SR&ED Tax Cases 2020
Webcast - May 14, 2020

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Recent SR&ED Judgments

SR&ED TOPIC	APPELLANT	PRIMARY ISSUE	WIN / LOSS
Technological eligibility			
Oracle dev + witness deceased	Clevor	Evidence - PI deceased	LOSS
Custom structure	Kam Press Metal	Technological Advancement	LOSS
Distributed computing	CRL Engineering	Evidence & Advancement	WIN
Drilling evidence for SRED	Exxon	Technological Advancement	LOSS
Concrete process development	Beton Mobile	Technological Advancement	WIN/LOSS
Financial issues			
CCPC status	CO2 Solution technologies	Control by public co.	LOSS
Use of SR&ED pool & losses	Dean's Knight Income	Acquisition of control	WIN

Detailed analysis of cases in SRED project format available for download III.B _

https://sredstakeholder.ca/may_14_2020_sredstakeholder_pdf_handouts/

SR&ED cases – TECHNOLOGY

OBJECTIVES > STANDARD PRACTICE

IDENTIFY

STATE of EXISTING KNOWLEDGE

BENCHMARKING SOURCES

OBJECTIVES

BENCHMARKS VS. OBJECTIVES

UNCERTAINTIES & HYPOTHESES

VARIABLES for EXPERIMENTATION

EXPERIMENTS

CORRELATE

RESULTS

OBJECTIVES

CONCLUSIONS

VARIABLES

Clevor – Oracle dev + witness deceased (LOSS)

Facts:

[1] expenditures $72,046, Federal ITC's $24,991

- unrepresented by counsel.
- only witness, president, Sheila Maithel daughter of developer (*deceased)

[2]Prior 2013 developed project management software application termed the "Clevor

- Schedule Optimizer" (CSO) - upon data input variables relevant to execution of project (construction or mining),
- software determine timing & sequencing of steps …
- optimally efficient (earliest) completion of project."

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Witnesses & evidence

[3] Ms. Maithal not have formal computer or software development training &

- not employed at time
- evidence content 2 letters late father in 2015
- did not call current or former employees

[4] CRA witness RTA, PhD in engineering management

[23] Dr. Zhou (of Clevor) meeting 2014 with CRA ...explained that new constraints were required to be added in the existing problem to overcome the deficiencies in the existing organizer

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Variables of Uncertainty & Experimentation

- 2 Activities:
  - API updates for Oracle changes
    - "learning" about 3rd party products
    - Combinations of XML items
  - **lateness & overhead calculation factors**
    - **[20] 5 courses of conduct (hypotheses)**

Lateness

- use lateness cost interest calculation;
- compound lateness cost calculation;

Minimize fragmentation

- standardized project overhead cost;
- critical path analysis find reason from duration POV;
- bottleneck resource analysis find reason from resource POV

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Lateness and Overhead algorithms

[21] first three of five “potential solutions” tested multiple datasets / test cases including,

- “composite resource only” dataset, “discrete resource only” dataset and “mixed resources” dataset, plus
- three dataset sizes - large (> 5,000 activities), small (< 1,000 activities) and medium
- concluded incorporation of a compound lateness cost & standard overhead cost
- produced optimal scheduling results best emulating a human decision.

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Ruling & Rationale - LOSS

According to the judge;

- [17] [re. API activity] In my view, trial and error procedure is routine engineering
- [24] [re. lateness activity] “information & supporting evidence do not establish
  - scientific uncertainties in modeling problem, using existing metaheuristics,
  - solving the problem at hand or
  - devising/adding new heuristics.”
- [25] .. I deny the claimed SR&ED tax credits.

