SR&ED
Scientific Research & Experimental Development Tax Credits

Practitioner workshop
September 22, 2014

SR&ED Practitioners meeting **September 22, 2014**

First Name	Last Name	Company
Moderator:		
Sabina	David	MEUK Corporation
Attended in person:		
Bryan	Allendorf	BGA Tax Strategies
Alex	Barankin	ATSS org
Roy	Bilic	Turn - R tech LTD
Harvey	Cantor	Harvey Conuslting
Tom	Carrothers	TJC Chemical Consultants
Darren	Chan	McGovern, Hurley, Cunningham, LLP
Michael	Chorr	BeneFact
Edward c	Collis	Collis & Weitzman, C.A.'s
Jeff	Dodgson	Akr Consulting inc
Jamie	Dowd	BeneFact
Darren	Drury	Pinnacle Consultants Inc.
Christine	Ermarkaryan	Braithwaite
Chris	Fattaei	kings way consulting
Norm	Finkelstein	SRED consultant
Greg	Garland	PWC
Allan	Gordon	SRED Professionals Inc.
Garron	Helman	BeneFact
Justin	Hoffman	Davis Martindale
Ramsey	Ida	Finucci Porter Hetu PC
Michelle	Jamieson	MEUK Corporation
Rob	Jenkins	SRED Consultant
David	Kennedy	TCE Capital Corporation
Peter	Khan	JPK Associates Inc.
Peter	Lau	Lumawiz Inc.
Mike	Lee	RD partners
Ruth	Liebersbach	McMaster Innovation Park
Jay	Mclean	PWC
Bob	Mitchel	SRED Consultant
Thomas	Nagel	SR&ED TSI
Pantea	Pervissian	MEUK Corporation
Anna	Piekarska	Export Deevelopment Canada
Maria	Piro	Terratec Environmental
Serge	Portnoy	Serge Portnoy, CA
Jennifer	Running	BDO Canda LLP
Alex	Schiappa	Business
Stephan	Schweighoger	business group
Bob	Singh	SRED Consultant
Grace	Slot	Ward & Uptigrove
Diane	Stogiannes	Braithwaite
Professor Chris	Stoute	Ryerson University
Bernard	Taub	N.T Professional Corp
Wayne	Taylor	MEUK Corporation
Bob	Turner	INAC Servies Limited

First Name	Last Name	Company
Mark	Vainberg	SRED Professionals Inc.
Greg	Visentin	KPMG
Robert	Zawydiwski	SR&ED Consultant

Attended via Webcast

Kim	Acherman	BDO
Kevin	Angell	SRED Management Inc.
Kieth	Chambers	Bridgman & Durksen
Darren	Chan	McGovern, Hurley, Cunningham, LLP
Tara	Dallmeier	Pinnacle
Corey	Delaney	Pinnacle
Harry	Gill	Canada revenue agenency
Nicola	Gonsalves	Research Development Consulting
Beverly	Graham	HiTech Research Consultants
Larry	Hildebrandt	Technology Initiatives Group
David	Hill	Immiso Corporation
Jesse	Hook	Jorritsma design Inc
Lisa	Hyde	Impact 360
Mary	Jezerinac	RDC reseach and development consulting inc
David	Jorritsma	Jorritsma Design
Abigail	Kan	McGovern, Hurley, Cunningham, LLP
Howard	Kazdan	McGovern, Hurley, Cunningham, LLP
Sarmen	Khagerian	Maxim Strategy Consulting Inc.
Laura	Krizmanic	Miovision Technology
Jim	Laird	Espresso Capital
Elizabeth	Lance	Ingenuity Group
Robert	Lang	PCI Geomatics
Jon	McCourt	SRED Management Inc.
Theo	Meimar	R&D Tax Solutions
Mihir	Panchal	Intrafinity
Denisia	Pereira	Business Development Bank of Canada
Rhonda	Pomerantz	Feldstein & Associates LLp
Serge	Portnoy	SRED consultant
Russ	Roberts	CATA
Elliot	Schiller	Taeeger Schiller Inc.
G	Shah	SRED Consultant
Glen	Skene	Braithwaite technology
Grace	Slot	Ward & Uptigrove
Bob	Sutton	SRED consultant
Neha	Tiku	MNP LLP
Craig	Turner	Ecosynthetix
Lori	Way	Roth Mosey
Peter	Wright	BDO
Beth	Yeh	Roth Mosey
Myriam	Zitouni	SRED Consultant

Total attendees **85**

Part 1

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b) Evidence of initial "due diligence" to define standard practices 5

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I) New Canada Revenue Agency Procedures

New form T661(13) to reflect 2013 changes

- Suggested project reporting format
- Report formats to address new CRA questions

New form T661(13) to reflect 2013 changes

CRA OLD FORMAT (up to 2013)		CRA NEW FORMAT (after 2013)	
T661 Box #	3 Criteria	T661 Box #	3 Criteria
240	Advancement (50 lines): "What technological advancements were you trying to achieve?"	n/a	replaced by box 246 below
242	Technological Uncertainty (50 lines): What technological obstacles/uncertainties did you have to overcome to achieve the technological advancements described in Line 240?	242	Technological Uncertainty > Standard Practice (50 lines): "What scientific or technological uncertainties did you attempt to overcome – uncertainties that could not be removed using standard practice?"
244	Activities (100 lines): What work did you perform in the tax year to overcome the scientific or technological uncertainties described in Line 242? (Summarize the systematic investigation or search)	244	Activities (100 lines): What work did you perform in the tax year to overcome the scientific or technological uncertainties described in Line 242? (Summarize the systematic investigation or search)
n/a	formerly box 240 above	246	Advancement (50 lines): What scientific or technological advancements did you achieve as a result of the work described in Line 244?

3 step documentation process:

"Technological Advancement" requires 3 key steps

STEPS

1) DEFINE PRIOR ART

2) CORRELATE prior art to VARIABLES for experiments

3) ANALYSIS of & CONCLUSIONS on VARIABLES

Notable quote:

“It’s tough when markets change and your people within the company don’t.”

- Harvard Business Review

RDBASE.NET International SR&ED template

		Recommended documentation	GOAL: prove to Government (CRA, IRS, patent office)
I	**OBJECTIVE BEYOND STANDARD PRACTICE**		
i)	**State of Existing technology**	State benchmarking methods & sources	Limits of information available to someone "skilled in the art."
ii)	**Objective(s)**	Top 5 measureable "Objectives"	Quantifiable Objectives beyond known limits
II	**TECHNOLOGICAL UNCERTAINTIES**	Top 5 "Variables" for experimentation	Formulate "test matrix" to test hypotheses
III	**EXPERIMENTAL ACTIVITY**	Defined by tax year*	
i)	**Experimentation method**	Number of alternatives tested & how?	Justify sample sizes
ii)	**Results**	Correlate to "Objectives"	Provide basis for Conclusions
iii)	**Conclusions**	Correlate to "Variables"	"New knowledge" illustrates "Technological Advancement"

Notable quote:

“It is not how many ideas you have. It’s how many you make happen.”

- Accenture

CRA NEW FORMAT (after 2013)		HOW TO PROVIDE INFO.
T661 Box #	**3 Criteria**	**RDBASE SR&ED project - 5 Steps**
n/a	replaced by box 246 below	
242	**Technological Uncertainty > Standard Practice (50 lines):** "What scientific or technological uncertainties did you attempt to overcome **– uncertainties that could not be removed using standard practice?**"	**I i):** Define Standard Practice (SP) **I ii): Objectives > Standard Practice &** **II: Technological uncertainties** to research
244	**Activities (100 lines):** What work did you perform in the tax year to overcome the scientific or technological uncertainties described in Line 242? (Summarize the systematic investigation or search)	**III i):** List **selected research logs** to show work done "systematically"
246	**Advancement (50 lines):** What scientific or technological advancements **did you achieve** as a result of the work described in Line 244?	**III ii & iii): Display results & conclusions.** The "technological conclusions" = advancements if all other criteria met.

New Canada Revenue Agency Procedures

New form T661(13) to reflect 2013 changes

This form is effective for claims filed after January 1, 2014 & includes a new project format & character limits.

Notable quote:

"It's tough when markets change and your people within the company don't."

- Harvard Business Review

CRA OLD FORMAT (up to 2013)		CRA NEW FORMAT (after 2013)	
T661 Box #	**3 Criteria**	**T661 Box #**	**3 Criteria**
240	**Advancement (50 lines):** "What technological advancements were you **trying to achieve**?"	n/a	replaced by box 246 below
242	**Technological Uncertainty (50 lines):** What technological obstacles/uncertainties did you have to overcome **to achieve the technological advancements** described in Line 240?	242	**Technological Uncertainty > Standard Practice (50 lines):** "What scientific or technological uncertainties did you attempt to overcome **– uncertainties that could not be removed using standard practice?"**
244	**Activities (100 lines):** What work did you perform in the tax year to overcome the scientific or technological uncertainties described in Line 242? (Summarize the systematic investigation or search)	244	**Activities (100 lines):** What work did you perform in the tax year to overcome the scientific or technological uncertainties described in Line 242? (Summarize the systematic investigation or search)
n/a	formerly box 240 above	246	**Advancement (50 lines):** What scientific or technological advancements **did you achieve** as a result of the work described in Line 244?

The 2 most significant changes are:

1) Moving the advancement field

Now at the end of the project description (vs. the start) & in the **past vs. future tense**

- Effect: Box 240 now box 246
- Clarify advancements achieved vs. contemplated)

2) An increased focus on "standard practice"

- Effect: Box 240 now box 246 which effectively
- combines standard practices with uncertainties (formerly separate)
- which raises further questions on how much detail to include on project objectives given related word limits

Notable quote:

“Innovation is the ability to convert ideas into invoices.”

