2008/pdf/plan-eng.pdf)

**A is the greater of**

- (a) \$400,000, and
- (b) the amount that is
  - (i) .....the particular corporation's **taxable income** for its immediately **preceding taxation year** ...

**B is**

- (a) nil, if the following amount is less than or equal to \$10 million:
  - (i) ...the amount that is its taxable capital employed in Canada ... for its immediately preceding taxation year” or
- (b) in any other case, the lesser of \$40 million and the **amount by which** the amount determined under subparagraph (a)(i) [**i.e taxable capital**]... **exceeds \$10 million.**

**Author’s commentary:**

Though the wording of this legislation seems complex the charts illustrate what it aims to accomplish.

These new provisions **represent a significant enhancement to the SR&ED program** and will likely have a **significantly positive effect on medium sized clients.**

**iv) SR&ED wages outside Canada – eligible up to 10% - if no foreign taxes paid**

Currently to be eligible SR&ED expenditures the Canadian SR&ED legislation requires that eligible activities be “performed in Canada” by a “taxable supplier.”

Based on the results of various tax cases<sup>151</sup>, the CRA had taken the position that it will **deny SR&ED credits eligibility on “salary and wages” of Canadian employees while abroad .**

This position had been softened by various administrative relief provisions but in the author’s opinion remained a source of confusion for claimants & CRA staff alike.

One of the most compelling arguments to support the eligibility of SR&ED credits on “salary and wages” of Canadian employees while abroad is the fact that the Canadian employee remains taxable on his or her salary and wages regardless of where these duties are performed.

As a result, in most if not all cases, the CRA earns substantially greater tax revenues from the personal taxes of the individual employee than it pays out to the SR&ED performers (i.e. the employers) on these wages.

<sup>151</sup> Tigney Technologies and LGL appeals

**The 2008 budget** legislation now proposes,

“The amount of a taxpayer’s expenditure

- (i) for **salary or wages paid to an employee who was resident in Canada** at the time the expense was incurred,
- (ii) in **respect of SR&ED** that
  - (A) was **carried on outside Canada**,
  - (B) was directly undertaken by the taxpayer,
  - (C) related to a business of the taxpayer, and
  - (D) was **solely in support of SR&ED carried on in Canada by the taxpayer; and**
- (b)“...**10 per cent of the total of all expenditures**, made by the taxpayer in the year, ... for salary or wages paid to an employee in respect of SR&ED that was **carried on in Canada**”

Furthermore the legislation requires that the, “**salary or wages is not subject** to an income or profits **tax imposed**, because of the employee’s presence or activity in a country other than Canada, by the government of that **other country.**”<sup>152</sup>

**Author’s commentary:**

This legislation appears to positively address a significant issue of uncertainty which affected a majority of claimants. As a result it will likely have a **significant positive effect** on simplifying both the claim and audit processes.

**Carry-back of non-refundable ITC – restriction on refunds**<sup>153</sup>

**Issue:**

Whether a taxpayer could;

- claim a refundable ITC in a year with tax payable &
- carry back a subsequent year's ITC to offset the tax payable, thereby increasing his refund for that year.

<sup>152</sup> Proposed ITA 37(9)(b)

<sup>153</sup> CRA Interpretation Document No.: 2005-014368117 (E) July 29, 2005 - Section Ref.: 127(5), 127.1(1), 127.1(3)

### Example:

**In year 1**, a taxpayer has **taxes payable of \$25,000 and ITC of \$100,000** with respect to qualified expenditures incurred in the year refundable at a 100% rate.

**In year 2**, the taxpayer has no tax payable and a **nonrefundable ITC** on qualified expenditures of **\$50,000**.

The taxpayer wants to claim the full refundable ITC of \$100,000 in year 1<sup>154</sup>.

The taxpayer would be deemed to have paid \$100,000 on account of tax payable and would therefore **receive a refund of \$75,000**.

**In year 2**, the taxpayer wishes to carry-back \$25,000 of the \$50,000 non-refundable ITC to year 1, and receive a **\$25,000 refund**.

### CRA position

Subsection 127(5) of the Act calculates the **maximum amount** that a taxpayer may claim for ITC in a particular year as the **total of**:

- 1) the taxpayer's investment tax credit at the end of the year in respect the taxpayer's SR&ED....&
- 2) the lesser of:
  - a) the taxpayer's investment tax credit at the end of the year ... and
  - b) the amount, if any, by which the taxpayer's tax otherwise payable under this Part for the year exceeds the amount, if any, determined under 1) above.

In the **example scenario**, subsection 127(5) limits the ITC to the total of:

- 1) total ITC's for the current and preceding years, being **\$100,000**
- 2) the lesser of:
  - a) subsequent year's ITC, being \$50,000
  - b) the amount by which taxes payable (\$25,000) exceeds the amount determined in 1) (**\$100,000**)  
**=\$0**

**Therefore, the maximum ITC that can be claimed for year 1 is \$100,000** pursuant to subsection 127(5) of the Act.

### Author's commentary:

This issue had been addressed earlier in the case of Ainsworth Lumber (where the taxpayer was successful in the carry-back).

The CRA's new interpretation appears to limit the availability of such a carry-back.

As a result claimants should **be wary about** assumptions on their ability to use **non-refundable credits in a "retroactive"** manner.

### Notable quote:

*"What one man can invent, another can discover."*

-- Sherlock Holmes

## Ontario SRED credits - recent changes

### Ontario Business Research Institute (OBRI) Tax Credit – pre-approval requirement waived<sup>155</sup>

Under the **current legislation**, a corporation is **required to obtain a ruling<sup>156</sup> within 90 days of signing the contract** with an eligible research institute in order to claim an expenditure under the contract as a qualified expenditure for the purposes of OBRI.

The Minister of Revenue has directed, that **rulings no longer need to be obtained<sup>157</sup>** by qualifying corporations or a partnership of which it is a member under section 43.9 of the Act in respect of **contracts entered into after August 9, 2007**.

This direction is being given at this time to simplify the process for claiming OBRI tax credits as part of the move to a single federally administered corporate tax system, by aligning this process with that of other refundable tax credits under the act.

<sup>155</sup> Ontario Ministry of Revenue, Corporate Tax Information Notice 6024, October 2007

<sup>156</sup> Under subsection 43.9(10) of the act

<sup>157</sup>, pursuant to subsection 43.9(13) of the act

<sup>154</sup> pursuant to subsection 127.1(1) of the Income Tax Act (the "Act")

### Author's commentary:

This proposal is a great step which **removes an unnecessary hurdle to claiming the additional 20% refundable credit** with respect to work with **colleges and universities**.

## Ontario harmonization - The Transitional Debit/Credit<sup>158</sup>

### Harmonization – scheduled for April 3, 2008

- The CRA will assume responsibility for the majority of Ontario's Corporations Tax administrative functions for taxation years ending prior to 2009.

As announced in the 2007 Ontario Budget, the New Act provides relief within the transitional mechanism for R & D performers.

- Many R & D performers would face a transitional debit because they have used federal investment tax credits to reduce their federal income tax rather than drawing down their federal SR&ED expenditure pool.

To alleviate the hardship of transitional debits for an R&D performer, an elective 7 year deferral is provided by the New Act.

- The deferral applies only to the extent that post-2008 SR&ED expenditures exceed post-2008 SR&ED deductions, on a cumulative basis.

- The New Act contains a transitional debit/credit mechanism.

- It is designed to take into account differences between a corporation's Ontario and federal income tax pools/balances.

- Under the New Act, the corporation uses federal pools and balances to determine its harmonized taxable income.

- These differences are determined at the beginning of the 2009 taxation year.

The pool/balance differences arise because:

- There are different policies in Ontario and federal laws
- Corporations may claim different amounts (e.g., loss carry forwards or reserves) for Ontario and federal purposes

Without transitional debits/credits, a corporation could:

- face the permanent loss of an Ontario deduction, or
- obtain a tax windfall from being able to deduct the same amount more than once for Ontario purposes.

The New Act **recognizes** Ontario and federal pool/balance **differences evenly over five years**.

To alleviate the hardship of transitional debits **for an R&D performer, an elective 7 year additional deferral is provided** by the New Act.

### Example of the (5+7=) 12 year deferral for SR&ED

Corporation A has a total federal balance of \$10 million and a total Ontario balance of \$8 million.

The difference between its federal and Ontario SR&ED pool balances is also assumed to be \$2 million.

It makes the R & D election.

### Results:

1. The total transitional debits (\$280,000 = 14% x \$2 million) that Corporation A would otherwise have paid for 2009 to 2013 are deferred until after 2015.

2. From 2016 to 2025, Corporation A will pay transitional debits of \$28,000 per year (\$28,000 = 14% x \$200,000), totaling the deferred transitional debit of \$280,000.

### Harmonization of phase out based – Ontario and federal definitions

As another minor item of adjustment the taxation year used to determine federal taxable income and taxable capital to reduce the \$2 million expenditure limit under the OITC has changed:

- Under the current CTA, a corporation's preceding taxation year and the associated corporations' **last taxation year ending in that preceding taxation year** are used.

- Under the New Act, the last taxation year of the corporation and associated corporations **that end in the previous calendar year are used**.

<sup>158</sup> Examples provided by Ontario MOF presentation by Ken Fox, Assistant Director, January 8, 2008



## SR&ED Newsletter Edition 2007-2

Welcome to the second 2007 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>Recent SR&amp;ED tax cases &amp; related issue(s).....</b>	<b>146</b>
Armada - eligibility of SR&ED preparation fees.....	146
Nuytten - personal (T1) SR&ED claim disallowed since work in Co.....	147
Hopmeyer - Whether SR&ED eligible while insolvent.....	148
Systemhac - Director fined \$75,000 for SR&ED tax fraud in B.C. court .....	149
<b>Recent CRA &amp; Ontario pronouncements.....</b>	<b>151</b>
2007 SR&ED limits for specified employees.....	151
CRA & Ontario harmonization 2008.....	152
Timeline for implementation - What's next? .....	152
Transitional Mechanism for SR&ED.....	152
Unresolved issues – still under discussion .....	153

## Recent SR&ED tax cases & related issue(s)

The past year has witnessed a release of a variety of smaller cases. The main issues and potential implications are outlined in the following pages. Copies of Tax Court judgments are available from the Tax Court of Canada's website.<sup>159</sup>

### Armada<sup>160</sup> - eligibility of SR&ED preparation fees

#### Facts:

The company engaged a Chartered Accounting Firm to support a claim for SR&ED tax credits. In order to provide that detail, the CA firm hired a retired engineer to assist in the writing of the technical reports.

A total professional fee of \$28,618 was charged, of which an amount of \$18,618 was claimed as the portion allocated to the technical reports and claimed as a qualified SR&ED expense.

#### Issue(s):

Whether payment for preparation of SR&ED claims are qualified SR&ED expenses.

#### Relevant legislation and analysis:

Both counsel referred to the decision of Val-Harmon<sup>161</sup> in which it had retained a firm (Gessat Inc.) to prepare its claim. Gessat Inc. was not an accounting firm or legal firm but a company which helped taxpayers make claims for credits based upon SR&ED.

Gessat Inc. charged a fee of \$20,638 to Val-Harmon, who then claimed a \$7,223 portion as being related to SR&ED preparation.

The Appellant and Respondent rely on different provisions of the Regulation to come within or fall outside the required terms of a "qualified expenditure."

Appellant relies on Regulation 2900(2)(c) (SR&ED traditional overhead which includes), "other expenditures

that are directly related to such prosecution and that would not have been incurred if such prosecution had not occurred."

The Respondent relies on the definition of "prescribed expenditure" Regulation 2902: "(B) a legal or accounting fee."<sup>162</sup>

#### Ruling & rationale:

In Val-Harmon, the judge held that 75% of the fee paid to Gessat Inc. was a "qualified expenditure" but the Respondent in that case had failed to plead that the fee was a "prescribed expenditure" within Regulation 2902. In that appeal, the Respondent (CRA) rested its case on Regulation 2900(2) rather than 2902.

I cannot conclude that the amount (\$18,618) paid to Deacur & Co. by Armada, was an expenditure "directly related to such prosecution." In order to be "directly related, expenditures must be incurred in the research itself or in the development itself. The amount paid to the CA firm was a consequence of research and development which had already taken place. It **was an accounting fee paid to the accounting firm** which prepared the Appellant's income tax returns...[and] not a "qualified expenditure" for the purposes of an investment tax credit."

Furthermore the CRA argued that the original judgment in the Val-Harmon case should be amended since it did not consider Regulation 2902. The judges gave this serious thought, stating;

"The amount of money involved in this case is not substantial and I don't think it would be fair to permit an amendment and we would have to adjourn the case, I think we'll leave that for some other cases.

It also raises of course the rather **serious question whether** what one does in **preparing reports** and making submissions to the Department of National Revenue falls under the general definition of **scientific research expenses**. It's a very good question and I think some day **should be addressed but not in this case.**"

#### Implications and author's commentary

In the author's view the judge is correct in the seriousness of the question. In reality the problem is much more complex than the few issues addressed. Some of the major variables to address within this issue include;

<sup>159</sup> Tax Court of Canada website [www.tcc-cci.gc.ca]

<sup>160</sup> Armada Equipment Corporation v. Her Majesty The Queen - Citation 2007TCC260, May 2, 2007 - Docket: 2005--4039(IT)

<sup>161</sup> Val-Harmon Enterprises vs. Her Majesty the Queen, [1995] T.C.J. No. 1762.

<sup>162</sup> Regulation 2902(a)(i)(B)

- Internal vs. external accounting fees – Does the act differentiate between fees paid to “book keepers” vs. “external accountants?”
- CA firm vs. consulting firm – Would the work for technical description writing be eligible if done by an “engineering consulting” firm however ineligible if contracted via an accounting firm?
- Traditional vs. proxy overhead – The case in question concludes that the amount is not a direct SR&ED expenditure but did not specifically address whether it is an eligible SR&ED overhead expense under the “traditional” allocation method.

As a result of these unresolved issues this case is likely of long term significance.

### **Notable quote:**

***"The function of genius is not to give new answers, but to pose new questions which time and mediocrity can resolve."***

**-- Hugh Trevor-Roper**

### **Nuytten<sup>163</sup> - personal (T1) SR&ED claim disallowed since work in Co.**

#### Facts:

The Appellant in this case was an individual (Mr. Nuytten) who was disallowed \$218,042 claimed on his personal tax return (T1) as SR&ED.

The Expenses claimed in the 2000 taxation year involved seven projects. The costs for these projects were gathered by a company (Nuytco) but billed personally to the Appellant thus ensuring that it was clear that he personally funded the technology and was its owner.

The Expenses were claimed by the Appellant by filing a T1 Adjustment which included not only the claim for the Expenses, but also salary from Nuytco of \$499,309 which was the amount necessary for Nuytco to “bonus down” to the “business limit.”

<sup>163</sup> Rene Nuytten v. Her Majesty The Queen: 2007TCC321 – July 16, 2007 - Docket: 2005-528(IT)G

Although the Appellant did not intend to create patents that he could license for royalties, he claimed he intended to create valuable intellectual property assets such as know-how, processes, designs, drawings, prototypes, models, and so on.

The Appellant further admitted that he did not intend to exploit those assets himself; rather all of his research products were incorporated into Nuytco’s business.

In 2000, the Appellant’s research activity generated no revenue of any kind. Nor did he have any arrangements in place to receive royalties or other compensation from Nuytco for its use of those assets in the Deep Worker submersible.

#### Issue(s):

Whether the individual (Mr. Nuytten) was “**carrying on business**”<sup>164</sup> and therefore entitled to claim SR&ED tax credits on the work performed.

#### Relevant legislation and analysis:

The evidence indicates that the research paid for by the Appellant in 2000 was effectively integrated with Nuytco’s business. Everything that Nuytco produces is based on his research. In addition, Nuytco originally paid for that research from 1997 until 1999, and did so again from 2001 onward. Finally, when the Appellant was satisfied that Nuytco would be financially successful he discontinued the arrangement and Nuytco resumed paying for the research.

The CRA argued that;

“Even if the Appellant’s research was a business in 2000, the expenditures were capital expenditures that may not be deducted in full.

Their purpose was to create assets that would give enduring benefits to the Appellant by generating future income and by being used in future products.

Since patents are “depreciable property” for purposes of the Income Tax Act, these expenses ... were the capital cost of a Class 44 asset.<sup>165</sup>

Expenses that did not result in the creation of any patent are, at most, eligible capital expenditures with deductions available only for businesses, not taxpayers earning income from property.”

<sup>164</sup> Required for SR&ED tax credit eligibility per ITA 37(1)  
<sup>165</sup> ITA Schedule II

Given these facts, it is difficult to conclude that Mr. Nuytten was carrying on a business during 2000 since there is no agreement in writing that provides for Nuytco to incur R&D expenses on behalf of Mr. Nuytten or for his benefit.

### Ruling & rationale:

In the judge's opinion,

“Overall, the conduct of Mr. Nuytten appears to be an awkward attempt to retain control over his inventions in the eventuality of the acquisition of control of Nuytco by another investor, and

in the meantime, Nuytco was intended to be the entity to make money from the exploitation of the technology developed by Mr. Nuytten and “his design team.”

This conduct is not consistent with someone carrying on a business for profit. The business carried on for profit is that of Nuytco and therefore the expenses in question belong to Nuytco.”

Result - Appeal denied.

### Implications and author's commentary

In the author's view, the judge eloquently summarized a major lesson from this case;

“The conduct of Mr. Nuytten illustrates the difficulty that **many taxpayers** have in managing their business through a **wholly owned corporation: they treat their corporation like their alter ego; they do not recognize the distinction** between their **own person** and the **legal personality of their corporation.**”

The facts outlined in the case do not state the percentage ownership of Nuytco by Mr. Nuytten, however this would be relevant to further analysis of this issue.

Overall this case is likely of little long term interest since it is **typically favorable** to claim the SR&ED tax credits within a corporation (in this case Nuytco) rather than as an individual. Had this been done by Nuytco, there would not have been a problem. As a result the issue appears to have been poor professional advice rather than an SR&ED planning issue.

### Notable quote:

*“A great pleasure in life is doing what people say you cannot do.”*

- Walter Bagehot (1826-77) English economist, political journalist and critic.

### Hopmeyer<sup>166</sup> - Whether SR&ED eligible while insolvent

#### Facts:

On January 27, 1999 Aqua-Vision Systems Inc. (AVSI) filed for Protection under The Bankruptcy and Insolvency Act of Canada for the purpose of filing a proposal with its creditors.

In cross-examination, it was shown the claim made by AVSI for the year 2000 for SR&ED expenses with respect to the A100 camera housing project were incurred in the period of November 1, 1998, to October 31, 1999.

The claim filed also shows salaries which were paid to the employees throughout the year 2000.

A claim for an allowable business investment loss (“ABIL”)<sup>167</sup> on the foregoing basis was formulated for the first time in an Amended Notice of Appeal filed on January 18, 2005.

The claim for an ABIL for 1999 was loans in the amount of \$74,074 purportedly made by the Appellant, and a liability of \$144,931 under a loan guarantee purportedly given by the Appellant. Of these amounts, 79% was not recoverable at the end of the 1999 taxation year. For the year **2000, the claim for the ABIL was with respect to the balance of the loans**, the guarantee and for the loss incurred on the disposition of the shares to the Appellant's daughter.

One of the requirements for this ABIL claim that the corporation “not have been carrying on business at the end of the 1999 taxation year,”<sup>168</sup> the Amended Notice of Appeal stated as a fact that the corporation was being liquidated.

<sup>166</sup> Estelle Hopmeyer v. Her Majesty The Queen: 2006TCC185, March 30<sup>th</sup>, 2006 Docket 2002-2842(IT)G

<sup>167</sup> ABIL per 50(1)(b) of the Income Tax Act

<sup>168</sup> ABIL claim requirement per clause 50(1)(b)(iii)(B) of the Act

### Issue(s):

The principal issue is whether at the end of the year 1999, Aqua Vision Systems Inc. was carrying on business.

### Relevant legislation and analysis:

On the subject of whether or not the company was carrying on business in the 2000 tax year, **Mr. Hopmeyer testified** as follows:

Q. At the end of the year, do you think it would be reasonable to expect that the corporation would be dissolved or be wound up and it would not again begin to carry on business?

A. Yes, I mean, that was really the, as far as I was concerned, I just kept it going just to see, you know, just to pay down the Bank debt and just further, ... **it was a dead business. There was no hope of revival;** you'd need \$2 million or \$3 million or \$4 million to, which there were no prospects of getting.

Q. Was your wife willing to continue to borrow to support AVS?

A. No way! She was, she's very upset with the amount of money that we had already invested. . . .

These claims, along with the fact that the shareholders claimed tax losses on the shares, became the basis of the CRA's argument that the company was not "carrying on business" as required for claiming SR&ED tax credits.

### Ruling & rationale:

In the judge's analysis he stated,

"Counsel for the Appellant submitted that the object of the actions of the corporation from the end of 1999 was essentially the payment of its bank loans. Counsel infers that because of this the corporation was no longer carrying on its business for the purpose of profit.

I am **not aware** of any court decision stating that having as a **goal the payment of debts may change a person's profit making purpose.** ... It seems to me that it would be contrary to normal commercial practice to come to such a conclusion."

I would add to these facts that the explicit purpose of the proposal was to afford AVSI the opportunity to re-establish itself ... [and therefore] that AVSI **was carrying on a business in the year 2000.**

Result – taxpayer wins & SR&ED claim allowed!

### Implications and author's commentary

This case illustrates a situation where the **tax objectives of spouses run contrary and create conflict.**

The fact that Mr. Hopmeyer's spouse and daughter filed tax forms claiming their investments in the company were "worthless" prompted the CRA to challenge the admissibility of the SR&ED claim.

Fortunately, (for the company) the tax court was willing to look at the full substance of the transaction and realized that the employment of five full time staff (including several performing SR&ED activities) was seen to be adequate evidence of SR&ED activities.

In the author's view, based on Mr. Hopmeyer's own testimony, the CRA could have made additional attempts to challenge whether there was "**reasonable expectation of profit.**" As a result it is likely of long term significance to claimants and tax planners.

### Notable quote:

***"Borrow money from pessimists -- They don't expect it back."***

**-- Steven Wright**

### **Systemhac<sup>169</sup> - Director fined \$75,000 for SR&ED tax fraud in B.C. court**

#### Facts:

In his scramble to finance his "holy grail technology" to fight software and music piracy, Surrey businessman Arie Ross has tried some unconventional sources.

Canada Revenue Agency announced that the BC provincial court judge has convicted Mr. Ross (a.k.a. Randolph Ross and Richard Ross) for tax fraud.

The agency said that to generate refunds under the federal Scientific Research and Experimental Development program, Ross submitted \$385,359 in expenses he claimed had been incurred by his company, Systemhac Corp., which is developing the SmartCD that he claimed, cannot be copied or burned.

<sup>169</sup> Vancouver Sun – June 21, 2007 Article by David Baines

These expenses **included payments to employees who never received the money and photocopies of cheques and invoices that proved to be forgeries.**

During a search of Ross's home and the offices of his accountant, CRA investigators found a **cheque that had been altered with correction tape.** Photocopies of that cheque had been provided to CRA to support Ross's tax credit claim.

Had the claim been accepted, the company would have received a \$134,876 tax credit to which it was not entitled.

### Ruling & rationale:

Ross pleaded guilty to one count of tax fraud in B.C. Provincial Court. He was fined \$75,000 and given a 12-month conditional sentence.

### Subsequent events:

We may not have seen the last of Ross or his SmartCD. He is currently chairman and chief operating officer of a Surrey-based company called Base of the Bridge Technology, which recently acquired the SmartCD technology with the stated aim of going public on the TSX Venture Exchange.

### Implications and author's commentary

While not a tax court of Canada case, in the author's view this case illustrates a variety of important issues to SR&ED claimant and claim preparers:

- i) While the **fraud was at the "federal"** level the **punishment** was determined by the B.C. **Provincial court.** This could lead to inconsistencies in the treatment of claimants in the various provinces & territories.
- ii) Under **CRA SR&ED audit practices it is common to review the T-4 slips of the employees being claimed.** If payments were not made the CRA will flag this immediately. As a result this particular fraud was destined to be discovered.
- iii) Regarding **falsification of invoices,** it would appear that the **accountant should also be held responsible** however, there is no mention of additional prosecution or third party liability.
- iv) In relation to the reported crime, the **penalty seems relatively low.** This represents more of a "slap on the wrist" than a deterrent to would be criminals.

In summary, while there is often subjectivity in establishing the existence and "end point" of experimental development, this case illustrates a clear intent to misrepresent the work performed. Fortunately CRA review procedures proved capable of identifying the fraud and implementing corrective action.

### Notable quote:

*"Don't worry about people stealing an idea.*

*If it's original, you will have to ram it down their throats."*

**-- Howard Aiken**

# Recent CRA & Ontario pronouncements

## 2007 SR&ED limits for specified employees

	<u>Treatment of expenses</u>		<u>ITA section</u>
	<u>Specified employees</u>	<u>Non-specified employee</u>	
<b>1 R&amp;D labour for the:</b>			
a) R&D expenditure pool (for deduction), &			37(1)
b) Qualified expenses (for ITC calculation)			127(9)
<u>Type of expense:</u>			
· salary & wages	<b>In</b>	<b>In</b>	(5-8)
· bonuses or profit based remuneration	<b>Out</b>	<b>In</b>	37(9) & 5(1)
· Expenses paid > 180 days Maximum	<b>Out</b> 5 x [YMPE]	<b>Out</b> N/A	78(4) 37(9.1)
 <b>2 Salary base for proxy amount (for ITC calculation)</b>			
<u>Type of expense:</u>			
· Income from employment	<b>In</b>	<b>In</b>	5
· bonuses/profit based remuneration	<b>Out</b>	<b>Out</b>	5(1) & 37(9)
· taxable benefits	<b>Out</b>	<b>Out</b>	6 & 7
· Expenses paid > 180 days Maximum	<b>Out</b> 2.5x [YMPE]	<b>Out</b> N/A	78(4) Reg. 2900(7)

### Specified Employees

Generally speaking, a specified employee includes any employee who owns 10 percent or more of any class of stock of the Corporation, or any individual who is directly related to such an employee. This may include the president's son or daughter.

The amount which may be claimed as SR&ED expenditures in respect of salary or wages incurred for a specified employee is limited and must be allocated among associated corporations (i.e. under common control).

### Implications for "specified employees"

Being deemed a specified employee results in certain restrictions on SR&ED labour inclusions and limits. The major effects are:

- a) Limit on SR&ED wages (5x YMPE)
  - The maximum amount of claimable salaries and wages for a specified employee is limited to 500% of YMPE (yearly maximum pensionable earnings).
- b) Limit on SR&ED proxy amount (2.5x YMPE)
  - The maximum amount of salaries and wages for a specified employee for calculation of the "salary base" used in the proxy overhead allocation cannot exceed 250% of YMPE.

- c) Exclusion of bonuses from SR&ED wages
  - Bonuses or remuneration based on profits should not be included in the R&D hourly rate calculation or in the R&D expenditure pool.

The **YMPE are set annually** under the Canada Pension Plan:  
 2007 = \$43,700, 2006 = \$42,100, and 2005 = \$41,100.  
 As a result, the maximum salary or wages claimable for a specified employee as SR&ED wages/proxy base in a taxation year is:

<u>SR&amp;ED wages - annual limits</u>			
		<u>Specified employees</u>	<u>Non-specified employee</u>
<b>1 SR&amp;ED labour:</b>			
2005	\$	205,500	No limit
2006	\$	210,500	No limit
2007	\$	218,500	No limit
 <b>2 Salary base for proxy amount</b>			
2005	\$	102,750	No limit
2006	\$	105,250	No limit
2007	\$	109,250	No limit

## CRA & Ontario harmonization 2008

The Ontario Corporate Income Tax Collection Agreement, like those of other provinces, will require Ontario to fully harmonize with the federal definition of corporate taxable income. As a result, any Ontario differences from the federal definition of taxable income will expire for taxation years ending after 2008.

Ontario currently provides \$380 million annually in corporate income tax incentives to support research and development (R&D).

One of these incentives is a “super-deduction” for the portion of the federal investment tax credit that relates to Ontario scientific research and experimental development (SR&ED). This deduction has the effect of enhancing the value of the federal SR&ED investment tax credit for Ontario corporations. However, as an Ontario-only deduction, it does not conform to the requirements of a harmonized tax base.<sup>170</sup>

The 2006 Economic Outlook and Fiscal Review and the 2007 Ontario budget also proposed a **new (4.5%) non-refundable R&D tax credit to replace the current (schedule 161) super-deduction for R&D for taxation years ending after 2008**. This tax credit is not in Bill 174 but is expected to be addressed before implementation of the harmonized return.

The tax credit rate has been set to maintain the same revenue cost to Ontario as the R&D deduction. Ontario's R&D deduction will provide an estimated \$200 million of tax support in 2006.

By converting the R&D deduction to a tax credit, this tax support would now become taxable for both federal and Ontario tax purposes. While the tax credit rate has been designed to be revenue-neutral to Ontario, the **federal government would receive an annual revenue windfall of about \$40 million** (based on the current \$200 million estimate) from the taxation of the credit.

With corporate income tax base harmonization, this “super deduction” incentive will automatically expire for taxation years ending after 2008.

## Timeline for implementation - What's next?

- Now - CRA<sup>171</sup> and OMOR<sup>172</sup> transition planning for 2009 harmonized return; planning for transfer of other corporate tax administration functions; enacting legislation
- Early to mid-2007: Enhanced collaboration on audit and supporting functions
- End of 2007: All policy and administrative details are finalized, including any necessary legislative amendments and the signing of appropriate agreements
- February 2008: Commencement of installment payments to the CRA for taxation years ending after December 31, 2008
- 2009: Harmonized tax return

Additional details of the proposed tax credit include:

- A corporation would have the option to waive all or part of its entitlement to the new credit.
- A 20-year carry-forward and three-year carry-back would be provided for unused tax credits, although no carry-back to a taxation year that ends before 2009 would be permitted.
- As under the federal ITC rules, partnerships would be entitled to flow the new credit through to active corporate members of the partnership.

## Transitional Mechanism for SR&ED

For Ontario and federal corporate income tax purposes, taxpayers typically have tax pools with respect to amounts that can be carried over to another taxation year. These tax pools apply to various items including, for example, unclaimed deductions for losses and SR&ED expenditures. Currently, tax pool balances may be different for federal and Ontario purposes.

However, upon harmonizing with the federal definition of taxable income, each Ontario tax pool balance will assume its federal value. In many cases, this will require upward or downward adjustments to the Ontario pools, which may result in future Ontario tax gains or losses for corporations.

Bill 174, the Strengthening Business through a Simpler Tax System Act, 2006, proposes a five-year transitional mechanism that is designed to minimize the Ontario tax gains and losses that would otherwise arise in adopting the federal tax pool balances.

By generally eliminating these tax gains and losses, the effect of the transitional mechanism is expected to be revenue-neutral for the Province.

---

<sup>170</sup> 2006 Ontario Economic Outlook and Fiscal Review Annex IV Corporate Tax Harmonization — Creating a More Competitive Tax Climate for Business

---

<sup>171</sup> Canada Revenue Agency  
<sup>172</sup> Ontario Ministry of Revenue

The proposed transitional mechanism first calculates the difference between the aggregate of the federal and Ontario tax pool balances.

- If the total Ontario balance exceeds the total federal balance, a tax credit is provided to reflect the corporation's Ontario tax loss that arises in moving to the lower total federal balance.
- Conversely, if the total federal balance exceeds the total Ontario balance, additional Ontario tax is charged to reflect the corporation's Ontario tax gain. The tax credit or additional Ontario tax (i.e., tax debit) is spread out evenly over five years, commencing with the corporation's first taxation year ending after 2008.

Two changes are proposed to this mechanism to provide transitional support to R&D companies in Ontario.

The **existing incentive** is recognized for purposes of the Income Tax Act (Canada), **the taxation year following** the year in which the corresponding federal ITC is claimed.

With this one-year lag and potential delays in claiming federal ITCs, there would be a gap between the incentive provided by the new 4.5 per cent tax credit and the existing incentive.

To eliminate this gap, it is proposed that the amount of a corporation's relevant federal ITCs earned in taxation years ending before 2009 would be added to the corporation's total Ontario balance, to the extent that those ITCs have not expired for federal purposes; have not been taken into account in the calculation of the existing Ontario incentive; and were not earned prior to the last time that control of the corporation was acquired.

This adjustment for federal ITCs would provide a significant measure of relief to many R&D companies in Ontario.

### **Unresolved issues – still under discussion**

Even with that adjustment, the transitional mechanism could still lead to a tax debit for an SR&ED performer where its federal SR&ED pool balance exceeds its Ontario SR&ED pool balance, as of the beginning of its first taxation year ending after 2008.

This difference could arise, for example, where a corporation has used federal ITCs, rather than its federal SR&ED pool, to reduce its federal income tax. To provide additional relief in these circumstances, it is proposed that a corporation be allowed to defer tax debits relating to its federal SR&ED pool balance. The corporation could elect to reduce the amount of its total federal balance by the lesser of two amounts.

- The first amount would be equal to the excess of its federal SR&ED pool balance over its Ontario SR&ED pool balance minus the amount of its adjustment for federal ITCs.
- The second amount would be the amount by which its total federal balance (determined without reference to the election) exceeds its total Ontario balance.

If the electing corporation incurs sufficient ongoing SR&ED, tax debits relating to the reduction in the total federal balance could be deferred by at least seven years as follows:

- For taxation years ending after 2008 and before 2016, a corporation would maintain a cumulative balance of its post-2008 SR&ED expenses.
- For each of those taxation years, the corporation's SR&ED tax deduction would be applied first against that cumulative balance.
- No tax debit would arise if the SR&ED tax deduction does not exceed the cumulative balance.
- If a corporation's SR&ED tax deduction exceeds the cumulative balance, the tax debit would be based on the extent to which the SR&ED tax deduction (up to the amount of the reduction in the total federal balance) exceeds the cumulative balance.
- For taxation years ending after 2015, a corporation's tax debit would be based on its SR&ED tax deduction for the year and no longer on its cumulative balance.<sup>173</sup>

### **Notable quote:**

*"Time is nature's way of keeping everything from happening at once."*

-- Woody Allen

---

<sup>173</sup> Ontario Budget 2007: Chapter III: Ontario's Tax System Supports Expanded Prosperity



## SR&ED Newsletter Edition 2007-1

Welcome to the first 2007 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>Recent SR&amp;ED tax cases &amp; related issue(s).....</b>	<b>155</b>
Perfect Fry – subsidiary of public Co. still CCPC for SR&ED .....	155
Zeuter – meaning of “technological uncertainty” .....	156
Daniel Harvey - minimum technical documentation .....	157
<b>SR&amp;ED Future trends.....</b>	<b>159</b>
Major changes being discussed by Parliament .....	159
1) Refundable credits - for all taxpayers .....	159
2) Increase ITC rates & thresholds .....	159
3) Eligibility of work outside Canada .....	159
4) Credits to passive SR&ED investors .....	160
<b>Recent Ontario pronouncements.....</b>	<b>161</b>
History of the “super-allowance” and “super-deduction” .....	161
“Super-Allowance” replaced by “Super-Deduction” in 2000.....	161
“Super-Deduction” to be replaced by “4.5% ITC” in 2008 .....	161
Proposed mechanics of the new credit .....	161
<b>SR&amp;ED planning - Determining an Appropriate Sample Size .....</b>	<b>162</b>
When does the SR&ED testing end? .....	162
Rules of thumb / industry standards .....	162

## Recent SR&ED tax cases & related issue(s)

The past year has witnessed a release of a variety of smaller cases. The main issues and potential implications are outlined in the following pages. Copies of the judgments are available from the Tax Court of Canada's website.<sup>174</sup>

### Perfect Fry<sup>175</sup> – subsidiary of public Co. still CCPC for SR&ED

#### Facts:

Throughout each of the relevant taxation years, the Appellant:

- (a) was a **corporation resident in Canada**;
- (b) was **wholly owned and directly controlled (*de jure*) by Perfect Fry Corporation, a public corporation**, the shares of which were listed on a prescribed stock exchange in Canada; and
- (c) was **indirectly and ultimately controlled *de jure* by a group of Canadian resident individuals** who acted in concert and who, in the aggregate, owned more than 50% of the shares of Perfect Fry Corporation.

#### Issue(s):

Was the company a "Canadian Controlled Private Corporation" within the meaning of the Income Tax Act?

If so, it would be eligible for enhanced SR&ED tax credits.

#### Relevant legislation:

The definition of CCPC;

"Canadian-controlled private corporation" means a private corporation that is a Canadian corporation other than a corporation;

(a) controlled, directly or indirectly in any manner whatsoever, by one or more non-resident persons, **by one or more public corporations** (other than a prescribed venture capital corporation), or by any combination thereof,

(b) that would, if each share of the capital stock of a corporation that is owned by a non-resident person or a

**public corporation** (other than a prescribed venture capital corporation), or were owned by a **particular person**, be controlled by the particular person, or

(c) a class of the shares of the capital stock of which is listed on a prescribed stock exchange."<sup>176</sup>

#### Analysis:

##### Paragraphs (a) & (c) not relevant

The parties agreed that the company was not disqualified from CCPC status under paragraph (a) of the definition of CCPC.

This flows from the decision of the Federal Court of Appeal in *Parthenon Investments Ltd. v. M.N.R.*<sup>177</sup> The Court held that, in the case of a chain of corporations, the phrase "controlled, directly or indirectly in any manner whatsoever" in the definition of CCPC referred to ultimate *de jure* control determined indirectly through the chain.

In *Parthenon* the parent and great-grandparent corporations of the taxpayer were Canadian but its grandparent corporation was controlled by non-residents.

The Respondent in that case had taken the position that despite the taxpayer's being ultimately controlled by two Canadian-resident corporations, the indirect control by the non-resident corporation constituted a weak link in the chain of control and disqualified the taxpayer corporation from being a CCPC.

The judge also noted, this position was rejected by the Federal Court of Appeal.

The parties also agree that the test in **paragraph (c)** of the definition of "Canadian-controlled private corporation" has no relevance to this case (i.e. the company itself was not listed – only its parent company).

##### Focus on paragraph (b) – meaning of "particular"

The analysis then focused on the **meaning of the term "particular person"** in paragraph (b) of the CCPC definition.

##### Ruling & rationale:

After contemplating both the Oxford and Webster's definitions of the word "**particular**" the judge concluded;

"I agree with the Appellant that the purpose of the provision is to aggregate the shareholdings of public

<sup>174</sup> Tax Court of Canada website [www.tcc-cci.gc.ca]

<sup>175</sup> Perfect Fry Company Ltd. v. The Queen: 2007TCC133 - March 6, 2007 - Docket: 2004-3629(IT)G

<sup>176</sup> Per ITA subsection 125(7)

<sup>177</sup> 97 DTC 5343.

corporations and non-resident persons in situations where those shares are widely held and no one person or group has *de jure* control of the corporation whose shares they own. This is clear from the Department of Finance Technical Notes cited by the Appellant.

I also agree that there is **no reason to believe** that by enacting **paragraph (b)** of the definition, Parliament also **intended it to apply in situations where *de jure* control of the corporation in question can otherwise be established.**"

The **result** was the company being entitled to **enhanced ITC's (i.e. as a CCPC) despite being "indirectly" controlled by a public company!**

### Implications and author's commentary

In the author's opinion, this case;

- opens huge opportunities
- for small public companies
- to earn enhanced, refundable ITC's

As a result it is likely of **considerable long term significance** to claimants!

## **Zeuter<sup>178</sup> – meaning of "technological uncertainty"**

### Facts:

Mr. Slater (the principal researcher) obtained a Bachelor degree in Engineering Physics and a Masters Degree in Electrical Engineering from McMaster University.

The ATG project was basically an on-line learning tool to be used by high school students

The Appellant hired local students who accumulated, verified and analyzed wide ranges of information.

The students would catalogue the data under the proper heading and then store it as Hypertext Markup Language ("HTML") webpages.

The project was ambitious; well over 20,000 web pages were produced covering over 1.5 million subjects.

Mr. Slater said that over a 10 year span, more than 70 summer students were hired with an average of seven students per year.

**Much of the information came from the online Encyclopedia Britannica;** however, Mr. Slater argued that, since students reading an encyclopedia would be "bored to tears", a website such as the ATG is necessary.

The CRA allowed the claims during the 1995-1999 period however **denied them for 2000-2002.**

Mr. Slater contends that, since the claims for SR & ED were allowed for the years 1995-1999 inclusive, they should be further allowed for the 2000, 2001, and 2002 taxation years.

### Issue(s):

Is the transcribing of "known information" to the internet eligible SR&ED?

### Relevant legislation and analysis:

"Scientific research and experimental development" is defined for income tax purposes as follows:

" means **systematic investigation** or search that is carried out **in a field of science or technology** by means of **experiment or analysis....**"<sup>179</sup>

### Ruling & rationale:

In the judges' view the governing approach to be taken in determining whether something qualifies for SR & ED was set out in detail by Chief Justice Bowman in "Northwest Hydraulics"<sup>180</sup> namely,

1. Is there a **technical risk or uncertainty**?

Based on further examination he proposed,

"The real difficulty in the project related to the collection, verification, and cataloguing of the various data gathered by the students. While these uncertainties may have been great, they are not technological or scientific uncertainties that are required for the ITCs."

As a result he concluded,

"the verification and **presentation of already known information does not constitute an advancement** in an existing body of scientific knowledge. Clearly it may help others in doing their own research, but it is not experimentation or analysis in and of itself."

<sup>178</sup> Zeuter Development Corporation v. The Queen - Citation 2006TCC597  
Oct 31, 2006 - Docket: 2005--3306(IT)

<sup>179</sup> SR & ED definition per ITA subsection 248(1)

<sup>180</sup> Northwest Hydraulic Consultants Limited v. The Queen, 98 DTC 1839 (T.C.C.) ["Northwest Hydraulic"].