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Key Criteria Summary

2001 - Clevor - Oracle + witness deceased (LOSS)		
BENCHMARKS	**ACTIVITIES BY YEAR**	
Internet searches: 10 Articles Suppliers: 1 products	2020	
	1-1	1-2
	updates for Oracle	lateness & overhead calculation factors
OBJECTIVES	**RESULTS**	
(none)		
UNCERTAINTIES & KEY VARIABLES	**CONCLUSIONS**	
1 - Technological uncertainty		
adding constraints		
applying metaheuristics		
UNDERSTAND 3RD PARTY API's - INELIGIBLE		
	METHODS	
Analysis Trials Prototypes Lines of code		

Our comments

- No explanation why Dr. Zhou or other employees not witnesses
- API and 3rd part work typically ineligible
- Work on social (accounting, management, finance) vs. natural sciences?
- Metaheuristics work could be eligible IFF properly documented
  - see 2017 discussion

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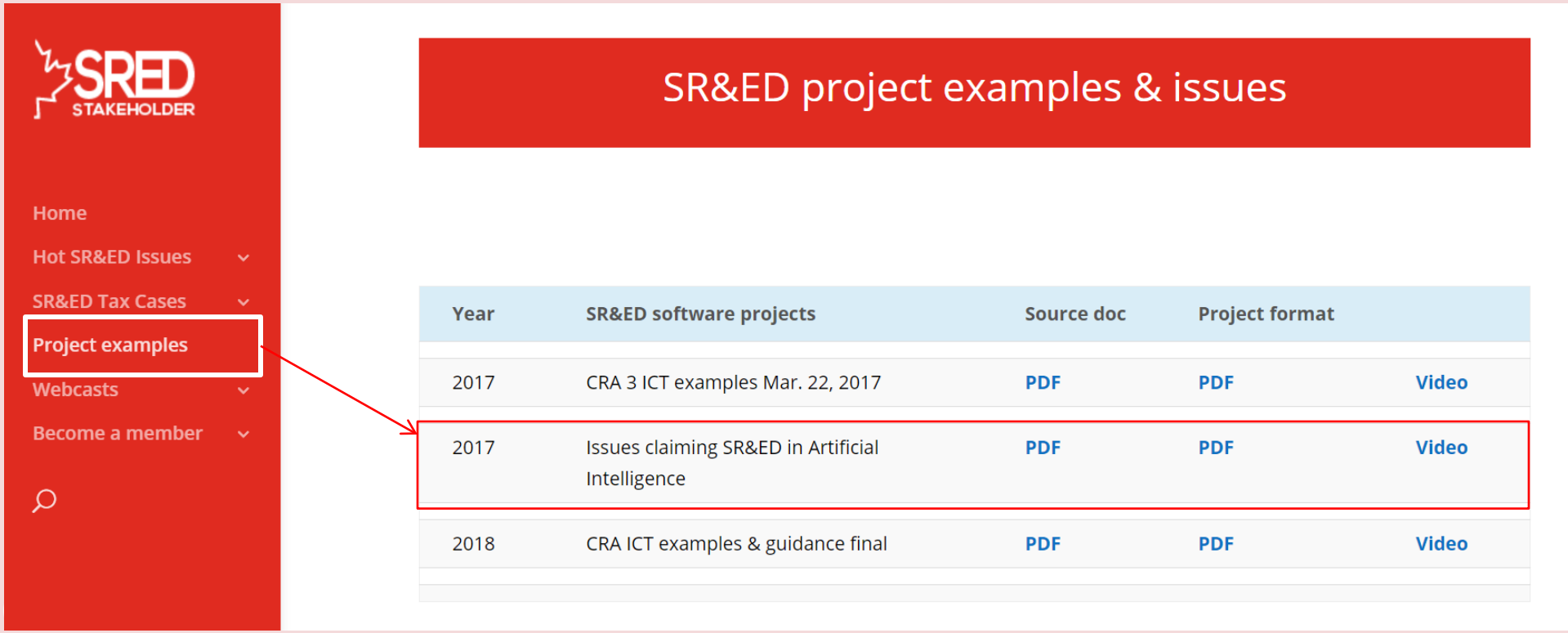
More discussion of metaheuristics



Kam Press Metal – Custom Structure - LOSS

Facts:

[4] custom manufacturing since 1973

- primarily metal - occasionally other materials
- 3 witnesses: GM, Sales/Eng. Mgr., SRED consult

[6] memorial niche complex design both curved & straight sections

- effect urns were floating in space.