- L. Duncan

New CRA RFI procedures & recommendations to address

- The most notable of the “standard” questions across the country fall into 2 main categories:
- 1) Technical documentation
  - a. Evidence of experiments
  - b. Due diligence to define standard practice
- 2) Financial info (detailed timesheet correlation)

1) Technical documentation

a) Evidence of “relevant” experimentation

The CRA requests, “Please send …

- up to maximum of five (5) letter-sized (8.5" x 11") pages for each project claimed
- which you feel best demonstrates that the work meets the definition of SR&ED in Subsection 248(1) of the Income Tax Act.”

1) Technical documentation

b) Evidence "due diligence" to define standard practices

The CRA requests, "…copies of the c**ontemporaneous evidence** that:

• recorded your initial **due diligence** activities and that shows that available technology could not overcome the technological problem or obstacle that you faced;

• recorded **the plan** you subsequently devised to overcome the technological problem or obstacle;

•Preserved the **new technological knowledge** gained by the company."

Notable quote:

“The best ideas lose their owners and take on lives of their own.”

- N. Bushnell

New CRA Request for information (RFI) procedures & recommendations to address

In 2013 the CRA began sending "requests for information" (RFI's) to a large % of claimants.

The most notable of the "standard" questions across the country fall into **2 main categories:**

1) Technical documentation

a. Evidence of experiments
b. Due diligence to define standard practice

2) Financial info (detailed timesheet correlation)

1) Technical documentation

a) Evidence of "relevant" experimentation

The CRA requests, "Please send …

- up to maximum of **five (5) letter-sized (8.5" x 11") pages for each project** claimed
- which **you feel best demonstrates** that the work meets the definition of **SR&ED** in Subsection 248(1) of the Income Tax Act."

b)Evidence of initial "due diligence" to define standard practices

The CRA requests, "In addition, if not included in the above sample, please send us copies of the **contemporaneous evidence** that:

• recorded your initial **due diligence** activities and that shows that available technology could not overcome the technological problem or obstacle that you faced;

• recorded **the plan** you subsequently devised to overcome the technological problem or obstacle;

•Preserved the **new technological knowledge** gained by the company."

Recommendations on meeting requirements

Google patents – new benchmarking tools

Many users are unaware of the information which is available to benchmark existing knowledge for their fields of science.

Once excellent example is Google Patent & Prior art search tools which:

- are FREE to use &

- allow controlled searches of patents, scholarly article, the web, books & people.

We have found that the information is useful to support both the:

- Claims for tax credits (due diligence) &
- Ongoing commercialization of the research results.

Notable quote:

"The best ideas lose their owners and take on lives of their own."

- N. Bushnell

3 step documentation process:

"Technological Advancement" requires the integration of 3 key steps.

Notable quote:

"Small opportunities are often the beginning of great enterprises."

- Demosthenes

STEPS TO ADDRESS "TECHNOLOGICAL ADVANCEMENT" CRITERIA

R&D Base demo - Key Criteria Summary

STEPS

1101 - Machinery - Improve Compounding Equipment

Benchmarks:	**Internet articles: 33**	**Objectives:**	Temperature variance: 2 Deg C
	Patent searches: 12 patents		Output: 120 output/minute
	Competitive products or processes: 14		Shear : 12 tons/sq.inch
	Similar prior in-house technologies: 8 products /		Improve Dispersivity : 1 mm
	Potential components: 6 products		Maximum cost increase : 15 %
	Queries to experts: 2 responses		

1) UPLOAD PRIOR ART
- try to include Google patents

Uncertainty: 1 - Temperature Control

Key Variables:
HYPOTHESES
1 optimal measurement devices
2 device locations,
3 vibration - locations, intensity, duration

2) CORRELATE prior art to VARIABLES for experiments

Activity	Testing Methods	Results - % of Objective	Variables Concluded	Hours	Materials $	Subcontractor $	Fiscal Year
1 - Thermocouples	Analysis / simulation: 12 alternatives	Temperature variance: 4 Deg C (33 %) Output: 100 output/minute (0 %) Improve Dispersivity : 0.6 mm (20 %)	device locations vibration - locations, intensity, duration	272.00	4,500.00	3,796.10	2011
2 - Fiber Optic System Optimization	Analysis / simulation: 6 alternatives Trails: 4420 runs / samples Physical prototypes: 14 samples Lines of code: 5 Lines of prototype code	Temperature variance: 1 Deg C (133 %) Output: 112 output/minute (60 %) Shear : 13 tons/sq.inch (150 %) Improve Dispersivity : 0.9 mm (80 %) Maximum cost increase : 20 % (133 %)	device locations optimal measurement devices	370.00	2,000.00	1,496.76	2011

3) UPLOAD ANALYSIS of Variables

TECHNOLOGICAL ADVANCEMENT

Our prior newsletter ___ discussed why the Tax Courts require evidence to be organized using the "scientific method."

This requires EACH of the 3 steps listed above.

If any step is missing the criteria will not be met.

Conversely if all components are met then the technological advancement criteria is achieved.

CASE STUDY – EXAMPLE

For a case study example of this documentation process please view the

RDBASE Technology Documentation example

Recommendations to address RFI procedures on Standard practice

I **PROJECT OBJECTIVE BEYOND STANDARD PRACTICE:**

GOAL is to prove to Government (CRA, IRS, etc.) :

Technology limits of "readily available" information to someone "skilled in the art."

i) State of Existing technology: Benchmarking methods & sources

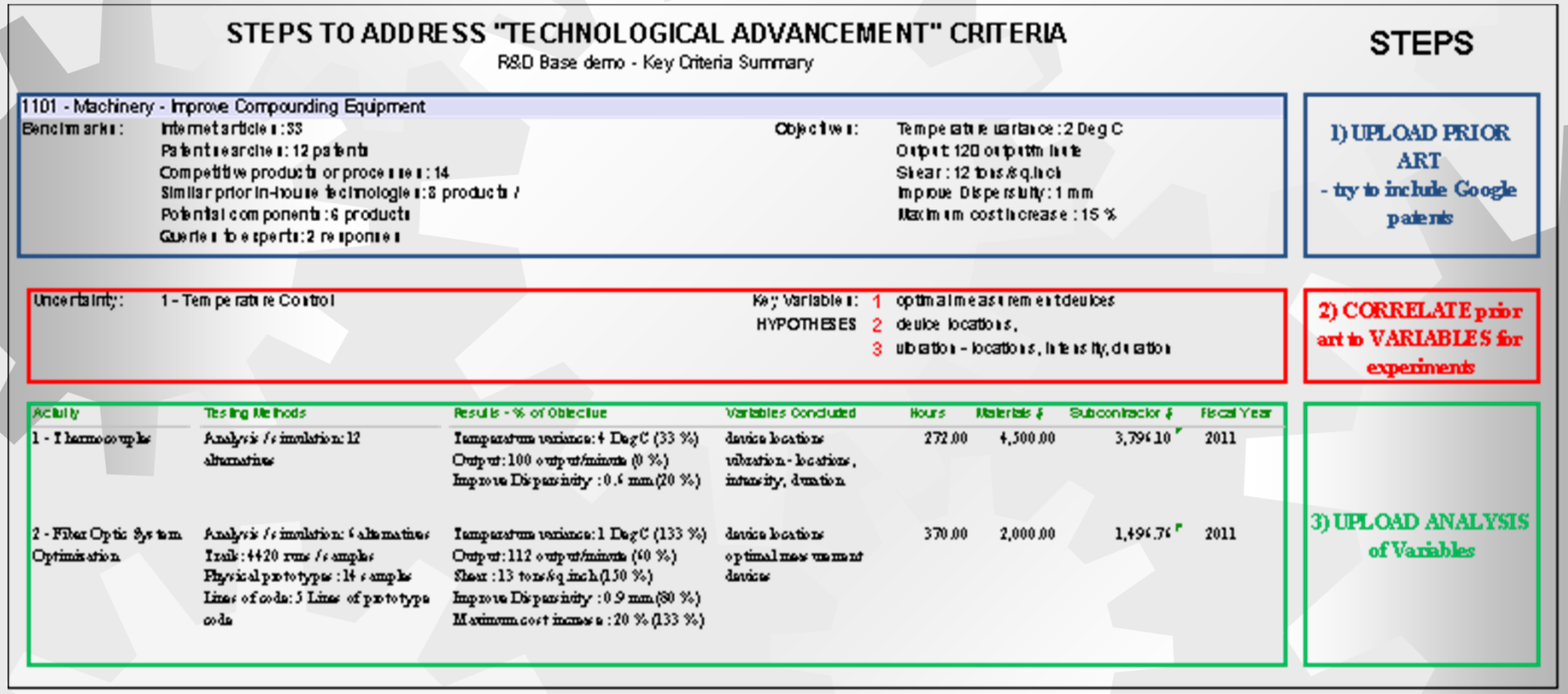
		Number (#) of	
i	Internet / Google Searches		internet sites
ii	Articles		articles
iii	Patent searches		patents
iv	Competitive methods		products / processes
v	In-house technologies		products / processes
vi	Potential components		products
vii	Queries to experts		responses
viii	Other		

ii) Objective(s)

Quantifiable Objectives beyond known limits

		Performance benchmarks (top 5)*	
		Benchmark 1	Benchmark 2
i	Existing benchmark		
ii	Units of measure		
iii	Performance objective		
iv	*Result (III below)**		

Prior Art – search example (7 slides)



STEPS TO ADDRESS "TECHNOLOGICAL ADVANCEMENT" CRITERIA

R&D Base demo - Key Criteria Summary

STEPS

1101 - Machinery - Improve Compounding Equipment

Benchmarks: Internet articles: 33
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Objectives: Temperature variance: 2 Deg C
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"Small opportunities are often the beginning of great enterprises."