“..If competent professionals in the field can resolve these issues with predictability, **there is no technological uncertainty**. This is exactly the situation in issue.”

The net result being that the **company was ineligible** for ITC's during the years in questions.

### Implications and author's commentary

In the author's opinion, this case **outlines** some of the most **common mistakes** and misunderstandings on behalf of claimants;

- having impressive technical designations or training does not automatically make all work SR&ED
- **collecting (or uploading) of data is only eligible if it is necessary to resolve a pre-stated, technological uncertainty**

### **Daniel Harvey<sup>181</sup> - minimum technical documentation**

#### Facts:

The taxpayer was an individual. He and several other **investors each invested amounts of \$6,000 - \$13,000 in an "SR&ED partnership"**

The investment was made following an information meeting, organized by the promoters of the project, that he attended along with some 15 other people he did not know.

Each of the investors in question;

- never participated in any associates meeting &
- were never provided any feasibility studies or marketing agreements,

however, in preparing their personal tax returns **various partners attempted to claim their related shares of investment tax credits (equal to 20%) of the invested amounts**.

Upon examination it was discovered that the partnership in question;

- had collected \$750,000 and that it had
- given a research contract in this amount to a related company
- signed sub-contracts for the research contract with three related companies &
- issued cheque jointly payable to various companies

- it then issued and bought back the associates' shares for an amount equal to 50% of their invested seed money.
- It did **not however appear to have expended any money on research or experimental development**.

Based on this and other evidence the CRA proposed that;

- none of the Appellants intended to work together on a scientific research project and therefore doubted the actual existence of these partnerships.
- that the partnership did not actually operate a business and was actually created as a sham to;
  - o allow Zuniq Corp. to acquire 50% of the seed money provided by the investors,
  - o while allowing them to lose nothing &
  - o even gain something through the tax benefits related to their investment.

#### Issue(s):

Whether the partners were entitled to SR&ED Investment tax credits?

#### Relevant legislation and analysis:

"Scientific research and experimental development" is defined for income tax purposes as follows:

“means **systematic investigation** or search that is carried out **in a field of science or technology** by means of **experiment or analysis...**”<sup>182</sup>

The **stated purpose** of the project submitted by the partnership was to **develop a prototype of a digital processing system** for a high-fidelity audio signal and to create an anti-aliasing filter with variable cut-off frequency and digital control.

Though this appeared to be a potential area of eligible work the **CRA noted that there were NO**;

- **prototypes** constructed,
- fundamental **technological uncertainties** for the prototype (since the partnership had only to follow the processor's technical characteristics, which indicated the steps to follow),
- **hypotheses** to be tested (meaning problems to solve)
- summary of hypotheses tested or **results obtained** as the work progressed &

<sup>181</sup> Daniel Harvey v. The Queen: 2006TCC73 Feb 28, 2006 Docket 98-3617(IT)I

<sup>182</sup> SR & ED definition per ITA subsection 248(1)

- no documents to show the role of each of the researchers in completing the project.

In other words, from the documents examined, the CRA could not find any elements to confirm that admissible work actually took place.

### Ruling & rationale: taxpayer lost

As result of the analysis the judge concluded that;

“The \$750,000 expenses submitted in support of the scientific research and experimental development seemed unlikely...[and that the]”

“Appellants did not show there was genuine scientific research and experimental development in the project in which they had invested. This being an essential condition to qualifying for an investment tax credit, the Appellants are therefore disallowed.”

This finding alone is sufficient to dismiss the appeals.

### Implications and author’s commentary

In the author’s opinion this case outlines the benefits of the current SR&ED structure in which the performer (rather than the investor) is required to document the SR&ED related work.

As a result the author would caution any passive SR&ED investor to be cautious of such investments and to demand;

- the SR&ED documentation
- be prepared by the “general partner” (or performers)

Given recent political impetus to expand tax incentives to this type of “passive SR&ED funding,” this case is likely of moderate long-term significance.

### Notable quote:

***"If you have always done it that way, it is probably wrong."***

**- Charles Kettering, inventor of Freon,  
holder of 300 patents**

## SR&ED Future trends

### Major changes being discussed by Parliament

CATAAlliance (Canada's largest high tech industry representation group) has launched an SR&ED Advocacy Campaign focusing on fundamental structural improvements to the federal system of tax support for innovation.

The Campaign is based on research reports and analysis developed through on-line consultations and round-table discussions that were carried out throughout the summer of 2006 on how to improve the SR&ED tax credit program.

The result of these workshops was the publication of the 2006 Consultation Report, "Improving Canada's Scientific Research and Experimental Development (SR&ED) Tax Incentive Program."<sup>183</sup>

In the author's opinion, this paper summarizes the majority of areas in which we might expect to see significant changes to the SR&ED program during the next few years.

Some of the major recommendations include:

#### 1) Refundable credits - for all taxpayers

##### Problem:

- Currently **certain taxpayers** (e.g., Foreign, Public or Large Companies)
- **earn non-refundable credits** (i.e. which must be applied against income taxes owing)
- which are of **no use** to many Canadian businesses, particularly **those with** significant pools of **losses**.

##### Recommendations:

For years, CATAAlliance has called for making the SR&ED credits universally accessible to all business entities. Specific recommendations include that the federal government;

- allow companies in loss position to access **tax credits refundable in cash within limits**.
- allow the credits to be **applied to other taxes** besides income taxes, **including payroll taxes**; &
- make the SR&ED incentives **available to limited partners** up to their "at risk amount".

<sup>183</sup> Copies of the Reports are available online at:  
[www.cata.ca/files/PDF/Resource\\_Centres/SRED/SRED2006ConsultRpt.pdf](http://www.cata.ca/files/PDF/Resource_Centres/SRED/SRED2006ConsultRpt.pdf)

## 2) Increase ITC rates & thresholds

##### Problem:

The amount of SR&ED expenditures that are eligible for the high rate (35%) refundable credits (currently \$2 million) have not kept pace with inflation.

As well, the limits on taxable income (<\$400,000) and capital tax (<\$10 million in assets) in the previous year with respect to the refundable credits are detrimentally limiting access to the refundable credits.

##### Recommendations:

The **SR&ED expenditure limit** for the high rate refundable credits be **increased (from \$2 million) to at least \$4 million**;

- the **taxable income limit be increased from \$400,000**, as proposed for calendar 2007, **to \$600,000 for 2007**, and in subsequent years to \$800,000
- the **grind of the expenditure limit from current \$10** of reduction in the expenditure limit for every \$1 of taxable income in excess of the business limit would be reduced **to a ratio of \$5 to \$1**; &
- the **capital tax restriction be removed** or at least the threshold at which the capital restriction applies (\$10 million of assets) be **raised**.

## 3) Eligibility of work outside Canada

##### Problem:

It is often not possible or practical for all the work associated with an SR&ED project to be conducted in Canada. Yet, Canadians accrue the benefits of the intellectual property and the learning from Canadian led projects.

##### Recommendations:

The Government **allow a proportion of the work** on a Canadian funded project **carried on outside of Canada** to be eligible for the incentives.

##### Author's note:

For a variety of reasons the author believes that, **as a minimum, the salary and wages of Canadian employees conducting SR&ED abroad be eligible** for SR&ED tax credit.

The supporting arguments for this position are almost irrefutable (since the employee pays Canadian taxes on these “foreign” earnings) and the benefits clearly documented.

The author is however **opposed to funding any payment under which the Canada Revenue Agency is not earning income taxes (e.g. work done by a foreign subcontractor)** since this work is likely of little, if any, benefit to the Canadian taxpayer.

Further information and related submissions to the CRA are available at [www.meuk.net](http://www.meuk.net).

#### **4) Credits to passive SR&ED investors**

##### Problem:

Canada has a poor record of leveraging and investing in the results of its R&D, i.e., successfully commercializing what it creates at home.

##### Recommendations:

- The federal government develop an integrated set of tax measures that **encourage investors** to invest **in start-up ventures**.
- A combination of **flow through shares, accelerated depreciation rates and/or investment pools** should be considered.
- This integrated package of tax incentives should be **designed to encourage passive investment** where the benefits accrue with the successes of the ventures.

##### **Notable quote:**

***"We can't solve problems by using the same kind of thinking we used when we created them."***

**- Albert Einstein**

\

## Recent Ontario pronouncements

### History of the “super-allowance” and “super-deduction”

From 1983 – 2000 Ontario provided an incentive called the SR&ED super-allowance which;

- provided the claimant with a gross up of its Ontario SR&ED expenditures (eg. \$100 expenditure = \$150 tax deduction)
- which was ignored by the CRA (i.e. not considered “government assistance”)
- Result is that it was NOT
  - o a reduction to Federal SR&ED expenditures or
  - o included in taxable income.

As a result of its **2000 budget**, the federal government (CRA) proposed that provincial deductions for R&D in excess of actual expenditures would be **treated as taxable, “government assistance.”**

### “Super-Allowance” replaced by “Super-Deduction” in 2000

In response to the Federal government proposal, Ontario replaced the “R&D Super Allowance” with an “R&D Super-deduction” which would;

- allow corporations to exclude from Ontario taxable income
- the portion of the federal investment tax credit that relates to qualifying Ontario SR&ED expenditures<sup>184</sup>.

The net result was to replace the super-allowance with an incentive providing very similar tax effects.

### “Super-Deduction” to be replaced by “4.5% ITC” in 2008

On March 22, 2007, Ontario’s Minister of Finance, The Honourable Greg Sorbara, presented the province’s 2007 budget.

Because of the transition to a harmonized corporate income tax system,

- for **taxation years ending after 2008**,
- Ontario will replace its deduction for the portion of the federal investment tax credit (ITC) relating to Ontario scientific research & experimental development (SR&ED) expenditures with

- a 4.5% non-refundable tax credit.

The budget outlines the following details relating to the new credit:

An eligible expenditure is an expenditure that is:

- incurred by a corporation during a taxation year ending after 2008
- for SR&ED carried on through an Ontario permanent establishment; and
- a qualified SR&ED expenditure for purposes of the federal ITC.

### Proposed mechanics of the new credit

The new credit will be determined after the transitional tax credit and debit, and before the tax credit for Ontario CMT (Corporate Minimum Tax).

- A corporation can waive all or part of its entitlement to the new credit.
- Unused tax credits can be carried forward 20 years or carried back three years, but no carry-back to a taxation year that ends before 2009 will be permitted.
- Partnerships can flow the new credit through to active corporate members of the partnership.
- Similar to the federal ITC rules, the new credit will be subject to recapture and change-of-control rules.
- Continuation rules will be provided to permit unused credits to be carried forward after a tax-deferred amalgamation or wind-up.
- The budget also provides several other relieving provisions relating to other federal and Ontario SR&ED differences.

### Notable quote:

*“The early bird may get the worm, but the second mouse gets the cheese.”*

- Steven Wright, scientist and comic

<sup>184</sup> As posted per the Ontario Ministry of Finance website, “Ontario Budget 2001” Paper C pgs 97-98 - 2001

## SR&ED planning - Determining an Appropriate Sample Size

The SR&ED legislation clarifies that [any] “testing” which is “commensurate with the needs and directly in support of the project” is eligible for ITC’s.

Many SR&ED eligible projects involve testing or sampling of a product or a production process. Inevitably, when the repetitive measurement of any parameter is involved, the question will always arise;

“What is an appropriate number of test runs or samples required for my project?”

CRA often challenges this aspect of SR&ED claims, leaving it to the claimant to justify the original number of test runs/samples put forward. This is particularly likely in situations where the “experimental production” is being sold in what might be considered a “commercial” operation.

### When does the SR&ED testing end?

If the technical rationale for determining the number of test runs/samples required is weak (or non-existent), the claimant may have a large portion of their claim rejected.

At this point, most people (even the engineers in the crowd) start to grow a little nervous, because setting that significant “number” involves dealing with statistics from a varying degree of sources including

- Statistical and engineering texts
- Industrial standards: eg. ISO, Six Sigma
- Industry specific: Pharmaceuticals, etc.

Although the process of determining sample size can be a bit confusing for most people, determining an acceptable answer can be done knowing what it is you want to prove!

The following is provided as a generic guide to help find your way through the basic principles.

#### **Define Project Objectives First**

Clearly defining your ultimate goal will frame the prescribed scope of work for the research project and ultimately the number of samples required.

In short, the number of specific objectives is directly proportional to the statistically significant sampling/testing requirements. This “scoping” exercise involves consideration of several components that are inextricably linked:

- 1) the types of tests required – consideration must be given to the:
  - complexity of the test itself,
  - time and cost required to conduct the test
  - analysis of results to support the objectives.

#### **Effects of environment**

Sampling or testing the performance of a machine or production line will typically require much different baseline considerations than say testing a new consumer product or computer program;

- 2) number of variables to include in the test matrix – consideration must be given to
  - a ceiling on what can be achieved within
  - practical performance and budget limitations;

Typically the **number of inter-dependent variables** will affect the overall **number of tests required on an exponential basis**.

- 3) evaluation criteria used to support decision making  
As the precision becomes finer and confidence levels increase, so does the requirement for sampling/testing.
  - While acceptable confidence limits for many scientific projects are between 90 – 95%, the precision may be acceptable at  $\pm 20\%$ , whereas confidence levels may be as high as 99 – 99.9% with high precision ( $\pm 5\%$  or smaller) for some industrial or pharmaceutical applications.

Although Items 1, 2, and 3 are mutually dependent, there is flexibility in setting the level of precision and confidence you wish to attain with respect to significant data, i.e., do you want to be within  $\pm 10\%$  precision of a 90% confidence interval, or do you want to be within  $\pm 5\%$  of a 99% confidence interval?

In short, the number of test runs or samples required for any given project is driven by the precision and level of confidence demanded by your defined objectives.

### Rules of thumb / industry standards

Although there are some general rules of thumb, there is no way to avoid the fact that some calculations need to be performed to develop a justifiable sample size number.

# Sample Size calculation example

Determining a sample size can quickly become very complicated conceptually.

Say you have a factory that produces widgets, and your competitor claims that 'half your widgets' come off the assembly line defective.

How many widgets should you randomly select (as a sample) to find out the percentage of widgets that tend to be defective during normal production?

If your normal production is 5,000 widgets per month, and you want to be 95% confident in your results, within a range of 10 percentage points of the mean, your sample size should be as calculated below<sup>185</sup>:

**Determine Sample Size**

Confidence Level:  95%  99%

Confidence Interval:

Population:

Sample size needed:

Let's say within your sample of 94 widgets the mean defective rate was 30%.

This means that;

- 95% of the time your normal production
- will have defect rates between 20% and 40%,
- meaning between 1,000 - 2,000 defective widgets
- for every 5,000 produced.

## Glossary of Terms

When choosing a correct sample size for a survey or study, you can use a "sample calculator", as shown above in the widgets example. You need to specify the following items:

- Confidence level – the percent of the time the mean of your results will lie within the confidence interval.

- Confidence interval – the precision applied to the specific mean quantity (i.e. the range that the mean lies within, mean  $\pm$  value)
- Population – the total number of individuals (the group size) about which you wish to determine some average result / property; the lot size or expected production; the number of people who are purchasing a product as a way to estimate the population size.

Also, from a population, a sample size is chosen to magnify the characteristics of that population. The sample calculator takes into account the population and confidence requirements. It computes an appropriate sample size to ensure the results are accurately representing the population.

## Limitations:

The sample calculator does not take into account many specifics when attempting to apply it to certain industries or cases. Certain industry standards and practices will alter the recommended sample size due to unaccountable demands at the time. It is meant to be used as a guideline when choosing a sample size.

On the **next page we illustrate a generic chart**<sup>186</sup> giving standard sample sizes based on the level of confidence chosen, population size, and confidence intervals.

## Notable quotes:

*"If everything seems to be going well,  
you have obviously overlooked  
something."*

*"When everything is coming your way,  
you're in the wrong lane."*

- Steven Wright, scientist and comic

<sup>185</sup> The calculator is from the website of Creative Research Systems – The Survey System found at: <http://www.surveysystem.com/sscalc.htm>

<sup>186</sup> taken from the IEEE website at <http://www.ieee.org/portal/pages/corporate/research/samplesizes.html>

## Sample Sizes

Population Size (N)	95% Level of Confidence			99% Level of Confidence		
	±3%	±5%	±10%	±3%	±5%	±10%
500	250 <sub>a</sub>	218	81	250 <sub>a</sub>	250 <sub>a</sub>	125
1,000	500 <sub>a</sub>	278	88	500 <sub>a</sub>	399	143
1,500	624	306	91	750 <sub>a</sub>	460	150
2,000	696	323	92	959	498	154
4,000	788	341	94	1,142	544	158
5,000	880	357	95	1,347	586	161
10,000	965	370	96	1,556	622	164
20,000	1,014	377	96	1,687	642	165
50,000	1,045	382	96	1,777	655	166
100,000	1,058	383	96	1,809	659	168

Note: The choice of +/- 3 percent, +/- 5 percent, and +/- 10% for confidence intervals is based on the tendency of researchers to use these intervals or a similar range of intervals in the design of their surveys.

a:

Population sizes for which the assumption of normality does not apply; in such cases, the appropriate sample size is 50 percent of the population size.

Source: Rea, Louis., and Richard A. Parker. *Designing and Conducting Survey Research: A Comprehensive Guide*. 2nd ed. San Francisco, CA: Jossey-Bass, 1997, page 121.



## SR&ED Newsletter Edition 2006-2

Welcome to the second 2006 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>Recent SR&amp;ED tax cases &amp; related issue(s)</b> .....	<b>166</b>
Terra Remote Sensing – meaning of “arm’s length” .....	166
Sedona Networks – CCPC Status .....	166
Maege - if SR&ED partnership is a “tax shelter” .....	167
<b>Recent CRA pronouncements</b> .....	<b>169</b>
Textile Industry Guidance Document - Examples .....	169
Example 1: (TechStyle Fabrics) outlines nature of SR&ED information required .....	169
Example 2: (Full Speed Fabrics Inc.) new process development with technological issues after commercialization .....	169
<b>SR&amp;ED planning – patent searches to benchmark standard practices</b> .....	<b>171</b>
Basic patent reporting structure .....	171
Patent search portals .....	171
How searches support SR&ED claims .....	171

## Recent SR&ED tax cases & related issue(s)

The past year has witnessed a release of a variety of smaller cases. The main issues and potential implications are outlined in the following pages. Copies of the judgments are available from the Tax Court of Canada's website.<sup>187</sup>

### Terra Remote Sensing<sup>188</sup> – meaning of “arm’s length”

#### Facts:

Terra's shares were owned as follows:

- 25 % by a company controlled by Mr. V;
- 18 % by a company controlled by Mr. O;
- 25 % by a company controlled by Mr. Q;
- 32 % owned by 10 other employees.

The individual Appellants (Mr. V, Mr. O & Mr. Q) are not related and each was a director.

#### Issue(s):

Did the Appellants deal as employees at arm's length?

#### Relevant legislation and analysis:

The Income Tax Act generally deems that, where a shareholder owns greater than 50% of the fair market value of the capital shares of a company it will be deemed to control it.<sup>189</sup>

If a person owns more than one company in this fashion the companies will be “associated” for taxation purposes. This “association” umbrella can be extended wherever “related persons”<sup>190</sup> each control corporations and there is 25% cross-ownership of shares in either direction<sup>191</sup>.

In the judge's opinion,

<sup>187</sup> Tax Court of Canada website [www.tcc-cci.gc.ca]

<sup>188</sup> Terra Remote Sensing Inc. v. The Queen - Citation 2006 TCC 279 - May 12, 2006 - Docket: 2005-1558(EI)

<sup>189</sup> Definition of control per ITA subparagraph 256(1.2)(c)(i)

<sup>190</sup> Related persons defined per ITA subsection 251(2) – includes parents, in-laws & siblings

<sup>191</sup> Definition of “Associated corporations” per ITA paragraphs 256(1)(c to e)

“Clearly, de facto control is not a factor. No one Appellant had control of the corporate Appellant to influence the bargaining position in establishing the employment arrangement.”

#### Ruling & rationale:

As a result the judge concluded,

“the application is equally consistent with them **simply being specified shareholders** as it is with being at arm's length.”

#### Implications and author's commentary

This case illustrates the high degree of confusion amongst tax practitioners in determining whether an employee is:

- a) Specified – meaning they own  $\geq 10\%$  of any class of stock of the corporation, vs.
- b) Non-arm's length – meaning that they and direct relatives “control” the corporation.

Both of these situations have drastically different effects on the eligibility of payments for SR&ED tax credit purposes.

In particular, expenditures for SR&ED performed by a “non-arm's length” performer are not “immediately” qualified expenditures for ITC purposes.<sup>192</sup> However, the performer can elect to claim or transfer the actual qualified expenditures incurred.<sup>193</sup>

This measure prevents the company from unfairly marking up the costs on “non-arm's length” transactions but would not be required in the fact scenario of this case.

### Sedona Networks<sup>194</sup> – CCPC Status

#### Facts:

Dispute arose over the classification of a portion of Sedona shares. This portion, 438,597 shares,

<sup>192</sup> ITA paragraph 127(9)(f) in the definition of “qualified expenditures”

<sup>193</sup> form T1146 – ITA subsection 127(13)

<sup>194</sup> Sedona Networks Corporation v. The Queen: 2006TCC80 - March 2, 2006 - Docket: 2003-2379(IT)G

constitutes enough shares to change the company's status from a CCPC, to a Public Corporation.

The 438,597 class B preferred shares were owned by the Bank of Montreal Capital Corporation (BMCC), a wholly-owned subsidiary of the Bank of Montreal (BMO). The latter is a Canadian public corporation for the purposes of the Act.

A management agreement executed between BMCC and Ventures West Management TIP Inc. (Ventures) was in place throughout Sedona's taxation year. Ventures is a Canadian resident corporation that was not a public corporation, within the meaning of subsection 89(1) of the Act.

The management agreement gave Ventures both:

- the right to exercise, as it deemed appropriate in its sole discretion, the voting rights with respect to the Sedona shares belonging to BMCC, and
- the right to acquire those shares in case of termination of the agreement by BMCC without proper cause.

BMCC also executed a power of attorney in favour of Ventures to facilitate the latter's carrying out and completing the management services to be provided to BMCC.

According to Sedona, the shares in question should only be added to the "residents" classification, whereas the Minister chose to add the shares to the "non-residents/public" class, because BMCC was controlled by a public corporation.

#### Issue(s):

How to treat, for the purposes of the Canadian Controlled Private Corporation (CCPC) definition, the shares owned by one corporation (controlled by a public corporation) when the voting rights of these shares have been transferred to another corporation (not a public corporation).

#### Relevant legislation and analysis:

Currently, a corporation is a CCPC if it is a private corporation and a Canadian corporation<sup>195</sup>, and it is **not controlled, directly or indirectly** in any manner whatever **by one or any combination of**

- public corporations (other than prescribed venture capital corporations) or
- non-resident persons.

Furthermore the CCPC definition<sup>196</sup> requires non-residents' and public corporations' shareholdings to be notionally attributed to one hypothetical person. If that person would control the corporation, then the corporation is not a CCPC.

#### Ruling & rationale:

In the judge's analysis,

"The management agreement is not to be taken into account for the purpose of determining if "effective control" existed. It might be relevant for the purpose of determining de facto control, but not de jure control.

Given that the hypothetical shareholder controls Sedona, it could **not be considered a CCPC**.

#### Implications and author's commentary

In the author's opinion this case illustrates some of the opportunities and pitfalls to consider when optimizing investment structures to include public or foreign shareholders.

### **Maege<sup>197</sup> - if SR&ED partnership is a "tax shelter"**

#### Facts:

Botanical Technologies was a partnership formed to perform co-operative research with a number of other agencies, including Agriculture Canada.

The first project that Botanical Technologies undertook was the development of something called "anthrocyanin", an organic coloring agent derived from plants, which could be used in both food coloring and cosmetics.

After two years of work the researchers could not overcome technical problems and as a result the

<sup>195</sup> private corporation and a Canadian corporation as defined in subsection 89(1)

<sup>196</sup> ITA 125(7)(b)

<sup>197</sup> Norma Maege v. The Queen: 2006TCC117 April 28, 2006 Docket 2002-2332(IT)G

funding to the project started to disappear by 1992, leading to its demise.

Between 1989 and 1992 Ms. Maege invested approximately \$70,000 in the partnership and claimed losses in the amounts of the investments, plus her corresponding share of the tax credits.

The CRA subsequently denied the amount of losses claimed arguing that the investment met the definition of a "tax shelter."

The company testified that losses in the first two to three years of Botanical Technologies "anthrocynanin" project were understandable since this was a "research" phase and losses were normal within that timeframe.

Documentary evidence, in the form of the Offering Memoranda for the relevant tax years, was introduced to confirm that **investors were informed in writing about the possibility of enjoying deductible losses** as well as tax credits through participation in the partnership.

#### Issue(s):

Whether or not the partnership was a tax shelter?

If the partnership was a tax shelter, the appeals will fail and the appellants will abandon all other claims.

#### Relevant legislation and analysis:

No amount may be deducted or claimed by a person in respect of a "tax shelter"<sup>198</sup> unless the person files with the Minister a prescribed form containing, among other things, the identification number for the tax shelter.

Effectively a "tax shelter"<sup>199</sup> includes

"any property in respect of which it may reasonably be considered having regard to statements or representations made or proposed to be made in connection with the property that, if a person were to acquire an interest in the property ...[he or she could deduct these amounts for tax purposes]... at the end of any particular taxation year ending within 4 years after the day on which the interest is acquired,"

<sup>198</sup> pursuant to subsection 237.1(6) of the Income Tax Act

<sup>199</sup> "tax shelter" was defined in subsection 237.1(1) of the Act

The judge proposed that,

"The definition of what constitutes a tax shelter depends entirely on the reasonable inferences to be drawn from representations made in connection with the property.

Representations would include written representations such as those contained in sales brochures or advertisements and verbal representations such as those made in public or private information or sales meetings..."

#### Ruling & rationale:

Based on the facts disclosed by the partnership the judge ruled that it did in fact meet the definition of a tax shelter and the deductions were denied.

#### Implications and author's commentary

In the author's opinion this case outlined a number of key planning issues:

- enhanced incentives (35% vs. 20%) federally as well as a variety of provincial incentives are only available to corporations (i.e. not proprietorships or partnerships).
- limited partners are further prevented from claiming any SR&ED credits
- had the investment been structured as a corporate entity the client would likely have earned a higher level of tax credits without any risk of being deemed a tax shelter
- the use of partnerships for SR&ED investment should be closely scrutinized by competent legal counsel to ensure that all tax goals are achieved.

#### Notable quote:

*"Never express yourself more clearly than you think."*

-- Neils Bohr

## Recent CRA pronouncements

### Textile Industry Guidance Document - Examples

The textile guidance document has been updated with the provision of two specific examples of project descriptions.

#### Example 1: (TechStyle Fabrics) outlines nature of SR&ED information required

 **I) Standard Practice & Objective:** TechStyle Fabrics presently weaves corduroy with gaps in the warp direction and does not leave gaps in the weft direction. The objective is to develop a process which can utilize current equipment to manufacture a product with gaps in the weft direction, thus providing better yields during cutting operations.

 **II) Technological Uncertainties:** A number of factors including;

- the type of yarn used,
- its construction,
- its count,
- its density and
- how it is woven

all interact to determine the appearance and properties of the fabric.

 **III) Activities (Systematic Investigation):** In this case, TechStyle had to;

- modify their equipment to operate outside its normal range to define ways to weave a railroaded corduroy product.
- as part of this work, they changed their “slitting” operations, which
- created uncertainties in the manufacture and performance of the product.

The technological advancement (conclusion) was the development of a new “slitting” method, which was perpendicular to existing methods and had to overcome uncertain effects on the properties and performance of the textile as well as on the subsequent manufacturing processes.

#### Example 2: (Full Speed Fabrics Inc.) new process development with technological issues after commercialization

##### Project 1 – process development

 **I) Standard Practice & Objective:** In the initial SR&ED project the technological advancement sought was to develop a new process in order to produce fabric with uniform two-dimensional stretch of 25%.

The company could manufacture a product with sufficient stretch in the warp direction but limited stretch in the weft direction. Currently available knitting constructions result in a product with plenty of stretch in the machine direction (length) but insufficient in the width.

 **II) Technological Uncertainties:** It was necessary to resolve the uncertainties associated with finding ways to increase stretch in width without;

- losing too much strength in the machine direction,
- creating new problems with the surface, or
- by requiring prohibitively expensive raw materials.

##### **III) Activities (Systematic Investigation):**

 The company conducted a planned series of trials to develop the process for knitting the new yarn blend that would produce uniform 2-D stretch fabrics.

These trials entailed testing a new textured polyamide, modifying the construction of the textile, and determining the benefits that could be achieved with heat treatment.

By the end of 2000, the claimant had met the objectives set at the time. The company started commercial production and filled orders. The SR&ED project was considered completed when the claim was filed.

## **Project 2 – process improvement**



**I) Standard Practice & Objective:** In January 2001, the R&D team began sourcing a new yarn supply in order to develop new shades.

At the same time, the company needed to investigate the cause of the return of almost 50 rolls of material by two customers. Some of the material was being returned because of poor chlorine stability.



**II) Technological Uncertainties:** The company needed to identify the cause of the problem and ensure that the product met the required chlorine stability rating of 4-5.



**III) Activities (Systematic Investigation):**

### **Pre-SR&ED Activities (ineligible)**

**Phase 1: Finding a cheaper source of spandex** does not require SR&ED. This is routine work to evaluate a new raw material.

**Phase 2: The new shade developments** also did not require SR&ED. These activities do not meet the requirements of SR&ED because the problem was solved using generally available techniques and knowledge.

### **SR&ED activities (eligible)**

**Phase 3: The work on the colour stability** required a systematic investigation using testing and analysis to determine why the material fades, despite passing the accelerated chlorine tests.

The analysis required to determine which algaecides cause the fading of red pigments provided the company with a new understanding of relationships between algaecides and colour stability.

**Phase 4: The experimentation to find the dye combination for stable red colour in presence of algaecide X** also qualifies as part of the project described in phase 3.

After the completion of phase 3, it remains uncertain that Full Speed Fabrics could develop a dye combination that was stable to the fading effects of algaecide X within the constraints of the application.

Although the company had identified the probable cause of the fading and potential solutions, they still

needed to apply this new knowledge to develop a modified product and process.

### **Post-SR&ED Activities (ineligible)**

**Phase 5: Application of the new know-how to produce a commercial product may or may not require SR&ED**, depending on the facts in the specific circumstances.

## **Notable quotes:**

*"We can lick gravity, but sometimes the paperwork is overwhelming."*

-- Werner von Braun

*"A man sits with a pretty girl for an hour, it seems like a minute.*

*He sits on a hot stove for a minute, it's longer than any hour. That is relativity."*

-- Albert Einstein

## SR&ED planning – patent searches to benchmark standard practices

Generally speaking the patent Acts and other related filing information including copies of most Canadian, U.S. and European patents can be viewed on-line.

### Basic patent reporting structure

To be validated, your invention must not have been previously sold, used or publicly disclosed. The claims must define distinctly and in explicit terms the **novel subject matter** of the invention for which protection is sought<sup>200</sup>.

**Analysis of a patent is to be determined from the point of view of one skilled in the art**, with a mind willing to understand the invention.

Every patent can be reviewed on-line and is organized into **five basic sections**:

- **Cover Page** - This page is produced by the patent office. Newer cover pages contain bibliographic information about the patent document, the title, the abstract, and a representative drawing.
- **Abstract** - The abstract is a single paragraph that describes the invention. Before 1975, Abstracts are not generally available.
- **Claims** - A section which outlines those items that are novel, and form the substance of the intellectual property which is to be protected by the patent.
- **Drawings** - An optional section containing diagrams of the invention.
- **Disclosures** - A detailed description of the invention.

### The Prosecution of your Patent Application

In Canada and the USA, the patent application is examined by a government-employed examiner for form and content. This may not occur until as late as two years from the filing date.

---

<sup>200</sup> section 27(4) of the Patent Act

While any previous patent or publication anywhere in the world which discloses the invention will usually prevent the grant of a valid patent for the invention, the cost of conducting a world-wide search is prohibitive.

As a result, the United States Patent and Trademark Office is preferred because of the large volume of prior patents and other literature on file there.

### Patent search portals

- **World Intellectual Property Organization** - [www.wipo.int](http://www.wipo.int)
- **Canadian Intellectual Property Office** - [www.cipo.ca](http://www.cipo.ca)
- **U.S. Patent and Trademark Office** - [www.uspto.gov](http://www.uspto.gov)
- **European Patent Office** – [www.european-patent-office.org](http://www.european-patent-office.org)
- **Japan Patent Office** - [www.jpo.go.jp](http://www.jpo.go.jp)

### How searches support SR&ED claims

Competitive patent searches and other similar information gathered during the development process will greatly assist in support of SR&ED claims with respect to;

- a) benchmarking “standard practices” &
- b) identifying “technological uncertainties”.

As a result these records should be kept as key pieces of supporting SR&ED evidence.

### Notable quote:

*"Somewhere, something incredible is waiting to be known."*

-- Carl Sagan



## SR&ED Newsletter Edition 2006-1

Welcome to the first 2006 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>Recent SR&amp;ED tax cases &amp; related issue(s).....</b>	<b>173</b>
Papiers Cascades – ITC’s from statute barred years.....	173
Ruling & rationale: adjustment to ITC carry-forward allowed.....	173
VR interactive - late filing (>18 months).....	173
Ruling & rationale: CRA account executive not responsible for deadlines.....	174
Alcatel – SR&ED eligibility of stock options.....	174
Legislative proposal to disallow > Nov. 17, 2005.....	174
<b>March 2006 Federal budget.....</b>	<b>175</b>
Small Business Limit and related SR&ED phase-out \$400-600K.....	175
Non-Capital Losses and Investment Tax Credits (20 yr. c/f).....	175
SR&ED program funding status.....	176
<b>Recent CRA pronouncements.....</b>	<b>177</b>
New T661 form – required >September 30, 2005.....	177
New APP SR&ED 2005-01 on Shared-Use-Equipment.....	177
Intended use vs. Actual use.....	177
New APP SR&ED 2005-02 on Assistance.....	177
Assistance versus contract payment.....	177
Provincial and territorial R&D tax credits – taxation of the OITC.....	177
<b>Summary of provincial + federal incentives.....</b>	<b>178</b>

## **Recent SR&ED tax cases & related issue(s)**

The past year has witnessed a few smaller cases. The main issues and potential implications are outlined in the following pages. Copies of the judgments are available from the Tax Court of Canada's website.<sup>201</sup>

### **Papiers Cascades – ITC's from statute barred years**<sup>202</sup>

#### **Facts:**

In the course of the 1993, 1994, 1995, and 1996 taxation years, the Appellant incurred various operating and scientific research and experimental development expenditures that qualified for investment tax credits (hereinafter "ITC").

Since the 1993 and 1994 taxation years were statute-barred at the start of the audit, on November 15, 1999, the Minister issued reassessment notices on March 26, 2001, for the 1993 and 1994 years, without amendment, but had adjusted the subsequent years for carry-forward balances.

According to the Minister's new computation, the ITC balance at the end of the 1995 taxation year is a negative ITC of \$206,364

#### **Issue(s):**

If the Minister assesses a prior year incorrectly and that year becomes statute-barred will prevent correcting the error in a year that is not statute-barred, even though it involves adjusting carry-forward balances from previous years?

#### **Relevant legislation and analysis:**

As regards to the definition for ITC<sup>203</sup> the company argued that once the normal assessment period<sup>204</sup> has passed, the Minister cannot issue reassessments for those years.

### **Ruling & rationale: adjustment to ITC carry-forward allowed**

In the judge's opinion,

“The Minister is obliged to assess in accordance with the law., even though it involves adjusting carry-forward

<sup>201</sup> Tax Court of Canada website [www.tcc-cci.gc.ca]

<sup>202</sup> Papiers Cascades Cabano Inc., 2005TCC396

Docket: 2003-1762(IT)G

<sup>203</sup> ITA paragraph 127(9)(c)

<sup>204</sup> ITA section 152

balances from previous years whether they be loss carry-forwards or balances of investment tax credits.”

#### **Implications and author's commentary**

This highlights an interesting scenario in that tax credits which have been refunded will effectively become “statute barred” however, amounts carried forward can be subject to “adjustment” until they are finally claimed.

### **VR interactive<sup>205</sup> - late filing (>18 months)**

#### **Facts:**

The two corporate tax years in question are the one ending in March 2001, and the other, which was a shortened year because of the reorganization, ending in October 2001. The deadlines to file for the credits were October 2002 and April 2003.

The founder left with, among other things, his knowledge of scientific research and experimental development matters and how to file claims. The new CEO, Mr. M first tried to reach called the CRA in the fall of 2002, managed to reach an officer in January 2003 and a meeting was organized for March 2003 under the CRA's account executive assistance program.

The meeting with a CRA representative (Mr. H) took place on 12 March 2003, and was rather technical in nature. Mr. H, recalled informing VR Interactive that the deadline to file for the first tax year had already expired, and the deadline for the second year was fast approaching.

The representatives of VR Interactive who attended the meeting do not recall any discussion of deadlines.

The claims were finally filed on 2 October 2003.

#### **Issue(s):**

Did the fact that the CRA representative had not advised of any pressing deadlines exclude the company from meeting the prescribed filing deadline?

#### **Relevant legislation and analysis:**

<sup>205</sup> VR interactive Corporation Date: 2005/02/24 Docket: T-451-04, Citation: 2005 FC 273

The income tax act imposes a filing deadline of 12 months from a corporations filing due date.<sup>206</sup> Effectively, this is 18 months from a corporation's year end.

### **Ruling & rationale: CRA account executive not responsible for deadlines**

In the judge's view,

".. giving VR Interactive the benefit of the doubt, it only says that Mr. H. was silent. There is no question of his making any sort of a representation which could possibly be considered as granting an extension of the delays. **Everyone is presumed to know the law, and Mr. H. certainly had no duty to warn.**"

### **Implications and author's commentary**

In the author's opinion it was likely that the filing deadlines were mentioned but that the taxpayer miscalculated the "flexibility" in this deadline.

Legislation proposed in November 2005 to restrict any extensions to this deadline indicate the importance of filing all information within prescribed deadlines.

### **Alcatel – SR&ED eligibility of stock options**

During 2005 the Alcatel<sup>207</sup> case set a precedence that the benefits conferred on the employees by way of stock option constituted "... expenditures made in respect of an expense incurred in the year for salary or wages ..."<sup>208</sup>.

### **Legislative proposal to disallow > Nov. 17, 2005**

On November 17, 2005 government proposed legislation that would prevent salary and wages incurred as a result of stock options to be qualified SR&ED expenditures.

A Notice of Ways and Means Motion was tabled proposing amendments to the Income Tax Act to clarify that the amount of an expenditure allowable to a taxpayer, and upon which a tax credit or deduction may be claimed, is limited to **the amount actually disbursed by the taxpayer.**

<sup>206</sup> ITA subsection 37(11)

<sup>207</sup> Alcatel Canada Inc., v. R. Feb. 24, 2005, Docket: 2003-748(IT)G, (TCC)

<sup>208</sup> within the meaning of subclause 37(8)(a)(ii)(B)(IV) of the Act

In general, the proposal related to employee stock options applies to options granted and shares issued on or after November 17, 2005.

The proposed legislation provides for reductions that apply to an expenditure that would,

"include an amount because of a corporation (or another corporation not dealing at arm's length with the corporation) having issued a share of its capital stock at any particular time on or after Announcement Day."<sup>209</sup>

### **Implications and author's commentary**

In essence, the new legislation clarifies that the value of an option granted by a taxpayer is not considered to be an expenditure for income tax purposes.

Furthermore, the new legislation clarifies that the value of any stock subsequently issued by the company to satisfy the option is not considered a qualified eligible SR&ED expense.

Shares issued under a stock option plan **before November 17, 2005 may still qualify** for Investment tax credits

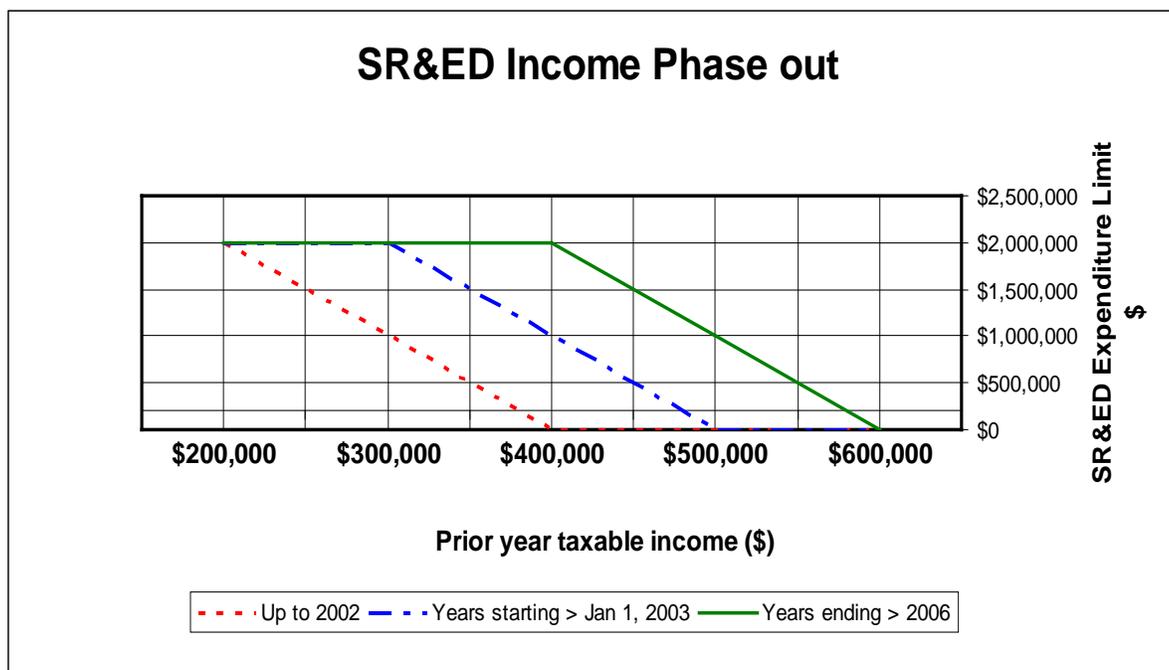
### **Notable quote:**

***"640K ought to be enough for anybody."***

**-- Bill Gates, 1981**

<sup>209</sup> New subsection 143.3(3) of the Income Tax Act

## March 2006 Federal budget



### Small Business Limit and related SR&ED phase-out \$400-600K

The small business deduction currently reduces the federal corporate income tax rate applied to the first \$300,000 of qualifying active business income of a Canadian-controlled private corporation (CCPC) to 12 per cent.