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Experimentation

[9-11] 3 designs considered: metal +

- glass, tempered glass & acrylic

[13-18] 6 issues cited in completing acrylic design

[28] not able, to resolve how to assemble niche columns .. subcontracted to acrylic mfg. co.

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Ruling & Rationale – LOSS with COSTS

According to the judge;

[25] I do not require assistance of expert witness to conclude activities .. not SR&ED.

- Appellant faced difficulties .. some able to solve through CAD exercises and trial and error.

[26] The resolution involved application standard procedures or routine engineering such as

- variations in design of components, approaches to assembly of components & materials used to construct components.

… did not attempt to resolve any technological uncertainty.

[30] **appeals dismissed, with costs**

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Key Criteria Summary

2002 - Kam Press Metal - custom structure (LOSS W COSTS)	
BENCHMARKS	**ACTIVITIES BY YEAR**
(none)	2020
	1-1
	development
OBJECTIVES	**RESULTS**
(none)	
UNCERTAINTIES & KEY VARIABLES	**CONCLUSIONS**
1 - Technological uncertainty	
PROBLEM: marketing vs. technology issues?	
	METHODS
Analysis	25
Trials	15
Prototypes	2
Lines of code	
	COSTS
Hours	
Materials $	
Subcontractor $	

Our comments

- Unusual to allocate costs
- Taxpayer upset judge with lack of evidence

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CRL Engineering – Distributed Computing - WIN

Facts:

[13] Appellant engineering firm specialized in developing public transit related technology

[15] SRED activities described as

“A Real Time Vehicle Arrival Prediction Model for Transitlive” (the “Project”).

- develop web based system using algorithms & GPS data to
- provide accurate real time for public transit buses.

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Witnesses & evidence

[14] Dr. Raman Paranjape, CEO, testified at the hearing.

- PhD & professor of Electric Systems Engineering, University of Regina.
- CEO also Ph.D. in engineering - present but did not testify

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Variables of Uncertainty & Experimentation

[16] Appellant argued Project involved

- "developing a physically distributed, multi-computing platform using general purpose computing systems to
- create, communicate, integrate, analyse and report real-time, dynamic data to users"

technological uncertainty whether

- "autonomous computational systems based on general-purpose computing units could be effectively deployed … in real-world transit systems".
- argued use of "general purpose computing systems" what "creates real scientific uncertainty."

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CRA position

[17] The Respondent (CRA) argues no scientific uncertainty &

- use of existing technology, notably Global Positioning Systems or “GPS”, and routine engineering

[21]Project described an “over-arching hypothesis” involved series unrelated & un-connected tasks & no real hypothesis.

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Experimentation

[23] The Appellant installed & monitored "a set of computing units on transit vehicles (…) to examine how the system could function"

- included various iterations of a code to test some aspect of the operating system that was
- "regularly updated to evaluate sequentially and progressively more complex options (...) and to examine alternatives".
- Argues activities constituted "progressive and systematic investigation" including adjustments to the sub hypothesis,
- followed by new testing and documentation.

[30] system snapshots captured weekly

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Ruling & Rationale - WIN

[26] Appellant argued activities

- "focused on understanding nature & characteristics of physically distributed, general purpose, multi- computing systems in a hostile and challenging environment".
- results were reported in a **scholarly journal** (Exhibit A-2).

It argued that its research provided a

"launching pad for **new achievements in distributed computing**".

[32] basis of evidence .. Court finds Appellant has

- satisfied the five-factor test described in the case law &
- was engaged in SRED activities.