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Benchmarks:	**Internet articles: 33**	**Objectives:**	Temperature variance: 2 Deg C
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Notable quote:

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- Demosthenes

Steps 1&2 – Objectives & Variables for search

1101 - Machinery - Improve Compounding Equipment

Benchmarks:
Internet searches: 33
Patent searches: 2 patents
Competitive products or processes: 14
Similar prior in-house technologies: 8 products /
Potential components: 6 products
Queries to experts: 2 responses

Objectives:
Temperature variance: 2 Deg C
Output: 120 output/minute
Shear : 12 tons/sq.inch
Improve Dispersivity : 1 mm
Maximum cost increase : 15 %

Uncertainty: 1 - Temperature Control

Key Variables: device locations, optimal measurement devices, vibration - locations, intensity, duration

RDBASE - Prior Art Search Example

X - designate as term to search on patent databases

	Project name	TO/FOR	Objectives	BY	Key variables (to achieve objectives)
X	Improve compounding	X	Temperature variance		optimal measurement devices
			Output		device locations
			Shear	X	vibration - locations, intensity, duration
			Dispersivity		
			Cost		

Google | Improve compounding equipment FOR temperature variance & shear BY vibrat | +David | Share

Web | Images | Shopping | Videos | More | Search tools

About 50,400 results (0.44 seconds)

Computer-controlled compounding extrusion blending ...

www.google.com/patents/US7070404

Grant - Filed 25 Oct 2002 - Issued 4 Jul 2006 - Daniel Joseph MacPhee - Macphee Daniel Joseph

An extruder **apparatus** for **compounding** thermoplastic resin and ... wherein said extrusion system further comprises a low **shear** barrier screw inside a .... Some **compounding** extruders introduce room-**temperature** fibers .... Additionally, to **improve** the precision of loads provided to chamber 228, a **vibration** ...

Overview - Related - Discuss

Elastomeric vehicle vibration damping devices

image not available

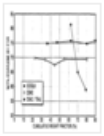
www.google.com/patents/WO1997000290A1?cl=en

App. - Filed 13 Jun 1996 - Published 3 Jan 1997 - Eric Paul Jourdain - Exxon Chemical Patents Inc

Motor vehicle **vibration** damping parts based on an ethylene, ... more functions and **equipment** are finding their way into the engine compartment. ... Natural rubber's self-plasticizing charcteristic at **compounding** **temperatures** allows a .... by viscosity at high **shear** and injection **temperatures**, **improved** cure ...

Overview - Related - Discuss

Elastomeric vehicle vibration damping devices



www.google.com/patents/EP0843700B1?cl=en

Grant - Filed 13 Jun 1996 - Issued 15 Nov 2000 - Eric Paul Jourdain - Exxon Chemical Patents Inc.

Motor vehicle **vibration** damping parts based on an ethylene, ... more functions and **equipment** are finding their way into the engine compartment. ... Natural rubber's self-plasticizing charcteristic at **compounding** **temperatures** allows a .... by viscosity at high **shear** and injection **temperatures**, **improved** cure ...

Overview - Related - Discuss

Plastic surfaces having improved surface characteristics

image not available

www.google.com/patents/US8722761

Grant - Filed 29 Oct 2009 - Issued 13 May 2014 - Narayanan Sankara Subramanian - E I Du Pont De Nemours And Company

A need exists for parts that have **improved** surface properties that are stable over ..... out using a twin screw extruder or other polymer processing

Enter initial search terms in Google Patents to find "Prior Art"

then

select the most relevant item

Patents | Application | Grant

Find prior art | Discuss this patent | View PDF | Download PDF

Computer-controlled compounding extrusion blending apparatus and method

US 7070404 B2

Publication number	US7070404 B2
Publication type	Grant
Application number	US 10/279,939
Publication date	Jul 4, 2006
Filing date	Oct 25, 2002
Priority date	Oct 25, 2002
Fee status	Lapsed
Also published as	US20040080064
Inventors	Daniel Joseph MacPhee, Christopher Mark Tanner
Original Assignee	Macphee Daniel Joseph, Christopher Mark Tanner
Export Citation	BiBTeX, EndNote, RefMan

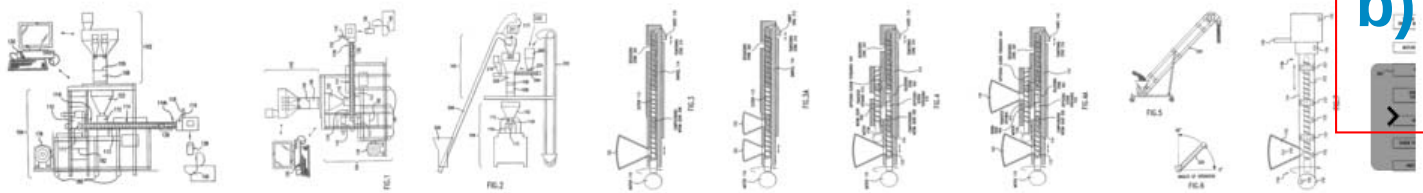
Patent Citations (11), Classifications (37), Legal Events (3)

External Links: USPTO, USPTO Assignment, Espacenet

ABSTRACT

An extruder apparatus for compounding thermoplastic resin and reinforcing fibers is disclosed. Molten thermoplastic resin is mixed in intimate contact with long reinforcing fibers of at least one and one quarter inches in length under the control of a sophisticated computer system, resulting in charge ready for molding.

IMAGES (17)



DESCRIPTION

FIELD OF THE INVENTION

This invention relates generally to extrusion compounding of resin with reinforcing fibers under control of a computer. More particularly, an extruder apparatus and process for producing a preform charge suitable for subsequent use in a molding operation, such as compression molding, is disclosed.

BACKGROUND OF THE INVENTION

Fibers and resins are normally introduced together into a compounding extruder in a solid state. Upon first being converted from a solid to a liquid by a combination

CLAIMS (24)

1. A compounding extruding and blending apparatus, comprising:

a blending system comprising a closed-loop auger feeder, responsive to a computer system;

wherein said blending system further comprises a vacuum loader and thermoplastic dryer, and includes dual paths which either incorporate or bypass said dryer and the choice of said paths can be made through said computer;

an extrusion system for forming a charge from the output of said blending

We can then

a) View Cited patents directly

OR

b) Use the prior art tool

without departing from the spirit and scope of the invention, as defined by the following claims.

PATENT CITATIONS

A) Citations: Allow users to review related patents

Cited Patent	Filing date	Publication date	Applicant	Title
US4066245 *	Apr 30, 1976	Jan 3, 1978	Whitlock, Inc.	Control for hopper loader for granular materials
US4613471 *	Jul 16, 1984	Sep 23, 1986	Harrel, Incorporated	Based on volume per unit time of extrudate being formed
US5052811 *	Apr 19, 1990	Oct 1, 1991	Akebono Brake Industry Co., Ltd.	Apparatus for blending friction material
US5225137 *	Feb 3, 1992	Jul 6, 1993	Abc Group	Bottle recycling apparatus and method
US5240324 *	Jun 5, 1992	Aug 31, 1993	Bluffton Agri/Industrial Corp.	Continuous flow system for mixing and processing bulk ingredients
US5401161 *	Jun 30, 1993	Mar 28, 1995	Long; Michael C.	Injection molding valve
US5792495 *	Oct 3, 1996	Aug 11, 1998	Warner-Lambert Company	Elastomer processing system for chewing gum
US6261081 *	Jul 15, 1999	Jul 17, 2001	Ralston Purina Company	Extruder with variable restriction element
US20010009307 *	Jan 24, 2001	Jul 26, 2001	Abrams Fredric Louis	Plasticator and molding system and method
DE19909307A1 *	Mar 3, 1999	Sep 23, 1999	Siemens Ag	Plastic product production machine e.g. an injection molding machine, extruder or blow molding machine
EP1128244A2 *	Jun 24, 2000	Aug 29, 2001	Negri Bossi S.P.A.	Network connection system for machine tools, particulary injection presses for plastics

* Cited by examiner

CLASSIFICATIONS

U.S. Classification	425/113, 425/149, 425/311
International Classification	B29C47/96, B29C47/10, B29C47/92
Cooperative Classification	B29C47/369, B29K2105/16, B29C47/1027, B29C47/1018, B29C2947/92704, B29K2105/08, B29C47/02, B29C47/0009, B29C2947/92638, B29C2947/92933, B29C2947/92676, B29C2947/924, B29C2947/92857, B29C2947/9259, B29K2105/06, B29C2947/92657, B29C2947/92533, B29C2947/92828, B29C2947/92895, B29C47/1045, B29C47/96, B29C47/92, B29C2947/926, B29C2947/92952, B29C47/10, B29C2947/92019, B29C47/004, B29C2947/92209
European Classification	B29C47/96, B29C47/10, B29C47/92

LEGAL EVENTS

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B) Prior Art Finder creates 5 separate top 10 lists

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Search Terms

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- [x] reinforcing fibers
- [x] compounding thermoplastic resin
- [x] charge ready
- [ ] quarter inches
- [ ] molten thermoplastic resin
- [ ] compounding extrusion
- [ ] extrusion blending
- [ ] intimate contact
- [ ] computer-controlled
- [ ] molding

Custom Date Range

Start date: MM/DD/YYYY

End date: 10/25/2002

Fiber-reinforced composites: materials, manufacturing, and design
PK Mallick - 1993
... Thus, even though the **fibers** provide **reinforcement** for the matrix, the latter also serves a number of useful functions in a **fiber-reinforced** composite material. The principal **fibers** in commercial use are various types of glass and carbon as well as Kevlar 49. ...