In order to provide additional tax relief to small businesses, Budget 2006 proposes that the annual amount of active business income eligible for the reduced tax rate—generally referred to as the "small business limit"—be increased as of January 1, 2007 to \$400,000.

Qualified CCPC's are also eligible to earn investment tax credits at an enhanced rate of 35 per cent on up to \$2 million of scientific research and experimental development (SR&ED) expenditures annually. This \$2 million expenditure limit is reduced as a CCPC's taxable income for the previous taxation year increases from \$300,000 to \$500,000 and taxable capital of the previous year increases from \$10 million to \$15 million.

For these smaller CCPC's all tax credits earned at the higher 35-per-cent rate on current expenditures are fully refundable, and 40 per cent of tax credits earned at the higher 35-per-cent rate on capital expenditures is refundable.

As a consequence of the proposal to increase the small business limit, the \$2 million expenditure limit will be reduced where taxable income for the previous taxation year is between \$400,000 and \$600,000.

This change will apply to taxation years that end after 2006. The phase-out based upon taxable capital will not be changed.

### Non-Capital Losses and Investment Tax Credits (20 yr. c/f)

Non-capital losses and Investment tax credits (ITC's) can currently be carried back up to 3 years and can also be carried forward 10 years. However, many businesses are unable to fully utilize their credits and losses before they expire.

To increase the ability of these companies to use these balances the 2006 budget proposes to extend the non-capital loss and ITC carry-forward period to 20 years.<sup>210</sup>

This measure will apply to non-capital losses and ITC's earned for SR&ED **in taxation years that end after 2005**.

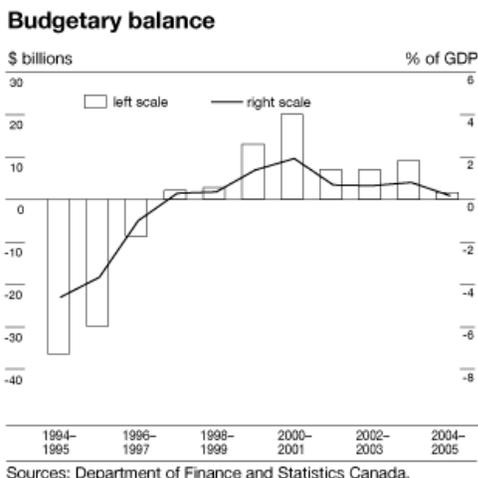
<sup>210</sup> Notices of Ways and Means Motions March 2006 paragraph 28

## SR&ED program funding status

Each year, the CRA receives claims from over 11,000 companies and provides over \$1.8 billion in tax credits annually! A question we are often asked is,

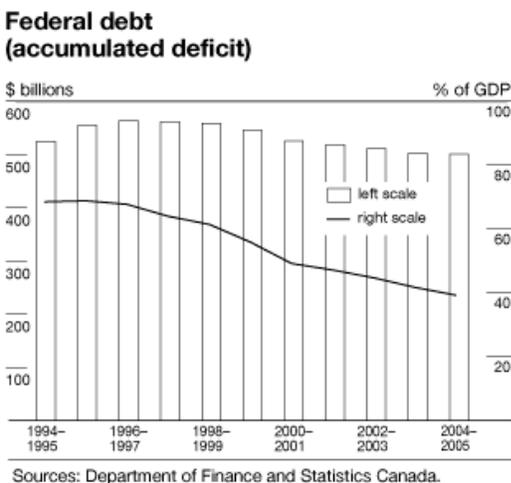
**“will the well run dry?”**

### Sources of funds:



As we can see from the chart above the Federal Government has been running **annual surpluses of \$5 to 10 billion for the past decade however, it is worthy to note that these surpluses have decreased significantly during the last few years!**

### Uses of funds:

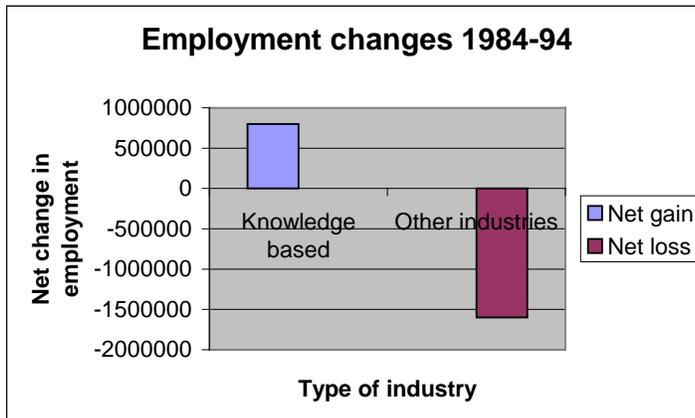


Additional analysis indicated that much of the surplus has been used to reduce the Federal deficit. One of the remaining questions will likely be the value of deficit reduction vs. investment in SR&ED tax credit infrastructure.

## “Knowledge” companies driving economic growth

In 1996 the Federal government released a report that examined the sources of growth for the Canadian economy.

The results of this report are shocking to many:



From 1984 to 1994 there was,

- A loss of 1,600,000 permanent positions for individuals with secondary school or equivalent education
- A gain of 800,000 new jobs for those with post-secondary education, particularly within the technical and science fields.

### Resultant government strategy – SR&ED funding

To address the need to develop and retain this technical base, Canada has one of the most favorable tax credit systems in the world with respect to the promotion of scientific research and experimental development (SR&ED) activities.

In fact all but two provinces also now provide some level of SR&ED tax incentive.

**Notable quote:**

***Simplicity is the ultimate sophistication.***

***-Leonardo da Vinci***

## Recent CRA pronouncements

### New T661 form<sup>211</sup> – required >September 30, 2005

Notable changes to Form T661

The YMPE (yearly maximum pensionable earnings) under the Canada Pension Plan (CPP) are revised to \$42,100 for 2006.

Therefore, the **maximum amount of salary** or wages per **specified employee** that you can include on line 305 is **\$210,500 (\$42,100 x 5) for a tax year that ends in 2006.**

### Effects on income tax software packages

If your software package uses either version (04) or (06) of Form T661, it will generate the T2 Return and Schedule Information (RSI 32) of Form T661.

The RSI 32 contains all the prescribed information requested on Form T661. As a result, you can file either a printout of Form T661 or the RSI 32. Either option still requires that project descriptions and all the attachments or schedules required by the CRA be sent as well.

If Form T661 is submitted in RSI format, the RSI 32 will be accepted without a signature, provided that field codes 165 and 170 contain the required information, as detailed in Guide T4088. You should keep a signed copy of Form T661 and/or RSI 32 in your records.

You are also reminded to retain schedules to support the breakdown for each expenditure claimed on Form T661 and on the attachments.

### New APP SR&ED 2005-01 on Shared-Use-Equipment<sup>212</sup>

#### Intended use vs. Actual use

The CRA clarifies,

---

<sup>211</sup> T661 Claim for Scientific Research and Experimental Development (SR&ED) in Canada

<sup>212</sup> CRA APP SR&ED 2005-01, September 8, 2005, Shared-Use-Equipment

“The **test for SUE is based on the actual use** of the equipment, during its operating time in the first and second period. **However, the test for PDP is based on the intended use of the equipment ...**”

### Implications and author’s commentary

This indicates the importance of documenting medium and long term experimental development plans for purposes of estimating related use of these capital assets.

### New APP SR&ED 2005-02 on Assistance<sup>213</sup>

The paper provides clarification on a few areas of common confusion:

#### Assistance versus contract payment

Discussion of the factors that differentiate and the amount of judgment involved and indicators then it is most likely assistance and not a loan. including:

- absence of firm terms of repayment  
For example, if an amount received is only repayable conditionally upon the claimant meeting certain revenue expectations.
- absence of a business motive on the part of the payor  
For the purpose of advancing the business interest of the payor or acquiring an interest in the property.

### Provincial and territorial R&D tax credits – taxation of the OITC

Discussion of the effects of ITA paragraph 12(1)(x) and alternatives to record the proxy and capital portions of the OITC.

Basically the portion of the

- (10%) OITC related to the
  - proxy amount (65% of SR&ED labour)
- is taxable the following taxation year, unlike the balance of the OITC which is taxable during the taxation year it is earned. For further details see SR&ED newsletter 2004-1 at [www.meuk.net](http://www.meuk.net).

---

<sup>213</sup> CRA APP SR&ED 2005-02, October 28, 2005, General Rules Concerning the Treatment of Government and Non Government Assistance

## Summary of provincial + federal incentives

Currently all but two provinces offer additional tax incentives to attract SR&ED work. The resulting effects on claimants can be illustrated by the following tables.

Provinces	CCPC			
	Prov. Credit	Provincial Refundable? (Federal is refundable)	Federal Credit Refundable (reduced by Prov credit) - Note 1	Combined
AB	0%	N/A	35.00%	35.00%
BC	10%	Yes	31.50%	41.50%
MB	15%	No	29.75%	44.75%
NB	15%	Yes	29.75%	44.75%
NL	15%	Yes	29.75%	44.75%
NS	15%	Yes	29.75%	44.75%
ON	10%	Yes	31.50%	41.50%
PEI	0%	N/A	35.00%	35.00%
QC	20%	Yes	28.00%	48.00%
SK	15%	No	29.75%	44.75%

Provinces	NON-CCPC Canadian Co.			
	Prov. Credit	Provincial Refundable? (Federal is non-refundable)	Federal Credit Non-refundable	Combined
AB	0%	N/A	20%	20%
BC	10%	No	18%	28%
MB	15%	No	17%	32%
NB	15%	Yes	17%	32%
NL	15%	Yes	17%	32%
NS	15%	Yes	17%	32%
ON	0%	N/A	20%	20%
PEI	0%	N/A	20%	20%
QC	10%	Yes	18%	28%
SK	15%	No	17%	32%

Notes to the above tables:

- 1) The federal tax credit is reduced by the provincial tax credit receivable.
- 2) Ontario and Quebec offer additional SR&ED incentives, which are not covered within the scope of this table.

### Notable quote:

*Once a new technology rolls over you, if you're not part of the steamroller, you're part of the road.*

- Stewart Brand: American Writer

### Notable quote:

*Success is going from failure to failure without loss of enthusiasm.*

- Winston Churchill



## SR&ED Newsletter Edition 2005-1

Welcome to the first 2005 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>Recent SR&amp;ED tax cases &amp; related issue(s) .....</b>	<b>180</b>
Alcatel – SR&ED eligibility of stock options .....	180
Ruling & rationale: qualified SR&ED expense.....	180
<b>New CRA pronouncements.....</b>	<b>181</b>
New T661 form – required >September 30, 2005 .....	181
Now need “statements of work” for subcontractors .....	181
CRA Note on stock option benefits claimed for SR&ED .....	181
Timing and quantification of amount claimed .....	182
APP 2002-02R2: Experimental vs. Commercial Production .....	182
Author’s commentary: “sale” does NOT disqualify work.....	182
Budget 2005 – “Canada” includes EEZ.....	183
Upcoming 2005 SR&ED Client Survey .....	183
How to sign up.....	183
<b>SR&amp;ED planning – keeping income &lt;\$300,000 .....</b>	<b>184</b>
Reasonableness of Shareholder/Manager Remuneration.....	184
Author’s commentary – tax advisors beware!.....	184
<b>SR&amp;ED filing deadlines – do’s &amp; don’ts .....</b>	<b>185</b>
Canada Post filing procedures .....	185
Relevant legislation .....	185
Effects of weekends and holidays .....	185
Related “Xpresspost” planning.....	185
Issue – proving “prescribed information” filed within 18 months! .....	185
CRA – position – file within 15 months.....	185

## Recent SR&ED tax cases & related issue(s)

The past year has witnessed a release of one significant SR&ED case. The main issues and potential implications are outlined below. Copies of the judgment are available from the Tax Court of Canada's website.<sup>214</sup>

### Alcatel<sup>215</sup> – SR&ED eligibility of stock options

#### Facts: stock options exercised

The corporation formerly known as Newbridge Networks Corporation, engaged in ("SRED") in Canada and maintained an employee stock option program.

In calculating its 1994 SRED expenditures the corporation included the value of stock option benefits derived by those employees who were directly engaged in the prosecution of SRED in the amount of \$23,344,318 and claimed investment tax credits ("ITC's") of \$4,668,864 with respect to the stock option benefits.

**The company did not record the amount in issue as an expense on its income statement for the 1994 (or any preceding) taxation year** and its financial statements reflected only the increase in the number of shares and share capital equal to the aggregate of the exercise price of all the shares acquired under the program (plus the corresponding increase in cash).

The Canada Revenue Agency (CRA) disallowed the ITC claim on the basis that the stock option benefits derived by the employees of the Appellant were not "expenditures incurred".

#### Issue(s): whether eligible SR&ED expense

The main issue is whether the benefits conferred on the employees by way of stock option constituted "... expenditures made in respect of an expense incurred in the year for salary or wages ..." <sup>216</sup>.

#### Relevant legislation and analysis:

The CRA argued that,

1) in allowing its employees to buy shares for less than market value as contemplated by the option program, they conferred a benefit on them without making any outlay and therefore did so without making any expenditure. The premise on which this argument rests is that legislation

which requires that an expenditure be made can be satisfied only by making an outlay or payment. Because the Appellant made no outlay it therefore made no "expenditure."<sup>217</sup>

2) Secondly, the CRA argued, the transactions whereby the employees were permitted to acquire shares at less than market value related not to the "income" earning process but rather to the share "capital" structure. The outlays, if any, were therefore not "expenditures of a current nature made by the taxpayer"<sup>218</sup>.

The judge also noted,

"stock option benefits fall within the meaning of salary or wages."<sup>219</sup>

### Ruling & rationale: qualified SR&ED expense

In the judge's view,

"It is hard to see how salary or wages can flow from employer to employee without expenditure on the part of the employer...."

The CRA's argument also fails to recognize that a very real expenditure is accomplished when shares having an established market value are sold for less than that value in the context of a scheme for the compensation of the employees who buy them. ... The expenditure consists of the consideration which the Appellant foregoes when it issues its shares for less than market value."

The judge further commented,

"The encouragement of scientific research which is the object of the legislation would be greatly diminished by the adoption of the narrow construction for which the CRA contends."

### Implications and author's commentary

To the author's knowledge this is the first significant case giving direction on potential treatment of stock option compensation and also illustrates that the courts are willing **to consider the "substance" of a transaction regardless of how they are reflected in the financial statements.**

An issue that was not addressed in the case is the fact that the income inclusion for the employee may be several years after the SR&ED is performed. This and several other issues were subsequently addressed by the CRA (see next section).

<sup>214</sup> Tax Court of Canada website [www.tcc-cci.gc.ca]

<sup>215</sup> ALCATEL CANADA INC., v. THE QUEEN, February 24, 2005, Docket: 2003-748(IT)G, (TCC)

<sup>216</sup> within the meaning of subclause 37(8)(a)(ii)(B)(IV) of the Act

<sup>217</sup> as required by subclause 37(8)(a)(ii)(B)(IV)

<sup>218</sup> within paragraph 37(1)(a) of the Act

<sup>219</sup> salary or wages as defined in section 248 of the Act

## New CRA pronouncements

### New T661 form – required >September 30, 2005

The CRA has revised Form T661(03) with new Form T661(04). The deadline for accepting claims filed on the old Form T661(03) is September 30, 2005.

The significant changes are as follows:

#### **Part 1 - General Information**

The CRA now requires claimants to indicate if it is the first SR&ED claim filed (field 130), and if not, when was the last SR&ED claim filed (field 132).

Claimants will now provide (field 155) the name of the person or firm who prepared the form.

#### Now need “statements of work” for subcontractors

#### **Part 2 - Scientific or Technological Project Information**

Question D in step 1 was expanded to request a description of all or part of the work performed on your behalf by contractors and that you include a copy of the statement of work from the contract. However, in such cases, the CRA will accept either a description of the work done by each contractor on your behalf or a copy of the statement of work describing the work that was carried out on your behalf. **Consequently, if no description of the work performed on your behalf or statement of work is provided, the project would not have met the filing requirements i.e. prescribed form containing prescribed information, and it will not qualify under the SR&ED program.**

The table formerly at the end of this part, which contained a list of all the SR&ED projects, was moved to new Schedule E.

#### **Part 3 - Summary of SR&ED Expenditures**

The Canada Pension Plan (CPP) maximum pensionable earnings are revised to \$41,100 for 2005. Therefore, the maximum amount of salaries and wages per specified employee that you can include on line 305 is \$205,500 (\$41,100 x 5) for a tax year that ends in 2005.

#### **Schedule A - Third-Party Payments for SR&ED**

This schedule was reformatted. You should complete a copy of this schedule for each third-party payment and attach the schedules to Form T661 or to the RSI 32. The total of all third-party payments should equal the amount on line 370 on Form T661.

#### **Schedule D - Calculation of the Salary Base and the Prescribed Proxy Amount**

You should complete this schedule if you use the proxy method.

The CPP maximum pensionable earnings are revised to \$41,100 for 2005. To determine the maximum amount of salaries and wages for each specified employee, calculate the prescribed proxy amount (total of \$41,100 x 2.5 = \$102,750).

#### **Schedule E - List of all SR&ED Projects Claimed**

The new Schedule E provides space for 50 SR&ED projects (formerly 20 in Step 1). If you have more than 50 projects, list the additional projects on copies of Schedule E and attach them to Form T661 or the RSI 32.

#### *Notable quotes:*

*"I have not failed; I have just found 10,000 ways that won't work."*  
(Thomas Edison)

*The function of genius is not to give new answers, but to pose new questions which time and mediocrity can resolve.*  
(Hugh Trevor-Roper)

### CRA Note on stock option benefits claimed for SR&ED

Following the decision rendered on February 24, 2005, by the Tax Court of Canada in Alcatel Canada Inc. vs. Her Majesty the Queen, the CRA released a “clarifying note” on several issues.

The CRA now accepts that where stock options are exercised by an employee, **the benefit will be allowed as salary or wages**, and the corporation will be entitled to an investment tax credit (ITC) in respect of the value of the resulting benefit. However, the **following conditions** would have to be met:

- the stock options have been **issued to the employee in a fiscal year** during which the employee, as an employee of the claimant, was **involved in the SR&ED activities** of the claimant;
- the **claimant files, within the 18-month reporting deadline**, prescribed forms containing prescribed information for the **year during which the stock option benefits were earned**;
- the **stock options were received by reason of the employee's employment** (if the employee is also a shareholder, it is a question of fact whether he or she

received the shares as a shareholder or as an employee);

- all or portion of the **employee's salary was an allowable SR&ED** expenditure of the claimant in the year the options were issued; and
- the **employee has exercised the option** or disposed of it.

### **Timing and quantification of amount claimed**

**Stock option benefits that are claimed for SR&ED purposes will be included in the salary or wages of an SR&ED employee in the same proportion (%) the employee's salary was claimed as SR&ED by the employer in the year in which the options were issued.**

Furthermore, the value of stock option benefits will not be an allowable SR&ED expenditure for purpose of subsection 37(1). The benefits will only be considered a qualified SR&ED expenditure in calculating the SR&ED ITC.

**Until the next revision of Form T661, the value of stock option benefits will be added to the qualified expenditures in line 500 in step 3 of Form T661.**

#### **Author's commentary:**

The treatment of the expenses appears to be similar to that used for the "prescribed proxy amount" or "shared-use equipment."

In the author's opinion this paper provides favorable treatment and clear directions for tax practitioners with respect to many of the issues which were not resolved in the Alcatel case!

#### **Notable quotes:**

*"The problem is never how to get new innovative thoughts into your mind, but how to get the old ones out."  
(Dee Hock - creator of Visa)*

*"All truths are easy to understand once they are discovered; the point is to discover them."  
(Galileo Galilei)*

## **APP 2002-02R2: Experimental vs. Commercial Production<sup>220</sup>**

The purpose of this revision is to clarify the methodology that claimants should use to distinguish between **experimental production (EP) and experimental development (ED)** work that occurs in conjunction or simultaneously with commercial production (CP+ED). EP and the ED part of CP+ED are eligible. The purpose of distinguishing between EP and CP+ED is to isolate the ineligible CP.

This revision is a clarification of the expenditure rules that apply in the situations described above. The key principles stated in the application policy have not changed.

The CRA now notes,

**"that the sale of any production, whether it results in a profit or a loss, should not be used to determine whether the context of the ED is EP or CP+ED. Rather, a product sale should trigger further investigation** identifying other technical considerations and evidence (supporting facts) that can be used to determine the context of the work."

For the purposes of this paper, experimental production (EP) is defined as follows:

**"EP means the output of experimental development that is required to verify whether the technological objectives have been met and/or if a technological advance is achievable and**

**The purpose of the trial is to evaluate the technical aspect of the project.** This is determined on the basis of the technical considerations and evidence relating to the particular trial. Accordingly, the **resulting sale of the EP is normally only incidental or secondary to the carrying out of ED work."**

#### **Author's commentary: "sale" does NOT disqualify work**

The CRA is now providing clear direction to claimants that the, "science should drive the claim!" In other words the fact that a prototype may eventually be sold does not mean that it was not part of an SR&ED project!

As a result, claimant should be able to claim all of the related wages and subcontractor fees as well as materials "consumed" or "transformed" in the experimental process. **This had been an issue of concern raised by several claimants regarding CRA audit practices.**

<sup>220</sup> Application Policy SR&ED 2002-02R2, DATE: July 29, 2005  
SUBJECT: Experimental Production and Commercial Production with Experimental Development Work - Allowable SR&ED Expenditures

## Budget 2005 – “Canada” includes EEZ<sup>221</sup>

For [SR&ED tax credit] purposes, Canada had been considered to include the 12-nautical-mile territorial sea. SR&ED that is undertaken outside that limit was generally not considered to be performed in Canada, even if it is performed in the area that is within 200 nautical miles from the Canadian coastline. This area is commonly referred to as Canada’s Exclusive Economic Zone (EEZ).

Based on current international treaties (most notably the Ocean’s Act of 1992), the author proposes that the “common law” definition of Canada clearly extends to the 200 mile exclusive economic zone. Canadian fishermen would agree<sup>222</sup> likely since Canada has exercised sole economic Dominion of these waters since 1992 and only Canadian fishermen are allowed to fish therein (albeit under careful regulation).

The result of the government’s position is that they have denied investment tax credits on any SR&ED work performed by Canadian fishermen on the basis that it did not occur “in Canada.”

The budget proposes to extend the SR&ED incentives to include expenditures incurred in the performance of SR&ED in Canada’s EEZ. This measure will apply to expenditures incurred on or after February 23, 2005.

### Author’s note:

The actual legislation up to this point reads,

“Canada, for greater certainty, **includes** the internal waters of Canada and the territorial sea of Canada;” &

“Exclusive economic zone of Canada - Every enactment that applies in respect of exploring or exploiting, conserving or managing natural resources, whether living or non-living, applies, **in addition to its application to Canada, to the exclusive economic zone of Canada, unless a contrary intention is expressed in the enactment.**”<sup>223</sup>

Despite these facts the CRA still chose to interpret the fact that the definition “includes” the certain waters to mean that it must exclude any other waters (i.e. the EEZ) up to this point.

In the author’s opinion this measure removes major:

- inconsistencies between domestic and foreign tax legislation as well
- as a gross injustice being faced by Canadian fishermen.

Despite the fact that these changes were likely unnecessary from a legal standpoint, in the author’s view, if it helps the

---

<sup>221</sup> Budget 2005 - Budget Plan Annex 8 -Tax Measures: Supplementary Information and Notice of Ways and Means Motion  
SR&ED Investment Tax Credit

<sup>222</sup> In fact the author has a letter from former fisheries minister, Brian Tobin, recognizing this problem.

<sup>223</sup> Interpretation Act Canada - subsection 8(2.1)

CRA interpret the definition of “Canada” it is likely of considerable value!

### Notable quote:

*“We all agree our theory is crazy, but is it crazy enough?”  
(Niels Bohr)*

## Upcoming 2005 SR&ED Client Survey

In early September 2005, the CRA will be mailing invitation letters to a sample of SR&ED claimants who have filed a claim in recent years.

The purpose of the survey is to obtain feedback from SR&ED claimants and their representatives on the CRA’s administration of the SR&ED program.

Phase 5, an independent market research firm, has been engaged by the CRA to collect the survey responses, and to conduct a third-party evaluation to determine how the program is faring. The survey will take place during September and October 2005.

### How to sign up

In addition to those directly invited, the CRA is encouraging all interested claimants and representatives to participate in the survey. **To access and complete the survey, respondents who did not receive an invitation letter must first obtain a password by completing the password request form (available September 6, 2005)**<sup>224</sup>. With a valid password, respondents can then visit Phase 5’s dedicated Web site.

The survey will take about 15 to 20 minutes to complete.

The findings of the 2005 survey will be published in a report, and made available on the CRA Web site in 2006.

### Notable quotes:

*“A game in which you fly around in space and shoot up other space ships? That is the stupidest idea that I have ever heard.”  
- (Atari manager)*

*“If at first the idea is not absurd, then there is no hope for it”.  
- (Albert Einstein)*

---

<sup>224</sup> at the CRA’s website: [www.cra-arc.gc.ca/taxcredit/sred](http://www.cra-arc.gc.ca/taxcredit/sred)

## SR&ED planning – keeping income <\$300,000

The amount of SR&ED expenditures that can earn “refundable” tax credits at the enhanced rate is referred to as the “expenditure limit.” The expenditure limit is generally \$2 million for CCPC’s with prior-year taxable income of \$300,000 or less.

This expenditure limit and refundability of the credits is reduced or “phased out”<sup>225</sup> for CCPC’s with prior-year taxable income between \$300,000 and \$500,000. In a “worst case” scenario, the loss of this enhanced status could cost a company \$700,000 annually in lost cash flows. As a result most CCPC’s will “bonus” out year end profits to achieve these levels.

### Reasonableness of Shareholder/Manager Remuneration<sup>226</sup>

At the 2001 Canadian Tax Foundation conference, the CRA discussed its long-standing policy on when shareholder /manager remuneration will be considered reasonable<sup>227</sup> (deductible) for tax purposes.

The CRA stated it, “would not challenge the reasonableness of remuneration that was paid by a Canadian-controlled private corporation (CCPC) to an individual who is a shareholder of the corporation, provided the individual is active in the business operations and resident in Canada.”

The CRA clarified, that **this policy would NOT apply where, “the income used to pay the remuneration is not derived from the normal business operations of the CCPC.”** This creates two levels of potential problems:

#### 1) Eligible payments from the CCPC

Includes salary and wages only (no management fees, or payments to retirement plans)

#### 2) Source of income for the CCPC

Includes active business income and certain “incidental” capital transactions (no investment or passive income)

#### Question 4

Can you give us some examples of situations that the CRA would consider to be beyond the intent of the policy?

#### Response 4

Yes. **We would consider a situation in which a CCPC pays the remuneration out of the proceeds generated**

**from a major a sale of business assets, including the sale of the entire business assets or those of a large division, to be beyond the intent of the policy.** This would encompass all sources of income triggered by the proceeds, including capital gains, recapture of capital cost allowance, and income arising from the disposition of eligible capital properties. **We would not generally be concerned with situations where there is a sale of some of the assets, which is incidental to the normal business operations.**

Since the conference, the CRA has provided a number of **advance income tax rulings** on the issue. In one of the first rulings<sup>228</sup> the assets of a CCPC including fixed assets, working capital, and goodwill were sold generating taxable amounts - some related to goodwill<sup>229</sup>.

The CCPC had **six shareholders, three of whom were active** in the day-to-day management of the operations of the business prior to its sale. Subsequent to the sale, the corporation **declared a bonus payable to the three active shareholders.**

In the ruling, it was stated that the purpose of the payment of the bonus was to remunerate the owner-managers for their contribution towards the successful management of the corporation. Based upon the facts at hand, **the CRA ruled the Act<sup>230</sup> would not apply to prohibit the corporation from deducting the amount of the bonus** in computing its business income for the applicable taxation year.

### Author’s commentary – tax advisors beware!

Being one of the first advance tax rulings on reasonableness of remuneration it provides some direction for treatment of “passive” income” however, in the author’s opinion it still leaves tax planners in **doubt with respect to defining what might be deemed a “major” sale of business assets and outlines dangers of earning “non-active” income.**

In the author’s opinion, this problem compounded by the fact that these **decisions are all based on CRA administrative procedures** (i.e. rather than any specific legislation). **Since the CRA has no authority to create legislation (only to follow it)** this means that, **in the event of a disagreement, the taxpayer has NO recourse through the tax courts.**<sup>231</sup> As a result, **until our “elected officials” (or at least the tax courts) provide legislation** (or precedence) on this issue, tax advisors will live with **considerable uncertainty.**

<sup>228</sup> Ruling 2004-0060191R3.

<sup>229</sup> Subsection 14(1) of the Act will tax amounts that are dispositions of eligible capital property (franchise rights and goodwill )

<sup>230</sup> section 67 and paragraphs 18(1)(a) and 18(1)(e)

<sup>231</sup> Other than as a general appeal under section 67 which refers to “fair market values” and therefore may not provide “clear” relief.

<sup>225</sup> ITA subsection 127(10.2) - For each dollar by which taxable income for the prior year exceeds \$300,000, the SR&ED expenditure limit for the year is reduced by \$10.

<sup>226</sup> Income Tax - Technical News No. 30, May 21, 2004

<sup>227</sup> for purposes of section 67 of the Income Tax Act (the Act)

## SR&ED filing deadlines – do's & don'ts

Most claimants are aware that corporate claims for SR&ED tax credits include a requirement to file a, "SR&ED return with all prescribed information," within 18 months of its corporate year-end<sup>232</sup>.

What many taxpayers seem unaware of is the fact that these returns can be filed through Canada Post up to the very last day of this filing deadline.

### Canada Post filing procedures

#### Relevant legislation

The Income Tax Act states, "when anything other than a remittance is sent by **first class mail (or equivalent)**, the item is **deemed received when the item was mailed.**"<sup>233</sup>

#### Effects of weekends and holidays

Interpretation Act section 26 states "Where the time limited for the doing of a thing expires or falls on a holiday, the thing may be done on the day next following that is not a holiday."

Interpretation Act section 35 defines "Holiday"<sup>234</sup> to mean Sunday among other specified days during the year.

### Related "Xpresspost" planning

Unfortunately if you just mail the envelope you will not have proof of filing. As a result the author proposes that taxpayers could take the following steps:

- use the Canada Post, Xpresspost service
- document the company name, year end & "tax returns enclosed" on the Xpresspost slip
- perhaps include an "enclosure letter" which could further list the enclosed documents
- have the Canada Post agent stamp both their Xpresspost tracking slip as well as any additional "enclosure" letters you may include with respect to your "enclosed" documents.

<sup>232</sup> Filing deadline per ITA subsection 37(11)

<sup>233</sup> paragraph 248(7)(a)

<sup>234</sup> "holiday" means any of the following days, namely, Sunday; New Year's Day; Good Friday; Easter Monday; Christmas Day; the birthday or the day fixed by proclamation for the celebration of the birthday of the reigning Sovereign; Victoria Day; Canada Day; the first Monday in September, designated Labour Day; Remembrance Day; ...any day appointed by proclamation...

## Issue – proving "prescribed information" filed within 18 months!

**While the recommended filing methods can be used to prove that the claim was filed "on time" it may not be enough to prevent the claim being denied due to "failure to submit prescribed information in prescribed form."**

In fact if any significant portion of the claim is missing the entire claim could be jeopardized!

In several cases taxpayers have maintained that all prescribed information was submitted and sadly there seems to be **little if any recourse to challenge the CRA's assertion that one or more pieces of information were missing.**

### CRA – position – file within 15 months

Question:

**When does an SR&ED claim need to be filed** in order for the CRA to review and **advise the claimant of any deficiencies** in the SR&ED claim?

CRA Response:

If an SR&ED claim is filed **within 90 days before the reporting deadline**, the CRA should have sufficient time to conduct a review to determine whether or not the claim meets the filing requirements and to advise the claimant of any deficiencies in the claim.<sup>235</sup>

### Implications and author's commentary

In the author's view a prudent claimant would take strong measures to **ensure that claims are submitted within 15 months from any corporate year end despite the 18 month deadline** prescribed by the legislation.

#### Notable quotes:

***"If the world should blow itself up, the last audible voice would be that of an expert saying it can't be done".***  
(Peter Ustinov)

***"Science is organized common sense where many a beautiful theory was killed by an ugly fact."***  
(Thomas Huxley)

<sup>235</sup> CRA Application Policy SR&ED 2004-02, Filing Requirements for Claiming SR&ED Carried Out in Canada, Question 4, October 5, 2004



## **SR&ED Newsletter**

### **Edition 2004-2**

Welcome to the second 2004 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>Recent SR&amp;ED tax cases &amp; related issue(s).....</b>	<b>187</b>
Chartwell v. Queen - unpaid amounts .....	187
<b>Administration of the SR&amp;ED Program —Survey Results Update .....</b>	<b>188</b>
<b>The 2004 Budget – association through Venture Capitalists.....</b>	<b>189</b>
Corporate control & effects on the SR&ED expenditure limit.....	189
Summary of current “association” problems .....	189
Proposed “exceptions” to the association rules .....	189
Requirements .....	189
Planning for investment by “public companies” or “foreign” investors.....	191
<b>Recent CRA Directives - financial.....</b>	<b>192</b>
Prototypes, Pilot Plants/Commercial Plants, Custom Products and Commercial Assets	192
Filing Requirements for SR&ED.....	192
Reporting deadlines: corporations, partnerships & proprietorships .....	192
Recourse for missed deadlines .....	193
Filing early enough to catch deficiencies .....	193
Authors note: efficient filing procedures.....	193
Allocation of Labour Expenditures for SR&ED.....	194
Retiring Allowances .....	194
<b>Recent CRA Directives - technical .....</b>	<b>195</b>
Plastics, materials processing, equipment & tool making guidance document .....	195
Case studies – 16 sample projects.....	195
Pulp and paper sector guidance document.....	195
<b>New definition of “prescribed” Stock Exchanges in Canada .....</b>	<b>196</b>

## Recent SR&ED tax cases & related issue(s)

The past year has witnessed one significant SR&ED case. The main issues and potential implications are outlined below. Copies of the judgment are available from the Tax Court of Canada's website.<sup>236</sup>

### Chartwell v. Queen<sup>237</sup> - unpaid amounts

#### Facts:

These assessments came about because the Appellant, Chartwell Management Inc. (Chartwell), invoiced Hypercore Inc. (the SR&ED claimant) for management fees, but did not record them in any way in their books and records. Chartwell was also a minority shareholder in Hypercore.

Hypercore recorded and then claimed the costs in the Chartwell invoices when applying for SR&ED grants and credits. The SR&ED credits were denied because Hypercore never paid the invoices.

Hypercore subsequently received an offer of \$1,483,937 for all of the shares on the basis that Hypercore was clean of any debt. Therefore all debt, including Chartwell's was forgiven and the shares were sold by all the shareholders.

The SRED auditor advised the income tax section of the problem which had been created and these assessments and appeals followed.

#### Issue(s):

The SR&ED tax credit claims for Chartwell's costs were denied because Hypercore never paid the invoices. The case itself dealt with whether Chartwell should have paid tax on the amount "receivable" regardless of the fact that it was not paid.

#### Relevant legislation and analysis:

Paragraph 12(1)(b) of the Income Tax Act required that the invoices be reported as receivables for income tax purposes. It reads:

12. (1) There shall be included in computing the income of a taxpayer for a taxation year as income from a business or property such of the following amounts as are applicable ...

(b) **any amount receivable** by the taxpayer in respect of property sold or services rendered in the course of a business in the year, **notwithstanding that the amount or any part thereof is not due until a subsequent year,**

#### Ruling & rationale:

The appeals were allowed and reassessed on the basis that the amounts in question for each Appellant for the years in dispute **constituted bad debts in those years.**

#### Implications and author's commentary

There is a provision in the SR&ED legislation, which **(temporarily) denies an investment tax credit for any costs, which remained unpaid within 180 days of year-end<sup>238</sup>**. These costs will be audited in the current year and a conclusion will be made on their "reasonableness," however, investment tax credits will be paid on these amounts only in the years in which they are actually paid.

In this particular case the court considered whether Chartwell should have paid tax on the amount "receivable" regardless of the fact that it was not paid. In particular there was indication that Chartwell was contemplating being issued shares in lieu of cash payments.

If this had happened the company would be deemed to have paid the amounts (and therefore they would have been eligible for SR&ED purposes) however, Chartwell would have been required to disclose the full amount of the "invoice" as paid (i.e. as income received).

#### Planning – "salary & wages" vs. management fees

As an alternative, if a transaction is structured to have "unpaid wages" rather than "management fees," an **employee will not have to pay tax on wages until they are "received."**<sup>239</sup>

This difference in "cash" vs. "accrual" basis of revenue recognition for "salaries" as opposed to "management fees" may provide a valuable planning tool for an owner manager who cannot afford to pay him or herself fair market wages for the year in question, but who wishes to accrue reasonable amounts during the year.

**When these amounts are subsequently paid the company will automatically receive its related SR&ED investment tax credits!**

<sup>236</sup> Tax Court of Canada website [www.tcc-cci.gc.ca]

<sup>237</sup> CHARTWELL MANAGEMENT INC., Appellant, v. THE QUEEN, Respondent. (TCC - Docket: 2002-2638(IT)G - November 8, 2004)

<sup>238</sup> ITA subsection 78(4) denies ITC's on amounts until taxation year in which paid

<sup>239</sup> ITA subsection 5(1) only taxes employees on income "received" during the year

# Administration of the SR&ED Program — Survey Results Update<sup>240</sup>

In the late 1990's, industry expressed concerns about the consistency and effectiveness of the Scientific Research and Experimental Development (SR&ED) program. These concerns led the Canada Revenue Agency (CRA), in co-operation with industry, to improve the CRA's administrative practices for the program.

The CRA engaged an independent firm to develop a performance metric that would provide a "report card", based on feedback from a broad cross-section of Canadian-based companies, on the administration of the SR&ED program.

Between July and November 2002, a Web-survey and case-study interviews were conducted. A survey report was prepared and originally released in December 2002.

A 2004 update to the 2002 study shows that the SR&ED administrative process has improved significantly since 1999 and that the steps we have taken so far to improve the program have been successful.

## **Key lesson learned # 1: Simplification**

Less than one-half of respondents were satisfied with the SR&ED guides and forms, and only one-quarter were satisfied with the SR&ED program Web site. Some respondents found the forms and information guides intimidating and difficult to read. Respondents continued to express a need for clear and simple forms and more useful information guides, especially for first-time claimants and small businesses. While only about one-quarter of respondents were satisfied with the usefulness of the Web site, nearly one-half of them were unfamiliar with or had no comment about its usefulness.

## **Key lesson learned # 2: Timeliness**

The turnaround time for processing claims should be faster. This is especially true for small companies, as delays put financial strain on companies and can stall scientific research. Only one-half of respondents were satisfied with the CRA's turnaround time for processing claims. Most dissatisfied respondents were small businesses, which, for the most part, are entitled to refunds.

The CRA has four service standards for SR&ED to process claims within specified time frames.

Target results achieved for 2003-04 are as follows:

- o Current-year refundable claims: the service standard is 120 days with a target of 90%. The result was 95%.
- o Current-year non-refundable claims: service standard is 365 days with a target of 90%. The result was 92%.
- o Claimant-requested refundable adjustments: service standard is 240 days with a target of 90%. The result was 95%.
- o Claimant-requested non-refundable adjustments: service standard is 365 days with a target of 90%. The result was that the processing time targets were met in 94% of filings.

The CRA claims these results are a significant improvement over previous years and demonstrate the progress that the SR&ED program is making.

## **Key lesson learned # 3: Consistency**

Close to two-thirds of respondents believed that the CRA's review process has improved in consistency over the years; however, the CRA needs to continue to improve in this area.

Program enhancements:

- In 2002, the National Technology Sector Specialists section was fully staffed. The section now consists of 14 specialists in various industry sectors to ensure consistent treatment within and across sectors.
- Since 2002, we also released guidelines for various sectors to clarify the rules on eligible SR&ED work including:
  - o Cross-Sector Shop Floor Guidance Document;
  - o Chemicals Guidance Documents #1 & 2
  - o Plastics, Materials, Processing, Equipment & Tool Making Guidance Documents

### **Notable quote:**

***"All truths are easy to understand once they are discovered; the point is to discover them."***

-Galileo Galilei

<sup>240</sup> For a comprehensive report of the survey results, see the document called Monitoring the Performance of the Administration of the SR&ED Program – Survey Results, which is available at [www.cra.gc.ca/sred](http://www.cra.gc.ca/sred).

## The 2004 Budget – association through Venture Capitalists

### Corporate control & effects on the SR&ED expenditure limit

There are currently two rates of federal investment tax credit for SR&ED in Canada:

- a general rate of 20 per cent and
- an enhanced rate of 35 per cent for “qualified” CCPC’s (Canadian-controlled private corporations)

Generally speaking,

- CCPC’s have  $\leq 50\%$  of their shares controlled by “public corporations” or “foreign parties”

“Qualified” CCPC’s are those with

- prior-year taxable income under \$300,000 and
- prior-year taxable capital employed in Canada under \$10 million.

The amount of SR&ED expenditures that can earn tax credits at the enhanced rate is referred to as the “expenditure limit.” The expenditure limit is generally \$2 million for CCPC’s with prior-year taxable income of \$300,000 or less. This expenditure limit is reduced on the basis of the following two criteria<sup>241</sup>.

1. **Income** - First, the expenditure limit is phased out for CCPC’s with prior-year taxable income between \$300,000 and \$500,000. For each dollar by which taxable income for the prior year exceeds \$300,000, the SR&ED expenditure limit for the year is reduced by \$10.
2. **Assets (taxable capital)** - In addition, the expenditure limit is phased out for CCPC’s with prior-year taxable capital (roughly equal to assets) employed in Canada between \$10 million and \$15 million. For every \$10 by which taxable capital employed in Canada for the prior year exceeds \$10 million, the SR&ED expenditure limit for the year is reduced by \$4.

- Determination of these limits must take into account the incomes and taxable capital of **all companies under common control**<sup>242</sup> or “associated corporations.”

- The policy intent of these provisions for associated corporations is to prevent the multiplication of the expenditure limit by corporations controlled by the same person or group of persons.

### Summary of current “association” problems

According to the budget documents the current “associated corporation” rules in the Income Tax Act may cause unintended results for some research and development intensive CCPC’s that are considered to be **associated solely because of independent investments made in the corporations by the same group of otherwise unconnected investors, such as venture capital investors**. This is because, under the associated corporations rules, two or more persons who own shares of a corporation are considered to be a “group” of persons independent of any other factor.

This issue was actually **first addressed in the 2000-2001 Quebec budget** and subsequently applied to the definition of a CCC (Canadian Controlled Corporation) for Quebec SR&ED tax credits purposes. The budget papers mentioned that consultations were also in progress with the Federal Department of Finance to reach a “common solution.” In the author’s opinion, these new proposals represent a tax “harmonization” in this respect.

### Proposed “exceptions” to the association rules

For the purposes of the SR&ED Expenditure Limit only, the rules of association are being relaxed so that otherwise associated corporations for other provisions of the *Income Tax Act* may not be associated for the SR&ED Expenditure Limit.

Qualified Corporations that have a group of common investors **will not have to share the \$2 million expenditure limit solely because two or more investors collectively have a majority interest** in the shares of each corporation.

Each qualified corporation will, in such a case, have access to its own \$2 million expenditure limit, thus continuing to provide each business with access of up to \$700,000 in Federal SR&ED assistance on these expenditures. A full copy of the “Notice of Ways and Means Motion” (i.e. the related legislation) is provided at the end of this letter. A summary of the requirements is as follows:

### Requirements

This situation applies where:

<sup>241</sup>ITA subsection 127(10.2)

<sup>242</sup>Limit to be shared by “associated corporations” as defined in ITA subsection 256(1)

## 1) Not identical shareholders

“there is at least one shareholder of the particular corporation who is NOT a shareholder of the associated corporation” and

## 2) “Group” control

“the corporations are associated solely because a control group of persons<sup>243</sup> is common to both corporations” and

## 3) “Business purpose” test

“the Minister of National Revenue is satisfied;

(a) that the particular corporation and the other corporation are not otherwise associated; and

(b) that the existence of a shareholder of the particular corporation who is not a shareholder of the other corporation, is not for the purpose of satisfying the requirements of that paragraph.”

- This change will apply to taxation years that end after March 22, 2004.

As the new rules relax the group concept for the Expenditure Limit association rules, the two corporations may no longer be associated for this purpose. In addition, the concept of a related group would have no meaning for this new provision, as the **concept of a “group” is being ignored**.

What this essentially means is that each corporation that has been disassociated for the purposes of the Expenditure Limit will not have to share the \$2,000,000 limit or include the associated corporation’s income in determining a reduced Limit based on that criteria.

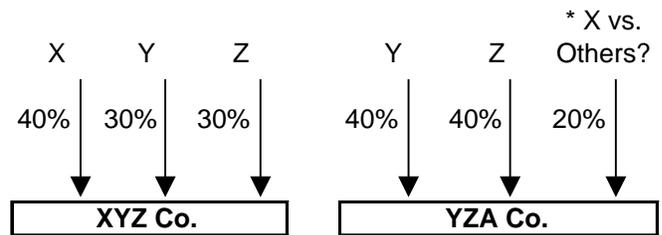
### Example

Mr. X owns 40% of XYZ Corporation. Mr. Y and Mr. Z each own 30% of XYZ Corporation. In addition, Mr. Y and Mr. Z own 40% each of YZA corporation. The remaining 20% of YZA corporation are owned by persons other than Mr. X.

In this situation, a control group of Mr. Y and Mr. Z control 60% of XYZ Corporation and 80% of YZA corporation. Under the rules of section 256 of the *Income Tax Act*, XYZ corporation and YZA corporation are associated for all purposes of the Act.

However, once the new rules for association are implemented for the Expenditure Limit calculation, the two corporations are no longer associated for this purpose. This occurs, because once you ignore groups, there is no common control of both corporations.

**With the ownership of at least one person in one corporation not owning shares in the other corporation, the new rules would deem them not to be associated for Expenditure Limit purposes.** Therefore, each corporation would be entitled to its own \$2,000,000 of Expenditure Limit (adjusted accordingly based on income or capital reductions to the limit).



### \* Variations and related effects

**a) No “other” shareholders:** If Mr. X owned the other 20% of YZA corporation, the new rules would not apply to this situation, since all three shareholders are owners of both corporations.

**b) Significance of “other” shareholders:** If, in this example, Mr. X owned 19% of YZA corporation with another shareholder owning the other 1%, it may be possible to disassociate. However, the anti-avoidance provision, may apply to not allow the disassociation, if the Minister believes the existence of that 1% shareholder exists solely to satisfy the new rules<sup>244</sup>.

**c) Overall control:** Also, as an additional anti-avoidance rule, the Minister must be satisfied that the corporations would not otherwise be associated. For example, if Mr. X had owned more than 50% of both corporations, these two corporations would be otherwise associated, regardless of any other shareholders in each corporation.

**d) Types of “other” shareholders:** In this example, the **fact that X, Y and Z are individuals may in fact still leave them subject to “deemed association”** if the Minister can argue that the existence of the corporate structure exists for the purpose of satisfying the requirements of the new rules<sup>245</sup>. **Since this is a subjective issue, at this point it is unclear whether the Minister intends to restrict the new legislation to “venture**

<sup>243</sup> Group control as contemplated under ITA paragraph 256(1.2) (a)

<sup>244</sup> subsection 8(b) of the Ways and Means Motion

<sup>245</sup> subsection 8(b) of the Ways and Means Motion

**capital” type** investors or whether it would also apply to “individuals” as outlined in the example above.

### **Analysis - implications to claimants**

The budget papers mentioned that this provision is targeted for those associated corporations that are treated as associated because of common unconnected independent investors, **such as venture capitalists**. As such it is unclear whether the new rules will apply to corporations which are held but groups of “individuals” rather than “venture capital corporations” and other investment type entities.

As a result, where this provision is used **by individual shareholders rather than investment entities**, tax advisors should be wary that they can assert that they have not run afoul of the subjective issue of whether the,

“the **existence of a shareholder** of the particular corporation who is not a shareholder of the other corporation, is **not for the purpose of satisfying the requirements** of that paragraph [i.e. the new rules].”

Despite the lack of clarity on the application of the rules to individual investors, **in the author’s opinion, these new provisions will likely be of considerable long-term significance to any corporations which receive equity funding from multiple investment agencies or venture capital corporations.**

### **Legislation: Notice of Ways and Means Motion**

#### **Refundable SR&ED Investment Tax Credits— Expenditure Limit**

(7) That, subject to paragraph (8), for taxation years that end after March 22, 2004, if a Canadian-controlled private corporation (in this paragraph and paragraph (8) referred to as the “particular corporation”) is associated with another corporation (in this paragraph and paragraph (8) referred to as “the other corporation”), in circumstances where those corporations would not be associated if the Act were read without reference to paragraph 256(1.2)(a) of the Act, and there is at least one shareholder of the particular corporation who is not a shareholder of the other corporation, the two corporations not be considered to be associated for the purposes of computing the particular corporation’s expenditure limit under subsection 127(10.2) of the Act;

(a) determining the particular corporation’s business limit, as applied for the purpose only of calculating the particular corporation’s

expenditure limit under subsection 127(10.2) of the Act; and

(b) paragraph (f) of the definition “refundable investment tax credit” in subsection 127.1(2) of the Act.

(8) That paragraph (7) apply only if the Minister of National Revenue is satisfied

(a) that the particular corporation and the other corporation are not otherwise associated; and

(b) that the existence of a shareholder of the particular corporation who is not a shareholder of the other corporation, is not for the purpose of satisfying the requirements of that paragraph.

### **Planning for investment by “public companies” or “foreign” investors**

As noted, it is unclear whether this new provision can be used by individual shareholders rather than venture capital investment entities specifically. As a result tax advisors should be aware of other means to disassociate these companies.

Generally speaking, in order to disassociate any particular corporation from a group of “associated companies” we need to keep the owners and any related individuals from owning more than 50% of any class of shares, other than shares of a “specified class.”

As noted previously, “association” in effect results in sharing of certain business and taxation limits. There is however a specific exemption from this “deemed association” for any shares of a “specified class.”<sup>246</sup>

#### **In general shares of a “specified class” are:**

- a) non-convertible or exchangeable,
- b) non-voting,
- c) non-participating, and
- d) perhaps most importantly, the dividend rate at the time of issue of the shares cannot exceed the CRA prescribed interest rate for the fiscal quarter.

In the authors’ experience, the use of **these shares can be an effective way to prevent association of companies** despite heavy cash or equity investment by large, public or foreign corporations.

<sup>246</sup> “Shares of a “specified class” defined per ITA subsection 256(1.1)

## Recent CRA Directives - Financial

### Prototypes, Pilot Plants/Commercial Plants, Custom Products and Commercial Assets<sup>247</sup>

Most notably the CRA clarifies;

When the project is the development of a custom product or a commercial asset, there will be a mix of work (SR&ED and commercial). Only the work associated with the SR&ED could be eligible.

**Any work that contributes to the effort to achieve a technological advance could be eligible work (e.g., work to identify what had to be built, integrated, and tested).**

Non-SR&ED work includes, among other things, standard practice work not related to resolving a SR&ED technological uncertainty, and not leading to technological advancement and any support work that is not commensurate with the needs of, or not directly in support of, the SR&ED project.

Documentation must clearly distinguish between work that is routine and is the standard practice of the claimant, and, therefore are ineligible (unless it is commensurate with the needs of the SR&ED project and directly in support of it), from the **work that resolves technological uncertainties and results in a technological advancement**, and is, therefore, eligible.

#### **Sale of prototypes:**

Usually the **proceeds from the sale of the prototype are less than 10% of the SR&ED project expenditures**. The sale is considered to be a sale of scrap materials and will be included in income under section 9 of the Act. As stated in Application Policy SR&ED 2000-03 Recapture of investment tax credits, by administrative policy, the **ITC recapture rules will not be applied** in the case of scrap sales.

### Filing Requirements for SR&ED<sup>248</sup>

This paper outlines the reporting requirements and deadlines along with several examples to illustrate the effects of the deadlines on different types of taxpayers (corporations, partnerships and individuals).

<sup>247</sup> Application Policy SR&ED 04-03 - Prototypes, Pilot Plants/Commercial Plants, Custom Products and Commercial Assets [2004-10-05]

<sup>248</sup> Application Policy SR&ED 2004-02: SUBJECT: Filing Requirements for Claiming SR&ED Carried Out in Canada DATE: October 5, 2004

## Reporting deadlines: corporations, partnerships & proprietorships

A claimant's reporting deadline refers to the day on or before which a prescribed form containing prescribed information is required to be filed. For the purpose of subsection 37(11) of the Act, the reporting deadline to file Form T661 is 12 months after the claimant's filing due date for the year in which the expenditure was incurred. For the purpose of paragraph (m) of the definition of an ITC in subsection 127(9) of the Act, the reporting deadline to file Schedule T2SCH31 or Form T2038 (IND) is also 12 months after the claimant's filing due date for the year in which the expenditure was incurred.

### **Corporations**

Under paragraph 150(1)(a) of the Act, a corporation is required to file an income tax return within six months after the end of the taxation year. The corporation's reporting deadline is 12 months after the corporation's filing due date. Therefore, a corporation will have **18 months** after the end of the taxation year in which an SR&ED expenditure was incurred to file prescribed forms containing prescribed information.

#### Example 1

**A corporation's taxation year ended on March 31, 2002.** The income tax return filing due date would be September 30, 2002. The corporation would be required to file Form T661 and Schedule T2SCH31 on or before **September 30, 2003.**

### **Individuals**

Paragraph 249(1)(b) of the Act defines the taxation year of an individual to be a calendar year. Under subparagraph 150(1)(d)(ii) of the Act, in most cases, an individual who carried on business in the year is required to file an income tax return on or before June 15 of the following year. An individual's reporting deadline is 12 months after the filing due date. Therefore, an individual will have 17 ½ months after the end of the taxation year in which the SR&ED expenditure was incurred to file prescribed forms containing prescribed information.

#### Example 2

**An individual's taxation year is December 31, 2001.** The income tax return filing due date would be June 15, 2002. The individual would be required to file forms T661 and T2038(IND) on or before **June 15, 2003.**

### **Partnerships**

For claimants who are members of a partnership, each partner's reporting deadline is determined based on the partner's taxation year in relation to the partnership's fiscal year in which the expenditure in question was incurred. A prescribed form (Schedule T2SCH31 or Form T2038(IND)) must be filed by each partner on or before each partner's respective reporting deadline in order to claim a share of the ITC of the partnership.

#### Example 3

**A corporation and an individual are the only members of a partnership. The partnership's fiscal year-end was September 30, 2001.** The partnership is not required to file a Partnership Information Return. The **corporation's taxation year ends on March 31. The individual's taxation year ends on December 31.**

Each partner should file a Form T661 for the partnership, financial statements for the partnership, and schedules showing the calculation and allocation of the ITC of the partnership. These should be filed with the partner's Schedule T2SCH31 or Form T2038(IND) by each partner's reporting deadline.

The partnership's fiscal year falls into the corporation's March 31, 2002 taxation year. The **corporation** would be required to file Schedule T2SCH31 by **September 30, 2003.**

The partnership's fiscal year falls into the individual's December 31, 2001 taxation year. The **individual** would be required to file Form T2038(IND) by **June 15, 2003.**

### Recourse for missed deadlines

Question: If an SR&ED claim is denied for not meeting the filing requirements, what is a claimant's next option or recourse?

CRA response: "A claimant or their authorized representative may write a letter to the assistant director of SR&ED at the coordinating tax services office requesting the assistant director to consider waiving the filing requirements pursuant to subsection 220(2.1) of the Act. The claimant must outline the facts and reasons why their request should be accepted.

On behalf of the Minister, the assistant director of SR&ED will review the claimant's request, and will consider each request based on its own particular merits. A request can normally only be accepted when extraordinary circumstances (for example, flood, fire, postal strike) prevented the claimant from meeting the requirements for filing an SR&ED claim.

More information on rights is available in the guide RC4213, Your Rights."

### Filing early enough to catch deficiencies

When does an SR&ED claim need to be filed in order for the CRA to review and advise the claimant of any deficiencies in the SR&ED claim?

CRA response: "If an SR&ED claim is filed within 90 days before the reporting deadline, the CRA should have sufficient time to conduct a review to determine whether or not the claim meets the filing requirements and to advise the claimant of any deficiencies in the claim.

If the SR&ED claim is not filed with sufficient time to allow the CRA a reasonable amount of time to review the claim, the CRA will not be able to advise the claimant of any deficiencies in the claim before the reporting deadline.

It should be noted that the onus is on the claimant to file prescribed forms containing all the relevant prescribed information on or before the reporting deadline. If the CRA is unable to review the SR&ED claim and advise the claimant of any deficiencies in the claim before the reporting deadline, the CRA will not allow any additional time for the claimant to address the deficiencies."

### Authors note: efficient filing procedures

*The Income Tax Act*<sup>249</sup> states that when anything other than a remittance is sent by first class mail (or equivalent), the item is deemed received by the CRA when the item was mailed.

### Related planning

Unfortunately if you just mail the envelope you will not have proof of filing. As a result I recommend that you use the Canada Post, Expresspost service and have the Canada Post agent stamp both a "proof of filing" cover letter and the mailing slip detailing the parcel contents.

This will generally;

- avoid an unnecessary trip the CRA's local office,
- extend filing deadline (generally to 9 pm) &
- ensure that the return is properly filed at the Taxation Centre (rather than the District Tax office).

### Notable quote:

*"Science is organized common sense where many a beautiful theory was killed by an ugly fact."*

-Thomas Huxley

---

<sup>249</sup> paragraph 248(7)(a)

## Allocation of Labour Expenditures for SR&ED<sup>250</sup>

The paper provides direction and examples of potential methods for labour allocation in a small start-up operation, which has developed simple allocation approaches to determine its SR&ED labour costs.

The paper illustrates that a company can use different methods to allocate SR&ED labour expenditures and that these should be tailored to the way it collects and manages financial information. Differing methods may be more appropriate in other industry sectors, but the concepts described in this example will likely be similar.

## Retiring Allowances<sup>251</sup>

Generally, any amount payable under a written or oral agreement, which has the nature and quality of salary, wages, commissions, accrued vacation pay, etc. would be considered salary or wages. However, in some cases, it could be considered a retiring allowance.

A retiring allowance includes an amount received in respect of a loss of an office or employment. In this context, the words “in respect of” have been held by the Courts to imply a connection between the loss of employment and the subsequent receipt, where the primary purpose of the receipt was compensation for the loss of employment.

Two questions set out by the Courts to determine whether a connection exists for purposes of a retiring allowance are as follows:

1. But for the loss of employment, would the amount have been received? and,
2. Was the purpose of the payment to compensate a loss of employment?

Only if the answer to the first question is “no” and the answer to the second question is “yes”, will the amount received be considered a retiring allowance i.e. the amount would not have been received if there was no loss of employment and the payment was made to compensate for the loss of that employment.

**Treatment under Proxy Method of overhead allocation**  
**A retiring allowance is not an allowable SR&ED**

<sup>250</sup> CRA Guide: Allocation of Labour Expenditures for SR&ED [2004-07-09]

<sup>251</sup> CRA APP SR&ED 04-01 Retiring Allowances [2004-01-20]

**expenditure** when a claimant elects to use the proxy method of calculating ITC since overhead is not included in the calculation of allowable SR&ED expenditures under subsection 37(1) and qualified expenditures under subsection 127(9). Instead, the prescribed proxy amount is calculated to represent an approximation of overhead to determine qualified expenditures for ITC purposes only.

### **Traditional Method of overhead**

Under the traditional method, a **retiring allowance may be allowed** as “Overhead or other expenditure” that is either “all or substantially all” (ASA) attributable or “directly attributable” to the prosecution of SR&ED in Canada.

### Other CRA clarifications or recommendations

- The CRA considers that an amount paid on account of or in lieu of general **damages** (e.g., damages for the loss of self-respect, humiliation, mental anguish, hurt feelings, etc., or under an order or judgment of a competent tribunal) for something other than in recognition of services (i.e., the prosecution of SR&ED) **would not be considered an allowable SR&ED expenditure.**
- The claimant must allocate all or a portion of the retiring allowance to SR&ED. This **allocation should reflect the time spent by the employee in SR&ED versus the overall time the employee was employed by the claimant.**
- Finally, **a retiring allowance negotiated to entice the employee to retire will not be acceptable as an SR&ED expenditure** since it relates to a corporate decision that has nothing to do with the prosecution of SR&ED.

### Author’s commentary

Since a retiring allowance does not meet the Income Tax Act’s definition of “salary or wages” inclusion in the SR&ED claim is subjective.

A review of these pronouncements indicates that “detailed consideration” of these issues should be contemplated for any companies who plan to include retiring allowances in their SR&ED claims.

### Notable quote:

***"If I had thought about it, I wouldn't have done the experiment. The literature was full of examples that said you can't do this."***

-Spencer Silver on work that led to the unique adhesives for 3-M "Post-It" Notepads

## Recent CRA Directives - Technical

### Plastics, materials processing, equipment & tool making guidance document<sup>252</sup>

This document was prepared by a joint Canada Revenue Agency (CRA) - Industry sector committee. Its purpose is to help CRA reviewers and plastics sector claimants, especially new claimants working for small and medium enterprises (SMEs), to navigate the material available to assist with the preparation of an SR&ED claim.

It primarily discusses technical issues rather than allowable expenditures or administrative aspects of the program.

For the purposes of this paper, the plastics sector is considered to consist of companies engaged wholly or partly in:

- producing plastic resins or additives (for example reinforcements, colorants, plasticizers, and other property modifiers);
- compounding plastics (mixing the materials to produce a plastic that is ready to be incorporated into a product);
- processing plastic materials into either semi-finished plastic parts or into finished products for sale to consumers;
- recycling and reclaiming waste products; and/or
- manufacturing machinery, equipment and the moulds, tools and dies used to process the plastics.

### Case studies – 16 sample projects

The paper also include the following examples:

[Author's note: A full copy of these examples can be printed by logging into our "R&D Base" database at,

**www.rdbase.net**

**Username: user@mtd**

**Password: user**

## Summary of project examples

#	<u>Project objective / main issues</u>
1	Plastics / Metal Hybrids for auto module
2	Plastic injection moulding & extrusion dies
3	Automotive Exterior Trim (Three Stakeholders)
4	In-line Compounding
5	Bottle Filling - Product Range Extension
6	Ejection Detection
7	Compression moulding - abrasion resistants
8	Material Substitution
9	Dual Injection
10	Different Equipment
11	Extrusion Process
12	Screw Design
13	Develop abrasion resistance
14	Large Compression Moulded Parts
15	Develop Bevel Gear
16	Cast Figurines

### Pulp and paper sector guidance document<sup>253</sup>

This guidance document provides supplementary guidelines related to SR&ED as it pertains to the Pulp and Paper industry sector which is made up of companies engaged in the process of producing pulp and paper products, from wood or other raw materials.

For the purposes of this guidance document there has been no attempt to deal with SR&ED issues pertaining to forestry, logging, or wood products industry sectors.

The paper looks at sector specific issues and examples including;

- The methodology for Determining EP/ED Mill Trials, CP/ED Mill Trials, and CP Mill Trials
- Phases of EP/ED or CP/ED Mill Trials
- Mill Trial Approaches
- Process Optimization

Case Studies Involving EP/ED Mill Trials

- Case Study 1: Development of Bleach Plant Process
- Case Study 2: Development of Specialty Coated Paper Process & Simplified Process Flow Diagram

### Notable quote:

***"Hell, there are no rules here -- we're trying to accomplish something."***

-Thomas Edison

<sup>252</sup> Released April, 2004 – available for download at [www.cra.gc.ca/sred](http://www.cra.gc.ca/sred).

<sup>253</sup> CRA - PULP AND PAPER SECTOR GUIDANCE DOCUMENT September 30, 2004

## New definition of “prescribed” Stock Exchanges in Canada

For the purposes of the Income Tax Act, the following are prescribed stock exchanges in Canada<sup>254</sup>:

- (a) Tiers 1 and 2 of the TSX Venture Exchange (also known as Tiers 1 and 2 of the Canadian Venture Exchange);
- (b) Montreal Stock Exchange; and
- (c) Toronto Stock Exchange.

### Effects for SR&ED claimants

Companies that;

- remain as **Tier 3 of the TSX Venture Exchange**, or
- any **other “junior exchanges”** not listed above,

**might be able to claim enhanced (35%), refundable SR&ED tax credits as if they were private corporations!**

### Notable quotes:

***"Everything that can be invented has  
been invented."***

-Charles H. Duell, Commissioner, U.S. Office of Patents,  
1899

***"Everyone is ignorant, only on different  
subjects."***

-Will Rodgers

---

<sup>254</sup> Income tax act Regulation 3200 – prescribed Canadian Exchanges



## **SR&ED Newsletter** **Edition 2004-1**

Welcome to the first 2004 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims.

<b>Recent SR&amp;ED tax cases &amp; related issue(s).....</b>	<b>198</b>
Maritime-Ontario Freight Lines v. R. ....	198
Issue(s): adequacy of technical documentation.....	198
Synchrosat Limited v. R. ....	199
Issue: allocating salary to only SR&ED activities.....	199
Blue wave Seafoods vs. R.....	199
Issue(s): challenging science officer’s analysis.....	200
<b>Unpaid amounts .....</b>	<b>200</b>
Accruing reasonable R&D wages when “cash strapped” .....	201
Sample Facts – Synchrosat revisited.....	201
Reporting of “Unpaid” amounts .....	201
Degree of disclosure required .....	201
Reporting unpaid wages vs. other expenses.....	201
Other factors to consider with respect to year-end SR&ED accruals: .....	201
Limits for “Specified Employees” .....	201
Risks of being deemed a Salary Deferral Arrangement (SDA).....	202
<b>The OITC – How is it Taxed?.....</b>	<b>202</b>
Issue: timing of tax on proxy amount .....	83
Tax mechanics of issue: received vs. receivable.....	83
Legislative support for deferral.....	83
Results & filing implications / planning.....	83
<b>New T661 form &amp; project format .....</b>	<b>204</b>
Previous requirements: T661E (99&01).....	204
New form T661E(03) – post June 30, 2003 .....	204
Effect on project descriptions .....	204
SR&ED PROJECT TEMPLATE – 2003+ .....	204
Simplify project documentation via rdbase.net.....	204
Business Number required for all subcontractors.....	204
<b>New schedule 31 – ITC claim form .....</b>	<b>205</b>
Income phase out revised.....	205
<b>Future developments &amp; unresolved SR&amp;ED issues.....</b>	<b>205</b>

## Recent SR&ED tax cases & related issue(s)

The past year has witnessed a release of a variety of smaller cases. The main issues and potential implications are outlined in the following pages. Copies of the judgments are available from the Tax Court of Canada's website.<sup>255</sup>

### Maritime-Ontario Freight Lines v. R.<sup>256</sup>

#### Facts:

In computing income for its 1996 taxation year the company SR&ED expenditures and the related investment tax credit (ITC) in the amounts of \$54,188 and \$10,838, respectively.

The work in question was performed by Mr. Jurca, an engineer, completed courses at an electro-technical college in Zagreb, Croatia, and subsequently took industrial engineering courses in Toronto. His mandate when retained by the Appellant in 1995 was to "design and to come up with the weight measuring system that would be more accurate than we had prior to that year, basically, the improvement of the existing system".

The stated **project objective** was, "... to design the system to register 1% of applied loads. So, in other words, if I would pick up 1,000 pounds, 1% of the applied load would be 10 - 10 pounds."

The claim stated that, "the **technological uncertainties were both mechanical and software** and that he intended to look at... possibilities to improve my hardware on this side, maybe better amplifiers that are different technology or a change in the software as well."

The CCRA Science officer referred to the failure by the Appellant to identify what technological barriers had to be overcome and stated that, "unless there was some evidence as to what these barriers were and what was done to deal with them, it was not possible to conclude that there existed a type of uncertainty that could not be resolved by routine engineering procedure."

Although the Appellant listed a number of factors which could affect the weighing accuracy, none of the documents submitted indicated the formulation of any hypothesis. As well, the CCRA also noted that none of the documents before the Court indicated that a procedure in accordance with established scientific methods was employed since **no test data and/or analysis was presented** for review and only general statements had been made.

<sup>255</sup> Tax Court of Canada website [www.tcc-cci.gc.ca]

<sup>256</sup> Maritime-Ontario Freight Lines Limited and Her Majesty the Queen (CITATION:2003 TCC 674) – informal procedure

## Issue(s): adequacy of technical documentation

The CCRA Science Reviewer testified that on the basis of the material submitted and Mr. Jurca's testimony, it was difficult if not nearly impossible to determine whether there was a technological uncertainty.

He said there could have been, however, the only evidence of uncertainty presented was the vague commitment on the part of the Appellant to improve the accuracy of the weighing function. This failure was compounded by a serious **lack of documentation to establish what specific activity was undertaken to reduce or eliminate the factors identified** by Mr. Jurca to have affected the accuracy of the device.

#### Relevant legislation, Ruling & rationale:

The judge made reference to several landmark SR&ED cases including C.W. Agencies Inc. v. The Queen, Northwest Hydraulic Consultants Limited v. The Queen, and RIS-Christie v. The Queen.

These cases developed and **outlined five criteria which the judge cited as useful in determining whether a particular activity constitutes SR & ED** The criteria are as follows:

1. Was there a **technological risk or uncertainty** which could not be removed by routine engineering or standard procedures?
2. Did the person claiming to be doing SR & ED **formulate hypotheses** specifically aimed at reducing or eliminating that technological uncertainty?
3. Did the **procedure adopted accord with** the total discipline of the scientific method including the formulation **testing and modification of hypotheses?**
4. Did the process result in a **technological advancement?**
5. Was a detailed **record of the hypotheses tested, and results kept** as the work progressed?

Finally, this case then went on to define,

**"A hypothesis is a tentative assumption or explanation to an unknown problem** and, as a rule, this requirement is met by the existence of a logical plan devised to observe and resolve the hypothetical problem."

The judge concluded that an acceptable minimum level of documentation be one which illustrates the methods utilized and the results obtained so that these can be duplicated independently by a reasonable third party.

related to eligible SR&ED activity is \$29,299 x 25% = \$7,324.66.

In the judges opinion since,

“ there are virtually **no documents** before the Court which *provide any comprehensible evidence of the nature of the experimentation carried out ...* the evidence before me fails to establish that the Appellant's project meets the criteria set out in the SR & ED regulations ... appeal dismissed.”

### **Implications and author’s commentary**

This is yet another case in which the science officer must make a judgment to assesses the taxpayers solution to a problem represented

- i) experimentation or analysis, or
- ii) an attempt to claim inflated cost allocations.

The CCRA science officer will generally assess the reasonableness of the costs being claimed through an examination of the related experimentation performed. We have found that the CCRA staff are willing to accept virtually any form of evidence<sup>257</sup> as long as it correlates with the attempted resolution of the stated “hypotheses.”

On the other side of this equation, where there is “no” evidence of any experimentation or analysis of alternatives, it will be impossible to justify that “any” costs are attributable.

## **Synchrosat Limited v. R.**<sup>258</sup>

### **Facts:**

When the company filed its claim it was under the impression that all the activities gave rise to eligible expenditures. An audit was subsequently performed by the Canada Customs and Revenue Agency (“CCRA”) and the project was split into four sets of activities. It was only during the audit that the appellant conceded that Activity “A” alone qualified as an eligible SR & ED activity. This represented only about 25% of his total time he spent in carrying out all four activities.

The company submitted that, during the entire 2001 taxation year, the scientist [Dr. Sen] worked as a full-time employee of Synchrosat Limited working more than 40 hours a week to undertake four separate activities, but he charged for only 540 man-hours of his time to the company for all his work performed during the year (i.e. the time for eligible SR&ED Activity A). The CCRA proposed that calculation of the total salary of the Appellant's shareholder

<sup>257</sup> evidence could include photos, emails, notes written on napkins and even in foreign languages!

<sup>258</sup> Synchrosat Limited v. The Queen (2003TCC380)

## **Issue: allocating salary to only SR&ED activities**

Whether the entire salary paid during the year (in the amount of \$28,080) was attributable only to that one eligible activity.

### **Relevant legislation, Ruling & rationale:**

When the appellant filed its claim for SR&ED it declared that work was a combination of the four activities listed. It was only during the audit that the appellant conceded that Activity “A” alone qualified as an eligible SR & ED activity.

Therefore, the judge did,

“not believe that the amount of \$28,080 that Dr. Sen charged the appellant was attributable only to that one eligible activity.”

Furthermore, Dr. Sen admitted that the appellant could not afford to pay him a higher salary for all of the work he did in 2001.

Therefore, the judge concluded that,

“the appellant had the burden of showing that Dr. Sen charged it only for the work done on the eligible activity. Dr. Sen did not file a breakdown of the time he spent on each activity in the appellant's project. The evidence before me is insufficient to refute the allegations of fact stated in the Reply.”

and as a result only 25 per cent of the salary earned in 2001 qualified as an SR & ED expenditure.

### **Implications and author’s commentary**

In the author’s opinion this case illustrates **not only a pitfall but also a series of potential opportunities** for structuring SR&ED remuneration. These concepts are **illustrated further in the section of this newsletter entitled, “Unpaid Amounts.”**

## **Blue wave Seafoods vs. R.**<sup>259</sup>

### **Facts:**

The company filed a claim for SR&ED tax credits but was denied on the basis of technical eligibility by the CCRA

<sup>259</sup> Blue Wave Seafoods Incorporated and D'Eon Fisheries Limited and Her Majesty the Queen (TCC informal procedure – Docket: 2001-2140(IT)G)

Science Officer (Mr. Neil). At the appeals stage, another the CCRA Science Officer (Belinda Hatton) made some adjustments in the Appellants' favour to the audit calculations however no changes were made to the evaluations in Mr. Neil's SRED science report.

Over the process of the science review and appeal the company had provided 580 documents to the CCRA Science Officer (Ms. Hatton). Despite this fact they claimed that “all overtures for examination of the CCRA Science Officer had been denied,” and the court action became necessary to discover information about the CCRA appeals because no one other than (Ms. Hatton) appeared to have this information.

### **Issue(s): challenging science officer’s analysis**

The company argued that in order to demonstrate that the CCRA appeals conducted by Ms. Hatton came to the wrong conclusion they must also discover what information Ms. Hatton considered to determine if they were granted fair and comprehensive consideration after their initial objection to the assessments.

### **Relevant legislation, Ruling & rationale:**

Subsection 93(3) of the Rules<sup>260</sup> reads as follows:

“The Crown, when it is the party to be examined, shall select a knowledgeable officer, servant or employee, nominated by the Deputy Attorney General of Canada, to be examined on behalf of that party, **but if the examining party is not satisfied with that person, the examining party may apply to the Court to name some other person.**”

In his analysis the judge clarified that,

“The rule clearly requires that the Crown shall select one knowledgeable officer,” and in his opinion, “two knowledgeable officers were made available to answer questions with respect to a science and a financial component. The discovery process was never intended to have the Crown provide three or four witnesses .... Discoveries are obviously a very useful procedure but at some point, a line must be drawn.”

Based on these facts the judge remarked,

“it was open to the Appellants to examine Mr. Neil and Mr. Harnish (the other CCRA officers) on the 580 documents previously provided in relation to Ms. Hatton's involvement and request undertakings when required.”

The company's counsel acknowledges that this was not done but is not a requirement in section 93.

As a result the judge concluded that,  
“the Appellants have to be proactive in discovery and ask for undertakings. They did not. Only after receiving unsatisfactory undertakings is a similar application appropriate... The examiner cannot presume that any or all of the officials of Revenue Canada can be examined.”

### **Implications and author’s commentary**

The judges comments underline **the importance of evaluating the credentials of the science reviewer before any opinions are made** since the courts seem cynical of challenges made “after” a negative opinion is received.

The case also outlines that the company should have made greater attempts to obtain the required representations through their appointed CCRA representative, rather than any specific CCRA representative. As a result we believe that the results of this case are of considerable long-term significance.

Furthermore, in the author’s experience this is an isolated occurrence and in typical situations where claims are denied, a detailed science report is available to provide the required explanations to the claimants.

## **Unpaid amounts**

Often, there are amounts which remain unpaid and which will only become eligible for tax credit in the year in which they are actually paid.

### **Unpaid salaries, wages, and other remuneration**

Where accrued salaries, wages, and other remuneration remain unpaid 180 days after the end of the year in which you incurred the expense, the income tax legislation deems the expense,

“not to have been incurred in the year, but rather in the year the amount is paid.”<sup>261</sup>

The next section builds upon this concept to provide further examples of how the legislation surrounding “unpaid amounts” can be used as a tax planning vehicle for “cash strapped” R&D companies to maximize their investment tax credit claims.

<sup>260</sup> Tax Court of Canada Rules (General Procedure)

<sup>261</sup> Subsection 78(4)

## Accruing reasonable R&D wages when “cash strapped”

As previously illustrated in the case of “Synchrosat Limited,” **cash strapped companies may have employees working for little or no remuneration.**

These companies **may wish to consider accruing reasonable salary & wages for the work performed.** If this transaction is properly structured, employees will not have to pay tax on wages until they are received and the company will receive entitlement to the credits in the fiscal year in which these wages are paid.

### Sample Facts – Synchrosat revisited

A “business owner” performs eligible SR&ED work on his company’s behalf but does not have the funds available to pay himself a “reasonable salary” for the work performed. The business owner (Dr. Sen) estimates that his normal “salary” for this work would have been \$100,000 but he was only able to pay himself \$25,000 of this amount during the year.

### **SR&ED claim = Accrual of reasonable subcontractor fees in year performed**

The taxpayer must assert that subcontractor costs have been **“incurred”** in the year due to the nature of the work. It is important that the taxpayer claims this work during the year in question to avoid missing the 18 month filing deadline<sup>262</sup> for SR&ED costs. In this case we would try to accrue reasonable, non-arm’s-length salary costs (i.e. \$100,000) related to the current year’s work.

### **Effect of this position**

There is a provision in the SR&ED legislation, which (temporarily) denies an investment tax credit for any costs, which remained unpaid within 180 days of year-end<sup>263</sup>. These costs will be audited in the current year and a conclusion will be made on their “reasonableness,” however, investment tax credits will be paid on these amounts only in the years in which they are actually paid.

Furthermore, if this transaction is properly structured, **employees will not have to pay tax on wages until they are “received.”**<sup>264</sup> Some of the planning issues with respect to properly structuring this arrangement are outlined below.

<sup>262</sup> ITA subsection 37(11) requires any SR&ED claims to be filed in prescribed form within 18 months of year-end

<sup>263</sup> ITA subsection 78(4) denies ITC’s on amounts until taxation year in which paid

<sup>264</sup> ITA subsection 5(1) only taxes employees on income “received” during the year

## Reporting of “Unpaid” amounts

Often taxpayers will claim SR&ED expenses “accrued” during the taxation year but unpaid 180 days after year-end. Currently the T661 form<sup>265</sup> requires disclosure of this amount on line 315 (for wages) & 500 (other SR&ED expenses) however, it is unclear what degree of supporting details should be submitted and the full extent of the related tax effects.

In the case of Synchrosat (discussed earlier), it is the authors opinion that, had the company accrued the entire balance of the SR&ED wages Dr. Sen was entitled to, it would have been able to claim 25% of this entire amount as SR&ED wages. It would then have earned the related credits to be received once paid!

### Degree of disclosure required

Many tax practitioners are unsure the degree of additional detail required to support these allocations but assume that it would be similar to the timesheet requirements used by a typical SR&ED employee.

### T661 - Reporting unpaid wages vs. other expenses

**Unpaid wages (in once)** - It would appear the unpaid wages would not be included in the balance of SR&ED wages (line 300 or 305) but would be disclosed separately (line 315) and only added to the total expenses in the year when paid (line 310).

**Non-wages (in-out-in)** - Unpaid SR&ED expenses other than wages would be accrued to the respective cost category (subcontractors, materials, etc.) and would then be “removed” for the “qualified expenses” calculation (line 520) and added back in the year paid (line 500).

Once the mechanics of these formulas were understood practitioners did not appear to have any remaining concerns.

### Other factors to consider with respect to year-end SR&ED accruals:

#### Limits for “Specified Employees”

Generally speaking, a “specified employee” includes any employee who owns **10 percent or more of any class of stock of the Corporation, or any individual who is related to such an employee.** In other words, this may include the president’s son or daughter, where the president is a specified shareholder.

<sup>265</sup> CCRA form T661 is also referred to as Corporate Tax Schedule 32

## Implications & planning for “specified employees”

Being deemed a specified employee results in certain restrictions on SR&ED labour inclusions and limits. The major effects are:

Limit on SR&ED wages

- 1) The maximum amount of salaries and wages for a specified employee is limited to 500% of YMPE (yearly maximum pensionable earnings)<sup>266</sup>.

Limit on SR&ED proxy amount

- 2) The maximum amount of salaries and wages for a specified employee for calculation of the “salary base” used in the proxy allocation cannot exceed 250% of YMPE.

Exclusion of bonuses from SR&ED wages

- 3) “Bonuses” or “remuneration based on profits” should not be included in the R&D hourly rate calculation or in the R&D expenditure pool<sup>267</sup>.

For fiscal 2003 the YMPE rate has been set at \$ 39,900 (\$ 39,100 for 2002). This results in **maximum 2003 SR&ED wages** and salary base amounts of **\$ 199,500** & \$ 99,750, respectively. In the author’s opinion, this underlines an important **opportunity for a specified employee being paid “SR&ED salary” of at least \$200,000 per annum** to the extent that he or she would likely be paid a taxable “bonus” at year end.

## Form for allocation of SR&ED wages of specified employees

In 1999 the CCRA released Form T-1174 – “Agreement among associated corporations to allocate salary wages of specified employees for SR&ED.” As the title of this form indicates it is used to ensure that the limits above are not exceeded for any individual employee by use of multiple corporations under the same control group. It is available for download from the CCRA’s website.