Mechanical degradation of glass **fibers** during **compounding** with polypropylene
B Fisa - Polymer composites, 1985
... new high performance/high **cost** engineering **thermoplastics** require that the **reinforcing** effect be ... 3) studied single screw extrusion **compound**- ing of several glass **reinforced resins** and found ... 2.65 mm); undispersed bundles predominate with a small number of individual **fibers**. ...

The **reinforced** plastics handbook
J Murphy - 1998
... The concept of **reinforcing** a **resin** is as old as the first really synthetic ... 15 and F, 16 fighters in 1974 and, two years later, boron **fibre**,**reinforced** epoxy was ... based on polyetherketones offered an interesting alternative to airframe manufacturers, with **resin reinforcement** systems in ...

Process modeling in composites manufacturing
SG Advani, EM Sozer - 2002
... Preface Properties and performance of products made from **fiber reinforced** composites depend on materials, design, and ... The end of each chapter has questions and problems that **reinforce** the content and ... knitting, or stitching, shaped into 2-D or 3-D **reinforcing** fabrics before ...

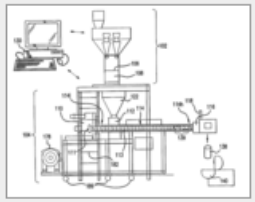
Rotatably driving extruding screw, introducing **reinforcing fibers**, ...

www.google.com/patents/US5185117
Grant - Filed Jul 10, 1991 - Issued Feb 9, 1993 - Ronald C. Hawley - Composite Products, Inc.
A process for **compounding reinforcing fibers** with a **thermoplastic resin** in an .... The mold is opened and the part is removed so that the cycle is **ready** to be ... Further disadvantages are that the molder must pay the **cost** of **compounding** the ...

Extruder apparatus and process for **compounding thermoplastic resin** ...

www.google.com/patents/US5165941
Grant - Filed Jul 11, 1991 - Issued Nov 24, 1992 - Ronald C. Hawley - Composite Products, Inc.

Patent US7070404



Computer-controlled compounding extrusion blending apparatus and method

Show Claims

Inventors: Daniel Joseph MacPhee, Christopher Mark Tanner
Assignees: Macphee Daniel Joseph, Christopher Mark Tanner
Patent number: US7070404
Application number: 10/279,939
Filing date: Oct 25, 2002
Issue date: Jul 4, 2006

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Search Terms

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- [x] DISPERSIVITY
- [x] SHEAR
- [x] reinforcing fibers
- [x] compounding thermoplastic resin
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- [ ] molten thermoplastic resin
- [ ] compounding extrusion
- [x] extrusion blending
- [ ] intimate contact
- [ ] computer-controlled
- [ ] molding

Custom Date Range

Start date: MM/DD/YYYY

End date: 10/25/2002

[Processing and characterization of aligned vapor grown carbon **fiber reinforced** polypropylene]
RJ Kuriger, MK Alam, DP Anderson, RL Jacobsen - Composites Part A: Applied ..., 2002
... [21] that **fiber dispersion** could be ... It consisted of a feeding zone, a compression zone, a conveying zone, a **shearing** zone, a venting zone, and a metering zone. ... The longitudinal tensile strength (σ L) is found by using the rule of mixtures and the **shear** lag model of Kelly and ...

[Effect of **compounding** on the properties of short **fiber reinforced** injection moldable **thermoplastic** composites]
DM Bigg - Polymer composites, 1985
... This results in considerable **shear**-induced fi- ber breakage during **compounding** and molding. ... Fig. 2. Effect of mixing conditions in injection molder on theftber **dispersion** in parts molded from ... dry **blends** cannot be achieved between pellets and **fibers**, and the **shearing** forces of ...

[Mechanical degradation of glass **fibers** during **compounding** with polypropylene]
B Fisa - Polymer composites, 1985
... **reinforced resins**, the advent of new high performance/high cost engineering **thermoplastics** require that the **reinforcing** effect be ... These **fibers** are much more likely to break as a result of **shear** stresses in the melt ... As the **dispersion** im- proves due to longer **compounding** times (Fig ...

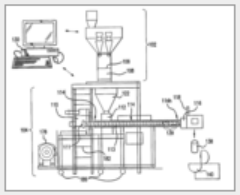
[Novel **reinforced** polymers based on **blends** of polystyrene and a thermotropic liquid crystalline polymer]
RA Weiss, W Huh, L Nicolais - Polymer Engineering & Science, 1987
... energy intensive (1 -6). In addition, it is difficult to achieve a uniform **dispersion** of **fibers** ... in mechan- ical properties for the **blend** similar to those attained by adding **reinforcing fibers** to the ... At the higher **shear** rates, measured with the capillary viscometer, an inversion of the viscos ...

[Method for making **fiber-reinforced** plastics]

www.google.com/patents/US4927579
Grant - Filed Apr 8, 1988 - Issued May 22, 1990 - Eugene R. Moore - The Dow Chemical Company
A method for adding intact **fiber reinforcing** material into **thermoplastic resin** ... low to medium **shear**, injecting the resulting mixture into an **extruder** with a resin to be **reinforced** ... for recycle while the **reinforcing** glass **fiber** and polymer **blend** is **extruded**. ... **blending** said **dispersion** into a molten polymer to be **reinforced**; and.

[Uniform **dispersion** in **thermoplastic** adhesive]

Patent US7070404



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Filing date: Oct 25, 2002
Issue date: Jul 4, 2006

Discuss this Patent

2) Financial info (detailed timesheet correlation)

CRA requests, “For salaries, wages and contract labour, please provide:

- An organization chart with job descriptions/duties for each person claimed.
- Details of activities for each SR&ED Project claimed, including
- number of hours claimed for each individual per activity, per month.”

Recommended timesheet details to address RFI procedures

Recommended Employee time detail for SR&ED *(record for each project / each year)*

Employee details			Linking work to SR&ED				SR&ED wages	
First Name	Last Name	Hours Worked	Type of work	Variables researched	Comments	Location	*hourly $ rate*	*SR&ED $*
			1) Design 2) Testing 3) Programming 4) Supervision	*OPTIONAL - Link to the variables in the project*	*OPTIONAL - should be completed by the more senior people if possible.*	*Country + Province or State*		
ALREADY EXISTS most systems			This information is MISSING in most time reporting systems				Complete @ y/e	
NEED TOTALS BY STATE/PROVINCE								$_____.

2) Supporting financial documentation

a) New focus on "weekly" timesheet details

SR&ED Wages & Contractor labour

For salaries, wages and contract labour, please provide:

• An organization chart with job descriptions/duties for each person claimed.
• **Details of activities** for each SR&ED Project claimed, including
• number of hours claimed **for each individual per activity, per month**.

Contractors

For each contractor, we require a copy of the contract(s) & statement(s) of work.

Recommendations on how to meet requirements

Perhaps the most notable item in the RFI questionnaires is consistent request for **timesheet** detail at a monthly**, weekly** or in some cases even a daily level.

Since current CRA directions on how to prepare proper timesheet are vague as to what is actually required this is likely to become an issue of contention.

Ultimately each employee should be able to identify how his or her

- "design or testing" work was
- "necessary to resolve"
- one or more of the stated "uncertainties."

Recommended Employee time detail for SR&ED

(record for each project / each year)

Employee details			Linking work to SR&ED				SR&ED wages	
First Name	Last Name	Hours Worked	Type of work	Variables researched	Comments	Location	*hourly $ rate*	*SR&ED $*
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ALREADY EXISTS most systems			This information is MISSING in most time reporting systems				Complete @ y/e	
NEED TOTALS BY STATE / PROVINCE								$ -

System requirements:

Having the **development team agree on the key variables** of experimentation allows this correlation to take place.

The "log interval" can be decided by the team based on the companies reporting preferences.

CASE STUDY – EXAMPLE

For a case study example of this documentation process please view the

RDBASE Technology Documentation example

Recommendations

- Ultimately each employee should be able to identify how his or her

- - “design or testing” work was
- - “necessary to resolve”
- - one or more of the stated “uncertainties.”

New energy sector R&D project examples from Australia

July 2013 Australian government released 6 R&D project examples for Energy Industry

- Dye sensitive solar cells
- Battery life
- Wind wake (wind farm software)
- Solar capture
- Energee (microalgae use)
- Supplygrid (smart meter)

Notable quote:

“The key to success is for you to make a habit throughout your life of doing the things you fear.”

- Vincent Van Gogh

They also have examples for other industries including:

- Agrifood
- Biotech
- ICT (Information & communications)
- Manufacturing &
- Built Environments (construction)

Relevance of foreign examples

In the author's opinion these examples are a useful source of ideas since:

- The Canadian & Australian definitions of eligible SR&ED work are the same
- These examples appear more complete than CRA's 10 new examples which illustrate only specific concepts instead of entire project descriptions.

Notable quote:

“The reasonable man adapts himself to the world;

the unreasonable one persists in trying to adapt the world to himself.

Therefore all progress depends on the unreasonable man.”

- George Bernard Shaw

Notable quote:

“The real problem is not whether machines think but whether men do.”