## Risks of being deemed a Salary Deferral Arrangement (SDA)

### Conditions that create a Salary Deferral Arrangement (SDA)<sup>268</sup>

- Plan or arrangement, funded or not; and
- Any person has a right (including such a right that is subject to one or more conditions) in a taxation year to receive an amount after the year where it is reasonable

<sup>266</sup> as defined in ITA Regulation 8500(1)

<sup>267</sup> as stated in ITA subsection 37(9) & Regulation 2900(9)

<sup>268</sup> Definition [ITA 248(1)]

to consider that **one of the main purposes** for the creation or existence of the right is **to postpone tax payable** under this Act by the taxpayer in respect of an amount that is salary or wages of the taxpayer for services rendered by the taxpayer in the year or a preceding taxation year;

## Negative implications

The net tax effects of being deemed an SDA is the immediate taxation to the employee. Since the amount is not subject to withholding by the employer (under ITA 153) until the amount is paid, the tax effects of this timing difference could be significant.

## Planning to avoid SDA provisions

To avoid the SDA rules, the deferral plan should meet one of the specific exemptions. In general, the available exceptions to employ could be:

- 1) Payment of amounts within 3 years of earning the amount;
- 2) The conditions for payment carry significant risk – such as tied to the revenues earned from the results of the SR&ED being performed; or
- 3) The payment is tied to the retirement or death of the shareholder/employee with a reference to the stock price of the company.

## The OITC – How is it Taxed?

### Issue: timing of tax on proxy amount

### Tax mechanics of issue: received vs. receivable

Several tax programs defer taxation of the “proxy portion” of the Ontario Innovation Tax Credit (OITC) until the subsequent taxation year.

What the program and CCRA are doing is reducing the current years government assistance for the amount of assistance earned on the **Prescribed Proxy Amount (PPA)** and treating it as income the following year by making the adjustment on schedule 1.

In other word the **government assistance on the PPA is being treated as taxable only when actually received.**

## Legislative support for deferral

### Income Tax Act (Warning – this is complex!)

In this situation, we are dealing with three main areas. The main area is contained within section 37 of the *Income Tax Act*. Paragraph 37(1)(d) states that the research expenditure pool must be reduced by the total of all amounts of government assistance, as that term is defined in subsection 127(9), in respect of an expenditure described in paragraph 37(1)(a) or 37(1)(b). The first of those paragraphs deal with current expenditures and the second deals with capital expenditures. In neither section are you allowed to deduct the PPA.

To further emphasize the point, paragraph 37(1)(e) requires the expenditure pool to be reduced for the federal Investment Tax Credit used in the prior year (under subsection 127(5) or 127(6)) where that amount can be attributed to a paragraph 37(1)(a) expenditure or the PPA.

Therefore, it is easy to conclude that if parliament had intended for government assistance on the PPA to reduce the expenditure pool, then it would have explicitly stated that in 37(1)(d) as it did in 37(1)(e).

So does that leaves government assistance on the PPA currently not taxable? The answer is no. The amount is taxable under paragraph 12(1)(x) of the *Income Tax Act*. When reading this section and comparing it to the definition of government assistance under 127(9) there is a strikingly similar set of words:

“... grant, subsidy, forgivable loan, **deduction from tax**, investment allowance, or any other form ...” that is “... from a government, municipality, or other public authority...”

Therefore, government assistance is always taxable. But what about the timing of when it is taxable?

The amount taxable under 37(1)(d) as a reduction to expenditures is to be reported on the basis of

“... at the taxpayer’s filing-due date for the year, the taxpayer has received, is entitled to receive, or can reasonably be expected to receive,”

the government assistance on the expenditures. Therefore, the amount is included in income as it is earned, as it is based on the amount receivable.

However, the wording of 12(1)(x) states that

“... any particular **amount received** by the taxpayer in the year, in the course of earning income from a business or property, ...”

The net result being that **government assistance on the PPA is only taxable when actually received.**

## CCRA – Guide to form T661

The Canada Customs and Revenue Agency’s (CCRA) instructions to line 430 as contained in the Guide to Form T661 – Claiming Scientific Research and Experimental Development (both the 2001 and 2003 versions) state the following:

“If you are using the proxy method, do not deduct the assistance for expenditures that the prescribed proxy amount replaces.”

## CCRA – APP 2000-3

The CCRA has gone further in SR&ED Application Policy Paper SR&ED 2000-03 to state the following:

“In determining the amount of assistance in the pool of deductible SR&ED expenditures the amount of provincial or territorial tax credits which relates to the PPA is not considered to be assistance that reduces the SR&ED allowable expenditures under paragraph 37(1)(d).

As the PPA is not an expenditure under paragraphs 37(1)(a) or subparagraph (b)(i), but is a notional amount which is used in lieu of the actual overhead expenditures in the calculation of the ITC, the PPA is not added to the SR&ED expenditure pool.

Consequently, the portion of the provincial or territorial tax credits which relates to the PPA should be included in income under section 9 or paragraph 12(1)(x) of the Act ...”

## Results & filing implications / planning

**As previously stated, the government assistance on the PPA is only taxable when actually received.** Note that the CCRA and the tax software will assume this amount is actually received the following year. While this may not be the case (especially those that file their SR&ED claim close to the 18 month deadline), for simplicity this assumption is normally followed **however, the opportunity exists for further deferral of the taxation of this amount when not received in the subsequent year.**

Example:

- For a 2001 claimed filed in 2002
- the amount may not be received until fiscal 2003 or even 2004 and
- the company would be entitled to defer recognition of the proxy related ITC until this time!).

This could be a major advantage to a firm who had exceeded income limits to the extent it faced a partial phase out its enhanced Investment Tax Credits (ITC’s).

## New T661 form & project format

In addition to elimination of "technological uncertainty heading" in Part 2 the SR&ED project description, the requirements have changed in several areas:

### Previous requirements: T661E (99&01)

Step 2 – Detailed Project Description

**B. What scientific or technological advancement** did you expect to achieve as a result of performing this work? In what field of science or technology did you expect to achieve this advancement? Explain why this is a scientific or technological advancement.

**C. Explain what scientific or technological uncertainty** you have to resolve to achieve the advancement stated in B above.

### New form T661E(03) – post June 30, 2003

Part 2 – Scientific or Technological Project Information

\* **B. Technology or Knowledge Base Level – Before you started your project, what were the technological limitations of your products or processes to be overcome**, or if your project work was predominantly scientific research, give a perspective in terms of the scientific knowledge that you were seeking before you started your work? You can use the information you provided last year if your project is continuing from last year and the objectives have not been achieved or changed.

\* **C. Scientific or Technological Advancement** – What advancement in technology is being sought, **what were the problems or challenges that you could not solve** using commonly available experience and required you to seek an advance in the underlying technology to achieve the objective in A above, or what was the new scientific knowledge sought in your work?

#### Effect on project descriptions

In the authors opinion the new form is a positive change with it main focus to **clarify that the “technological uncertainties” addressed should be continually benchmarked against the company’s “knowledge base.”**

As a result the new form represents **positive clarification as to the optimal SR&ED project structure but NOT a significant change in required project documentation.** As a result most tax and SR&ED practitioners believe that the CCRA’s current SR&ED related Information Circulars do NOT need to be revised to reflect these changes.

#### SR&ED PROJECT TEMPLATE – 2003+

Project #: \_\_\_\_\_ Project Name: \_\_\_\_\_  
Fiscal Year Ending \_\_\_\_\_  
Date Started: \_\_\_\_\_ Completion date: \_\_\_\_\_

**OVERALL PROJECT OBJECTIVE:** *(Related to the corporation's existing technical practices)*

#### **I) EXISTING SCIENTIFIC OR TECHNOLOGICAL KNOWLEDGE BASE:**

*(Try to provide benchmarks of similar products/processes as basis of original assumptions and ideas whenever possible)*



#### **II) TECHNOLOGICAL ADVANCEMENT:**

##### **TECHNOLOGICAL UNCERTAINTIES:**

*(Which variables are unpredictable with respect to determining the “optimal combination of components?” These issues are created by departures from standard practices.)*



#### **III) SYSTEMATIC INVESTIGATION**

##### **A) EXPERIMENTATION & ANALYSIS**

###### **[PERFORMED THIS TAXATION YEAR]:**

*(Try to clarify variables in question and illustrate any unexpected inter-relations.)*

##### **B) CONCLUSIONS & RELATED EXPLANATION(S):**

*(Illustrate any unexpected results & try to provide technical conclusions)*

##### **C) TECHNICAL DOCUMENTATION RETAINED:**

*(Notes, drawings, diagrams, and any third party correspondence which indicates that methodologies behind the solutions were not “readily available” at the outset)\**



#### **Simplify project documentation via rdbase.net**

If your SR&ED staff wish to document SR&ED activities online, using your company’s **rdbase.net account**<sup>269</sup> the structure will automatically follow that required by the CCRA.

#### **BN # required for all subcontractors**

The new T661 form also now requires CCRA Business Numbers for all SR&ED subcontractors claimed. The previous form provided an exception for small suppliers under \$30,000. As a result tax preparers may get “diagnostic errors” from their software when finalizing claims that include payments to “non-registered” subcontractors.

<sup>269</sup> Just log in at: [www.rdbase.net](http://www.rdbase.net) - Username: demo Password: demo

Discussion & commentary:

Some of the potential methods to “clear” the filing diagnostics with unregistered “small suppliers” were:

- input a “dummy” business number such as 88888 8888, OR
- some programs will allow users to input NR (non-registrant) in the business number field

In the meantime, the CCRA has not provided any specific guidance on this issue.

## **New Schedule 31 – ITC claim form**

### **Income phase out revised**

In response to 2003 budget proposal that,

- for taxation years beginning after January 1, 2003,
- the \$2-million expenditure limit on enhanced credits,
- be phased out where taxable income in the previous year is between \$300,000 and \$500,000 (previously between \$200,000 and \$400,000),

the CCRA has released a new version of Schedule 31 to accommodate these changes.

### **Capital phase-out unchanged**

Also of note is the fact that the expenditure limit can also be phased out where prior-year “group” taxable capital employed in Canada was between \$10 million and \$15 million. This remains unchanged in 2003 despite the fact that the Federal capital tax threshold itself is increasing to \$50 million and the provinces of Ontario and Quebec use ranges of \$25 and \$50 million for phasing out their enhanced credits to “Qualified Corporations.”

Further information and a graphical representation of these phase out criteria available at [www.rdbase.net/taxcredits](http://www.rdbase.net/taxcredits).

## **Future developments & unresolved SR&ED issues**

Please feel free to **download details** on an assortment of unresolved SR&ED issues as documented in the minutes from out 2000-2003 "SR&ED Practitioner's Workshops" at [www.meuk.net /SR&ED issues / practitioners meetings](http://www.meuk.net/SR&ED%20issues/practitioners%20meetings).

### **Section / Issue / Year issue first raised**

1. New T661 form - 2003
  - 1.1. Elimination of "technological uncertainty heading" in Part 2 2
  - 1.2. BN number required for all subcontractors
  - 1.3. Reporting for Unpaid amounts
    - 1.3.1. Degree of disclosure required
    - 1.3.2. Reporting for unpaid wages vs. other types of expenses
    - 1.3.3. Risks of being deemed a Salary Deferral Arrangement (SDA)
2. Commercial vs. experimental production - 2003
  - 2.1. Issues in agreement – no carve out of SR&ED wages
  - 2.2. Issues in contention
    - 2.2.1. Carve out of SR&ED subcontractors
    - 2.2.2. Definition of “Commercial” production
3. Ontario SR&ED issues - 2003
  - 3.1. i) Ontario OITC taxability - timing of tax on proxy amount
    - 3.1.1. Tax mechanics of issue: received vs. receivable
  - 3.2. Ontario Business-Research Institute Tax Credit – Pre-approval
    - 3.2.1. Issue: Why Ontario pre-approval required since audited by CCRA?
    - 3.2.2. Response to date: no plans to waive requirement
4. Administrative wages - cut-off of "financing activities" (2002)
5. SR&ED “salary & wages” incurred outside of Canada – 2000 & 2001
6. Capital tax implications from “development costs” - 2000 & 2001
7. Loss on ITC refundability on repayments of government assistance - 2001
8. Foreign contractors in Canada (how & when to claim for SR&ED) – 2001
9. Issues of other groups – for future discussion
  - 9.1. SR&ED self-assessment and recourse methods (2002)
    - 9.1.1. Second review
    - 9.1.2. Alternative dispute resolution (ADR)
  - 9.2. Materials consumed (2002)
  - 9.3. Accessibility of credits to all claimants (2002)
    - 9.3.1. Companies other than qualified CCPC’s
    - 9.3.2. Individuals



## **SR&ED Newsletter** **Edition 2003-1**

Welcome to the first 2003 edition of our newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims. This newsletter includes significant SR&ED developments issued by the CCRA and the tax courts during the past six months. The major topics of this newsletter are outlined as follows:

<b>Background to the Federal SR&amp;ED Tax Credits .....</b>	<b>207</b>
Qualified CCPC's - defined.....	207
Phase-out on Taxable Income expanded.....	207
Phase-out on Taxable Capital unchanged.....	207
<b>2003 Budget: Taxable income vs. capital phase-outs.....</b>	<b>208</b>
<b>Recent CCRA Directives .....</b>	<b>192</b>
Time lines for submitting & processing claims .....	209
What happens after I send in my claim?.....	209
<b>SR&amp;ED Strategies - SR&amp;ED Capital Issues .....</b>	<b>210</b>
SR&ED assets decision tree.....	210
ASA vs. SUE SR&ED equipment rules .....	210
Three classes of SR&ED capital assets.....	211
Strategies in documenting long-term SR&ED intent.....	211
Subsequent dispositions/commercial use.....	211
Example - (change to commercial use) .....	211
Author's commentary and related tax planning.....	212
Example - revisited & optimized.....	212

## Background to the Federal SR&ED Tax Credits

There are currently two rates of federal investment tax credits for SR&ED in Canada:

- a) **A general rate of 20 per cent** and
- b) **An enhanced rate of 35 per cent** for “qualified” Canadian-controlled private corporations (CCPC’s).

### Federal SR&ED Tax Credit Rates and Refundability (%)

i) **Canadian-controlled private corporations (CCPC’s)** have NOT more than 50% of their shares controlled by “public corporations” or “foreign parties.”

- ii) **“Qualified” CCPC’s** are those with,
  - a) prior-year taxable income under \$200,000 and
  - b) prior-year taxable capital employed in Canada under \$10 million.

**Current ITC limits as well as those announced in the 2003 Federal budget are illustrated below and the next page.**

Business Type	Credit Rates	Refundability Rates	
		Current Expenditures	Capital Expenditures
Unincorporated Businesses	20	40	40
CCPC’s with prior-year taxable income, - of \$200,000 or less:			
Expenditures up to expenditure limit <sup>1</sup>	35	100	40
Expenditures over expenditure limit	20	40	40
- between \$200,000 and \$400,000			
Expenditures up to expenditure limit <sup>2</sup>	35	100	40
Expenditures over expenditure limit	20	0	0
CCPC’s with prior-year taxable capital employed in Canada between \$10 million and \$15 million:			
Expenditures up to expenditure limit <sup>3</sup>	35	100	40
Expenditures over expenditure limit	20	0	0
All Other Corporations	20	0	0

<sup>1</sup> Expenditure limit is generally \$2 million per annum for the “associated group of companies” (i.e. all companies under common control).  
<sup>2</sup> Expenditure limit for CCPC’s is phased out for prior-year “group” taxable income between \$200,000 and \$400,000. (\$300,000 and \$500,000 for taxation years starting after January 1, 2003)  
<sup>3</sup> Expenditure limit for CCPC’s is phased out for prior-year taxable “group” capital employed in Canada between \$10 million and \$15 million. (Note: Ontario and Quebec include foreign or public companies and use ranges of \$25 and \$50 million for phasing out their enhanced credits to “Qualified Corporations”).

### Phase-out on Taxable Income expanded

As illustrated above and on the next page, the budget proposes that the \$2-million expenditure limit on enhanced credits be phased out where taxable income in the previous year is between \$300,000 and \$500,000 (previously between \$200,000 and \$400,000).

### Qualified CCPC’s - defined

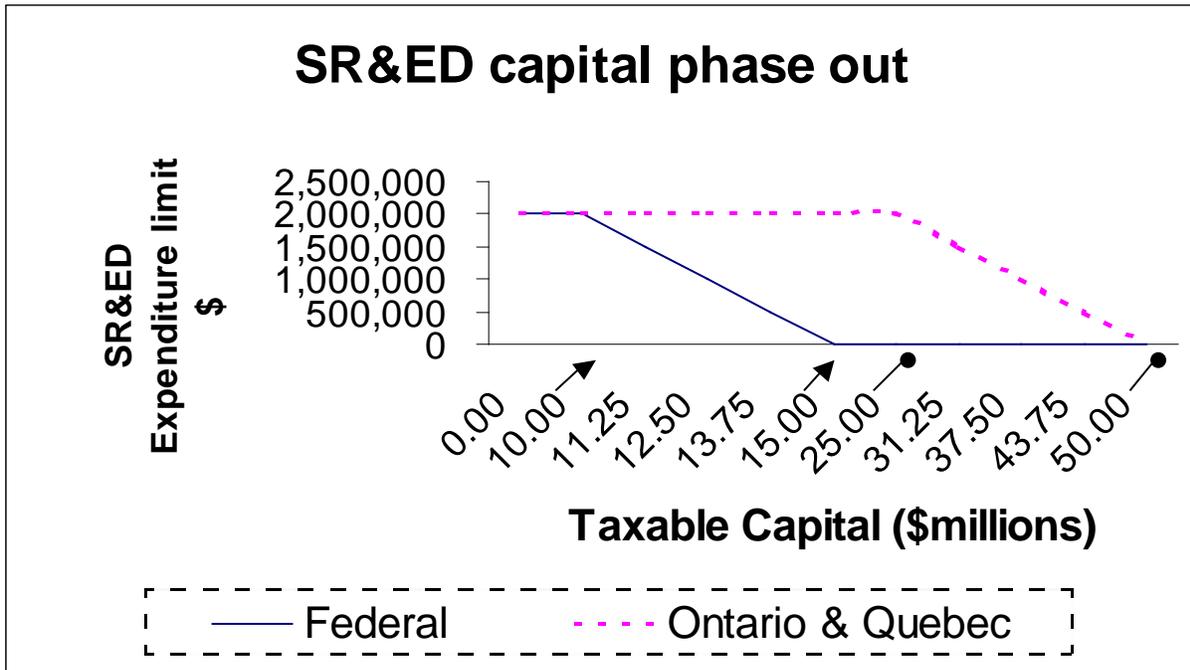
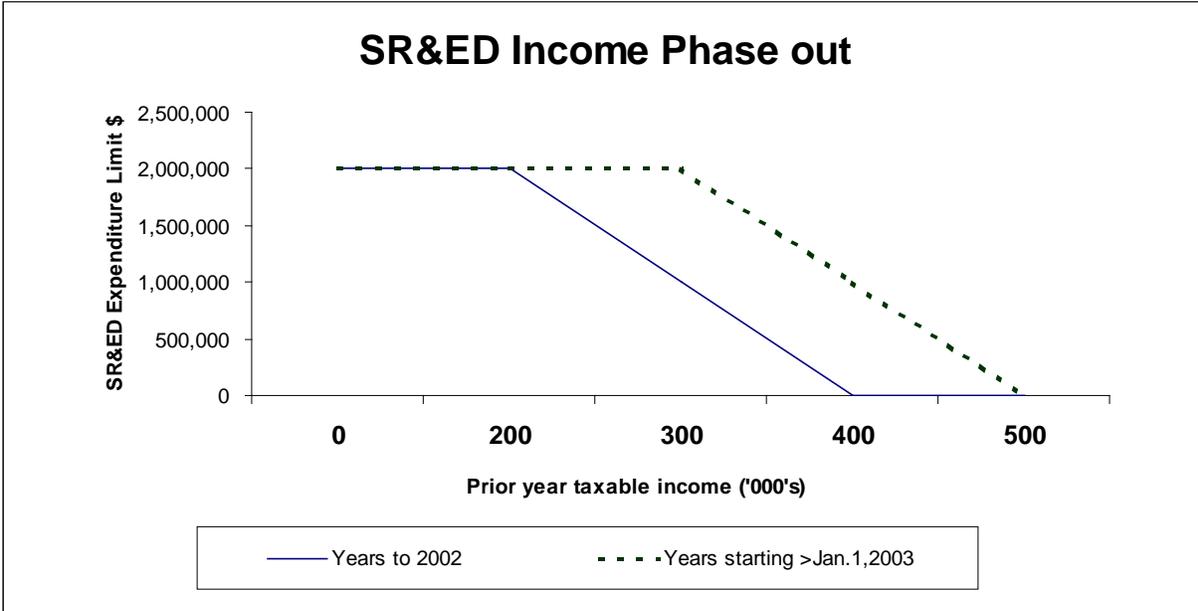
### Phase-out on Taxable Capital unchanged

**The expenditure limit is phased out** for prior-year “group” taxable capital employed in Canada **between \$10 million and \$15 million**. This remains **unchanged** in 2003 despite the fact that the **Federal capital tax threshold itself is increasing to \$50 million** and the provinces of **Ontario and Quebec use ranges of \$25 and \$50 million** for phasing out their enhanced credits to “Qualified Corporations.”

**2003 Budget: Taxable income vs. capital phase-outs**

**Expansion of “income threshold” but NOT “taxable capital”<sup>270</sup> for “Qualified Corporation” Status**

The February 2003 Budget provided for one major incentive to Corporations Qualified for enhanced credits.



<sup>270</sup> “Taxable capital” is roughly equal to the “assets” of the corporation

## Recent CCRA Directives

### Time lines for submitting & processing claims<sup>271</sup>

## Two common questions: What happens? & When?



### What happens after I send in my claim?

“We review your claim to see if we can process it as filed. **If we can process your claim as is, we will issue a cheque to you**, or allow a tax credit. If we cannot process your claim as is, we may request more information or ask to visit your site.

If you are **claiming for the first time**, we usually visit **you** to further clarify what kind of expenditures you can claim, discuss how to present your claim, answer your questions, and help ensure that all your work that qualifies has in fact been claimed.”

**If we can process your claim as filed**, it usually takes **60 days**. **If we need to review** the claim in more detail, it usually takes **120 days** to process your claim.”<sup>1</sup>

### Author’s commentary:

Recent CCRA pronouncements as well as the result of the Datacalc Research Appeal<sup>272</sup> confirm that the **absolute filing deadline for submitting SR&ED claims is 18 months from the corporations’ fiscal year end**.

It has been the authors experience that first time claimants should allow at least 180 days before expected refunds but that the CCRA appears to be strongly committed to honoring these timelines. It would also appear that the primary determinant of assessment speed is the degree of relevant detail provided in the project technical descriptions.

### *Notable Quote:*

***"Everything should be made as simple as possible, but not simpler."*** —  
***Albert Einstein.***

<sup>271</sup> Source – CCRA form RC4290(E) - Refunds for Small Business R&D Scientific Research Experimental Development (SR&ED) Program

<sup>272</sup> Datacalc Research Corporation v. The Queen - (TCC) Docket: 2000-1413-IT-G Date: 2002/02/22 (see discussion per SR&ED newsletter 2002-1)

## SR&ED Strategies - SR&ED Capital Issues

*Notable Quote:*  
*"Nothing is so simple that it cannot be  
misunderstood."  
- Teague's Paradox*

### SR&ED assets decision tree

<u>Question:</u>	<u>Issue:</u>	<u>Result(s)</u>	<u>ITA section</u>
if NO <span style="font-size: 2em;">→</span>			
<b>if YES</b>			
1 Is the property "depreciable" property	land & other non-depreciable properties excluded	excluded from eligible SR&ED expenses and tax credits	37(1)(b)
2 Is the property other than a "building", "leasehold interest in a building," or intangible "right" (e.g. a patent) arising from previous SR&ED?	"buildings" and intangible "rights" excluded	excluded from eligible SR&ED expenses and tax credits	37(1)(b)
3 Is the asset intended to be used > 50 % of its economic life in Canadian SR&ED activities?	Intent - primarily SR&ED asset	excluded from eligible SR&ED expenses and tax credits	Regulation 2902(b)(i)
4 Is the asset intended to be used > 90 % of its economic life in Canadian SR&ED activities?	Intent - ASA SR&ED asset	excluded from eligible SR&ED expenses but,  potential SR&ED credits on shared used equipment (SUE) over the next 24 months	Regulation 2902(b)(i)  127(11)
5 Is the property available for use at year-end?	availability of SR&ED ITC	SR&ED expenditures deemed not made until property is "available for use"	37(1.2)
6 Is the property new?	no ITC's on "used equipment"	excluded from "qualified SR&ED expenses" used for calculating tax credits but still part of R&D expenditure pool	Regulation 2902(b)(iii)
7 Have you completed and filed form T661 to claim expenses?	claim for R&D capital	Include brief statements of long term R&D intent at time of purchase & summary of shared use %'s	37(11)
8 Have you subsequently disposed of the asset or converted it to commercial use?	repayment of ITC earned (see "disposition" example)	Repayment based on current value of asset (generally UCC for tax) at historic ITC rate	127(27 to 35)

### ASA vs. SUE SR&ED equipment rules

The following chart summarizes issues & related tax credit effects between ASA and SUE SR&ED equipment.

## The intended SR&ED use of the asset over its estimated economic life can result in 3 potential SR&ED classes

ASA equipment (>90%)	SUE (>50%)
<ul style="list-style-type: none"> <li>■ relates to equipment intended to be used in SR&amp;ED throughout its useful life;</li> <li>■ included in subsection 37(1) expenditure pool and earns ITC;</li> <li>■ ITC is earned when you make the capital expenditure;</li> <li>■ you earn ITC on full cost;</li> <li>■ includes general purpose office equipment or furniture under the traditional method only;</li> <li>■ eligibility is based on intent.</li> </ul>	<ul style="list-style-type: none"> <li>■ relates to equipment you use for SR&amp;ED and some other purpose;</li> <li>■ only earns ITC – capital cost is included in CCA schedule in usual manner;</li> <li>■ you earn the partial ITC over time;</li> <li>■ you earn ITC on one-half of the cost;</li> <li>■ excludes general purpose office equipment or furniture under both the traditional and proxy methods;</li> <li>■ eligibility is based on actual use &amp; intent.</li> </ul>

### Three classes of SR&ED capital assets

The intended SR&ED use of the asset over its estimated economic life, which can result in 3 potential classes of assets:

1) **> 90% SR&ED intent (ASA - “All or substantially all”)**

If we can argue > 90% SR&ED intent we will earn the credit on the capital cost of the equipment in the year of acquisition OR, full credits on lease payments when paid.

2) **> 50 % but <90% SR&ED intent (“Primarily”)**

If we can argue > 50 % but <90% SR&ED intent we will earn either: a deferred credit (over 3 years) on 50% of the lease payments or capital cost of the asset OR, the actual percentage of lease payments we can allocate to SR&ED if we use the traditional method of overhead allocation.

3) **> 0 % but < 50% SR&ED intent**

If we can argue > 0 % but < 50% SR&ED intent we will only earn credits on the actual percentage of lease payments we can allocate to SR&ED. Furthermore these credits will only be earned if we use the traditional method of overhead allocation.

### Strategies in documenting long-term SR&ED intent

It should be noted that it is the CCRA who deems the terms, “ASA” and “primarily” to represent >90% or >50%, respectively. The income tax act does not specifically define these terms and therefore, taxpayers may wish to reconsider these amounts where this treatment can be supported. For example, if an employee spent 88% of her time in SR&ED during the year, the company might argue that the intent was for her computer to be an ASA SR&ED asset.

### Subsequent dispositions/commercial use

Quite often the experimental prototypes may eventually be used in commercial production. In these cases a portion of the ITC earned may need to be repaid. The CCRA confirms that the Undepreciated Capital Cost (UCC) for tax purposes can be used as an estimate of the Fair Market Value (FMV) of the asset. This repayment concept is clarified in an example recently released by the CCRA:

#### Example - (change to commercial use) <sup>273</sup>

Corporation A gives a contract to Corporation B (arm's length) for the construction of equipment to meet unique performance criteria. The contract requires that Corporation B perform SR&ED on behalf of corporation A in the development of the equipment. The total amount of the contract is \$1,000,000. All of the work was completed at the end of year 1, at which point

<sup>273</sup> CCRA Application Policy SR&ED 2000-04R2, June 18, 2002, Recapture of Investment Tax Credit – Example 7

Corporation A started using the new equipment in its operations.

For purposes of claiming the allowable SR&ED expenditures, Corporation A identified the SR&ED and non-SR&ED and allocated the costs accordingly. The SR&ED portion of the contract was estimated at \$800,000. The \$200,000 not claimable is a cost relating to expenditures incurred on the commercial portion of the equipment. The CCRA's Research and Technology Advisor found the allocation to be reasonable.

Corporation A entered \$800,000 on line 340 of form T661 as expenditures for arm's length SR&ED contract. When Corporation A starts using the equipment in its operations, there is a conversion to commercial use and the ITC recapture rules will apply.

The FMV of the equipment at the time of conversion to commercial use is \$500,000. For the purpose of determining the FMV, the claimant has used the cost of producing a second unit if the technology had already existed.

For the purposes of the ITC recapture rules, using a prorated amount (see Note) as FMV would be acceptable as it is reasonable to apportion the FMV between the SR&ED costs and other costs. Since the ITC on the particular equipment was claimed using a 20% rate, the ITC recapture will be calculated as follows:

**The recapture amount is the lesser of:**

i) the ITC earned in respect of the particular property (the portion of the contract in respect of the SR&ED is part of the cost of acquiring the property)

\$160,000 (i.e., \$800,000 @ 20%) and

ii) the amount determined by applying the percentage which was used in calculating the ITC on the property to the Fair Market Value of the property at the time of its conversion to commercial use

\$80,000 (i.e. [ $\$500,000 \times 800,000/1,000,000$ ] @ 20%)

**The ITC recapture will be \$80,000, the lesser of \$80,000 and \$160,000.**

[Note: Any other reasonable apportionment of the FMV would be acceptable if it is based on the facts of the case, and is supportable] – see planning example!

This example could be misleading since only the “materials” vs. “labor related” portions of the payments need to be repaid.

The method illustrated is often referred to as the “**carve-out**” **method** since it “carves-out” the cost to redo the work and effectively allows only the incremental costs. **As a result an opportunity has been missed!** Consider the following additional CCRA pronouncements<sup>274</sup>:

**SR&ED “Labour” costs not reduced**

Labour costs incurred for an employee directly undertaking, supervising or supporting (traditional method), or for an employee directly engaged in (proxy method), the required experimental production, are allowable SR&ED expenditures. **No portion of such labour costs should be allocated to the commercial production.** This is the case whether the experimental production results from the operation of a pilot plant or a prototype, or it is produced in a commercial plant.

**Sale of experimental production**

The ITC recapture rules<sup>275</sup>, will apply to recapture all or a portion of the ITC relating to the cost of materials transformed when experimental production is sold or converted to commercial use after February 23, 1998. Note that **these rules do not apply to recapture ITC in respect of SR&ED labour costs** and overhead expenditures incurred by the claimant to carry out the experimental production.

The **reduction of the costs** of the experimental production by the proceeds from the sale of experimental production, or the expenditure **carve-out approach** used in the past to estimate SR&ED expenditures relating to the experimental production, are **not methods founded in law**. These methods **should not be used** for estimating the costs of the experimental production.

**Example - revisited & optimized**

Based on the above analysis the author proposes that a more correct method would be to **have the contractor separately identify and invoice the “labour” vs. the “material or capital”** portions of the work. **Examples of potentially eligible “labour” components** within the contractor’s fee could be the costs **to assemble, test and replace** components. These could then be removed from the \$800,000 base used for the “carve-out” in the previous example.

**Author’s commentary and related tax planning**

<sup>274</sup> CCRA Application Policy SR&ED 2002-02, July 17, 2002, Experimental Production - Allowable SR&ED Expenditures

<sup>275</sup> recapture rules in subsections 127(27) to (35) of the Income Tax Act



## SR&ED Newsletter Edition 2002-1

Welcome to the first 2002 edition of our semi annual newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims. This newsletter includes significant SR&ED developments issued by the CCRA and the tax courts during the past six months. The major topics of this newsletter are outlined as follows:

<b>Recent SR&amp;ED tax cases &amp; related issue(s)</b> .....	<b>44</b>
Datacalc Research Corporation v. The Queen .....	214
Issue(s): extension of 18 month filing deadline.....	198
Mimetex Pharmaceuticals Inc. v. The Queen .....	214
Issue(s): “defacto” control.....	214
<b>Recent CCRA Directives</b> .....	<b>215</b>
Extended ITC Access for Farm Producers.....	215
Food and Consumer Packaged Goods Sector SR&ED Guidance Document .....	215
Formula Ingredient, Manufacturing Specifications (F.I.M.S.) .....	215
Consumer Research.....	216
Scale-up and Commercialization.....	217
Treatment of “administrative” salaries or wages .....	217
Water and Energy Sources as Materials.....	218
<b>SR&amp;ED strategies – “subcontractor” vs. “royalty” agreements - ensuring SR&amp;ED eligibility</b> .....	<b>219</b>
<b>Ontario Business Research Institute (OBRI) Credit – 20% &amp; refundable</b> .....	<b>220</b>

## **Recent SR&ED tax cases & related issue(s)**

The past six months has witnessed a release of a variety of smaller cases. The main issues and potential implications are outlined in the following pages. Copies of the judgments are available from the Tax Court of Canada's website.<sup>276</sup>

### **Datacalc Research Corporation v. The Queen**<sup>277</sup>

#### **Facts:**

This appeal is from an assessment for the appellant's 1986 taxation year whereby the Minister of National Revenue denied SR&ED ITC's in the amount of \$665,607 claimed in its return of income for the 1986 taxation year since the claim was not filed until 1999: well past the 18 month deadline.

#### **Issue(s): extension of 18 month filing deadline**

Whether the late-filing could be warranted and, if so, under what conditions?

#### **Relevant legislation, Ruling & rationale:**

Basically the credit was denied as based on current legislation, qualified expenditures must be identified on or before the due date for filing the tax return for the subsequent taxation year.<sup>278</sup>

#### **Implications and author's commentary**

It seems quite clear that, neither the CCRA, nor the Tax Courts are willing to extend the prescribed filing deadlines. In the author's opinion this underlines the importance for taxpayers to file on a timely basis.

### **Mimetex Pharmaceuticals Inc. v. The Queen**<sup>279</sup>

#### **Facts:**

During the year in question, Mimetex (a foreign corporation) owned 50 common shares in the capital stock of the appellant, and two Canadian residents, who were also directors owned 25 common shares each.

There were three directors elected to the board, one a U.S. resident and the other two Canadians.

#### **Issue(s): "defacto" control**

Both parties agreed that no one had "de jure" (voting) control over the appellant. The issue is rather whether the appellant was controlled in fact, directly or indirectly in any manner whatever, by a non-resident. In other words, it has to be determined whether the non-resident corporation Mimetex Inc. ("Mimetex"), which owned 50 per cent of the voting shares of the appellant in 1996, exercised "de facto" control over the Canadian company.

The CCRA's council pointed out that;

- The two Canadian directors, who, according to the appellant's argument, were supposed to control the appellant, in fact knew almost nothing about the appellant (for example one did not know at the time of his examination for discovery how many employees were working for the appellant, who had signing authority for the appellant, etc.).
- Mimetex had financial control over the appellant and had a controlling influence over the appellant's affairs. This is best illustrated, in his view, by the fact that a Canadian director of the appellant, had to leave following a conflict with another U.S. doctor, who was not a shareholder, director or officer of the appellant, but was hired by the U.S. director on his own decision, without any resolution of the board of directors.

#### **Relevant legislation and analysis:**

De facto control within the meaning of subsection 256(5.1) of the Act which reads as follows:

"Control in fact. . . , a corporation shall be considered to be so controlled by another corporation, person or group of persons (in this subsection referred to as the "controller") at any time where, at that time, the controller has any direct or indirect influence that, if exercised, would result in control in fact of the corporation, except that, where the corporation and the controller are dealing with each other at arm's length and the influence is derived from a franchise, licence, lease, distribution, supply or management agreement or other similar

<sup>276</sup> Tax Court of Canada website [www.tcc-cci.gc.ca]

<sup>277</sup> (TCC) Docket: 2000-1413-IT-G Date: 2002/02/22

<sup>278</sup> ITA subsection 37(11)

<sup>279</sup> (TCC) Docket: 1999-4847-IT-G Date: 2001/11/08

agreement or arrangement, the main purpose of which is to govern the relationship between the corporation and the controller regarding the manner in which a business carried on by the corporation is to be conducted..”

### Ruling & rationale:

Based on the facts provided, the judge concluded that,

“Indeed the evidence discloses that the only director that exercised such control and supervision was the non-resident director. ... without the approval of the board of directors.”

### Implications and author’s commentary

In the author’s opinion this case underlines the importance of clearly considering “defacto” control issues whenever there are foreign shareholders or directors of a Qualified Canadian Controlled Private Corporation.

#### Notable quote:

***"I think there is a world market for maybe five computers."***

-- Thomas Watson, chairman of IBM, 1943

## Recent CCRA Directives

### Extended ITC Access for Farm Producers

A news release from Agriculture and Agri-Food Canada, dated February 6, 2002, indicates an intention to provide investment tax credits to farmers who make financial contributions towards SR&ED through agricultural organizations.

In the agriculture industry, investments of this kind are often referred to as check-offs, assessments, or levies to finance research and development.

Over the past two years, there have been ongoing consultations among CCRA, AAFC, and agricultural organizations on the delivery of tax-based incentives to farm producers. These consultations have resulted in the

development of a streamlined program application process to provide easier access to investment tax credits.

In order to qualify, agricultural associations will have to act as agents for the farm producers in all matters relating to the SR&ED Program. An information sheet is being sent to agricultural associations explaining the process.

#### Implications to SR&ED claimants:

As a result, we recommend that farm producers clarify what portions of any contributions made to such organizations can be claimed as for SR&ED purposes. We would suggest that these payments would likely also qualify for an additional 20% fully refundable Ontario Business Research Institute (OBRI) credit, if the appropriate pre-approval forms are filed on a timely basis (i.e. within 90 days of signing the contract).

## Food and Consumer Packaged Goods Sector SR&ED Guidance Document<sup>280</sup>

This paper describes the elements of a SR&ED project as conducted by the Food and Consumer Packaged Goods Industry in a stated attempt to, “clarify SR&ED in this industry from a practical viewpoint and describes the methods by which these activities are accomplished.”

We have reproduced the following excerpts from the paper which we believe to be of relevance to most if not all researchers in the agricultural sector.

### Formula Ingredient, Manufacturing Specifications (F.I.M.S.)

The science and technology involved in the development of product formulations and manufacturing process specifications usually requires SR&ED to meet consumer needs throughout worldwide geographical locations and temperature zones.

- Product stability,
- consistency in quality,
- flavor,
- texture,
- form,
- extended shelf life &
- safety

are some of the key attributes which this industry designs into its products.

---

<sup>280</sup> Prepared by Food and Consumer Products Manufacturers of Canada (FCPMC) & Canada Customs and Revenue Agency (CCRA)

This is accomplished by developing specifications for formulations and manufacturing parameters. (F.I.M.S. is the terminology used to describe this activity). In cases where such work involves a SR&ED project, those activities that directly contribute to the resolution of the technological uncertainties, qualify as SR&ED support activities.

Materials used by the food and consumer packaged goods industry in its wide range of products are primarily derived from agricultural or chemical sources which tend to exhibit chemical and physical variability. In the case of those materials derived from agricultural sources, this variability is largely caused by factors such as,

- time of harvest,
- change in species variety,
- growing location and conditions,
- seasonal climatic variation,
- water availability,
- stress factors etc.

In the case of other materials used for food and consumer packaged goods including preservatives, flavors, binders, fragrances etc., manufacturing or other source-specific factors may introduce differing degrees of material variability.

Due to the inherent variability of a wide variety of the materials used in producing food and consumer packaged goods, unanticipated and unacceptable results can occur, creating technological challenges that cannot be resolved using standard practice or knowledge available to the claimant. This may result in the performance of a SR&ED project to resolve the scientific and technological uncertainties encountered.

## **Consumer Research**

Consumer testing becomes eligible when it is used as an analytical tool in support of a SR&ED project.

The science of consumer testing involves the use of sensory evaluation techniques, which have been researched and documented by scientists. Sensory evaluation is defined as the scientific discipline used to evoke, measure, analyze and interpret reactions to characteristics of food and consumer products as perceived through the senses of smell, sight, taste, touch and hearing. These techniques are quantifiable and have been correlated to instrumental analytical measurements e.g. rheological measurements, HPLC, NMR, NIR, texture analysis etc.

Sensory characteristics of these products are considered as important as chemical, nutritional, physical or microbiological characteristics. The term "organoleptic

properties" is sometimes used to describe the sensory characteristics of these products.

The CCRA admits that, "it is impractical to predict consumer reaction to a given prototype, based solely on meeting certain chemical or physical criteria that have been achieved scientifically." Industrial scientists cannot rely on data from laboratory analysis to predict consumer acceptance, hence consumer testing has emerged as a valid analytical tool used in support of R&D projects. **Therefore consumer testing is eligible when used in support of a SR&ED project.** The testing instrument may be trained sensory panels, employees, consumers and users.

The following **types of (eligible) testing** involving sensory testing are often utilized to evaluate experimental products during the experimental development process:

1. **Discrimination testing** which would include both Triangle testing and Difference testing.
2. **Sensory panel testing** which could involve either a professional trained panel of experts or a semi-trained consumer group i.e. church group, scouts, guides, seniors etc.
3. **Focus group testing** or framework testing of experimental prototypes.
4. **CLT (Central Location Test):** pre-recruited personal interviews to evaluate experimental product prototypes.
5. **HUT (Home Use Test):** an in-home placement of experimental product prototypes generally with a questionnaire or other mechanisms to capture information related to the product design attributes.
6. **In-Situ Test** - End-use testing for service products used outside the home, in hospitals, food service operations, dental offices etc.

The following **types of (ineligible) consumer research** are often conducted to obtain information to assist in making marketing or business decisions about a product:

1. V-HUT or Volume Home Use Test, which is conducted to measure the volume potential for a potential product launch i.e. a BASES test of commercial ready product to measure the volume potential.
2. Simulated Test Market is used to measure share of market potential and repeat purchase potential.

3. Product Positioning Research which can be done in a central location or in home and where the questions relate the product to the marketing concept, pricing, branding, positioning, and a measure of the purchase intent.

4. Copy Pre-Testing where consumers react to advertising copy that describes a product and its use. Measures include product and brand name recall, persuasiveness, intent to purchase, likeability, memorability etc. No product prototypes are used in the test. Examples would include LINK or ASI testing for TV copy or STARCH testing for print advertising copy.

5. Ideation Research where consumers help to build a rough articulation of new products or brand positioning.

6. Continuous Tracking Research, which is typically a telephone-based survey to track consumer awareness of advertising and brand imagery.

7. Usage and Attitude (U & A) studies in which consumers provide a diary of their consumption behavior and attitudes regarding a category of products.

8. Focus Group testing related to marketing programs, i.e. concept development, ideation research, product positioning etc.

### **Scale-up and Commercialization**

As a project moves through various phases of development, frequent trials on a larger scale will be required. These experimental trials are often part of a SR&ED project using equipment of any appropriate scale.

### **Implications and author's commentary**

In the author's opinion, this paper likely provides significant clarification to claimants as to the cut-off of between eligible activities vs. those that are ineligible "style changes." Generally speaking, a "style change" includes any work aimed at aesthetic improvements rather than objective and verifiable advancements of technical knowledge. As a result this paper will likely be of considerable long-term significant to claimants in the agricultural, food and packaging industries.

#### **Notable quote:**

***"Heavier-than-air flying machines are impossible."***

-- Lord Kelvin, president, Royal Society, 1895

## **Treatment of "administrative" salaries or wages**

The stated purpose of this newly released Application Policy Paper<sup>281</sup> is, "to clarify what administrative salaries or wages are "directly related" to the prosecution of SR&ED, **under the traditional method** of calculating investment tax credits."

There have been cases where dedicated SR&ED performers have claimed, under the traditional method, all or a large portion of, the expenditures incurred for administrative salaries or wages. The expenditures were claimed either as all or substantially all (ASA) attributable to, or directly attributable to, the prosecution of SR&ED in Canada.

### **TASKS/DEPARTMENTS THAT ARE DIRECTLY RELATED TO SR&ED WORK**

- Financing of SR&ED (is "directly related" if the funds are used to perform SR&ED)
- Evaluating, recruiting and hiring of SR&ED personnel
- Technical implementation and control of scientific projects; defining future SR&ED direction
- supervision of SR&ED group and SR&ED project selection/evaluation. Such tasks are usually performed by a VP Technology
- Evaluating the technological feasibility of a product and the potential SR&ED efforts and costs involved
- Technological planning for on-going SR&ED projects (assignment of technological personnel, job priority, development of technological strategies, assessment of quality of materials used)
- Work performed by clerical staff for tasks directly related to payroll, purchasing and accounting

### **TASKS/DEPARTMENTS THAT ARE GENERALLY NOT DIRECTLY RELATED TO SR&ED WORK**

- Ø Bidding costs
- Ø Purchasing (other than direct purchasing of material/SR&ED equipment)
- Ø Taxation and Legal services
- Ø Sales, marketing and advertising
- Ø Employee relations

---

<sup>281</sup> CCRA Application Policy Paper 2002 - 01 (March 12, 2002) -- "directly related" test - for traditional overhead claimants

- Ø Development of benefits program for SR&ED personnel
- Ø Corporate secretary and reporting to shareholders
- Ø Initiating and closing of licensing agreements
- Ø Feasibility studies (non-technological) leading to potential SR&ED collaborations and assessing the commercial feasibility of a given technology
- Ø Commercialisation of existing intellectual property
- Ø Review and approval of SR&ED budgets
- Ø Patent application

### **Implications and author's commentary**

In the author's opinion, this represents a potential tightening of activities, which may have been formerly allowed under the traditional method. There is also a fair amount of judgement in evaluating the cut-off between "commercial and technical" feasibility given that commercial constraints often drive the technical objectives.

Examples of potential "grey" areas:

- "Financing of SR&ED" is eligible but "review and approval of SR&ED budgets" is not. Most SR&ED performers would agree that it is hard to "finance" SR&ED without a "budget"?
- Work performed, "by clerical staff for tasks directly related to payroll, purchasing and accounting" is eligible but, "development of benefits program for SR&ED personnel" is not?

Based on these and other issues the author believes that the paper:

- likely creates as much confusion as it removes and
- underlines the importance of clearly documenting the linkage of any SR&ED work claimed to the resolution of "specific technical uncertainties."

### **Notable quote:**

***"If I had thought about it, I wouldn't have done the experiment. The literature was full of examples that said you can't do this."***

-- Spencer Silver on work that led to the unique adhesives for 3-M "Post-It" Notepads

## **Water and Energy Sources as Materials**

The CCRA states that, "generally water and energy sources used to carry out SR&ED are not considered to be materials. Their costs are treated as overhead expenses and could be allowable SR&ED expenditures only in the traditional method of calculating the investment tax credit (ITC)."

However, there are circumstances where water and energy sources used in performing SR&ED could be considered materials consumed, based on the definitions of "materials" and "consumed" in Application Policy 2000-01.

In this respect, an Interim Instructional Sheet is aimed at clarifying how water and energy sources should be treated for SR&ED purposes<sup>282</sup>.

### **CCRA's "Previous" Policy Position**

Application Policy 2000-01 describes "materials consumed" with respect to SR&ED claims, defines "cost", "materials", "consumed" and "transformed" and gives examples from various industries.

As used in subclause 37(8)(a)(ii)(B)(V) of the Income Tax Act and paragraph 2900(2)(a) of the Income Tax Regulations, the word "materials" is defined as: "all the raw materials, substances, or other items that compose the body of a thing at a given moment in the SR&ED process."

The policy also states "energy sources directly related to the prosecution of SR&ED (fuel, electricity oil, etc.) are generally not materials," and that "costs related to these energy sources are overhead expenditures."

According to the application policy, "consumed" means that the material was "destroyed or rendered virtually valueless as a result of the SR&ED". The cost of consumed materials can be claimed both in the traditional and proxy methods of ITC calculations. Whereas materials "transformed" are described as being incorporated into a product that has some value either to the claimant or to another party. The cost of transformed materials is an allowable SR&ED expenditure only under the traditional method.

### **Water and Energy Sources as Consumed Materials**

In most industries, specifically in the chemical, petrochemical, minerals, pulp and paper and textile industries, water consumed is usually separated into several streams. One is the utility water used throughout the plant, another stream

<sup>282</sup> Excerpts and commentary from the CCRA's recent Addendum to Application Policy SR&ED 2000-01

is the boiler feed water, which is used to generate steam on site, and the third is the process water stream which, like any other feed material, enters the process and becomes part of intermediate and/or final product(s), as governed by the chemical equation(s) on which the process is based.

This process water stream is often pre-treated or conforms to specifications unique to the process. Once water enters the process, for all practical purposes, **it is rendered useless** - as process water feed - even if it is recovered.

The CCRA agrees that such process water streams meet the definition of "materials" and "consumed". The problem, however, is the identification of the costs and the quantity consumed in SR&ED. See "Financial and Technical Review Issues" below.

With respect to **energy use, a similar argument** could be made that some of the energy sources used in the plant can be **part of the chemical/physical process** - i.e. it is part of the conversion/production process and is integral to the chemical reaction on which the process is based.

All endothermic reactions in the chemicals, petrochemicals, pharmaceutical and biotechnology industries, most metallurgical refining processes, production of cement, glass, ceramics and other industrial raw materials, as well as most forming operations in the plastics industry, require significant energy input directly into the process. In physical terms, the intermediate and final products of these processes may retain this energy in their new form, but often the energy must be removed (sometimes dissipated).

Again the CCRA clarifies that, "The **cost of such energy** sources used in a process, that is part of SR&ED, **could be included in the cost of materials consumed**. However, the problem is to clearly identify its cost and quantity, apart from the portion used for lighting, space heating and running the machinery and equipment."

#### **Financial and Technical Review Issues Related to Water and Energy Use**

Although it is theoretically possible to calculate the energy and water consumed in a particular physical/chemical process, or to measure such consumption precisely in an operating plant, or in an experiment or trial run, often this data is not readily available to the claimant or the technical reviewers. Where some data may be available, it is often hard to clearly identify the portion of consumed water and energy sources directly related to the project.

Where expenditures on portion of water and energy sources that might qualify as "materials consumed" are expected to be

significant, the claimant has the choice of **the traditional method** of calculating ITC's, where cost of all water and energy sources directly attributable to the SR&ED are allowable overhead expenditures.

A claimant can also choose **the proxy method** of calculating ITC's and claim water and energy sources as consumed materials. In the case of proxy, **claimants will have to identify and document clearly the portion of the water and energy sources "consumed"** in the process.

Where expenditures on water and energy sources that might qualify as "materials consumed" are expected to be insignificant, the choice of the proxy method has no substantial impact on the cost of materials consumed allowable for SR&ED purposes.

Application policy SR&ED 2000-01 will be revised to reflect this position and to clarify other issues.

#### **Implications and author's commentary**

In the author's opinion, this represents a potential **"loosening" of the rules regarding the types of expenses covered by the proxy method** and is also likely of considerable interest to most "processing" industries.

#### **Notable quote:**

***"Computers in the future may weigh no more than 1.5 tons."***

-- Popular Mechanics, forecasting the relentless march of science, 1949

### **SR&ED strategies – "subcontractor" vs. "royalty" agreements - ensuring SR&ED eligibility**

#### **Sample Facts**

A taxpayer hires a subcontractor to perform eligible SR&ED on his behalf and negotiates to pay by way of future royalties. The subcontractor estimates that his normal charges for this work would have been \$100,000.

#### **Issue(s): SR&ED eligibility**

The taxpayer realizes that he must file the SR&ED claim for these subcontractor costs in the year "incurred," to avoid

missing the 18 month filing deadline<sup>283</sup> for SR&ED costs. In this case he attempts to accrue reasonable, arm's-length costs (i.e. \$100,000) related to the current year's work.

### **Effects of this position:**

1) There is a provision in the SR&ED legislation, which (temporarily) denies an investment tax credit for any costs, which remained unpaid within 180 days of year-end. These costs will be audited in the current year and a conclusion will be made on their "reasonableness," however, investment tax credits will be paid on these amounts only in the years in which they are actually paid.

2) Unfortunately for the taxpayer, under the current scenario, they will likely not earn SR&ED credits on these payments due to specific legislation which reads,

"no deduction may be made under this section (i.e. SR&ED) in respect of expenditure **made to acquire rights in or arising out of SR&ED.**"<sup>284</sup>

### **Potential methods to get "on side" for SR&ED:**

Since, under the current fact situation, the legal agreement itself had not **split the invoice into separate contractor vs. royalty payments**, the entire amount of the payment would be ineligible under a strict reading of the legislation.

If instead we had created the following fact scenario:

We agreed to pay the "subcontractor" fees of \$100,000 (perhaps at an accelerated rate e.g.. 10% of sales) and then once these fees are paid, **pay any remaining fees as "royalties" (perhaps at a lower rate say 5%)**, the "subcontractor" payments would arguably be eligible since it is not caught by the strict wording of the 37(4) legislation above.

As a result, taxpayers in this situation may wish to consider a clause in their agreements such as:

"The "subcontractor" shall keep a record of his time and costs and provide this along with related progress reports to the company on a monthly basis. These fees will then be paid upon successful commercialization of the product at a rate of \_\_\_% of sales."

<sup>283</sup> Prescribed forms must be filed within 18 months form year end as per ITA subsection 37(11)

<sup>284</sup> ITA subsection 37(4)

We are then free to add further "royalty" payments as completely distinct amounts which should not affect the SR&ED eligibility of the "subcontractor" payments above.

### **Other potential effects - GST implications:**

Technically, under this proposed invoicing method, the subcontractors may owe the GST on their invoices when they are issued. As a result they may find it unfair if this position makes them pay taxes on amounts they have not received. Given that "payor" company will get the corresponding "input tax credit" on this GST payment, we can still likely work out a deal where we agree to return this amount to the subcontractor until the "subcontractor" payments actually start rolling out to them.

In effect, this new position creates an overall cap for SR&ED claim purposes as to the portion of "subcontractor payments" incurred and differentiates them from any future royalty payments that may also be made. This cap is determined based on what "reasonable" fees would normally have been paid for the services performed in the current year.

### **Notable quote:**

***"There is no reason anyone would want a computer in their home."***

- Ken Olson, president, chairman and founder of Digital Equipment Corp., 1977

## **Ontario Business Research Institute (OBRI) Credit – 20% & refundable**

The provisions for this credit are included in section 43.9 of the Ontario Corporations tax act. Some of the major issues to note are as follows:

1) In order to be a "qualifying corporation" and hence eligible to claim the OBRI credit, you must carry on business in Ontario through a permanent establishment. This is not required with the similar Quebec tax credit.

2) The requirement for an advanced ruling received royal assent December 18, 1997 with Bill 164. At the time of writing it appears that the ruling requirement is still in force however, the government is contemplating its removal. To this extent we have reproduced the relevant legislation below.

### **Expenditure before ruling obtained**

"If a corporation or partnership incurs an expenditure under a contract before the Minister gives a ruling under subsection

(10), and the Minister subsequently gives a favourable ruling, the expenditure shall be deemed, for the purposes of subsection (10) but not subsection (3), to have been made after the ruling was given if the corporation or partnership applies to the Minister for the ruling,

- (a) within 90 days after the later of,
  - (i) the day on which the contract was entered into, and
  - (ii) the day on which the Tax Credits to Create Jobs Act, 1997 receives Royal Assent; or

(b) no later than three years after the day on which the contract was entered into, and the Minister is satisfied that the corporation or partnership was unable to apply for the ruling at an earlier time through no fault of its own for reasons that were beyond its control.”

Soon after this legislation was released the Ontario government announced its intention to dispense with requirement for ruling,

“At any time after May 6, 2000, the Minister may give a direction that rulings no longer need to be obtained under this section in respect of contracts entered into after the date of the Minister's direction, if the Minister is satisfied that corporations, their officers, directors and shareholders, partnerships and their members and eligible research institutes are conducting their business and affairs in a manner that meets the spirit and intent of this section.”

### **Implications and author's commentary**

Despite these great “May 2000 budget speech announcements” above as of June 2002 the Ontario Ministry is still vigorously enforcing this requirement. In the author's opinion, the government should grant this credit to all corporations performing work that qualifies as a, “Third party payment,” for federal SR&ED purposes.

Hopefully, the proposed changes will take effect in the near future. In the meantime, claimants should remain vigilant to file the pre-approval documents for any “University” or “Research Institute” based SR&ED work.

### **Closing quotes:**

***"So we went to Atari and said, 'Hey, we've got this amazing thing, even built with some of your parts, and what do you think about funding us? Or we'll give it to you. We just want to do it. Pay our salary, we'll come work for you.'***

***And they said, 'No.' So then we went to Hewlett-Packard, and they said, 'Hey, we don't need you. You haven't got through college yet.'"***

-- Apple Computer Inc. founder Steve Jobs on attempts to get Atari and H-P interested in his and Steve Wozniak's personal computer

***"640K ought to be enough for anybody."***

-- Bill Gates, 1981



## SR&ED Newsletter Edition 2001-2

Welcome to the second 2001 edition of our semi annual newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims. This newsletter includes significant SR&ED developments issued by the CCRA and the tax courts during the past six months. The major topics of this newsletter are outlined as follows:

<b>Recent SR&amp;ED tax cases &amp; related issue(s) .....</b>	<b>223</b>
Nashen – eligible software development .....	223
Ainsworth Lumber – ordering of ITC use.....	225
Larter – Tax effects of work outside Canada .....	225
R.J. Miller – lack of technical documentation .....	226
Wojcik – incomplete information.....	227
<b>Taxability of Super-allowances.....</b>	<b>228</b>
Quebec drops superdeductions.....	228
Ontario replaces Super Allowance.....	161
<b>Corporate structuring corner .....</b>	<b>229</b>
Association through trusts.....	229
<b>Tracking innovation assets.....</b>	<b>230</b>
Tools for analyzing patents .....	230
Implications to SR&ED claimants.....	231
<b>SR&amp;ED tax planning corner.....</b>	<b>232</b>
Payments to non-residents .....	232
1) Withholding taxes .....	232
2) SR&ED eligibility.....	233
Implications & related planning .....	233

## **Recent SR&ED tax cases & related issue(s)**

The past six months has witnessed a release of a variety of smaller cases. The main issues and potential implications are outlined in the following pages. Copies of the judgments are available from the Tax Court of Canada's website.<sup>285</sup>

### **Nashen<sup>286</sup> – eligible software development**

#### **Facts: entire software project claimed**

The company has been in business for over 16 years. Broadly speaking, its business includes developing, customizing and modifying accounting, distribution, manufacturing and related software for the distribution and manufacturing industries. These systems run on "midrange" computer servers (currently the IBM AS/400 with 10 to 500 attached workstations).

During its 1998 taxation year it claimed four separate research projects with a resulting claim for SR&ED expenditures of \$88,188 and investment tax credit of \$30,866.

Project #1 – Common Driver for API's,  
Project #2 – E-mail alternatives,  
Project #3 – Integration of AFP documents, &  
Project #4 – Knowledge-based business.

- Projects 1 & 4 involved development of context-sensitive electronic forms,
- While projects 2 & 3 involved developing a system for electronic mailing of complex documents.

#### **Issue: Eligibility of SR&ED activities**

The CCRA disallowed the credit on the basis that it was, "Unclear whether the company proceeded by formulating hypotheses specifically aimed at eliminating technological uncertainty and that they presented no detailed record of hypotheses, tests and results to support claim."

#### **Relevant legislation and analysis:**

Given that the case focused on technical eligibility issues the taxpayer responded with the following additional technical information:

<sup>285</sup> Tax Court of Canada website [www.tcc-cci.gc.ca]

<sup>286</sup> Nashen & Nashen Consultants Inc. v. The Queen - 06/15/01-- Doc. 2000-3621(IT)I (T.C.C.)

#### A. Technological Limitations of Current Technology

At the outset of the project, there was no capability for the AS/400 system to e-mail directly (with no other intervention) a document (i.e. a spool file ready for printing) which has more than just text. When the spool file has only text, the AS/400 command, sddst, will after some straightforward configuration, be able to easily e-mail the file to any address on the Internet.

However, many applications today create spool files which have advanced function printing (AFP) capabilities. These functions include the embedding into documents of design elements, such as graphics, forms (called overlays) logos (page segments), bar codes, different font character sets, etc.

There is no facility, either offered by IBM, or by third parties, to e-mail directly from the AS/400 these complex documents. Discussions with IBM, and with third parties that offer related fee-based products, indicated that a tool of this type would be very marketable!

#### B. Technological Uncertainties

Determine if there is a method to email spool files that contain advanced, embedded functions.

#### C. Related SR&ED Activities

During 1997, the Company's team undertook to create a workflow based system, with folders as controlling objects.

During 1998, the research team focused on the creation of a Graphical Development Tool that was to be capable of producing exact electronic replicas of paper forms, store them in a server (a AS-400 machine) and a Form Filler Tool to provide accurate and flexible form filling.

The Company acquired the Advanced Function Printing (AFP) Utilities for the AS-400 computer that is compatible with the OS-400. Thus a created PC form may be up-loaded to the AS-400 server. The AFP Utilities include several resources such as form definitions, overlays, page segments, fonts and page definitions.

However, the AFP function was not a Form Design Graphical Development tool. It is not compatible with popular graphic formats such as PC Paintbrush bitmap (PCX), Tag Image File Format (TIFF), Graphics Interchange Format (GIF), JPEG compressed bitmap (JPEG) and Portable Document File (PDF) (Adobe Acrobat – displayable with a Web browser).

For the desired E-Mail capability, after experimenting with all PC-based e-mail utilities, it was found that there was a need for a Form Design Tool that could convert the AFT form into a PDF format, which was retained as the most promising standard.

[Author's note: an ideal description would compare results to initial expectations for each of the utilities and tools examined. These conclusions themselves may in fact represent technical advancements.]

#### D. Technical conclusions

By the end of the 1998 fiscal year, following tests with JPEG, GIF and PDF standards the 1999 planned research program called for the development of a Framework that combined:

- Form Design Toolkit
- Form Filler Frontend
- And Central Advanced Function Printing

[Author's note: an ideal description would provide additional detail of the conclusions to date which have resulted in this vs. other potential frameworks and briefly provide cite any remaining technical uncertainties.]

#### Ruling & rationale: 2 of 4 projects eligible

On the basis of the project review the judge concluded that Projects #1 and #4 did not display strong enough evidence of a technological advancement to support the SR&ED claim but that Projects #2 & #3 did. As a result the company was entitled to credits on projects #2 and #3, subject to informal procedure limitations.<sup>287</sup>

#### Implications and author's commentary

In the author's opinion, this case exemplifies one of the most commonly encountered problems when preparing SR&ED claims: isolating the technical, from the business uncertainties of the project. Even though this case is only the result of informal procedure, it is one of the first SR&ED tax cases with respect to software eligibility and is likely therefore of moderate short-term significance.

The fact that this and many recent cases are being filed as "informal appeals" allow the small taxpayer a fast and cost effective (\$100 filing fee) method to complete his or her

<sup>287</sup> Informal appeal generally limited to claims of \$12,000 of taxes under appeal.

appeal, with forms that are directly available from the internet.<sup>288</sup>

#### Inro Consultants Inc.<sup>289</sup> – eligibility of royalty payments

##### Facts: royalty payment for rights

The sole shareholder of the company was a university professor who developed a software program in the course of employment. The company and university entered into an agreement in which he acquired rights of ownership of software program for which he would pay a royalty on sales and claimed \$47,341 of such payments as an SR&ED expense. The CCRA disallowed the credit.

##### Issues: SR&ED eligibility of payments

Are payments to acquire rights ever eligible for SR&ED?

##### Relevant legislation & analysis

Unfortunately for the company the income tax legislation is quite clear in stating that,

“No deduction.....for an expenditure made to acquire rights in, or arising out of, and [SR&ED].”<sup>290</sup>

##### Ruling and rationale: ineligible

As a result of the clear legislation, the Judge denied any SR&ED deduction or related tax credit on these payments.

##### Implications and author's commentary

While legislation related this issues quite clear, problems and interpretation can still exist where a taxpayer negotiates to pay eligible SR&ED subcontractors by way of royalties rather than immediate cash. As discussed in our previous newsletter, 2000 – 1 (available from our website), we believe that this scenario would represent payments to perform SR&ED rather than to acquire rights resulting from SR&ED.

In the author's opinion, this case illustrates the importance of correctly structuring the legal form of any SR&ED contracts.

<sup>288</sup> tax court forms available at: [www.tcc-cci.gc.ca/rules/inf/](http://www.tcc-cci.gc.ca/rules/inf/)

<sup>289</sup> INRO CONSULTANTS INC., v. THE QUEEN, June 29, 2001, document 1999-4233(IT)I (T.C.C.)

<sup>290</sup> ITA subsection 37(4)

## Ainsworth Lumber<sup>291</sup> – ordering of ITC use

### Facts: ITC usage not chronological

The facts of the case are voluminous however, a major issue addressed whether the company was required to deduct investment tax credits ("ITC's") it may have had arising out of expenditures incurred in its 1993 taxation year from tax otherwise payable before deducting ITC's arising in a subsequent (1995) taxation year?

### Issue: Ordering of ITC use

Are there any ordering rules on this ITC usage?

### Relevant legislation

The judge examined legislation relating to the deduction of the ITC which reads, in part, as follows:

“There **may** be deducted from the tax otherwise payable by a taxpayer under this Part for a taxation year an amount not exceeding the least of...”<sup>292</sup> (emphasis added)

### Ruling & rationale: Taxpayer elects order

The CCRA argued that subsection 127(5), permitting the deduction of ITC's, requires the deduction of the 1993 ITC's before the deduction of the 1995 ITC's.

After a detailed review of the wording of the subsection the judge did not agree stating,

“That subsection simply provides a formula for determining the amount of ITC's that may be deducted from the tax otherwise payable for a taxation year. It includes neither direction nor prohibition respecting the order of ITC deduction.”

The judge further clarified his opinion that,

“If Parliament had intended an "ordering" of deductions it would have so legislated as it did in subsection 80(3).[6] That section provided that a formula determined amount be applied to reduce, in the following

order the taxpayer's (i) non-capital losses (i.1) farm losses, (ii) net capital losses, (iii) restricted farm losses for preceding years ...”

### Implications and author's commentary

Although the specific facts of this case are somewhat unique, the implications of the judgment are likely of considerable significance to taxpayers who earn refundable ITC's since it implies that the taxpayer will always be able to apply non-refundable tax credits against any taxes payable while maintaining any refundable credits. In the author's opinion, it also illustrates the importance for tax preparers to contemplate the optimal use of these credits in the related tax form<sup>293</sup>.

## Larter<sup>294</sup> – Tax effects of work outside Canada

### Facts: SR&ED performed outside Canada

The taxpayer was a ship's captain earning income on a ship in the period from September 1992 to November 1993. The ship engaged in research, including drilling into the ocean floor for core samples.

A specific provision of the income tax act provides that individuals may, in certain circumstances, exclude from taxable income the wages earned from their Canadian employer while working abroad. The minister disallowed the OETC claim for 1993 on the grounds that that taxpayer had not conducted an eligible activity for OETC purposes as required under the Income Tax Act.

### Issue: Is SR&ED an engineering activity?

### Legislation & analysis:

To be eligible for the OETC credit, the legislation<sup>295</sup> requires,

“the taxpayer carry out his employment in connection with a contract under which his employer carried on a business concerning: (A) exploring for petroleum, (B) a construction . . . or engineering activity, or (C) an activity performed under contract with the United Nations.”

<sup>291</sup> AINSWORTH LUMBER CO. LTD., v. THE QUEEN, Date: 2001 04 24 Docket: 98-1052-IT-G (T.C.C.)

<sup>292</sup> Per ITA subsection 127(5) – Investment Tax Credit

<sup>293</sup> CCRA Corporate Income Tax Schedule 31 – Investment tax credit

<sup>294</sup> Norman P. Larter v. the Queen - Tax Court of Canada (Informal Procedure) November 1, 2000 (Court File No. 1999-4012(IT)I)

<sup>295</sup> OETC credit eligibility per ITA clauses 122.3(1)(b)(i)(A), (B), and (C)

## Ruling & rationale: SR&ED found ineligible

The judge dismissed the taxpayer's appeal, concluding,

- (a) that, although scientific research important by any standard, such research not one of activities listed in the Act (i.e. A, B or C above); and
- (b) that, as a result, the work performed by the ship in issue not qualifying the taxpayer was not entitled to receive the OETC claimed.

## Implications and author's commentary:

Since this was an informal procedure the level of judicial review and the related weight of this precedence is relatively low. The main concern the author has with this judgment is the proposal that "SR&ED" activities are not an "engineering" activity.

In fact, Webster's dictionary defines engineering as, "the science of applying knowledge of the properties of matter and natural sources of energy to the problems of industry."

Furthermore, the definition of "experimental development"<sup>296</sup> clarifies that it includes "engineering" to the extent it is, "commensurate with the needs, and directly in support of ..." the SR&ED project. Given that these facts were not contemplated, the author believes that this issue is one a variety of unresolved issues with respect to Canadian employees performing SR&ED outside of Canada.

On a secondary note, the author proposes that under the current legislation, if the work were performed outside of Canada, as necessary to earn the OETC credit, it would not be eligible for SR&ED tax credit purposes.<sup>297</sup>

## **R.J. Miller<sup>298</sup> – lack of technical documentation**

### Facts: SR&ED work denied without comprehensive explanation

<sup>296</sup> definition of SR&ED per ITA subsection 248(1)

<sup>297</sup> ITA subsection 37(1) requires SR&ED work to be "carried on in Canada."

<sup>298</sup> R.J. MILLER & ASSOCIATES (1986) LTD. V. THE QUEEN, Date: 2001 0 102 Docket: 97-1632-IT-G; 97-1633-IT-G

The Corporation's research included two projects for the years in question: (a) the Custom Stock (1993 and 1994) and (b) the Receiver-Trigger (1994).

Mr. Miller, a skilled shooter, formulated in his mind what he wanted in a custom shotgun. He hired Weber, a gunsmith, to carry out his technical innovations. Together they created the Custom Stock. In the same manner the Corporation developed a technologically advanced Receiver-Trigger and Recoil system. All were eventually incorporated in a custom shotgun for which the Corporation has secured a patent in Canada and the U.S.

The CCRA science auditor concluded that the work on the Custom Stock met all the above requirements however, the work on the Receiver-Trigger did not qualify since there was no technical advancement or technological uncertainty. This opinion was offered without a comprehensive analysis.

## Issues: Qualifications of science auditor

The core issue concerned the determination of which development activities would be eligible. One of the taxpayer's main arguments was that the auditor was not sufficiently qualified to evaluate the work in question.

## Legislation & analysis:

With respect to the technical backgrounds of the parties in question, the judge noted:

"The evidence of Weber, while an impressive gunsmith, was limited to producing shotgun parts designed and directed by Miller. Weber is a skilled craftsman and has his own shop. He was not the inventor and driving force behind the creation of the custom shotgun nor was he called on to give expert testimony."

"The CCRA's expert, was a highly qualified mineralogist but he did not have experience with competition shotguns. It is the position of the expert witness to provide a comprehensive analysis of the matter that would permit the court to arrive at an opinion. No such analysis was given."

## Ruling & rationale: claimant must provide evidence

The judge examined the SR&ED eligibility issues established in the case of Northwest Hydraulic Consultants v. the Queen and stated,

“It is clear that an Appellant has the burden of proof to show that the Minister’s assumptions are incorrect. Usually in situations dealing with a specialized and technical area, the Court looks to be instructed by experts. In this case the use of experts was badly lacking on both sides.”

As a result the judge looked to the evidence provided during the trial specifically,

In June of 1993 the first shotgun was examined for fitting. The prototype was in service by August of 1993. It worked from the first firing and did not require a single modification since the initial installation. In the words of the gunsmith,

“We started with one gun. I look at the parts, I designed the piece; I built it and tested it. **It worked from the first go.** No changes were required.” (emphasis added)

As a result, the judge concluded that the technical uncertainty criterion was not satisfied and the case dismissed.

### Implications and author’s commentary:

In the author’s opinion, this case reiterates the importance of correlating any SR&ED activities to one or more specific, technical uncertainties. Given the taxpayer could not illustrate system uncertainty as to, “which of several alternatives: i.e. paths, routes, approaches, equipment configurations, ...etc. would meet the desired specifications,” the judge had no choice but to deny the admissibility of this work

## Wojcik<sup>299</sup> – incomplete information

### Facts: Claim filed without technical information

The taxpayers, both individuals, made a claim for SR&ED credits and made mention of a few projects: the smokeless ash tray, the eco-dryer, and linear motors for space transportation (the "projects") however, according to the judge, “the only evidence provided by the taxpayer before the Court is the repeated claim that SR&ED was being carried on.”

<sup>299</sup> Wojcik, S. v. The Queen; Wojcik, A. v. The Queen -- 07/10/01 -- Docs. 2000-3792(IT)I; 2000-3793(IT)I – (T.C.C.)

The taxpayer claimed that the forms to claim SR&ED expenditures were consistently denied to them to prevent them from making a claim. In response the CCRA provided them additional copies of the forms and the opportunity to make additional technical submissions however, no response was received.

### Issues: reasons for lateness or omissions

What if any reasons could be proposed for failing to file a complete SR&ED claim or to extend the filing deadline beyond the 18 month limit<sup>300</sup> established in the legislation?

### Relevant legislation & analysis:

Given that the taxpayers could show no evidence of any systematic observation, measurement or experiment in relation to the projects, it clearly fell short of establishing entitlement to SR&ED expense deductions and investment tax credits.<sup>301</sup> Furthermore, the judge was satisfied that the forms to make SR&ED claims are available from any CCRA office. The author notes that these forms are also available on the internet.<sup>302</sup>

### Ruling and rationale: all information required in prescribed time

Based on the above facts the judge dismissed the appeals.

### Implications and author’s commentary

Although the results of this case are likely of little surprise to experienced SR&ED claimants, it illustrates that;

- the CCRA may be very flexible in allowing additional technical information to be submitted however,
- complete claims which include technical project descriptions, within prescribed times, are required in all cases.

<sup>300</sup> 18 month filing deadline for corporations per ITA subsection 37(11)

<sup>301</sup> Per ITA subsection 37(1)

<sup>302</sup> Per CCRA website: [www.ccra-adrc.gc.ca](http://www.ccra-adrc.gc.ca)

## Taxability of Super-allowances

As a result of its 2000 budget, the federal government has proposed that, for taxations year beginning after February 22, 2000, provincial deductions for R&D in excess of actual expenditures would be treated as taxable government assistance.

### Quebec drops superdeductions

As a result of this, the Québec superdeductions assistance program was cancelled for corporations with taxation years commencing after February 29, 2000.<sup>303</sup>

### Ontario replaces Super Allowance

Ontario is proposing to suspend the R&D Super Allowance for two years and, in its place, allow corporations to exclude from Ontario taxable income the portion of the federal investment tax credit that relates to qualifying Ontario Scientific Research and Experimental Development (SR&ED) expenditures<sup>304</sup>.

This measure would be effective for a 24-month period, beginning with the first taxation year for which the federal super-deduction provision would apply to the corporation. To qualify for the Ontario benefit under this proposal, the investment tax credit must:

- be included in federal taxable income during the 24-month period; and
- be in respect of qualifying Ontario SR&ED expenditures incurred by the corporation during the 24-month period or in the taxation year immediately preceding the 24-month period.

Ontario then called upon the federal government to revisit its 2000 Budget proposal and to ensure that federal legislation does not target Ontario's R&D Super Allowance.

## Ontario fights back!

### Analysis and Author's comment

In the authors' opinion, the effectiveness of Ontario's proposal requires a literal reading of the definition of "government assistance,"

"Government assistance means assistance from a government, municipality or other public authority whether as a grant, subsidy, forgivable loan, deduction from tax, investment allowance or as any other form of assistance **other than as a deduction under subsection (5) or (6);**"<sup>305</sup> (emphasis added)

#### "Loophole" in the wording?

Given that subsection 127(5) referred to above represents the, "federal SR&ED investment tax credit," it appears that this amount is specifically excluded and will not be subject to tax.

Ironically, this "legislative" exclusion of the 127(5) credit was to avoid double counting since the amount was already included in taxable income through another section<sup>306</sup>.

Despite this fact, if the issue is brought to court, the judge will likely rely on a literal reading of the act and the Ontario position will be successful. Informal discussions with the Ontario Ministry of Finance have indicated that this is likely their legal interpretation.

#### Effect(s) on Ontario SR&ED claimants

It is also not surprising that Ontario proposed this as a two-year measure since this is likely the amount of time it would typically take the federal government to change the existing legislation. In the meantime, SR&ED claimants should be careful to ensure that their tax returns are reflecting the, "most current legislation."

Given that this will affect every Ontario SR&ED claimant, this issue will likely be of significance to all Ontario SR&ED claim preparers. It will be interesting to see what, if any, measures the next Federal budget proposes in this regard.

<sup>303</sup> As per CCRA Application Policy Paper SR&ED 2000-03

<sup>304</sup> As posted per the Ontario Ministry of Finance website, "Ontario Budget 2001" Paper C pgs 97-98 - 2001

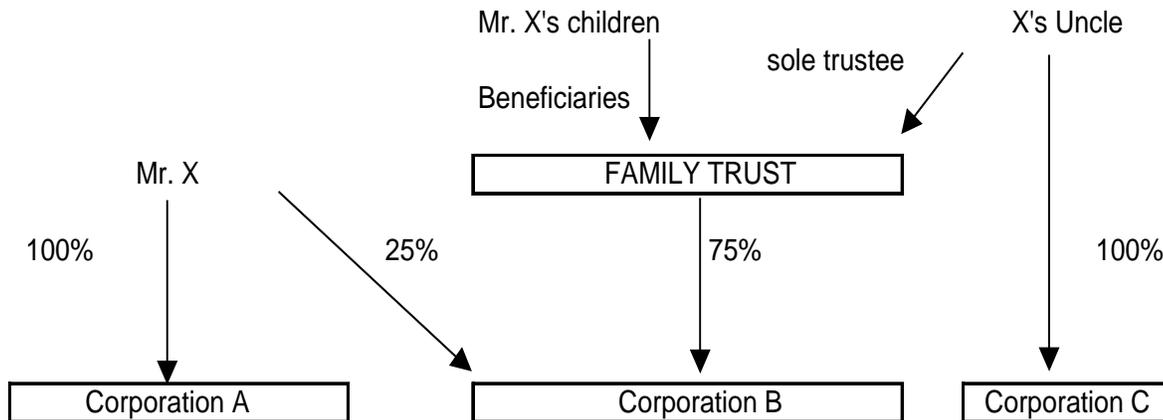
<sup>305</sup> Government assistance defined per ITA subsection 127(9)

<sup>306</sup> taxation of federal SR&ED ITC per ITA paragraph 37(1)(e)

## Corporate structuring corner

## Be careful whom you trust!

### Association through trusts



#### Issues: deemed ownership of shares

##### Deemed ownership

- A specific tax provision<sup>307</sup> treats shares of a corporation held by a trust as being owned by its beneficiaries. In cases where the trust is “discretionary” as to the allocations to its beneficiaries, each is deemed to have full ownership.

##### Minor beneficiaries

- Another tax provision<sup>308</sup> provides that shares of a corporation owned by a minor child<sup>309</sup>, directly or indirectly (through a Trust), shall be deemed to be **owned by a parent** of the child for the purposes of determining whether the corporation is “associated” with any other corporation that is controlled, by that parent, or a group that includes the parent.

#### Example

The above example is reproduced from a CCRA bulletin.<sup>310</sup> As a result of the above noted rules, even if all of X’s children are over 18 years of age, both Corporations A and B will be “associated” for tax purposes.<sup>311</sup> The CCRA also suggests that since X’s uncle is the sole trustee, assuming he can bind the trust, he will also control Corporation B. As a result Corporations A, B & C will be associated.<sup>312</sup>

#### Tax planning implications

In order to receive enhanced SR&ED tax credits, an associated group of companies must have under \$400,000 in income and under \$15,000,000 in taxable capital.<sup>313</sup> If possible, to claim the optimal amount of expenditures, the associated group needs to be under \$200,000 in income and under \$10,000,000 in taxable capital. As a result, if one can “dis-associate” from the balance of a group, these limits become easier to maintain.

While planning for trust is a complex field, some of the general provisions tax planners may use include;

- A testamentary<sup>314</sup> trust’s share may be deemed to be held by “income” rather than “capital” beneficiaries.<sup>315</sup>
- Beneficiaries can be excluded until they turn 18
- Family members should avoid owning  $\geq 25\%$  of the shares of each others’ companies, since this creates a basis for association.

<sup>307</sup> Income Tax Act, paragraph 256(1.2)(f)

<sup>308</sup> Income Tax Act, subsection 256(1.3) – Parent deemed to own shares

<sup>309</sup> Under 18 years of age

<sup>310</sup> CCRA Interpretation Bulletin 64-R3

<sup>311</sup> Income Tax Act, paragraph 256(1)(c)

<sup>312</sup> Income Tax Act, 256(1)(b) & 256(2)

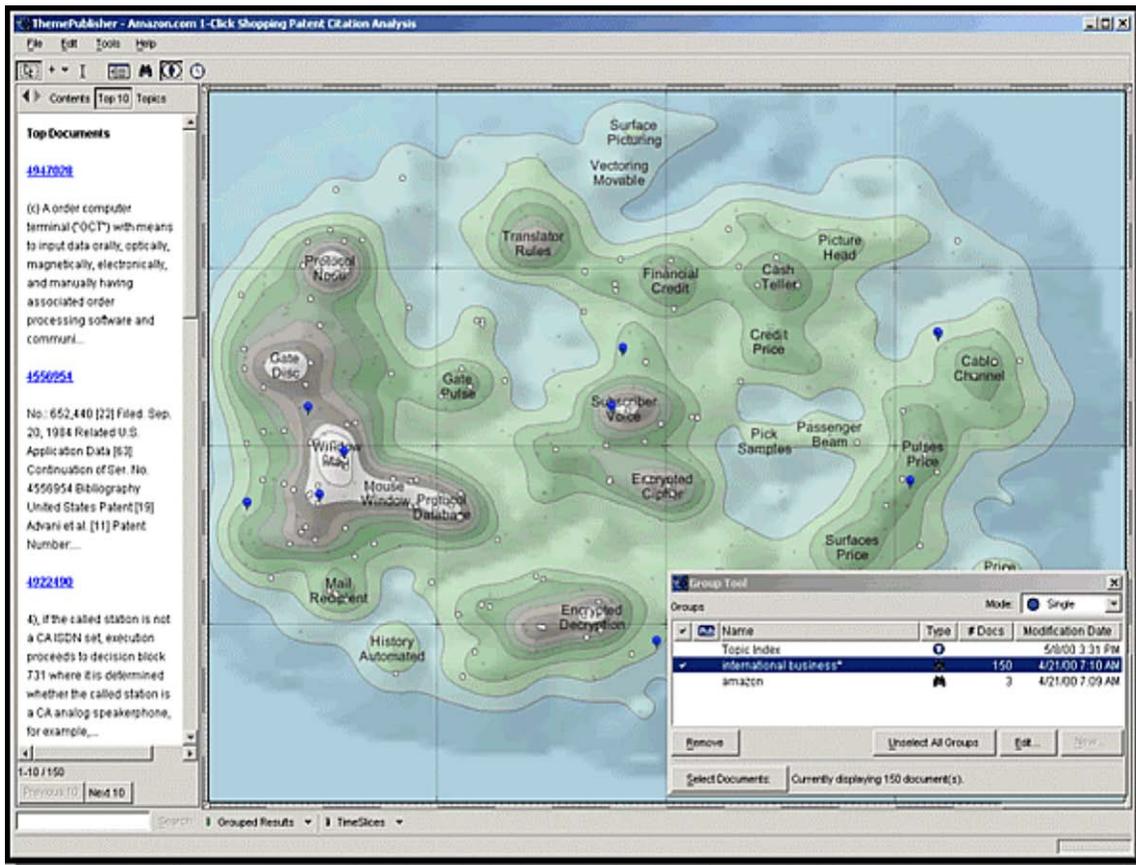
<sup>313</sup> Enhanced credit eligibility per ITA subsections 127(10.1 & 10.2)

<sup>314</sup> Testamentary trusts are created upon death of an individual

<sup>315</sup> Income Tax Act, subparagraph 256(1.2)(f)(i)

## Tracking innovation assets

large collection of patents and other non-patent documents.  
318



## Mapping the technology

In the author's opinion, a common problem of unsuccessful SR&ED claimants is a failure to define "existing standard practices" before experimentation is started. Many SR&ED claimants are aware that most governments make patents available on-line and free of charge.<sup>316</sup> Despite this resource, one of the major problems encountered when using the various "intellectual property" websites is the overwhelming degree of information received.