- *B. F. Skinner*

SR&ED Newsletter 2014 –2

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

- Fio – CRA use of evidence during TCC Appeal - WIN
- Laboratoire du-var Inc. – documenting owners time for SR&ED - LOSS
- Coveley– wage accruals & ABILs – PARTIAL LOSS – many lessons
- Airmax (from 2013 – revisited)
  - Issue 2) informal appeal $12K limit / result in year

Fio – CRA use of evidence during TCC Appeal - WIN

- FACTS/ISSUE: CRA used information obtained from the court to further reassess the appellant (Fio)
- WIN/LOSE: WIN - costs of $25,000
- RULING /RATIONALE: "I cannot accept argument that provides more favourable treatment to one of the parties. The Respondent (CRA) cannot use the Discovery Documents in any other proceeding before this Court or any other court ."
- IMPLICATIONS: shows confusion Objection (ITA section 165) / Appeals (section 169)
- SIGNIFICANCE: Moderate

Recent SR&ED tax cases

Fio – CRA use of evidence during TCC Appeal - WIN[1]

Facts

During a tax court appeal for its 2007, 2008 and 2009 taxation years the CRA used information obtained from the court to further reassess the appellant (Fio) for those years.

The Appellant (Fio) brought a motion for an order vacating the reassessments & directing the Minister of National Revenue and/or the Attorney General of Canada **to pay $100,000as** "punishment for her/their contempt of this Court" and awarding the costs of this motion on a full indemnity basis.

Issue

This issue before the Court is whether the Minister breached the "implied undertaking rule" by using information obtained by the Respondent in the course of pre-trial discovery proceedings to reassess the Appellant.

Legislation & analysis

Income Tax & other legal precedence

The CRA's defence argued that section 241 of the ITA provides a complete code governing how the Minister can use a taxpayer's information. In effect, it overrides the **implied undertaking rule.**

Basically the "implied undertaking rule" focuses on the protection of privacy rights and promoting full discovery and full and frank disclosure. It has been adopted by most levels of court in Canada.

Analysis:

Fio argued that, if the Court allows the Minister's conduct to stand, the Minister can effectively delay a dispute ad infinitum by reassessing, and that such a situation would undermine the role of this Court and the administration of justice.

The CRA's defence was that the relationship between the Minister and the taxpayer is a different relationship than that of normal litigants. Because of this relationship, the implied undertaking rule does not apply to the Minister in the fact situation before the Court.

Ruling & rationale (Judge's comment) - loss

The judge concluded,

> "I cannot accept an argument that provides more favourable treatment to one of the parties before the Court. The **Respondent (CRA) cannot use the Discovery Documents** in any other proceeding before this Court or any other court .
>
> The Appellant requests costs on a full indemnity basis. I do not believe that the Respondent's conduct warrants an awarding of costs on a solicitor and client basis. Such costs are reserved for cases of reprehensible, outrageous or scandalous behaviour.
>
> However, it is my view that the conduct of the Respondent requires an award of substantial costs. In light of the Respondent's conduct, I have decided to award the **Appellant costs of $25,000."**

Author's comment: moderate significance

This case illustrates the high level of misunderstanding of the differences between the

- Objection process &
- Tax Court of Canada appeals processes.

even by Canada Revenue Agency staff.

Likely of high importance give current level of objections and the likelihood of these proceeding to the appeal process.

Typical dispute resolution steps & timelines

Step - Administerd by	Parties	Expected timeframe
I) Canada Revenue Agency		
a) Negotiate with CRA reviewer	CRA & client	30 days
b) 2nd admin. review	CRA & client	180 days
c) Objection [ITA s. 165]	CRA & client	365+ days
II) Tax Court of Canada [ITA s. 169]		
a) Appeal - Informal	CRA, Dept. of Justice & Client	6-9 months
b) Appeal - General	CRA, Dept. of Justice & Client	2-3 years

[1] Fio Corporation v. The Queen - 2014 TCC 58, Date: 2014-04-29

Laboratoire du-var Inc. – documenting owners time - LOSS

- ISSUE: History of successful claims claimant & spouse – reduced to 25% & 0% for 2005 & 2006.
- WIN/LOSE: LOSE - The appellant insisted they should have considered the prior rulings
- RULING /RATIONALE: “A direct relationship between the various components and the claim submitted is required and must be established on a balance of probabilities.”
- IMPLICATIONS: Need real time documentation
- SIGNIFICANCE: Moderate

Laboratoire du-var Inc. – documenting owners time for SR&ED - LOSS[2]

Facts

Over the years, the appellant submitted many research and development projects. The vast majority were received favorably by the Canada Revenue Agency that usually accepted them as submitted.

For the **2003 and 2004** taxation years, all the salary paid to **Mr. Trudeau and his spouse as salary expenditures** for various research and development projects was **allowed; for the 2005 and 2006** years, the Canada Revenue Agency (the Agency) **allowed Mr. Trudeau's expenditures at 25% and disallowed all of Ms. Nadon's**.

Issue

Therefore, the only issue is the following: were the salaries of Pierre Trudeau and his spouse Louise Nadon considered eligible expenditures?

Legislation & analysis

Income Tax Act

The act only requires that the wages be,

"expenditure made in respect of an expense incurred in the year for salary or wages of an employee who is **directly engaged** in scientific research and experimental development in Canada **that can reasonably be considered to relate** to such work having regard to the time spent by the employee thereon."[3]

CRA Guidance

He noted that the Agency had modified and restricted the qualification criteria by tightening the control mechanisms on one hand, and adding an array of new elements on the other.

The appellant repeatedly insisted during the examination by the respondent's representatives that they should have considered the prior records where the president and his spouse's salaries were fully allowed, in particular for 2003 and 2004.

Ruling & rationale (Judge's comment) - loss

The judge denied the appellants claims stating

"Despite the many questions the president, Mr. Trudeau, was asked, he was **never able to provide specific explanations to establish a direct and unequivocal relationship** in terms of the work attributed to the research project for which he billed hours of work that were disallowed, thereby giving rise to the sole issue under appeal

A direct relationship between the various components and the claim submitted is required and must be established on a balance of probabilities, so it would seem that each research and development project is a specific case with specific data."

Author's comment: moderate significance

Recent CRA requests for information include,

"We require documentation to support the time spent in SR&ED by the specified employees.

We require **time sheets and/or time logs to** support the time spent working during the year and the time spent doing work **directly engaged in SR&ED** for work performed in Canada.

The time sheets or time logs **must be detailed enough** for us to determine what duties you were performing in order to determine if they meet the "directly engaged in SR&ED" definition."

As a result it is **increasingly important** for all researchers (especially owners of the company) **to keep logs of their work on a daily or at least weekly basis.**

Notable quote:

"Give a person a fish and you feed them for a day. Teach a person to use the Internet and they won't bother you for weeks, months, maybe years"

-Anonymous

[2] Laboratoire Du-Var Inc. v. The Queen. v. The Queen - 2012 TCC 366, Date: 2012-10-17

[3] ITA 37(8)(a)(ii)(B)

Coveley– wage accruals & ABILs – PARTIAL LOSS – many lessons

- FACTS:
- Mr. Coveley holds mechanical & electrical engineering degrees. He was the chief technology officer & an employee of cStar. Mr. Coveley is NOT a shareholder of cStar.
- Mrs. Coveley is the sole shareholder, president and chief executive officer of cStar. She is also an employee of cStar.
- Starting in 1998, the appellants made loans to cStar comprising of their unpaid remuneration, cash advances and corporate expenses
- In 2006 each claimed ("ABIL") in their income tax returns
- ISSUE: Are the appellants entitled to deduct an ABIL?
- WIN/LOSE: Mrs. - WIN / Mr. LOSS

Coveley– wage accruals & ABILs

- ISSUE 2: WHEN are the appellants entitled to deduct an ABIL?
- WIN/LOSE: LOSS
- RULING /RATIONALE: “Based on this the judge concluded that the debt was not a bad debt at the end or 2006 & ether neither party would qualify for ABIL deduction.”

Coveley– wage accruals & ABILs

IMPLICATIONS:

- This illustrates a tax planning opportunity (accruing wages for unpaid work) which can be used by SR&ED intensive companies in early stages.
- It also underlines the complications with claiming losses on a company which;
  - is in poor financial position but
  - still active in any manner.

SIGNIFICANCE: Moderate

Coveley– wage accruals & ABILs – PARTIAL LOSS – many lessons[4]

Facts

The appellants are the co-founders of cStar Technologies Inc ("cStar"). They are husband and wife.

Mr. Coveley holds mechanical and electrical engineering degrees. He was the chief technology officer and senior vice‑ president of cStar. He is also an employee of cStar. Mr. Coveley is **not a shareholder** of cStar.

Mrs. Coveley is the sole shareholder, president and chief executive officer of cStar. She is also an employee of cStar.

Starting in 1998, the appellants **made loans** to cStar comprising of their **unpaid remuneration,** cash advances and corporate expenses that they paid on behalf of cStar with their personal credit cards.

In 2006 each appellant claimed an allowable business investment loss ("ABIL") in their income tax returns

The Minister of National Revenue (the "Minister") disallowed the ABILs on the basis that the appellants did not meet the requirements of the Income Tax Act (the "Act") for claiming an ABIL.

Issue

Are the appellants entitled to deduct an ABIL in computing their incomes?

Legislation & analysis

Income Tax Act

"Business investment loss" is defined in part as follows at paragraph 39(1)

(c): "a **taxpayer's business investment loss** for a taxation year from the disposition of any property is the amount, if any, by which the **taxpayer's capital loss** for the year from a disposition after 1977 . . . to which subsection 50(1) applies", exceeds any of the amounts subsequently referred to.

50. (1) Debts established to be **bad debts and shares** of bankrupt corporation.. [where]

(i) the corporation has during the year become a bankrupt (within the meaning of subsection 128(3)) …,
(ii) is insolvent …& a winding-up order made in the year**, or**

(iii) at the end of the year,

(A) the corporation is **insolvent**,
(B) neither the corporation nor a corporation controlled by it **carries on business**,
(C) the fair market value of the share is nil, and
(D) it is **reasonable to expect that the corporation will be dissolved or wound up** and will not commence to carry on business

Ruling & rationale (Judge's comment) - loss

The judge used a 3 step process to determine if either Mr or Mrs. Coveley would be eligible to claim the ABIL.

a) Was there a debt owed to the appellants by cStar?

The accrued salaries were credited to the appellants' loan accounts. In my view, this is sufficient to establish the existence of debts owed to the appellants by cStar.

b) The debt was incurred for the purpose of gaining or producing income from a business or property

Since there was no interest on the loans it became relevant whether the loan was by a common shareholder.

Accordingly, the judge's view was the condition the debt be incurred for the purpose of gaining or producing income from a business or property **is fulfilled for Mrs. Coveley (shareholder), but not for Mr. Coveley**.

His ABIL claim must therefore be disallowed on this basis.

(c) Did the debt became bad when claimed?

There was no evidence that the appellants made reasonable efforts to recover their debts …tried to sell any of cStar's assets, such as patents or to sell any of cStar' shares.

The evidence showed that the appellants were not ready to share control of cStar with potential investors.

[4] Michael Coveley v. The Queen - 2013 TCC 417, Date: 2013-12-20

Based on this the judge **concluded that the debt was not a bad debt at the end or 2006** & ether neither party would qualify for ABIL deduction.

Author's comment: moderate significance

The judge also commented that,

"The appellants' salaries should have not been included in their income, as the salaries were not received by them. Subsection 5(1) of the Act."

This illustrates a **tax planning opportunity (accruing wages for unpaid work)** which can be used by SR&ED intensive companies in or early stages of their business cycle.

It also underlines the complications with claiming losses on a company which;

- is in poor financial position but
- still active in any manner.

Notable quote:

"To steal ideas from one person is plagiarism;
> to steal from many is
> research ."

- Steven Wright

Notable quote:

"All of us could take a lesson from the weather. It pays no attention to criticism"

- *Anonymous*

Notable quote:

"The real problem is not whether machines think but whether men do."

- B. F. Skinner

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-Anonymous

Economic overview of the SR&ED program in Canada

- Shift from tax credits to grants
- New BDC loan program for SR&ED

Shift from tax credits to grants

Research and Development in Canadian Industry						
Total business enterprise research and development expenditures						
	2010	**2011**	**2012**	**2013**	**2014**	**% total**
Manufacturing	7,334	7,577	7,434	7,159	7,131	36%
Services	7,056	7,470	7,049	6,951	6,914	35%
Information and communications technologies	4,664	5,128	4,770	4,673	4,625	23%
Mining and oil and gas extraction	981	1,044	1,244	994	941	5%
Utilities	188	193	230	237	214	1%
Construction	113	137	100	103	105	1%
Agriculture, forestry, fishing and hunting	131	124	95	92	94	0%
Total all industries (x 1,000,000)	**20,467**	**21,673**	**20,922**	**20,209**	**20,024**	**100%**
Total research and development personnel (full-time equivalent)						
Services	73,293	78,729	70,044	n/a	n/a	40%
Manufacturing	63,861	59,933	56,445			32%
Information and communications technologies	48,147	49,379	45,106			25%
Mining and oil and gas extraction	2,044	2,011	1,763			1%
Agriculture, forestry, fishing and hunting	1,945	1,750	1,439			1%
Construction	1,916	1,835	1,318			1%
Utilities		1,343	1,148			1%
Total all industries	**191,206**	**194,980**	**177,263**			**100%**

Shift from tax credits to grants

While the latest figures on spending have not been published by the government it appears that the has been a reduction in

- - 2007 levels of $4.1 Billion & 25,000 claimants
- - 2012 levels of $3.6 Billion & 23,000 claimants

Increase in SR&ED Objections

There has also been an increase in objection & appeals (roughly 600 objections in Ontario alone).

- Many of the claimants being denied had claimed successfully in prior years.
- Industries hardest hit appear to be manufacturing & software.

Economic overview of the SR&ED program in Canada

Research and Development in Canadian Industry						
Total business enterprise research and development expenditures						
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Total all industries	**191,206**	**194,980**	**177,263**			**100%**

According to the CRA

- The SR&ED program is the single largest federal tax incentive program that supports business research and development.
- The SR&ED program provided over $3.6 billion in tax assistance to over 23,000 claimants in 2012 alone[5].

The table above illustrates that businesses in Canada anticipated spending just over $20 billion on industrial research and development (R&D) in 2014.[6]

Over 90% of total expenditure can be allocated to 3 main groups (manufacturing, service & Information technology).

Shift from tax credits to grants

While the latest figures on spending have not been published by the government it appears that the has been a reduction in

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Many of the claimants being denied had claimed successfully in prior years.

Industries hardest hit appear to be manufacturing & software.

[5] Canada Revenue Agency news release Feb. 6, 2014
[6] Statistics Canada Table 358-0024 Business enterprise research and development (BERD) characteristics, by industry group based on the North American Industry Classification System (NAICS)

Notable quote:

“All of us could take a lesson from the weather. It pays no attention to criticism”

- *Anonymous*

New BDC loan program for SR&ED

September 2014 loan to $250,000

Key terms:

- Up to 125% of claim (if previous successful claims) or
- 100% (if first time)
- Interest Rates: 6 to 9%
- No prepayment penalty

- Info: 1 888 463-6232 or info@bdc.ca

New BDC loan program for SR&ED

In September 2014 the Business Development Bank of Canada (BDC) is providing a new loan to **borrow up to $250,000** to cover R&D and other tax credit-related expenses for a given fiscal year.

The key "tax credit financing" terms are:

- Up to 125% of claim (if previous successful claims) or
- 100% (if first time)
- Interest Rates: 6 to 9%
- No prepayment penalty;

Make no capital payments while you wait for your refund

Further reduce financial stress on your business by deferring your capital payments until your tax credit arrives.

Once you get your tax credit, you decide what's good for your business

When you receive your tax credit, you can pay back the loan to reduce your debt, or you can transfer the amount to a term loan and use your tax credit money for other business needs, such as funding growth projects, buying equipment or stepping up your marketing efforts.

You can take up to three more years to pay back the term loan.

Pay back at any time with no penalty

There are no fees if you decide to pay back the loan earlier, leaving you choices if opportunities arise.

Limit your personal risk

Your personal assets are not taken as collateral for the loan.

For more information

For further information contact the BDC at

- 1 888 463-6232
- info@bdc.ca

Notable quote:

"I am so clever that sometimes I don't understand a single word of what I am saying."

- Oscar Wilde

Notable quote:

"A clever, imaginative, humorous request can open closed doors and closed minds."

- Percy Ross

Notable quote:

“A clever, imaginative, humorous request can open closed doors and closed minds.”

- *Percy Ross*

New CRA SR&ED pronouncements

- SR&ED T661 Claim Form – Revised optional filing measure for Part 9
- CRA reduces concern with SR&ED consulting fees
- SALT (Self-Assessment Learning Tool)

T661 – Revised optional filing measure for Part 9

Administrative measure Part 9 separately

- **Step 1.** Submit complete Form T661(13) by deadline. For Part 9 provide name of each claim preparer – line 940 & business number – line 945
- **Step 2.** You must submit a paper copy of the T661(13) -provide the billing arrangements – lines 950, 955, 960 & 965

New CRA SR&ED pronouncements

SR&ED T661 Claim Form – Revised optional filing measure for Part 9

As of **January 1, 2014**, Part 9 of the Form T661 (13) must be fully completed. If any of the prescribed claim preparer information is missing, incomplete or inaccurate, a penalty of $1,000 may be assessed.

For claim preparers who have concerns about the confidentiality of their information, the CRA has introduced an administrative measure to permit Part 9 of the Form T661 (13) to be **filed separately**.

Step 1. Submit with your return, a complete Form T661(13) by the SR&ED reporting deadline. For Part 9 you will need to:

- check the appropriate box at line 935 attesting to whether a claim preparer was engaged in any aspect of the preparation of the claim;
- **provide the name of each claim preparer – line 940;**
- **provide each claim preparer's business number – line 945;**
- certify that the information provided in this part is complete and accurate – line 970; and
- sign and date Part 9 - line 975.

However, in Part 9 you must not enter the billing arrangement data – lines 950, 955, 960 and 965 respectively.

Step 2. You must submit a paper copy of the T661(13), completing only Part 1 – General Information, and Part 9 – Claim preparer information. Both Parts 1 and 9 must be completed in their entirety for each claim preparer. You will need to:

- check the appropriate box at line 935 attesting to whether a claim preparer was involved in any aspect of the preparation of the claim;
- provide the name of the claim preparer – line 940;
- provide the claim preparer's business number – line 945;
- **provide the billing arrangement code, billing rate, other billing arrangement(s) and the total fee paid, payable or expected to pay – lines 950, 955, 960 or 965 respectively;**
- certify at line 970, sign and date Part 9 at line 975; and
- send Parts 1 and 9 directly to your tax centre at the same time you file your return.

Do not resubmit Parts 2 through 8 or Part 10 of the T661(13).

If the CRA does not receive a complete Part 9 with the details for each claim preparer involved in preparing the SR&ED claim, the CRA may apply a $1,000 penalty.