### Tools for analyzing patents

One company to provide users with a high level view on innovation assets is Aurigin Systems Inc.<sup>317</sup>, whose software, offers powerful text analysis tools that generate topographical maps based on the "key terms" contained in a

The interface maps both the content and the context of the documents and allows the subject matter to be searched using simple keyword queries. Documents matching the query are grouped into topic areas so that:

- the frequency of documents associated with the topic (content) increases the elevation of the topic area within a given contour on the topographical map, and
- the degree of inter-relationship between the topics (context) is represented by their physical distance between the peaks.

The result is a concise, technical overview of the landscape in a particular market. The user may create time slices of the map to see how it changed over different time periods.

<sup>316</sup> Canadian patents at "www.cipo.ca" and U.S. patents at "www.uspto.gov"

<sup>317</sup> Aureka® platform from Aurigin Systems – [www.aurigin.com](http://www.aurigin.com)  
Additionally, the Aurigin technology offers a whole suite of analytical tools (Reporting, Citation Analysis, Claims Tree etc.) that enable you to establish a strategic framework for IP Management and extract significant value from your IP.

<sup>318</sup> For those interested in Aurigin's technology and IP related services, please contact Greg Bucklin of Aurigin at (408) 873 8400 and mention the MEUK Newsletter.

## **Implications to SR&ED claimants**

In general any tools aimed at developing a comprehensive, yet concise, definition of these “standard practices” will simplify the SR&ED tax credit and patent filing processes.

**Payment to non-residents for work in Canada**

<b>Permanent Establishment (P.E.)</b>	<b>1) No P.E.</b>	<b>2) With P.E.</b>
Contractor payment	\$ 100,000	\$ 100,000
<b>Contractor's (payee) taxes</b>		
Canada withholding	\$ 15,000	\$ -
income tax (@35%)	\$ -	\$ 35,000
U.S.A. income tax (@35%)	\$ 35,000	\$ 35,000
less: FTC	\$ (15,000)	\$ (35,000)
Net taxes paid	<u>\$ 35,000</u>	<u>\$ 35,000</u>
 <u>Payor's SR&amp;ED tax credit (35%)</u>	 <u>\$ -</u>	 <u>\$ 35,000</u>

**Payments to non-residents**

Often, Canadian SR&ED performers will hire foreign contractors to assist with this work. Generally, these payments fall into three main categories:

- 1) Subcontractors
- 2) Patents & other “know-how”
- 3) Management fees<sup>319</sup>

In the author’s experience, the first two categories (subcontractors & patents) represent areas where income tax implications, including eligibility for SR&ED tax credits, is a source of major confusion amongst taxpayers.

Often, performers will hire foreign contractors to assist with this work. In the author’s experience, the eligibility of these payments for SR&ED tax credits is a source of major confusion amongst taxpayers.

**Issues & relevant legislation**

**1) Withholding taxes**

**a) Commercial services in Canada**

”Every person paying to a non-resident person a fee, commission or other amount in respect of services rendered in Canada, of any nature whatever, shall deduct or withhold 15 per cent of such payment.”<sup>320</sup>

<sup>319</sup> see CCRA IT468R re. management fees paid to non-residents  
<sup>320</sup> ITA regulation 105(1)

**b) Know-How and Similar Payments**

Though no legal definition of "know-how" payments exists, the CCRA regards them to include,

“payments for special knowledge, skills or techniques which are considered beneficial in the conduct of a business. Such payments may be for expertise flowing from experience, ability or research which may be reflected in blueprints, drawings, specifications, plant layouts, designs, secret processes and formulae.”

Generally speaking, the tax legislation<sup>321</sup> subjects a non-resident person to an income tax of 25% on all amounts paid.

**c) Exemptions to withholding taxes**

The major exemptions to the withholding tax rules are on the basis of “Tax treaties” or in cases where the transaction is a “Bona Fide Cost Sharing Arrangement”<sup>322</sup>.

**Tax treaties**

If know-how or similar payments to a resident of a country with which Canada has a comprehensive tax treaty in force, the taxability of payments can be reduced. For example,

- U.S.A.<sup>323</sup>, Austria, Netherlands – 0% (exempt)
- United Kingdom - limits rate to 10%

<sup>321</sup> ITA paragraph 212(1)(d)

<sup>322</sup> defined per ITA subparagraph 212(1)(d)(viii)

<sup>323</sup> per Article XII(3)(b) of the Canada-U.S. Tax Treaty

## **2) SR&ED eligibility**

The Canadian SR&ED legislation requires that eligible activities be “performed in Canada” by a “taxable supplier,” which includes,

“a non-resident person ..by which the amount was payable...in the course of carrying on business in Canada through a permanent establishment.”<sup>324</sup>

“Permanent establishment,” includes any fixed place of business or the use of “substantial machinery” in Canada.<sup>325</sup>

### **Implications & related planning**

An example of potential tax planning with respect to these payments is illustrated in the example on the previous page.

#### **File a Canadian tax return**

- If the subcontractor claims that he conducted work through a “permanent establishment” they could file a Canadian tax return and pay tax on his net, Canadian source income.

#### **Effects:**

##### **SR&ED performer**

- If the SR&ED subcontractor is a “taxable supplier” and performed the work in Canada, the “payor” would be able to claim the payments as eligible SR&ED expenses.

##### **Non-resident**

- Would file a Canadian tax return and pay tax on its net, Canadian source income. This would most likely earn the subcontractor an equivalent foreign tax credit when filing returns in its country of residence.

**Net result:** payment eligible for tax credit

To the extent that the “non-resident’s” tax rate in their home country is greater than the with-holding amount, the transaction is tax neutral to the subcontractor however, the payor would now be entitled to an investment tax credit on these payments.

For a more detailed analysis and interpretation of definition of “residence”, “permanent establishment” and related effects please see,

- Wolf<sup>326</sup> - engineer taxable since in Canada > 183 days
- Dudley<sup>327</sup> – not P.E. based on degree of “control”

<sup>324</sup> taxable supplier defined per ITA subsection 127(9)

<sup>325</sup> definitions of “permanent establishment” per ITA regulations 400 (corporations) and 2600 (individuals)

<sup>326</sup> LAWRENCE WOLF v. THE QUEEN, August 31, 2000, Court File No. 98-2647(IT)G (T.C.C.)

**Closing thought:**

**“An investment in  
knowledge pays the best  
interest.”**

**– Benjamin Franklin**

<sup>327</sup> WILLIAM A. DUDNEY v. THE QUEEN, Date: 1998 10 30 Docket: 97-1386-IT-G, (T.C.C.)



## SR&ED Newsletter Edition 2001-1

Welcome to the first 2001 installment of our semi annual newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims. This newsletter provides an overview of the following significant SR&ED developments.

<b>Recent SR&amp;ED tax cases &amp; related issue(s) .....</b>	<b>235</b>
CDD-REM - Payments to “specified employees” .....	235
Facts: no invoice for payment(s) .....	235
Issue(s): Documentation required to support SR&ED?.....	235
Ruling & rationale: eligible based on “evidence” .....	235
Rainbow Pipeline - Development of a predictive model .....	236
Facts: subcontract repairs claimed as SR&ED related .....	236
Issue: Whether inquiries into repairs SR&ED?.....	236
Ruling & rationale: eligible “systematic investigation”.....	237
Aurora Marine- Eligible Yacht expenses.....	238
Facts: Yacht used 100% in SR&ED activities.....	238
Issue: Whether certain overheads eligible? .....	238
Ruling & rationale: all relevant overheads eligible .....	238
<b>Corporate structuring corner .....</b>	<b>239</b>
Organizing corporate ownership and structures to optimise credits .....	239
1) “Associated” corporations .....	239
2) “Related” corporations.....	240
3) “Connected” corporations.....	240
<b>Stock Option Strategies .....</b>	<b>241</b>
Option overview – can be taxed at rates of “capital gains” .....	241
Federal incentives for employee stock options.....	241
Ontario’s new [ORES0] credit.....	242
Ontario issues a “credit challenge”.....	242
Eligibility for Ontario exemptions: .....	242
<b>SR&amp;ED strategies – eligible wages .....</b>	<b>244</b>
SR&ED wages – decision tree .....	246

## Recent SR&ED tax cases & related issue(s)

Perhaps due to the CCRA's new "dispute resolution, liaison processes" we have noticed a decrease in the number of SR&ED tax related judgements during the past year. As a result, in addition to our review of two current cases, we have also included a review of a significant case from late 1999 [Rainbow Pipelines]. Copies of the full judgements of these and other SR&ED tax cases are available for download from the Tax Court of Canada's website [www.tcc-cci.gc.ca].

### CDD-REM<sup>328</sup> - Payments to "specified employees"

#### Facts: no invoice for payment(s)

The case dealt with a lack of documentary evidence for SR&ED payments that were originally claimed as SR&ED wages, but upon audit, were found to be undocumented payments to the companies of the controlling shareholders.

During its 1993 and 1994 taxation years, the corporation made payments to other corporations, that were also shareholders, claiming that the SR&ED portions of these payments were 25% and 35%, respectively.

#### Issue(s): Documentation required to support SR&ED?

- 1) The main issue concerned whether the amounts without direct invoice documentation were in fact, "on account of SR&ED."
- 2) A secondary issue was whether the companies operated at "arm's length."

#### Relevant legislation & analysis

The CCRA representative referred to ITA subsection 127(9) and argued that,

- The workers, the two shareholders, were not paid for R&D.
- There was no evidence that the amounts claimed were related to the services which they provided for the Appellant.

<sup>328</sup> CDD-REM Process, Vacuum Technology Corporation v. The Queen - 2000/11/28, Docket: 1999 - 4891 (IT) I, (TCC - informal procedure)

- They were not operating at arm's length from the Payor.
- There was no evidence of the liability of the company, the Appellant, to pay the amounts which are sought to be deducted here, to the two alleged recipients."

Based on these facts, the CCRA argued that,

"the information on the T4s [slip]... was the most accurate method to be used," since "this was a non-arm's length situation"<sup>329</sup>.

### Ruling & rationale: eligible based on "evidence"

#### Issue 1 - SR&ED payment eligibility without invoice documentation

The Court found,

"the methodology used by the auditor in this particular case was probably dictated by the fact that he was unable to find the paper trail that he was looking for. Indeed in some situations that might have been fatal to the Appellant's case.

A paper trail including the use of invoices, which are accurate and issued at proper times showing that the work was done, what the charges were for, how much work was done and how much was paid, is a better way of doing it. However, the Court is satisfied, on the basis of the evidence heard, that that is not a fatal omission in this particular case to the Appellant's position."

The analysis then focused on the issue of whether the company in fact made the payments on account of R&D? **Based on the credibility of the witnesses and other documents submitted the court was satisfied** that the amounts, "were also paid out by the Appellant company **on account of R&D.**"

#### Issue 2- Arm's length status

Despite references to specific legislative support, the court found,

<sup>329</sup> under paragraph 251.1(b) of the Act

“that at the end of the day these **companies were operating at arm's length** from each other. They were not operating at non-arm's length under the Act nor were they operating at non-arm's length in fact.”

### Implications and author's commentary

#### Issue 1 – SR&ED payment eligibility without invoice documentation

Though the judge provided the taxpayer with the desired relief, he clarified that;

*“Without the viva voce evidence of the persons who testified, in the absence of the proper paper trail, this result could not have been reached. If the Court did not believe what these witnesses had to say, this result could not be reached.”*

In the author's opinion this case underlines the importance of continual vigilance regarding the ongoing documentation required to support any SR&ED contract amounts.

The specific facts of this case may be less relevant subsequent to 1996 when new legislation<sup>330</sup> was passed to prohibit these and most other “non-salary” payments to “specified employees.”<sup>331</sup>

This case does underline some of the confusing issues with respect to the eligibility of SR&ED salaries. As a result we have provided a “summary “ of these rules in the “SR&ED strategies” section of this newsletter.

#### Issue 2- Arm's length status

In the author's opinion, since the parties in question were not related, nor did either “control”<sup>332</sup> the corporation individually, it is clear that the judge was correct in establishing that the parties were dealing at “arm's length.” Further discussion of “corporate control” and related planning issues is provided in the “Corporate structuring corner” of this newsletter.

<sup>330</sup> restrictions on specified employees per ITA subsections 37(9) &(9.1)

<sup>331</sup> “specified employee” defined per ITA subsection 248(1)

<sup>332</sup> As defined in ITA subsection 256(1.2)

## Rainbow Pipeline<sup>333</sup> - Development of a predictive model

### Facts: subcontract repairs claimed as SR&ED related

Rainbow Pipeline Company Ltd. (Rainbow) had operated the 24-inch trunkline (approximately 300 kms long) for 26 years (1967 to 1993) without any pipeline ruptures. In February and July 1993, it had two significant ruptures in the 24-inch portion of its pipeline. Those two ruptures were believed to be caused by a combination of Stress Corrosion Cracking (“SCC”) and metal corrosion. Further inspection discovered 523 defects which were caused by SCC and/or metal corrosion.

Rainbow had also retained an expert consultant to identify, by aerial survey, sites that might be SCC susceptible, and characterize SCC at such excavation site using onsite investigation techniques. In several instances dig sites believed to be susceptible to SCC, additional soil, environmental and other data was gathered to enhance knowledge about how soil type, drainage, and topography might influence the existence of SCC.

The company identified about 140 different expenditures where they had consulted with subcontractors to determine what portion of their work was SR&ED vs. non-SR&ED repairs.

In its taxation year ending December 31, 1994, the company spent \$19,600,000 on projects connected with and resulting from pipeline leaks. In addition to issues as to whether certain payments, were current expenses or capital outlays, the CCRA contested the **taxpayer's claim that \$2,081,325 of these expenditures were** “scientific research and experimental development.”

### Issue: Whether inquiries into repairs SR&ED?

The judge was,

“predisposed to think that any pipeline corporation with a trouble-free operating history like the Appellant, suddenly faced with a major repair (replacing 44 kms. of pipe) and 523 minor repairs, would not embark upon a replacement and repair program costing \$17.5 million unless, at the same time, the corporation commenced **a serious inquiry into the cause and effect of such repairs.** There is no doubt that the Appellant commenced such an inquiry. **The question is whether the inquiry was SR&ED.**”

<sup>333</sup> Rainbow Pipeline Company Ltd., v. The Queen: 1999/09/15, Docket: 96-4369-IT-G I, (TCC)

## Relevant legislation & analysis

### Rainbow's position

The company claimed that its "process" was determining the cause and effect of SCC even if there were only "incremental improvements" to that process and that the activities in question were, "work with respect to engineering, operations research, data collection and testing commensurate with the needs, and directly in support, of its [experimental development] work."<sup>334</sup>

In particular with respect to Stress Corrosion Cracking, Rainbow claimed:

- "We needed to know what caused it:
- What caused the cracks to form?
- What caused them to grow?
- What parameters caused the formation -- both the initiation and the growth?
- We needed to know more about growth rates.
- We needed to know how to identify the SCC that was existing in the pipeline.
- We needed to know how to predict where it might occur."

The company relied on the **precedence set in the case of Northwest Hydraulic Consultants Limited v. The Queen**, which clarified:

"Most scientific research involves gradual, indeed infinitesimal, progress. Spectacular breakthroughs are rare and make up a very small part of the results of SR&ED in Canada."

### CCRA position

The CCRA relied on the **1988 decision** of the tax court in the case of **Sass Manufacturing Limited** in which amounts expended on the fabrication of a prototype machine<sup>335</sup> were **ineligible for SR&ED**. In that case, the court clarified:

"The evidence falls far short of establishing the existence of **any** systematic investigation ... Systematic investigation connotes the **existence of controlled experiments and of highly accurate measurements** and involves the **testing of one's theories against empirical evidence**. Scientific research must mean the **enterprise of explaining and predicting** and

the gaining knowledge of whatever the subject matter of the hypothesis is. This surely **would include repeatable experiments** in which the steps, the various changes made and the **results are carefully noted.**"

### Ruling & rationale: eligible "systematic investigation"

#### Weight of "third party" evidence - Standard practice at the outset:

Rainbow's evidence included studies from the late 1980's suggesting "significant" SCC on a pipeline was strongly related to the terrain conditions where there was the potential for pipe coatings to have disbonded.

In 1995-1996, the NEB [National Energy Board] held an inquiry into SCC on Canadian oil and gas pipelines which confirmed that, "there was very little research on SCC failures in pipelines prior to 1993-1994." Rainbow was invited by the NEB to participate in its public inquiry concerning SCC on Canadian oil and gas pipelines. Rainbow participated in the SCC inquiry and made available, to the inquiry, the results of its research into SCC as a result of the pipeline ruptures in 1993.

At the time of the Inquiry, six CEPA (Canadian Energy Pipeline Association) member companies were using predictive models to assess the SCC-susceptibility of their systems, or portions thereof, and five other member companies were developing predictive models.

These models had further established that, while the information on terrain conditions known to promote SCC susceptibility may be applied to all pipelines in the same area, because the data about each pipeline -- its coating, its year of construction, its operating history - an accurate predictive model can be used only for the pipeline for which it was developed. As a result the judge placed,

*"significant weight on the NEB [National Energy Board] Inquiry Report because it was **not prepared to advance the cause of either party to this appeal...** because it **describes indirectly the state of knowledge of SCC** (its cause and effect) in 1993 and 1994 when the Appellant had its two major SCC ruptures and performed the necessary replacement and repairs."*

<sup>334</sup> which are SR&ED eligible activities – per ITA subsection 248(1)

<sup>335</sup> [Author's note: Ironically, this machine was intended to install drainpipe!]

### Difference(s) identified between Rainbow & Sass

Unlike the current evidence presented by Rainbow, the judge noted that, **in Sass, none of the conclusions of the CCRA's expert were, "seriously," challenged** by the taxpayer.

The judge then examined the question: "Did the process result in a technological advance, that is to say an advancement in the general understanding?" On this issue he commented,

**"The rejection after testing of an hypothesis is nonetheless an advance** in that it eliminates one hitherto untested hypothesis. Much scientific research involves doing just that. **The fact that the initial objective is not achieved invalidates neither the hypothesis formed nor the methods used.** On the contrary it is possible that the very failure reinforces the measure of the technological uncertainty."

As a result the judge found the work **eligible SR&ED** stating,

"It appears to me from the Sass Manufacturing decision that the taxpayer was not faced with a technical problem (like leaks in a pipeline) which threatened its business. **Sass was simply trying to build a prototype machine whereas, Rainbow Pipe Line attacked the problem which threatened its business and, at the same time, started a "systematic investigation ... in a field of science or technology by means of experiment or analysis".**

### Implications and author's commentary

Given that this case is one of the few providing a detailed illustration and analysis of the "technical requirements" of an eligible SR&ED claim, in the author's opinion, this case is likely of long-term importance to all SR&ED claimants.

### **Aurora Marine<sup>336</sup> - Eligible Yacht expenses**

#### **Facts: Yacht used 100% in SR&ED activities**

The CCRA, while admitting the validity of some research using a Yacht, disallowed certain expenses including the yacht's slippage and insurance.

---

<sup>336</sup> Aurora Marine Industries Inc. v. The Queen: 2000/11/ 28, Docket: 1999 – 4891 (IT) I, (TCC)

Based on the testimony of the taxpayer, the judge was, "satisfied that the boat was used exclusively at all times for the purpose of testing the various [SR&ED] products."

### **Issue: Whether certain overheads eligible?**

In the author's opinion, the key legislative question was, "what expenses would be allowed under the traditional method of overhead allocation?"

### Relevant legislation & analysis

Since this case was an informal appeal it did not provide an in depth legislative analysis and as a result carries less precedence than a traditional tax court of Canada ruling.

### **Ruling & rationale: all relevant overheads eligible**

Because the yacht was exclusively used for the research and development, the yacht's slippage and yacht insurance was allowed.

### Implications and author's commentary

In the author's opinion, the judge correctly interpreted the inclusions envisioned by the legislation.<sup>337</sup> The case is also of interest since it further illustrates that the courts are willing allow a reasonable allocation of overhead expenditures to any SR&ED activities.

As a result, we believe that this case will be of moderate long-term significance to companies who choose the "traditional," rather than the "proxy," method of overhead allocation.

## **Closing thoughts**

**"A man is but what he knoweth."  
- Francis Bacon**

**"Knowledge is power."  
- Thomas Hobbes**

---

<sup>337</sup> "traditional" overheads defined per ITA Regulation 2900(3)

## Corporate structuring corner

### Organizing corporate ownership and structures to optimise credits

*Confused as to tax implications of your corporate structure? You are not alone! The table below outlines some critical issues, definitions & implications.*

Corporate status:	1) Associated	2) Related	3) Connected
<b>Criteria</b>	Under "common control"	Controlled by related person(s) [RP's]	>10% of FMV of issued & voting shares
<i>ITA references</i>	256(1)	251(2)	186(4)
<b>General tax implications</b>	Share business limits for income & capital tax + Interco. rent = active income	Disclose RP transactions & use "fair market value"	Tax free intercompany dividends
<i>ITA references</i>	125(3-5) & 129(6)	69(1)	186(1)
<b>SR&amp;ED implications</b>	Share expenditure limits for enhanced credits		Employees controlling >= 10% are "specified employees"
<i>ITA references</i>	Election to claim or transfer eligible costs - no mark-ups 127(10.2-4)	127(9) & (13-22)	248(1)

### 1) "Associated" corporations

The Income Tax Act generally deems that, where a shareholder owns greater than 50% of the fair market value of the capital shares of a company it will be deemed to control it.<sup>338</sup> If a person owns more than one company in this fashion the companies will be "associated" for taxation purposes. This "association" umbrella can be extended wherever "related persons"<sup>339</sup> each control corporations and there is 25% cross-ownership of shares in either direction<sup>340</sup>.

Control of a corporation generally exists by reason of the ability to elect a majority of the directors of the corporation - *de jure* control. The concept of control also includes what is often referred to as *de facto* control. An example of *de facto* control might be a situation where a person held 49 per cent of the voting control of a corporation but held enough "other influence" so that the shareholder could force the corporation to act in accordance with his or her wishes.

"Whether a person can be said to be in actual control of a corporation, notwithstanding that he does not legally control more than 50 per cent of its voting shares, will depend in each case on all of the circumstances."<sup>341</sup>

In the authors' experience, and as illustrated in the previous case analysis of CDD-Rem, misunderstandings of the association and control "rules" and implications are common.

Since "associated" companies are required to share the various business<sup>342</sup> and expenditure<sup>343</sup> limits, for reduced taxes and enhanced SR&ED incentives respectively, the legislation also allows rents received by an associated company to be deemed "active" rather than passive income.

As a result, many readers will be familiar with the classic "creditor proofing" organizational structure in which a parent, "holding company," owns the land and building of the "operating companies."

<sup>338</sup> Definition of control per ITA subparagraph 256(1.2)(c)(i)

<sup>339</sup> Related persons defined per ITA subsection 251(2) – includes parents, in-laws & siblings

<sup>340</sup> Definition of "Associated corporations" per ITA paragraphs 256(1)(c) to e)

<sup>341</sup> Department of Finance technical notes to subsection 256(5.1)

<sup>342</sup> Business limit defined per ITA subsection 125(3)

<sup>343</sup> SR&ED Expenditure limit defined per ITA subsection 127(10.2)

## **2) “Related” corporations**

Determination of whether corporations and subcontractors are dealing at “arm’s length,” requires an examination of the inter-relationship of several different terms within the income tax act:

Arms length,

“related persons shall be deemed not to deal with each other at arms length”<sup>344</sup>

Related persons include,

“individuals connected by blood relationship, marriage or adoption .... and any two corporations [controlled by related persons]”<sup>345</sup>

Blood relationship,

“the child or other descendants ... or brother or sister .. or, if one is married to the other or to a person who is so connected by the blood relationship to the other...”<sup>346</sup>

In more simple terms the term blood relationship generally includes parents, grandparents, brothers, sisters and in-laws however, it does not specifically include cousins, nieces and nephews.

### **Non-Arm's Length (related party) Contract Payments**

The SR&ED claim requires that you distinguish between “arm’s length” contractors and “non-arm’s length” contractors. In general terms, “non-arm’s length” contractors are those who are controlled by the same “person” or “related group of persons” as described above.

Effective for taxation years that begin after 1995, expenditures you incur for SR&ED performed on your behalf by a performer at a time when you and the performer do not deal with each other at arm's length are not “immediately” qualified expenditures for ITC purposes.<sup>347</sup> However, the performer can elect to claim or transfer the actual qualified expenditures incurred.<sup>348</sup> This prevents the company from unfairly marking up the costs on “non-arm’s length” transactions.

<sup>344</sup> as defined in ITA subsection 251(1)

<sup>345</sup> as defined in ITA paragraphs 251(2)(a) & (c)

<sup>346</sup> as defined in ITA subsection 251(6)

<sup>347</sup> ITA paragraph 127(9)(f) in the definition of “qualified expenditures”

<sup>348</sup> form T1146 – ITA subsection 127(13)

## **3) “Connected” corporations**

Typically, corporations will be, “connected,” when one owns >10% of the fair market value of the shares in another.<sup>349</sup> This will result in an ability pay inter-company dividends in a tax-free manner.<sup>350</sup>

Though there are no other, significant, SR&ED tax implications resulting from corporations having “connected” status, further analysis of such “entities” may uncover the existence of “specified employees.” Generally, this is any employee who (directly or indirectly) owns 10% or more of any class of stock of the company. Further analysis of the “specified employee” rules and implications are outlined in the, “SR&ED strategies – eligible wages,” section of this newsletter.

### **Summary and implications**

In our experience, advance contemplation of these simple relationships is an important step in developing the “perfect” structure for your organization.

## **Closing thought**

“Trifles make perfection  
– and perfection is no  
trifle.”

- Michelangelo

<sup>349</sup> as defined in ITA subsection 186(4)

<sup>350</sup> exclusion from Part IV tax per ITA section 186

## Stock Option Strategies

### CCPC options – tax deferred

*In most cases, inclusion of the stock option benefit in employee income occurs at the time of acquisition of the*

Taxpayer / event	Taxable income inclusion (exemption)	
	Federal	Ontario
<b>Eligibility requirements</b>		
<b>Employer / issuer</b>	Option price $\geq$ FMV of stock when granted	Option price $\geq$ FMV when granted + Ontario SR&ED expenses $>$ 10% of revenues OR $>$ \$25 million
<b>Employee / recipient</b>	"arm's length"	"arm's length" Ontario resident $\geq$ 30% of time in SR&ED employed at least six months
<b>Employee / recipient</b>		
All Corporations	(\$100,000) / year of vested, option benefits <b>eligible for deferral</b> until sold	(\$100,000) / year of <b>option benefits &amp; capital gains - EXEMPT from tax via [ORES0] credit + EHT exemption on R&amp;D wages</b>
Qualified CCPC's	No limits on deferral amounts	As per all corporations + follow Federal rules on deferral
<i>ITA references</i>	<i>Draft legislation December 21, 2000</i>	<i>Proposed new section 8.7 under bill 152</i>

*share.*

### Option overview – can be taxed at rates of “capital gains”

Generally speaking, all income and benefits from employment are fully taxable. “Arm’s length” employees who acquire shares of a company through stock options having an “option price” of at least the fair market value of the security at the time the option was granted,” will earn an **additional deduction [=50%]**<sup>351</sup> against the stock option benefit.<sup>352</sup> In effect this reduces the tax rate on these options to that which would be imposed on capital gains.

In addition to the deduction, there may also be **additional deferrals** [discussed below] of the timing of the income inclusion for the employee exercising the option.

### Federal incentives for employee stock options

<sup>351</sup> for dispositions after 2000, the deduction is ½  
<sup>352</sup> per ITA subsection 110(1)(d)

### *Problems “weighing your options?”*

The table below outlines new incentives.

However, if the share was acquired under an option granted;

- by a CCPC<sup>353</sup>;
- to an “arm's length” employee,

the “**income inclusion**” is **deferred** until the disposition of the share.<sup>354</sup>

### Extension of option deferral benefits to public companies<sup>355</sup>

In its 2000 budget, the Federal government announced additional, stock option incentives, for public companies. As a result, new legislation provides that,

“If the share is a publicly listed share that the employee acquired **after February 27, 2000** and in respect of which the employee made a **valid election**<sup>356</sup> to defer taxation,

<sup>353</sup> Canadian-controlled private corporation

<sup>354</sup> per ITA subsection 7(1.1)

<sup>355</sup> More information in backgrounder accompanying Department of Finance news release No. 2000-101, issued on December 21, 2000.

<sup>356</sup> employee must file CCRA form T1212 & employer include on T4 slip

the relevant [taxable] event is the disposition of the share.”

Further legislative follow up to this announcement clarified, “that the deferral of the income inclusion [for the year]... be available only if the **specified value** of the particular security does not exceed \$100,000 ... and, for this purpose, the specified value ... **is the fair market value of the security** at the time the option was granted.”<sup>357</sup>

### Limits on public company deferrals

Although there is no limit to the amount of taxable benefit that can ultimately be deferred, the deferral election is subject to an annual vesting limit of \$100,000. This limit is based on:

- the year in which the options vest (i.e., first become exercisable), and
- on the fair market value of the underlying securities when the options were granted.

For options vesting in a given year, an employee will be able to defer taxation on the acquisition of securities having a total fair market value (determined at the time the options were granted) not exceeding \$100,000.

## Example of Mr. X – an arm’s length employee

- Mr. X receives options – 10,000 shares @ \$20/share
- exercises option in year 2, when price \$25/share
- potential income inclusion of 10,000 x \$5/share=\$50,000
- If, all of the options vested in year 1, the \$100,000 limit, at \$20/share, would limit deferral to 5,000 shares.
- If however, half of options vested in year 2, the \$100,000 deferral could be used on 5,000 shares each year.

### Ontario’s new [ORESOS] credit

#### Ontario issues a “credit challenge”

The close of the 2000 year witnessed the clarifying details on the new, “Ontario Research Employee Stock Option,” [ORESOS] tax credit. According to the Ontario government,

“The refund **reflects the tax saving from a notional deduction** from taxable income **for Ontario purposes of up to \$100,000 of taxable stock option benefits and taxable capital gains** on the sale of shares acquired from exercising the stock options.

<sup>357</sup> Budget 2000 – paragraph (10) - Notice of Ways and Means Motion to Amend the Income Tax Act

This measure **applies to eligible stock option agreements** entered into **after** this Bill receives Royal Assent [Author’s note: received **December 21, 2000**].”<sup>358</sup>

As a minor, related incentive,

“The bill also proposes excluding the stock option benefits from the Employer Health Tax base, for employees of eligible R&D intensive companies.”

According to Ontario Finance Minister Ernie Eves,

“... the federal government ... has yet to respond to one of Ontario's most significant challenges -- the implementation of the Ontario Research Employee Stock Option Credit (ORESOS). If the federal government remains unwilling to act in the taxpayers' best interest by promoting administrative efficiency through a fair and reasonably-priced, harmonized administration of ORESOS, Ontario will have no choice but to establish the capacity to provide this benefit directly, ourselves.”<sup>359</sup>

### Eligibility for Ontario exemptions:

#### Employer:<sup>360</sup>

- For ORESOS – unless qualified SR&ED expenses > \$25 million, they must be > than 10% of annual revenues.
- EHT exemption – unless qualified SR&ED expenses > \$25 million, they must be > than 10% of both, the annual revenues & total expenses.

#### Employee:<sup>361</sup>

- For ORESOS – employee must be a resident of Ontario in the year, with at least 30% of his or her time spent undertaking qualified SR&ED activities. The credit is not available to employees who are “specified shareholders.”

## Example: Mr. X revisited as an Ontario, R&D employee

- Mr. X receives options – 10,000 shares @ \$20/share
- exercises option in year 2, when price \$25/share
- sells shares in year 2, when price \$28/share

<sup>358</sup> Ontario Legislature - Bill 152- received Royal assent December 21, 2000

<sup>359</sup> Ontario Ministry of Finance News Release, December 4, 2000

<sup>360</sup> as per 2000 Ontario Budget – employer tests apply to prior taxation year

<sup>361</sup> per 2000 Ontario Budget – employee tests apply to year of entry into option agreement

- potential taxable “income benefit” of 10,000 x \$5/share x 50% taxable = \$25,000
- potential “taxable capital gain” of 10,000 x \$3/share x 50% taxable = \$15,000
- Result – under ORESO credit, both the **income benefit & taxable capital gain** totaling \$40,000 (and up to \$100,000/year) would be sheltered from personal taxes, in Ontario.

only whether the federal government will comply by removing the remaining tax impediments but, more importantly, if companies will be able to design “understandable” packages to suit the needs of their “hi-tech” employees.

Given that the new Ontario tax incentive alone represents a potential savings of \$25,000 / year<sup>363</sup> of personal taxes for qualifying individuals, we believe that the rewards should be lucrative enough to stimulate the development of, “winning offerings.”

### Author’s commentary on “stock options”

#### Federal measures “defer” a current problem

In our opinion, the new federal provisions **partially removes a serious “shortcoming”** of the “old” option scenario, example;

- employee has “benefit income” on option exercise
- stock value decreases before sale resulting in “capital” loss
- “capital” loss on shares can not be applied against “benefit income” to reduce previous tax paid

Though this problem still exists for shares of public companies<sup>362</sup>, it is **now at least deferred** until the employee chooses to dispose of the shares. As a result of this scenario and a generally volatile market for “hi-tech” stocks, many employees will literally get “stuck” holding shares, which they **can not** sell because of the tax implications outlined above.

Potential legislative solutions to the problem might include,

- following Ontario’s recommendation to “fully exempt” the income inclusion and gains in the first place, or
- providing for capital losses, attributable to shares acquired via the exercise of options, to be deductible against (offset) any related “benefit inclusion.”

While the ideal scenario would be the “exemption” proposed by Ontario, even the second “offset” option would be a positive measure in maintaining the integrity of an income tax system which, generally speaking, does not tax employees on money they have not, and may never, receive.

#### Time will tell if “employees” see the benefits

Given the problems outlined above it is easy to see why many employees would be fearful of “option based” remuneration. In the author’s view, the next major step will be to witness not

#### Implications on Federal – Ontario tax harmonization

Since both Ontario and Quebec require submission of provincial, corporate tax returns it is not uncommon for them to develop their own “corporate tax” legislation. In the author’s view, this credit as well as the “unilateral” manner in which it was implemented, once again illustrates the willingness of Ontario (and Quebec) to continually expand the SR&ED program.

Also particularly noteworthy, is that these new changes affect “personal taxes” which were traditionally an area of “harmonized” reporting.

Although it is currently unclear as to whether the Federal and provincial governments will find areas of “common ground” on these, or other SR&ED issues, in our opinion one thing is clear: **the taxpayer appears to be the big winner in these battles!** If this continues to be the case, we hope that “unilateral” tax incentives of these sorts will become a trend for future SR&ED legislation.

### Closing thought

“When all think alike,  
then no one is thinking.”

- Walter Lipmann

<sup>362</sup> Losses on dispositions of shares of certain CCPC’s may qualify as ABIL’s which can be applied against any source of income – ITA section 38

<sup>363</sup> Assuming the top Ontario, marginal, personal, tax rate of 12%, on income over \$59,190

## SR&ED strategies – eligible wages

- Does not include the employer's portion of CPP or QPP, EI, WCB, employee pension plans,

<u>SR&amp;ED Salary &amp; Wage inclusions</u>	<u>Type of employee:</u>		<u>ITA</u>
	<u>Specified</u>	<u>Regular</u>	<u>section(s)</u>
<b>SR&amp;ED labour for the:</b>			
a) <b>SR&amp;ED expenditure pool (for deduction) &amp;</b>			37(1)
b) <b>Qualified expenses (for ITC calculation)</b>			127(9)
<u>Type of expense:</u>			
· salary & wages	<b>In</b>	<b>In</b>	(5-8)
· bonuses or profit based remuneration	<b>Out</b>	<b>In</b>	37(9) & 5(1)
· Expenses paid > 180 days	<b>Out</b>	<b>Out</b>	78(4)
<b>Maximum</b>	<b>5 x [YMPE]</b>	<b>N/A</b>	<b>37(9.1)</b>
<b>c) Salary base for proxy (overhead) calculation</b>			
<u>Type of expense:</u>			
· Income from employment	<b>In</b>	<b>In</b>	5
· bonuses or profit based remuneration	<b>Out</b>	<b>Out</b>	5(1) & 37(9)
· taxable benefits	<b>Out</b>	<b>Out</b>	6 & 7
· Expenses paid > 180 days	<b>Out</b>	<b>Out</b>	78(4)
<b>Maximum</b>	<b>2.5x [YMPE]</b>	<b>N/A</b>	<b>Reg 2900(7)</b>

employee medical plans and insurance plans.

### Eligible Salaries or Wages

Qualifying SR&ED expenditures include the portion of salaries or wages (based on time spent) the company incurred for its employees who are directly engaged in SR&ED in Canada. Generally speaking, this includes all employee time necessary to resolve a technical uncertainty.

### Definition of Salary or Wages

“Salary or wages”<sup>364</sup> is income from office or employment<sup>365</sup>.

#### Inclusions:

- This includes vacation, statutory holiday, sick leave pay and taxable benefits.

#### Exclusions:

## *Who, gets paid what?*

### **An overview of SR&ED labour inclusions**

- Note: If you choose the “traditional” method of overhead calculation, you will be able to include these benefits as, “eligible R&D overhead.”

Basically, eligible “salary or wages” can be summarized as those amounts that would appear as “taxable income” in box 14 of the employee's T-4 slip.

### Optimising the calculation of SR&ED Salary or Wages

**Vacation and holiday pay** - As indicated, the hourly or daily cost of an SR&ED employee should

<sup>364</sup> defined in subsection 248(1) of the ITA  
<sup>365</sup> as calculated in sections 5 to 8 of the ITA

include reasonable allocations of vacation and holiday pay. Failure to include allocations for such amounts can lead to an overall reduction of 10 % of the related labour and proxy claims (i.e. 5 weeks of vacation & statutory holidays during a 52 week work year).

**Full time SR&ED employees** - If all or substantially all (>90%) of an employee's time is spent in the prosecution of SR&ED then all the salary or wage is eligible.<sup>366</sup>

### **Specified Employees**

Generally speaking, the identification of “connected corporations” leads to the identification of potential, “specified employees.”

### **Definition of a specified employee**

The determination of whether an employee is in fact, “specified,” requires an understanding of definitions of “arm’s length,” and “related,” from our “corporate structuring article” and a brief examination of two more income tax terms:

A specified employee means,  
“an employee who is a specified shareholder ... or who does not deal at arm’s length...”<sup>367</sup>

A specified shareholder,  
“owns, directly or indirectly, at any time in the year, not less than 10% of the issued shares of any class of the capital stock of the company or any related corporation ...”<sup>368</sup>

### **Summary of persons deemed “specified employees”**

Based on the definitions outlined above, a “specified employee” includes any employee who owns 10 percent or more of any class of stock of the Corporation, or any individual who is related to such an employee. In other words, this may

include the president's son or daughter, where the president is a specified shareholder.

### **Implications for “specified employees”**

Being deemed a specified employee results in certain restrictions on SR&ED labour inclusions and limits. The major effects are:

#### **Limit on SR&ED wages**

- The maximum amount of salaries and wages for a specified employee is limited to 500% of YMPE (yearly maximum pensionable earnings)<sup>369</sup>.

#### **Limit on SR&ED proxy amount**

- The maximum amount of salaries and wages for a specified employee for calculation of the “salary base” used in the proxy allocation cannot exceed 250% of YMPE.<sup>370</sup>

#### **Exclusion of bonuses from SR&ED wages**

- Bonuses or remuneration based on profits should not be included in the R&D hourly rate calculation or in the R&D expenditure pool<sup>371</sup>.