CRA reduces concern with SR&ED consulting fees

In the 2013 budget[7] the Government confirmed:

> "The submissions received by the Government during the consultations indicated that intervention to regulate contingency fees directly is not required:
>
> - the market for SR&ED tax preparers is competitive, contingency fee rates have declined over time and
> - there is no evidence that this type of billing arrangement results in higher compliance costs for businesses."

Notable quote:

"You can tell whether a man is clever by his answers.

You can tell whether a man is wise by his questions."

- Naguib Mahfouz

[7] Chapter 3.4: Investing in World-Class Research and Innovation

Notable quote:

“You can tell whether a man is clever by his answers.

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CRA reduces concern with SR&ED consulting fees

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- “The submissions received by the Government during the consultations indicated that intervention to regulate contingency fees directly is not required:

- • the market for SR&ED tax preparers is competitive, contingency fee rates have declined over time and

- • there is no evidence that this type of billing arrangement results in higher compliance costs for businesses.”

SALT
(Self-Assessment Learning Tool)

Tool divided in **two standalone** interactive PDF files - download on your computer

- **Step 1** will help you understand the eligibility requirements for SR&ED work

- **Step 2** estimate expenditures & ITC.
- http://www.cra-arc.gc.ca/txcrdt/sred-rsde/slt-eng.html

SALT (Self-Assessment Learning Tool)

SALT includes clear explanations of key concepts and tips on how to effectively structure an SR&ED claim submission.

The tool is divided into two standalone interactive PDF files that you can download on your computer. No information will be transferred to the CRA through this tool.

SALT Step 1 will help you understand the **eligibility requirements for SR&ED** work and help you determine if your company project might include SR&ED work.

The report generated at the end of this step will help you understand why your work is potentially eligible (or not) for the SR&ED Program. The information in your report can then be used to prepare your SR&ED claim.

SALT Step 2 (PDF, 183 KB) will help you identify the **extent of eligible work** performed during the course of your project. This step will also help you estimate allowable expenditures associated with your work and the potentially claimable ITC.

Author's opinion:

These steps closely resemble the actual submission for the T661 form.

They may provide a basis for potential claimants to receive pre-approvals or other guidance being offered in CRA outreach efforts.

Ideally they could provide additional direction by way of sample projects.

Notable quote:

"The desire to seem clever often keeps us from being so."

- Francois de La Rochefoucauld

Notable quote:

"I never make stupid mistakes. Only very, very clever ones."

- John Peel

SALT - Author's opinion

- These steps closely resemble the actual submission for the T661 form.
- They may provide a basis for potential claimants to receive pre-approvals or other guidance being offered in CRA outreach efforts.
- Ideally they could provide additional direction by way of sample projects.

New tax changes

- TCC informal appeal limit increase to $25K
- Stock option benefit denial of expenditure
- New rules on defining “control” & association

TCC informal appeal limit increase to $25k

After June 25, 2013 Informal Procedure Application

"Where a taxpayer has so elected in the taxpayer's notice of appeal or at such later time as may be provided in the rules of Court, And the **aggregate of all amounts in issue is equal to or less than $25,000**; ..."

18. *(1) The provisions of sections 18.1 to 18.28 apply in respect of appeals under the Income Tax Act*

Notable quote:

“One machine can do the work of fifty ordinary men. No machine can do the work of one extraordinary man.”

- Elbert Hubbard

New tax changes

TCC informal appeal limit increase to $25K

New legislation has been passed applicable after June 25, 2013 Informal Procedure Application[8]

> "Where a taxpayer has so elected in the taxpayer's notice of appeal or at such later time as may be provided in the rules of Court, and
>
> > the **aggregate of all amounts in issue is equal to or less than $25,000**; ..."

Since this $25,000 limit relates only to the federal tax credit it effectively allows a claimant in Ontario to;

- Claim up to $40,000 (when you factor in the Ontario credits of up to 14.5%) &
- Get a ruling within 1 year of the initial disagreement with the CRA

Given the current level of objections this it is likely of immediate significance to claimants.

Stock option benefit denial of expenditure

In 2005 legislation proposed that the value of an option granted by a taxpayer is not considered to be an expenditure for SR&ED income tax purposes.

This legislation was recently passed with an effective Date: November 17, 2005 **except that for securities issued or sold before the announcement date (October 24, 2012),** the definition "option" in subsection 143.3(1) of the Act, as enacted by subsection (1), is to be read without reference to its paragraph (a).

In the author's view it is interesting to note that this opportunity potentially lasted until 2012 despite the legislation being proposed effective 2005.

New rules on defining "control" & association

In general terms, new 256.1(6) counters tax avoidance structures under which corporate tax attributes were traded by arm's length persons in circumstances where a corporation (in a loss position) that has undeducted attributes (i.e., SR&ED ITCs) acquires control of a corporation that is profitable.

Because the loss corporation acquires control of the profitable corporation, the owners of the corporation avoid, subject to the general anti-avoidance rule (GAAR), an acquisition of control of the loss corporation and the application of the tax attribute trading rules.

This new provision deems there to have been an **acquisition of control of a corporation**, applies at a particular time if:

Shares of the corporation held by a person(s), have at the particular time, a fair market value (FMV) that exceeds **75% of the FMV of all the shares of the capital stock** of the corporation.

Author's opinion:

This change appears to address concerns that loss companies are being used inappropriately.

Notable quote:

"One machine can do the work of fifty ordinary men. No machine can do the work of one extraordinary man."

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New rules on defining "control" & association

new 256.1(6)deems acquisition of control if:

- Shares of the corporation held by a person(s), have …a fair market value (FMV) that exceeds 75% of the FMV of all the shares of the capital stock of the corporation.

Author's opinion:

- This change appears to address concerns that loss companies are being used inappropriately.

Hot SR&ED issues in the media

- Social Media sites
  - Sample Comments on common themes
- Public media Globe & Mail
  - double dips on loans vs. credits

Notable quote:

“One machine can do the work of fifty ordinary men. No machine can do the work of one extraordinary man.”

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Social Media sites - Sample Comments common themes

Linked In Groups which discuss SR&ED tax credit issues:

Group	Scope	# Members
SR&ED Canada	Canadian SR&ED issues	1,560
CATA SR&ED	Canadian SR&ED issues	1,216
R&D tax credit forum	International R&D Tax credits	1,076

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Social Media sites

The R&D Tax credit is administered in over 60 countries around the world. Most of these countries use the same international definition for eligible work.

Various social media groups have formed to address specific issues. This section examines issues & specific comments posted to these groups.

Sample Comments on common themes

Inconsistency:

"It looks like the strength of the Claim does not matter to CRA. Sometimes I have a feeling that CRA is putting all claims on a big table and at random selects 5% that will be rejected. I have seen some very strong claims being rejected and some very weak ones being approved."

"We are hearing that files under audit are being steamed rolled to an assessment and that requests for supporting documentation go beyond reason and reflect new expectations beyond what had been previously experienced."

"One thing that's clear, at least to me, is that several years ago Harper's Government was very concerned by the increasing size of the program, which now seems to be getting smaller for whatever reason."

Recognizing Technological Advancement:

"There's a trend in CRA with the mistaken belief that standard practice means "experimenting with practices and methods known to you. In that case, there is no SR&ED ever. Our position is always: if it's standard practice, then no experimentation is required."

"There seems to be a discrepancy between CRA's definition and those in common research papers in the field in what in fact constitutes an IT Technology when using that as a basis for whether the technology base was advanced in the project."

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“There seems to be a discrepancy between CRA’s definition and those in common research papers in the field in what in fact constitutes an IT Technology when using that as a basis for whether the technology base was advanced in the project.”

Public media Globe & Mail double dips on loans vs. credits

Recent Globe & mail article made the following statements &/or claims:

"For years, many companies have **been billing taxpayers twice when they do R&D – once via R&D tax credits**, and then **again** through direct assistance for the same work, typically in the form of government **loans, investments and other repayable contributions**."

"But a Tax Court decision last year in a case involving Halifax-based Immunovaccine Technologies Inc. and the Canada Revenue Agency is t**hreatening to turn the rules** of the game upside down."

Public media Globe & Mail – double dips on loans vs. credits

A recent Globe & mail article[9] made the following statements &/or claims including:

> "Governments everywhere continue to finance factory upgrades, new aircraft models, drug research, and an infinite array of industrial projects."
>
> "It's all tolerated despite strict World Trade Organization rules that prohibit most subsidies. There are some notable exemptions for assistance targeted at research, disadvantaged regions or mandated environmental upgrades."
>
> "The R&D loophole in particular is so large that governments routinely drive planes and autos through it. Slap "innovation" on a program and you're good to go."
>
> **"For years, many companies have been billing taxpayers twice when they do R&D** – once via R&D tax credits, and then again through direct assistance for the same work, typically in the form of government loans, investments and other repayable contributions."
>
> "But a Tax Court decision last year in a case involving Halifax-based Immunovaccine Technologies Inc. and the Canada Revenue Agency **is threatening to turn the rules of the game upside down."**
>
> "The problem was that Immunovaccine Technologies was also claiming R&D tax credits on its research work. The Canada Revenue Agency rejected a large chunk of the credits, and the company appealed."
>
> "The Tax Court upheld the CRA's ruling, effectively ending this form of double-dipping by arguing that companies should not get government assistance and also tax credits."
>
> "If another party has borne the economic cost of a taxpayer's participation in scientific research and experimental development, there is no need to allow deductions or credits as an incentive for that taxpayer to engage in [R&D] activities," Justice Lucie Lamarre wrote in her decision.
>
> "Experts say the ruling will have an effect far beyond Immunovaccine Technologies, by making government loans potentially unattractive to thousands of Canadian companies."

The article also noted that,

> "The case also stokes the ongoing debate about how government can best spur companies to innovate and do more R&D."
>
> "A 2011 report by a federally appointed R&D panel, headed by Open Text Corp. executive chairman Tom Jenkins, recommended that Ottawa shift its emphasis away from tax credits to direct funding."

Author's opinion:

In the author's view these statements when taken together can be misleading to readers since

- the **legislation always reduced the SR&ED** tax credits
- for they type of assistance in the Immunovacine case.

As a result this is likely an isolated incident of a claimant who did not understand the SR&ED rules.

In the author's experience most claimants seem to understand the general principle that

- SR&ED credits are earned on
- the portion of SR&ED cost which they pay for directly

Acknowledging the ongoing debate between direct funding (grants) and direct funding (tax credits), as cited earlier in this newsletter,

- grants appear to be seeing a shift in funding
- which is being taken from the SR&ED program.

Notable quote:

"The digital camera is a great invention because it allows us to reminisce. Instantly."

- Demetri Martin

[9] The Globe and Mail, "Tax Court ruling to change the government subsidy game," Published Sunday, Mar. 16 2014

Author's opinion

Statements taken together could mislead readers since;

- the legislation always reduced the SR&ED tax credits
- for they type of assistance in the Immunovacine case.

As a result this is likely an isolated incident of a claimant who did not understand the SR&ED rules.

Notable quote:

“The digital camera is a great invention because it allows us to reminisce. Instantly.”

- ***Demetri Martin***

Part III – other issues

Other issues of interest or cited by participants

Globe & Mail

September 19, 2014, By BILL CURRY

CRA staffing shakeup throws promised tax crackdown into question;

- "notices went out to more than **100 staff who handle taxpayer appeals of CRA decisions**, according to the Union of Taxation Employees…appears those auditors will be **shifted to a new focus** on small and medium-sized Canadian businesses.."
- "To be clear, the CRA is not reducing the number of tax evasion and tax avoidance experts or the number of auditors," he wrote in an e-mail."
- "This work force adjustment process will not result in any auditor positions being cut."

Video series: CRA's SR&ED
Tax Incentive Program (Sep 9, 2014)

- Video 1: Who can claim SR&ED tax incentives? (2:05 min)
- Video 2: What work qualifies for SR&ED tax incentives?(3:47)
- Video 3: How do you calculate your SR&ED expenditures & investment tax credit? (3:08 min)
- Video 4: How to apply for SR&ED tax incentives? (3:59 min)

- Both videos & Transcripts available for download.

Video 2: What work qualifies for SR&ED tax incentives?

- “So how do you know that you've achieved technological advancement? An easy way is to ask yourself: what technological uncertainties did you encounter when you tried to develop the product or process?
- Technological uncertainties are barriers that prevent you from achieving your goals. The knowledge that you gain in overcoming those barriers is the technological advancement.”

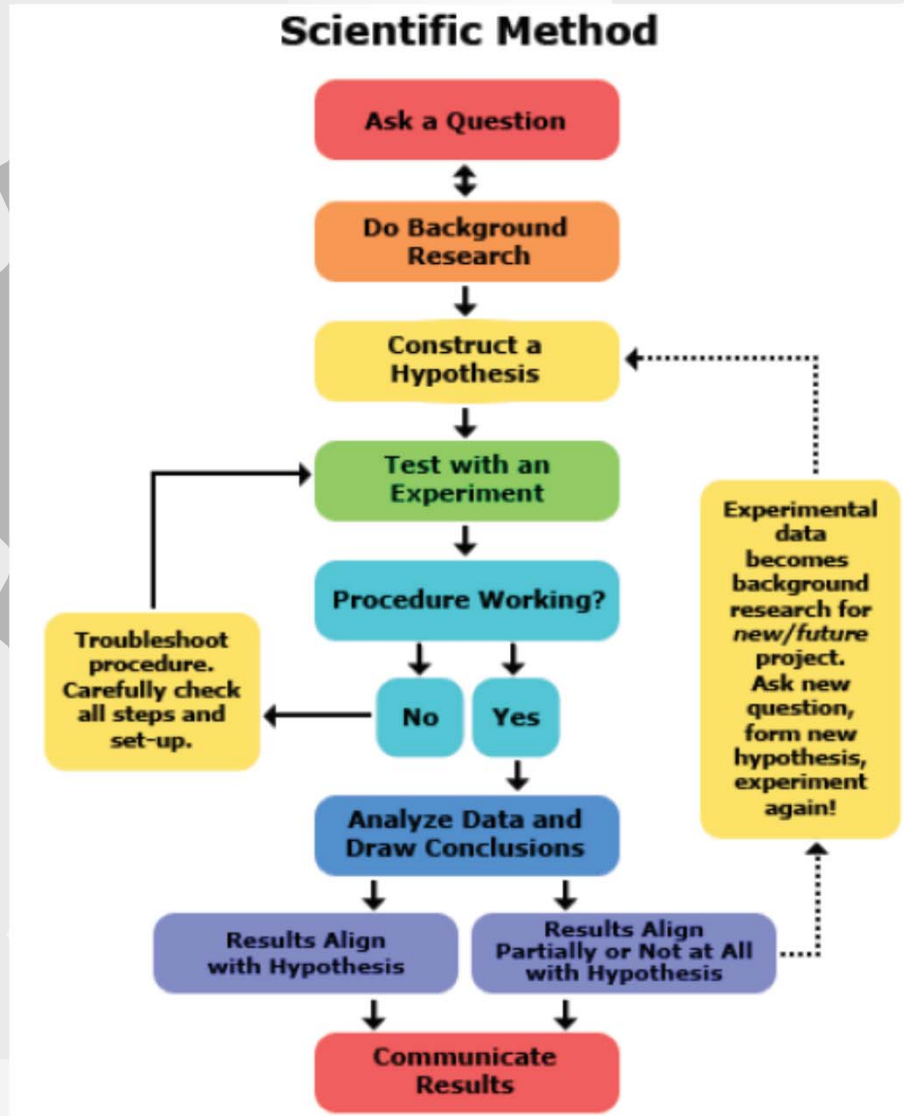
Video 2: What work qualifies for SR&ED tax incentives?

- “In a nutshell, if you're doing a systematic investigation or search, by experiment or analysis, to advance science or technology, your work qualifies!

- It's that simple!”

Comparing the Engineering Design Process and the Scientific Method

http://www.sciencebuddies.org/engineering-design-process/engineering-design-compare-scientific-method.shtml



Dispute resolution - formal vs. informal appeal strategies

Typical dispute resolution steps & timelines			
	Step	**Parties**	**Expected timeframe**
1	Negotiate with CRA reviewer	CRA & client	30 days
2	2nd admin. review	CRA & client	180 days
3	Objection	CRA & client	365 days
4	Tax Court of Canada		
	a) Appeal - Informal	CRA, Dept. of Justice client	6-9 months
	b) Appeal - General	CRA, Dept. of Justice client	2-3 years

Dispute resolution - formal vs. informal appeal strategies

General Procedure (tax court)

- generally cost $40,000+
- require use of a lawyer (tax litigator)
- takes 3+ years during which
- subsequent SR&ED claims can be held up

Informal Procedure (tax court)

- $100 application fee
- client or accountant can represent
- no lawyer required
- takes < 1 year
- limited to $12,000 / year
- provides legal precedent for future years

SR&ED changes in March 29, 2012 Federal budget

	Year change proposed to start (prorate)	2012 current	2013	2014 full effect
1)	Federal ITC rate (non-CCPC)	20	20	15
2)	Subcontractor costs (% eligible)	100	80	80
3)	Rate to calculate proxy (overhead)	65	60	55
4)	Capital equipment (% eligible)	100	100	0

International definition of an R&D project

- "For a … project to be classified as R&D, its completion must be dependent on a scientific &/or **technological advance**, the aim of the project must be the **systematic resolution** of a scientific and/or **technological uncertainty**."

  - Source: Frascati Manual 2002, paragraph 135

2014 YMPE set at $52,500

SR&ED wages - annual limits

1	**SR&ED labour:**		**YMPE**		**Specified employees***	**Non-specified**
	2012	$	50,100	$	250,500	No limit
	2013	$	51,100	$	255,500	No limit
	2014	$	52,500	$	262,500	No limit
2	**Salary base for proxy amount**					
	2012	$	50,100	$	125,250	No limit
	2013	$	51,100	$	127,750	No limit
	2014	$	52,500	$	131,250	No limit

***Specified employees own >=10% any class of stock (or related to such shareholders).**

SR&ED Salary & Wage inclusions

		Specified employees*	Non-specified employee	ITA section
1	**R&D labour for the:**			
a)	R&D expenditure pool (for deduction), **&**			37(1)
b)	Qualified expenses (for ITC calculation)			127(9)
	Type of expense:			
	· salary & wages	**In**	**In**	(5-8)
	· bonuses or profit based remuneration	**Out**	**In**	37(9) & 5(1)
	· Expenses paid > 180 days	**Out**	**Out**	78(4)
	Maximum	**5 x [YMPE]**	**N/A**	37(9.1)
2	**Salary base for proxy amount (for ITC calculation)**			
	Type of expense:			
	· Income from employment	**In**	**In**	5
	· bonuses/profit based remuneration	**Out**	**Out**	5(1) & 37(9)
		Out	**Out**	6 & 7
	· Expenses paid > 180 days	**Out**	**Out**	78(4)
	Maximum	**2.5x [YMPE]**	**N/A**	Reg. 2900(7)