**For fiscal 2000 the YMPE rate has been set at \$37,600. This results in maximum SR&ED labour and salary base amounts of \$188,000 & \$94,000, respectively.**

### **Tax planning for the “specified”**

As a **tax planning measure**, we recommend any “specified employee” involved in SR&ED be **paid salary, rather than commissions or bonuses**, for the first **\$190,000** of income. In practical terms, this generally means that owner managers involved in development should budget for monthly payroll with-holdings, rather than on the traditional, year-end bonus.

### **Form for allocating specified employees SR&ED wages**

<sup>366</sup> per ITA Regulation 2900(5)

<sup>367</sup> as defined in ITA subsection 248(1)

<sup>368</sup> as defined in ITA subsection 248(1)

<sup>369</sup> as prescribed in ITA subsection 37(9.1)

<sup>370</sup> as prescribed in ITA Regulation 2900(7)

<sup>371</sup> as stated in ITA subsection 37(9) & Regulation 2900(9)

In 1999 the CCRA released Form T-1174 – “Agreement among associated corporations to allocate salary wages of specified employees for SR&ED.” As the name indicates, this form ensures that the “specified employee” wage limits are not exceeded for any individual employee, through the use of multiple corporations, under the same control group.

### **SR&ED wages – decision tree**

We have found SR&ED wages, perhaps for some of the reasons outlined, to be common amongst taxpayers. As a result, on the next page we offer a **flowchart** of what we believe to be the major SR&ED questions to consider when preparing claims. Though not an exhaustive list of all SR&ED labour issues, we have found this table to be invaluable when explaining [and hopefully **simplifying**] the rules to new claimants.

Similar flowcharts or decision trees are available for each type of qualified “SR&ED expense” in our “Guide to R&D Base.”

### **Closing thought**

**“Nothing is more  
simple than greatness;  
indeed, to be simple is  
to be great.”**

– Ralph Waldo Emerson

## SR&ED Labor - decision tree

<b>Determining eligible SR&amp;ED wages</b>			→ if "NO"	
<b>Question:</b>		<b>Issue:</b>	<b>Result(s)</b>	<b><i>ITA section(s)</i></b>
if "YES"				
1	Does the employee receive a T4 slip?	employee vs. subcontractor status	treat as subcontractor payment	248(1)
2	Can you allocate labor hours to specific SR&ED activities?	timesheet support	need to correlate man hours claimed with resolution of specific technical	<i>Regs. 2900(2)(b) &amp; 2900(4)</i>
3	Do cost allocations include estimates for vacation & holiday pay?	ITA definition of "salary & wages"	ensure labour cost base contemplates the full cost of R&D labor	248(1)
4	Does employee or a related person own >=10%, of any class of stock?	specified employee status	limits on R&D labor & salary base for proxy calculation	37(9.1)
5	Are all amounts paid within 180 days of the fiscal year end?	deferred inclusion	expense deemed "not" incurred in the year, but rather in the year paid.	78(4)
6	Have you filed CCRA Schedules 31 & 32 with your tax return?	claim for R&D costs & credits	completion of R&D wages portion of the claim	37(11)



## **SR&ED Newsletter - Edition 2000-1**

Welcome to the first of what we expect to be a semi annual newsletter regarding recent developments to Scientific Research and Experimental Development (SR&ED) project management and tax credit claims. This newsletter provides an overview of significant SR&ED developments issued by the CCRA<sup>372</sup> and the tax courts for the year to date as well as related tax planning opportunities. The newsletter also provides a brief overview of our “R&D Base” project tracking software and links for interested parties to download a free demonstration version.

**The major topics of this newsletter are outlined below.**

<b>Recent SR&amp;ED tax cases &amp; related issue(s).....</b>	<b>249</b>
Quantetics Corporation - Definition of “All or substantially All” .....	249
C.W. Agencies - whether development of application software SR&ED .....	250
Knowledge Systems Incorporated - whether electronic diary entries SR&ED .....	255
<b>Tax planning - corporate structures to optimise credits.....</b>	<b>257</b>
Issue: Associated corporations must share SR&ED expenditure limits.....	257
“dejure” or “voting” control.....	257
“defacto” or “non-voting” sources of control.....	257
Potential structures to optimise SR&ED tax credits.....	258
<b>Overview of the R&amp;D Base model.....</b>	<b>259</b>
History of the Yantra - the three basic shapes of geometry .....	259
Square – triangle- circle - The basis of the R&D Base interface.....	260
The “R&D Base” database .....	260
<b>Summary of the R&amp;D Base input and output.....</b>	<b>261</b>
Technical description compilation.....	261
The Square - definition of existing knowledge.....	261
The triangle – documenting technical uncertainty.....	261
The Circle – Ongoing experimental activities & conclusions .....	261
Correlation of activities to costs .....	262
Output.....	262

<sup>372</sup> Canada Customs and Revenue Agency

## Recent SR&ED tax cases & related issue(s)

### Quantetics Corporation<sup>373</sup> - Definition of “All or substantially All”

#### Facts:

The appellant is a Canadian corporation that was incorporated in 1977 in order to pursue the application of quantitative scientific and mathematical techniques. Its president and sole director is an electrical engineer with a Ph.D. in chemical engineering. The appeal dealt with the 1985 through 1987 taxation years.

In order to finance its research and development activities for the years in question, the appellant got involved in, at least, three additional businesses:

- exporting firearms from Canada to the United States and recovered duties and taxes,
- arbitrage market opportunity to earn commissions in the form of federal sales tax recoveries and
- services recovering duty drawbacks on exported automobiles.

With respect to the 1985 fiscal year, the consulting fees attributable to R&D account for 19 per cent of total revenue. In 1986, the consulting fees represented 31 per cent of total gross revenue. In 1987, there was no income at all from R&D.

On assessment the Minister proposed that only an amount of \$345,397 out of the total consulting fees of \$465,089 was attributable to R&D. The taxpayer claimed that these additional expenses related to the “additional” businesses should be allowed since it believed, despite the facts listed above, that “all or substantially all” of the company’s efforts were SR&ED related.

#### Issues:

1) Should the 90 per cent test be applied to gross revenue only to determine whether a company is involved “all or substantially all” in SR&ED activities. As a result, were costs for some of the “non-SR&ED” activities to be included in the claim based on the fact that their proceeds helped to finance the research?

2) The case also dealt with the issue of whether a bonus to a specified employee would be eligible. In the author’s opinion this is no longer a relevant issue since the law regarding these payments has changed for taxation years after 1992<sup>374</sup>.

#### Relevant legislation & analysis:

Counsel for the appellant submitted that nothing in the *Act* suggests that it was intended that “all or substantially all” should mean more than 90 per cent. On the contrary, when the legislator intends to refer to a specific percentage, he does so, as is evidenced in other sections of the *Act*. They argued that where the taxing statute is not explicit, the ambiguity should be resolved in favour of the taxpayer<sup>375</sup>. This is more particularly so with respect to tax incentives for doing R&D where the legislation dealing with such incentives must be given such fair, large and liberal construction and interpretation as best ensures the attainment of its objects<sup>376</sup>.

Counsel for the company proposed that the “90 per cent of revenue test” applied to gross revenue is not an appropriate test arguing that if the legislation had been intended to refer specifically to a gross revenue test, there is ample authority in the *Act* to suggest that it could have done so. They also provided references to various other sections in the *Act* containing an explicit reference to gross revenue (for example the provisions on foreign accrual property income speak of “more than 90% of . . . gross revenue”).

<sup>373</sup> Quantetics Corporation v. The Queen - Date: 2000/06/ 02, Docket: 91-1411(IT)G, (TCC)

<sup>374</sup> Bonuses to specified employees excluded per ITA subsection 37(9)

<sup>375</sup> *Johns-Manville Canada Inc. v. The Queen*, [1985] 2 S.C.R. 46)

<sup>376</sup> (*Northwest Hydraulic Consultants Ltd. v. The Queen*, [1998] 3 C.T.C.2520 (T.C.C.))

### **Ruling and rationale:**

In the judge's view, the appellant's testimony on the subject was, "very general and it seems to me that he did not intend to reveal the exact source of those fees. Nor was there any accounting evidence adduced by the appellant that could have provided more accurate information regarding the statement of income and expenses."

Based on these facts the judge concluded, "It was not illogical for the Minister, in the circumstances, to conclude that the disallowed expenses could have been incurred for other purposes than R&D. At least, I do not find that the appellant has demonstrated the contrary."

### **Implications and author's commentary:**

In this case the taxpayer could not provide "reasonable" links of the costs of the disallowed work to the SR&ED in question other than the fact that the proceeds would be used for SR&ED activities. This line of reasoning is obviously faulty since it would in fact enable virtually any type of "non-R&D" activity to become eligible for tax credit as long as the performer promised to flag proceeds for R&D.

Though enhanced incentives for "sole-purpose" R&D performers has been eliminated, in the author's opinion, the issue of whether the "all or substantially all" criteria is met with less than the CCRA's recommended "90% threshold" remains a hot issue. In this case the judge was willing to consider criteria which failed to meet a strict 90% or more R&D source test, but that the facts in question were overwhelmingly below the 90% margin. This case analysis may therefore be of long term interest to taxpayers in supporting whether other SR&ED items such as a capital additions meet the CCRA's "ASA" criteria. An example might be an asset with perhaps an 85% R&D intent.

## **C.W. Agencies<sup>377</sup> - whether development of application software SR&ED**

### **Facts:**

The software developed by the company was known as the International Distributed Lottery System (IDLS). The case was fought on an all or nothing basis. Either the activity viewed as a whole constitutes SR&ED or none of it does.

In the course of creating the software the taxpayer utilized and claimed advancements related to:

- a) A computer platform based on newly emerging technology, that is to say, object-oriented technology said by the Appellant to be fundamentally different and in its infancy. Object-oriented technology brings together data structures and functions to create objects capable of further use.
- b) A CASE or computer aided software engineering tool for the writing of computer code; and
- c) rapid prototype methodology whereby prototypes of components of the software are created, tested and then reworked to remedy deficiencies and add new functions or

---

<sup>377</sup> CW Agencies Inc. v. The Queen - Date: 2000/08/30, Docket: 98-1324(IT)G, (TCC)

capacities. Rapid prototype methodology was a departure from the then traditional "waterfall" methodology in which the entire software program is created in one stroke.

### **Evidence of expert witnesses:**

- **For the company**

Dr. Jacob Slonim, Dean of the Faculty of Computer Science at Dalhousie University, was called by the company. In his report, Dr. Slonim himself made reference to the inadequacies of the company's records. He noted:

"The one disappointment, which I had, was the **lack of project management and documentation that is more detailed.** I understood that the project management, which would have helped me to see where the difficulties were, was not retained at the C-W Agencies. I saw one or two pieces of documentation that indicated to me that they used the project-management tool. Furthermore, although I have a bias since I worked for IBM for ten years and know their procedures quite well, employing a project manager from IBM, who did not draw a detailed project management plan, would be most surprising. It is possible that he retained it upon his departure from the C-W Agencies. **Without it, the analysis was definitely a lot more difficult to do.** However, as I mentioned, because of the numerous uncertainties in this project, I have no doubt that experimental research was being conducted."

In order to deal with the inadequacy of the documentary record Dr. Slonim examined changes in the data structure and, from periodical changes in the log generated by the CASE tool, he felt that he was able to infer the changes that were being made.

Dr. Slonim then described the Appellant's hypothesis as follows:

" ... C-W Agencies hypothesized that the benefit gained from the object-oriented architecture would result in a higher productivity per person from the reusability of components and a decrease in system development time compared to procedurally based development methods. At the same time, there were major drawbacks: the need to manage the uncertainty of performance and scalability of the new unproven methodology. It is the scale of this system, which justifies it as experimental research."

- **For the CCRA**

Dr. Ken Takagaki was called as an expert witness for the CCRA. He holds a Ph.D. degree from the University of British Columbia. He is the Dean of the School of Computing and Information Technology at the British Columbia Institute of Technology. Between 1985 and 1988, he worked on his thesis which pertained to object-oriented information systems.

Dr. Takagaki addressed the question whether the work involved in the development of information systems necessarily involves scientific research within the meaning of s. 2900. He

distinguished between those information system development projects which fall within s. 2900 and those which do not.

" ... Where an ISD project **utilizes a new principle or concept and the project is undertaken primarily to test the new principle** or concept, it may conform to 2900(1). Or, parts of an ISD project may utilize new knowledge, principles or techniques conforming to the requirements of 2900(1)."

Next Dr. Takagaki reviewed the Appellant's ten projects both individually and collectively. He noted:

"In all of their projects, CW Agencies Inc. appeared to have made efforts to follow a process of identifying requirements, creating prototypes with their CASE tool., testing, design refinement and iteration, i.e. routine systems development, using commonly applied methodologies as taught in courses or explained in textbooks of the time. ... I characterize these investigations as those of competent and prudent users of complex, commercially available technologies rather than those of researchers seeking to discover new knowledge, concepts or principles."

By way of rebuttal Dr. Slonim said he was surprised that Dr. Takagaki had failed to identify any of the 21 uncertainties and speculated that Dr. Takagaki's failure to identify the uncertainties resulted from an inadequate opportunity to examine the technology utilized by the Appellant.

## Issue:

The primary issue is whether the created application software for use in its business conducted SR&ED.

## Judgement & rationale: Not eligible SR&ED

### Strike 1 – lack of specific technical hypotheses

The judge expressed his doubt as to whether the "hypothesis" proposed by the company is one which is capable of being proved or disproved by means of scientific research stating,

“It seems to me that it is **simply too vague**. The word **hypothesis** in this context is normally considered to mean a **provisional concept** which is not inconsistent with known facts and **serves as a starting point for further investigation by which it may be proved or disproved objectively**. Even if this hypothesis is one which can be tested by scientific research it does not appear that the Appellant attempted to test it. All the Appellant really attempted to do was to develop software.”

### Strike 2 – lack of detailed project records

The Court reviewed previous precedence set in the case of Northwest Hydraulics quoting:

“Did the person claiming to be doing SR&ED formulate hypotheses specifically aimed at reducing or eliminating that technological uncertainty? This involves a five stage process:

- (a) the observation of the subject matter of the problem;
- (b) the formulation of a clear objective;
- (c) the identification and articulation of the technological uncertainty;
- (d) the formulation of an hypothesis or hypotheses designed to reduce or eliminate the uncertainty;
- (e) the methodical and systematic testing of the hypotheses.

Although the *Income Tax Act* and the Regulations do not say so explicitly, it seems self-evident that a detailed **record of the hypotheses, tests and results be kept**, and that it be kept as the work progresses.”

As admitted by the expert witness himself, little if any, evidence of SR&ED was maintained by the company.

### **Strike 3 – use of outside consultants to defend claim**

It is the author's belief that project technical descriptions should always be prepared and reviewed by the technical staff involved with the research. The courts supported this position in this case as the judge clarified,

“An odd feature of this case is that **virtually all of the evidence** relating to the detail of what **was in fact done** by the Appellant in the course of designing and writing the software was given, **not by a person directly and personally involved in the process, but rather by the Appellant's expert, Dr. Slonim**. As I appreciate the evidence, Dr. Slonim was compelled by the absence of a detailed project management plan to examine the results of the Appellant's work, next to examine the tools and technology used by the Appellant and, finally, to arrive at conclusions regarding the problems which he thought must have been faced by the Appellant and the steps taken to solve those problems. I note that the **failure to call the project manager or some similarly placed person was never explained by counsel for the Appellant**. In deciding what must in point of fact have happened, based on conjecture with regard to "the numerous uncertainties in this project", Dr. Slonim arrived at conclusions which in my view were not justified by the evidence.”

Based on this evidence the judge felt that the CCRA's witness, Dr. Takagaki, took a more prudent and defensible position to evaluating the claim. As a result the taxpayer's appeal was dismissed.

### **Implications & Author's commentary**

This case outlines the importance of linking all activities under claim to the resolution of one or more specific technical uncertainties. Given the great number of “system’ uncertainties inherent in most software development projects, this is a common problem of the software industry in general. It is our belief that our R&D Base software, by correlating all activities and conclusions to one or more predetermined technical uncertainties, can reduce or eliminate the types of documentation issues faced by the company in this case.

## Knowledge Systems Incorporated<sup>378</sup> - whether electronic diary entries SR&ED

### Facts:

The company was in the business of providing computer and technical services and computer systems management consulting in Ontario. During the relevant years, it was also involved, through its principal, in accumulating information for a project known as Knowledge Development Systems (KDS).

The hypothesis at the root of the KDS project taken from the Notice of Appeal, was that it ought to be possible to link a computer user's human intelligence and experiences with the memory, storage, retrieval, speed and indexing capabilities of a computer, to produce a superior decision-making process combining the best elements of the human mind with the best elements of the personal computer.

The CCRA's expert witness, Dr. Gotlieb, describes the research undertaken by KSI as follows:<sup>379</sup>

“The purpose of this research was to develop a system that when, for an individual, (the user) a query arises about any item or question that comes to his attention, he could recall all facts or items he had previously encountered that were relevant to the query and had been recorded into the system. The system is intended to be a personal, rapid, portable, and reliable, memory aid.

The way this is achieved is that when the user encounters a (*sic*) item that he feels is worth remembering, to become part of his personal knowledge base, he records this on a portable device to create an *entry*....”

Filed in evidence were hundreds of examples, excerpts from two of these entries are reproduced as follows:

### Page 27:

“Summary: KDS Experiment – Finding what I didn't know I had  
Saw spare boat propeller in crawl space and decided to make a kds entry so I could locate it when I needed it. Made entry and did search on 'crawl space' to see what else I had tagged there. Came up with an earlier prop entry that was almost identical.”

### Page 29:

“Summary: KDS Experiment – Consequences of an iterative approach  
Consequence of an iterative approach....from item: We understand from a point of view ...  
...as we learn, our perceptual models change and that changes our point of view. Thus we see old things differently, and we see entirely new things. Other people with different contexts see still differently. Thus there is no reality, only selected, limited, changing views with changing and different interpretations.”

### Judgment & rationale: Not eligible SR&ED

Based on some of the evidence provided above the judge concluded,

“Certainly, [the taxpayer] spent many hours on his project. If it was not scientific research, what was it? I believe it is **closer to a hobby and a recreational activity** or personal daily diary than SR&ED. **Many of the entries are random thoughts stored for [the taxpayer's] own personal reasons.** If after almost 10 years it **cannot be tested** by world-class computer scientists, I fail to see how the Appellant has satisfied the onus of proving that the KDS project is SR&ED.”

---

<sup>378</sup> Knowledge Systems Incorporated v. The Queen, Date: 2000/07/26, Docket: 98-1663(IT)G, (TCC)

<sup>379</sup> Exhibit A-5, page 1.

### **Author's commentary and opinion**

In the author's opinion this case illustrates a failure on the part of the taxpayer to understand some of the basic requirements of the SR&ED program:

- that research in the social sciences and humanities is ineligible for tax credit, and
- that evidence of technical hypotheses and conclusions must be correlated to quantified project objectives with defined timeframes.

As a result, in the author's opinion, this case is likely of little long-term interest to taxpayers.

## Tax planning - corporate structures to optimise credits

The following section attempts to illustrate that there may be considerable opportunity to structure ventures with foreign shareholders, public companies and other companies in a manner which maintains CCPC<sup>380</sup> status and therefore potential eligibility for enhanced SR&ED investment tax credits.

### Issue: Associated corporations must share SR&ED expenditure limits

#### “dejure” or “voting” control

The Income Tax Act generally deems that, where a shareholder owns greater than 50% of the fair market value of the capital shares of a company it will be deemed to control it.<sup>381</sup> This is commonly referred to as “voting” or “de jure” control.

If a person owns more than one company in this fashion the companies will be “associated” for taxation purposes. This “association” umbrella can be extended wherever “related persons”<sup>382</sup> each control corporations and there is 25% cross-ownership of shares in either direction<sup>383</sup>.

#### “defacto” or “non-voting” sources of control

The “association” umbrella can also be extended if it can be shown that a person controls a company through methods other than voting control. This is commonly referred to as “de facto” control. The CCRA clarifies that, “de facto control consists of all forms other than de jure control, by which a person may exercise control over a corporation” and provides the following examples:

Major factors<sup>384</sup> include:

- 1) the ability to change the board of directors or reverse its decisions,
- 2) making alternative decisions concerning the actions of the corporation in the short, medium or long term,
- 3) the ability to directly or indirectly terminate the corporation or its business, or
- 4) the ability to appropriate its profits and property.

Additional general factors<sup>385</sup> include:

- a) the percentage ownership of voting shares in relation to the holdings of other shareholders;
- b) ownership of a large debt or retractable preferred shares,
- c) shareholder agreements including the holding of a casting vote,
- d) commercial or contractual relationships of the corporation, for example, economic dependence on a single customer or supplier,
- e) possession of a unique expertise that is required to operate the business; and
- f) the influence that a family member who is a shareholder, creditor, supplier, etc. may have over another family member who is a shareholder of the corporation.

It should also be noted that the CCRA provides a specific **exclusion** to the “defacto control” rules for **arm's length** agreements where,

*"the influence is derived from a franchise, license, lease, distribution, supply or management agreement or other similar agreement or arrangement, the main purpose of which is to govern the relationship between the corporation and the controller regarding the manner in which a business carried on by the corporation is to be conducted."*<sup>386</sup>

<sup>380</sup> Canadian Controlled Private Corporation as defined in ITA subsection 125(7)

<sup>381</sup> Definition of control per ITA subparagraph 256(1.2)(c)(i)

<sup>382</sup> Related persons defined per ITA subsection 251(2) – includes parents, in-laws & siblings

<sup>383</sup> Definition of “Associated corporations” per ITA paragraphs 256(1)(c) to e)

<sup>384</sup> CCRA Interpretation Bulletin 64-R3, paragraph 17

<sup>385</sup> CCRA Interpretation Bulletin 64-R3, paragraph 19

<sup>386</sup> CCRA Interpretation Bulletin 458 R, paragraph 8 (May 31, 1991)

## **Potential structures to optimise SR&ED tax credits**

Generally speaking, in order to disassociate any particular corporation from a group of “associated companies” we need to keep the owners and any related individuals from owning more than 50% of any class of shares, other than shares of a “specified class.”

As noted previously, “association” in effect results in sharing of certain business and taxation limits which will reduce a companies SR&ED investment tax credits. There is however a specific exemption from this “deemed association” for any shares of a “specified class.”<sup>387</sup>

In general shares of a “specified class” are;

- a) non-convertible or exchangeable,
- b) non-voting,
- c) non-participating, and
- d) perhaps most importantly , the dividend rate at the time of issue of the shares cannot exceed the CCRA prescribed interest rate for the fiscal quarter.

In the authors’ experience, the use of these shares can be an effective way to prevent association of companies despite heavy cash or equity investment by large, public or foreign companies. In these cases the ownership arrangements should be structured to specifically address these control issues.

---

<sup>387</sup> “Shares of a “specified class” defined per ITA subsection 256(1.1)

## Overview of the R&D Base model

R&D Base is designed to focus on what we believe to be the simplest available method to recognize and concisely organize evidence of advancements in a company's knowledge. In developing and implementing the R&D Base model we aim to provide intuitive prompts and measures to document issues of technical relevance. To this extent we have chosen an intuitive, geometric model, perhaps the oldest in history as the basis of our interface:

## History of the Yantra - the three basic shapes of geometry

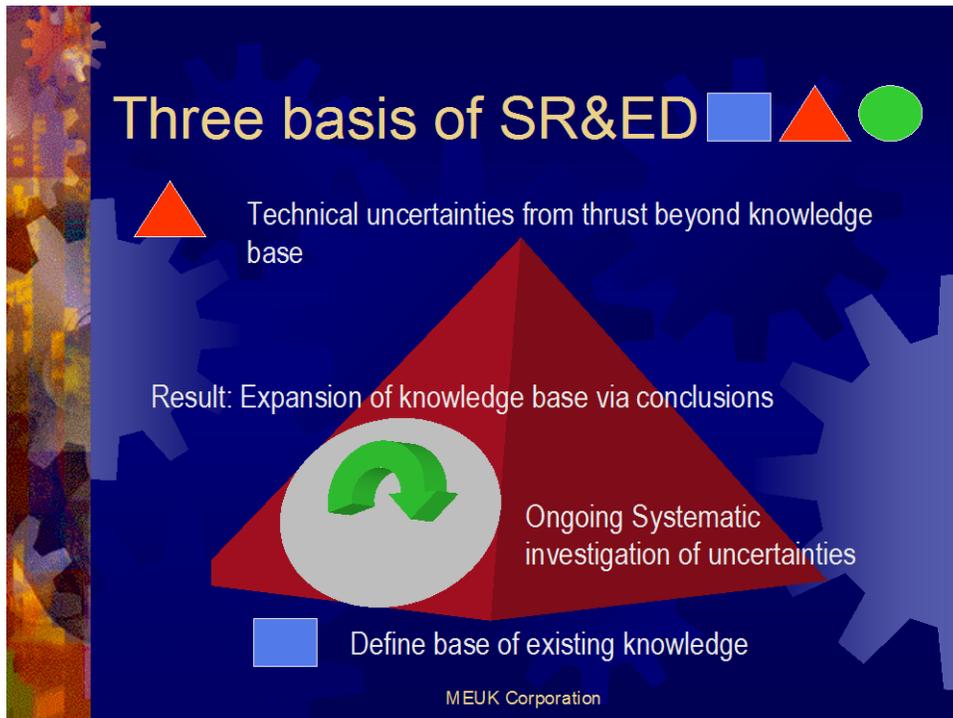


Contemplation of the three basic shapes of geometry; the square, triangle and circle, has been exemplified throughout recorded history in art, math, science, athletics and virtually every other field<sup>388</sup>.

---

<sup>388</sup> As documented in, Man and His Symbols, by Dr. Carl Gustav Jung, 1964, Published by Laureleaf, ISBN: 0440351839

## Square – triangle- circle - The basis of the R&D Base interface



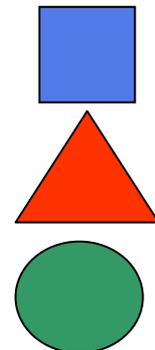
**"Nothing is more simple than greatness; indeed, to be simple is to be great."**

- Ralph Waldo Emerson

### The "R&D Base" database

Quite simply, R&D base is a simple to use, Microsoft access database with the Visual Basic interface. This tool takes our R&D base model to the next level! We believe that this simple geometric model is particularly suited to the art of developing technical knowledge. The R&D Base model aims to help researchers:

1. Define benchmarks & boundaries of existing knowledge,
2. Identify technical uncertainties, &
3. Concisely document related experimentation & conclusions.



## Summary of the R&D Base input and output

The next sections summarize the input and output parameters of the program. Due to the fact that the graphics to display the R&D Base interface are too large to include in this newsletter, we encourage interested parties to **download and view a demonstration copy of the R&D Base database as well as fully narrated multimedia tutorials at:**

<http://www.meuk.net/download/download.html>.

## Technical description compilation

### The Square - definition of existing knowledge

The first step in the R&D Base (square, triangle, circle) model is definition of the knowledge base. R&D base uses the square to represent the boundary of existing knowledge of the company regarding a particular product or process.

Whenever a new project is created the user is prompted for a definition of standard practices and then the project objective as well as the start and estimated completion date. Each of the input screens (i.e for the project objective and standard practice) can accept up to 256 lines of text.

### The triangle – documenting technical uncertainty

- Details of selected uncertainties

Our interface embeds a summary name (up to 20 characters) to briefly identify each of the major uncertainties identified. We use the red triangle to summarize each major technical “uncertainty.” When the respective triangle is selected a more detailed explanation of the uncertainty appears in a display box at the bottom of the uncertainties screen.

- Correlation of uncertainties to activities

Currently, the system allows for up to 14 separate uncertainties per project & an unlimited number of activities per uncertainty. To add detail of research activities, the user can select the uncertainty and then select the “green circle” icon to enter the “research steps.” As a default, double clicking on any triangle will also take the user to the research steps.

### The Circle – Ongoing experimental activities & conclusions

- Add activities

R&D base allows the user to create new activities or update existing activities as desired. A green icon is created for each new activity which in turn is correlated with one or more of the technical uncertainties (triangles) identified. Users can update their own as well as other’s activities.

Given that the program limits the number of uncertainties to 14 for any project, the user must rank the uncertainties and correlate the activities appropriately. To this extent we recommend that **minor technical uncertainties** be illustrated in the details of alternatives analyzed &/or the respective conclusions [i.e. within the circles].

- Ongoing activities

If you perform ongoing or follow-up work on an activity you can “double click” the icon (i.e green circle) for that activity to allow further additions.

- Single or Multiple conclusions

The database allows for multiple conclusions with each activity. To simplify the on screen display we have outlined only the first line of each conclusion. Double clicking on the “conclusion line” itself will display its full detail. We have also restricted the ability to change conclusions, once entered, to the administrator level. We have found this useful to avoid the temptation for users to erase their evidence of potentially “useful mistakes.”

## **Correlation of activities to costs**

**As a final step to assist in any claims for tax credits or grants, the system provides for the simple allocation of employee labour, contractors & materials for each activity within a project.**

- Once details of any activity are entered, the user can allocate the respective time and costs incurred.
- In order to allocate costs to a selected activity, merely select the “modify costs” button and begins to quickly document the three main sources of eligible SR&ED expenses: labour, subcontractors and materials.

### **SR&ED Labour**

The program provides drop down lists of all R&D employees and drop down calendars to allocate hours spent in any time period and increments desired.

### **Contractors and Materials**

Once explanations of the material usage and subcontractor are outlined in the activities, the program provides the ability to record the name, cost, date & a brief summary of SR&ED work (30 characters max.) for each material and contractor entry. The program prompts whether actual or estimated cost to avoid year-end confusion by accounting departments.

## **Output**

The database will allow researchers to search historical information by any desired words or phrases in order quickly identify similar activities or conclusions drawn by the organization, whether today, or at any time in the past.

The program can print out the project descriptions in the CCRA’s required format for claiming SR&ED tax credits. These descriptions as well as related cost information can also be easily exported other programs including Microsoft Excel & Word for further manipulation. The benefit will be SR&ED tax credit claims that can support the existence of each activity through correlation to one or more specific technical uncertainties.

## **Questions or feedback**

We welcome your questions or feedback on any issues raised in this letter.

We also encourage interested parties to examine:

- past SR&ED newsletters
- SR&ED tax guide [the Guide to RDBASE.NET],
- “RDBASE.NET” online SR&ED tracking software &
- additional tutorials re. eligible SR&ED activities at

**[www.rdbase.net](http://www.rdbase.net)**



## **Terms of use**

Although we endeavor to ensure accurate & timely information throughout this letter, it is not intended to be a definitive analysis of the legislation, nor a substitute for professional advice.

Before implementing decisions based on this information, readers are encouraged to seek professional advice, in order to clarify how any issues discussed herein, may relate to their specific situations.

This document may be reproduced & distributed freely as long as it acknowledges the RDBASE.NET SR&ED Consortium as the original author.

© 2011 *The RDBASE.NET SR&ED Consortium*

## **TABLE OF FIGURES**

Executive Summary of Reports .....	5
“Jenkins” report - Federal Commission .....	9
“Mowat (UofT)” – Academic POV .....	12
“Matthews” reports – VC + CATA industry association POV’s .....	14
“CD Howe / PWC” report – Private Commission POV .....	16
“Mobilizing Science & Technology to Canada's Advantage — 2007” .....	18
“Innovation & Business Strategy: Why Canada Falls Short (CCA 2009)” .....	21
Report consistency .....	25
Objectivity .....	25
Understanding BEST practices of SR&ED before shifting funding .....	25
Understand that Venture Capital is “picking the winners” .....	26
Soneil – evidence of hypotheses and experiments – lose .....	28
Global Enviro Inc. – criminal charges for false claim - lose .....	29
Canada slips further in innovation rankings (June 28, 2011) .....	30
Time for action on Innovation, not more study (July 3, 2011) .....	30
DRAFT Policy on the Eligibility of Work for SR&ED (June 20, 2011) .....	31
Review of Federal Support to R&D [Jenkins panel] – Oct 2011 .....	31
Taxpayers' Ombudsman – fall 2011 .....	31
Jentel – Illustrating “Technological Advancement” - lose .....	33
SR&ED Lease Expenditures Policy – draft .....	42
SPECTROL INC. – time extension for objection or appeal - win .....	44
SUNATORI – accruing wages payable – win + lose? .....	45
SR&ED Filing Requirements Policy – DRAFT .....	46
Third-Party Payments Policy - DRAFT .....	48
SR&ED claim average CRA Processing Times .....	50
Potential for penalties to be levied on “frivolous” claims .....	51
T661 – Part B: More space for project descriptions (50/100 lines) .....	52
A) Technical review guides – versions for CRA staff & for claimants .....	54
B) New Guide to form T661 .....	55
A) New proposals: Aggressive tax planning - reporting of “contingent fees” .....	57
B) Prior proposals status at June 30, 2010 .....	58
III a) Legislative definition of SR&ED .....	61
III b) Tax court definition of “TA” ( 5 components) .....	62
III c) CRA definition of a “project” .....	62
III d) CRA Definition of “TA” .....	63
COMPILING THE DATA: Template to identify and quantify the required elements .....	66
The SR&ED “Key Criteria summary” – 5 components of TA .....	69
“SR&ED key criteria” examples – plant breeding, machinery & chemistry projects: .....	70
Methods to estimate value .....	72
Factors to maximize perceived value of a company .....	72
Market Value Comparative Summaries .....	73
Hi vs. low technology stock values .....	73
Development vs. research expenses .....	74
Example of Development cost disclosure in Financial statements (F/S’s) .....	74
Results & implications to F/S users: .....	75
SR&ED Ombudsmen request for feedback .....	76
Questions and Answers - New SR&ED Claim Form and Guide (Addendum) [released 2009-06-04] .....	78
APP 2004-02r2-eng Filing Requirements for Claiming SR&ED (June 11, 2009) .....	79
Transitional Measures for Filing Form T661 .....	80
Manual entry required for Taxprep and Profile .....	82
Results & filing implications / planning .....	83
Selected SR&ED funding / factoring agents in the Golden Horseshoe area .....	85
6 W’s of factoring SR&ED credits .....	86
Considerations for SR&ED claim preparers .....	86

Advanced Agricultural – Eligibility of clinical trials .....	88
Advanced Agricultural – revoking “proxy” election once filed .....	89
Spasic – “hobby” vs. “carrying on business” .....	90
Unresolved issues: .....	91
Potentially resolved issues: .....	91
Resolved issues:.....	91
2009 budget – enhanced incentives .....	92
Summary of credits by Province:.....	94
Ontario 2009 budget – enhanced incentives .....	95
Alberta – 2009 new 10% refundable SR&ED ITC .....	95
Comments on the current CRA description (Pros & Cons) .....	99
Sample CRA software project – key SR&ED components via template .....	108
Sample CRA software project – rewritten to remove existing documentation shortfalls (3 pages) .....	109
TAXPREP - specific problems to preparing descriptions.....	116
PROFILE - specific problems to preparing descriptions .....	120
1) CRA response to problems cited – corrections coming.....	122
2) Providing technical documents via website .....	122
Contact information for technical & financial people in charge .....	126
Partnership information .....	126
Section A – project identification .....	126
Sections B & C - Project descriptions - can NOW elect from 2 formats .....	126
Section D – Additional project information.....	127
Section E – Project cost.....	127
Section A: Choice of overhead method (unchanged).....	127
Section B: Calculation of allowable SR&ED expenditures .....	127
Identification of T661 “form preparer” moved to the certification section.....	128
Timing - required for year ends in 2009 or later.....	128
New T661 form in Fall 2008 .....	131
Federal & provincial SR&ED funding.....	131
Expenditures by Province .....	131
Credits earned by “rate of ITC’s” .....	132
Credits earned by “size of corporation” .....	132
Credits earned by “industry sector” .....	133
Marginal effective tax rates on investments in R&D assets .....	134
White star - representation by officer vs. legal counsel .....	137
Chichkov – non arm’s length payments & carrying on business.....	137
Foster - LPs eligibility & frivolous appeal.....	138
Lilly v. Novopharm – Patent defence – requirement to define Standard Practice .....	139
2008 budget – enhanced incentives .....	141
Carry-back of non-refundable ITC – restriction on refunds.....	142
Ontario Business Research Institute (OBRI) Tax Credit – pre-approval requirement waived.....	143
Ontario harmonization - The Transitional Debit/Credit.....	144
Armada - eligibility of SR&ED preparation fees.....	146
Nuytten - personal (T1) SR&ED claim disallowed since work in Co.....	147
Hopmeyer - Whether SR&ED eligible while insolvent .....	148
Systemhac - Director fined \$75,000 for SR&ED tax fraud in B.C. court.....	149
2007 SR&ED limits for specified employees .....	151
CRA & Ontario harmonization 2008.....	152
Perfect Fry – subsidiary of public Co. still CCPC for SR&ED.....	155
Zeuter – meaning of “technological uncertainty” .....	156
Daniel Harvey - minimum technical documentation.....	157
Major changes being discussed by Parliament.....	159
History of the “super-allowance” and “super-deduction” .....	161
“Super-Allowance” replaced by “Super-Deduction” in 2000 .....	161
When does the SR&ED testing end? .....	162
Rules of thumb / industry standards.....	162

Terra Remote Sensing – meaning of “arm’s length” .....	166
Sedona Networks – CCPC Status .....	166
Maege - if SR&ED partnership is a “tax shelter” .....	167
Textile Industry Guidance Document - Examples .....	169
Basic patent reporting structure .....	171
Patent search portals .....	171
Papiers Cascades – ITC’s from statute barred years .....	173
VR interactive - late filing (>18 months).....	173
Alcatel – SR&ED eligibility of stock options .....	174
Small Business Limit and related SR&ED phase-out \$400-600K.....	175
Non-Capital Losses and Investment Tax Credits (20 yr. c/f).....	175
SR&ED program funding status .....	176
New T661 form – required >September 30, 2005 .....	177
New APP SR&ED 2005-01 on Shared-Use-Equipment .....	177
New APP SR&ED 2005-02 on Assistance .....	177
Alcatel – SR&ED eligibility of stock options .....	180
New T661 form – required >September 30, 2005 .....	181
CRA Note on stock option benefits claimed for SR&ED .....	181
APP 2002-02R2: Experimental vs. Commercial Production .....	182
Budget 2005 – “Canada” includes EEZ.....	183
Upcoming 2005 SR&ED Client Survey .....	183
Reasonableness of Shareholder/Manager Remuneration .....	184
Canada Post filing procedures .....	185
Relevant legislation.....	185
Related “Xpresspost” planning .....	185
Issue – proving “prescribed information” filed within 18 months! .....	185
Chartwell v. Queen - unpaid amounts .....	187
Corporate control & effects on the SR&ED expenditure limit .....	189
Summary of current “association” problems.....	189
Proposed “exceptions” to the association rules.....	189
Requirements .....	189
Prototypes, Pilot Plants/Commercial Plants, Custom Products and Commercial Assets .....	192
Filing Requirements for SR&ED .....	192
Allocation of Labour Expenditures for SR&ED .....	194
Retiring Allowances.....	194
Plastics, materials processing, equipment & tool making guidance document .....	195
Pulp and paper sector guidance document .....	195
Maritime-Ontario Freight Lines v. R. ....	198
Synchrosat Limited v. R. ....	199
Blue wave Seafoods vs. R.....	199
Accruing reasonable R&D wages when “cash strapped” .....	201
Reporting of “Unpaid” amounts .....	201
Other factors to consider with respect to year-end SR&ED accruals: .....	201
Issue: timing of tax on proxy amount.....	202
Results & filing implications / planning.....	203
Previous requirements: T661E (99&01).....	204
New formT661E(03) – post June 30, 2003.....	204
BN # required for all subcontractors.....	204
Income phase out revised.....	205
Phase-out on Taxable Income expanded.....	207
Qualified CCPC’s - defined .....	207
Phase-out on Taxable Capital unchanged .....	207
Time lines for submitting & processing claims.....	209
SR&ED assets decision tree .....	210
ASA vs. SUE SR&ED equipment rules.....	210
Three classes of SR&ED capital assets.....	211

Strategies in documenting long-term SR&ED intent .....	211
Subsequent dispositions/commercial use .....	211
Datacalc Research Corporation v. The Queen .....	214
Mimetex Pharmaceuticals Inc. v. The Queen .....	214
Extended ITC Access for Farm Producers.....	215
Food and Consumer Packaged Goods Sector SR&ED Guidance Document.....	215
Treatment of “administrative” salaries or wages .....	217
Water and Energy Sources as Materials .....	218
Nashen – eligible software development .....	223
Ainsworth Lumber – ordering of ITC use.....	225
Larter – Tax effects of work outside Canada .....	225
R.J. Miller – lack of technical documentation .....	226
Wojik – incomplete information.....	227
Quebec drops superdeductions .....	228
Ontario replaces Super Allowance.....	228
Association through trusts.....	229
Tools for analyzing patents.....	230
Implications to SR&ED claimants .....	231
Payments to non-residents .....	232
CDD-REM - Payments to “specified employees”.....	235
Rainbow Pipeline - Development of a predictive model .....	236
Aurora Marine- Eligible Yacht expenses .....	238
Organizing corporate ownership and structures to optimise credits.....	239
Option overview – can be taxed at rates of “capital gains”.....	241
Ontario’s new [ORES0] credit.....	242
SR&ED wages – decision tree.....	246
Quantetics Corporation - Definition of “All or substantially All” .....	249
C.W. Agencies - whether development of application software SR&ED .....	250
Knowledge Systems Incorporated - whether electronic diary entries SR&ED .....	255
Issue: Associated corporations must share SR&ED expenditure limits .....	257
Potential structures to optimise SR&ED tax credits .....	258
History of the Yantra - the three basic shapes of geometry.....	259
Square – triangle- circle - The basis of the R&D Base interface .....	260
The “R&D Base” database .....	260
Technical description compilation.....	261
Correlation of activities to costs .....	262
Output .....	262