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Key Criteria Summary

2003 - CRL Engineering - distributed computing (WIN)	
BENCHMARKS	**ACTIVITIES BY YEAR**
(none)	2020
	1-1
	Development
OBJECTIVES	**RESULTS**
Accuracy of data: % Autonomous system: 1 1=yes / 0= no General purpose equipment: 1 1=yes / 0=no Distributed data: 1 1=yes / 0=no	
UNCERTAINTIES & KEY VARIABLES	**CONCLUSIONS**
1 - Technological uncertainty	
characteristics physically distributed GP equip	
use of autonomous system	
	METHODS
Analysis Trials Prototypes Lines of code	10

Our comments

- "over-arching hypothesis" vs. specifics
  - specific hypotheses more successful
- Lack of details on actual issues of experimentation

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Exxon – drilling well (LOSS)

Facts:

[57] well drilled 4,600 m, drill bit "torqued off" & lost.

Issue whether cost of drilling ($2,048,215) SR&ED?

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[60] Appellant (EXXON) submits drilling well SR&ED because provided experimental

- validation of predictions made using new/improved RCA methodology
- developed by Upstream Research Company.

Witnesses & evidence

[62] Appellant submitted expert reports of Doctor Fairchild

- Respondent (CRA) expert reports of Professor Gringarten

RE. EVIDENCE JUDGE COMMENTED:

While these reports provide

- some interesting technical background,
- limited assistance issue whether drilling well B16-54 constitutes SR&ED.

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CRA position

- [61] (CRA) submits drilling well was to delineate the oilfield in the Hibernia southern extension and to satisfy the requirements of EL1093 (commercial use)

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Relevant legislation - para (h) definition SR&ED 248(1)

- excludes drilling for petroleum,
- consistent cost of wells addressed definitions “CEE” “CDE” - 66.1(6) & 66.2(5) ITA.

Variables of Uncertainty & Experimentation

The judge noted

[64]. . . In any case, the validation of a reservoir model cannot rely on a single well but comes from the accumulation of proofs from a series of wells.

All wells are drilled based on reservoir characterization and reservoir connectivity studies and **in turn all wells**,

- from wildcat to appraisal to delineation to development,
- contribute knowledge to improve reservoir model & reduce uncertainty.

[65] The **primary objectives,** incentives and issues in respect of the B16-54 well are described in the **presentation to**

- **management** dated June 16, 2005 as follows

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Objectives & issues claimed

PRIMARY OBJECTIVES

- Define OWC in Hibernia South by penetrating primary reservoir targets of Layers 2 and 3 between 4500-4800
- De-risk sufficient volumes to determine **economic viability** of platform facility upgrades

ISSUES

- **Depth** of OWC in Hibernia South is currently unknown but NFW MM1 will test interval of 4500-4800 m
- Magnitude potential **reservoir quality** (permeability and porosity) degradation with depth better understood through log and core acquisition.

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Ruling & Rationale - LOSS

The judge concluded;

[69] “The drilling of a conventional well, based on the predicted location of oil,

- to establish **whether & extent oil present**
- may be **distinguished from** construction of a pilot plant **to test a new or improved process** or technology.
- Latter contributes to the resolution of technological uncertainty associated with the construction of a full scale plant while
- Former incidentally provides data that either agrees with or disagrees with outcome predicted by model.”

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Key Criteria Summary

2004 - Exxon - drilling evidence for SRED (LOSS)	
BENCHMARKS	**ACTIVITIES BY YEAR**
(none)	2020
	1-1
	development
OBJECTIVES	**RESULTS**
(none)	
UNCERTAINTIES & KEY VARIABLES	**CONCLUSIONS**
1 - Technological uncertainty	
	METHODS
Analysis Trials Prototypes	1

Our comments

- Case illustrates both failure & areas of potential SR&ED
- Costs to analyze results of multiple sites for model development more likely eligible
- Different then testing a prototype part on a commercial location?

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SR&ED cases – FINANCIAL

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CO2 Solution technologies – CCPC status - LOSS

Facts:

[3] CRA reassessed refundable ITC to nil, basis not a CCPC , being controlled, directly or indirectly, by a public company, namely CO2 Solutions Inc.

- not entitled to increase or refundable ITC 127.1 (1) of the ITA.

[9] CO2 Publique inc. as joint-stock company in 1997.

- field of carbon dioxide capture and management
- claimed refundable ITCs SR&ED until becoming public in 2004.

[10] During 2005, CO2 Publique established new structure.

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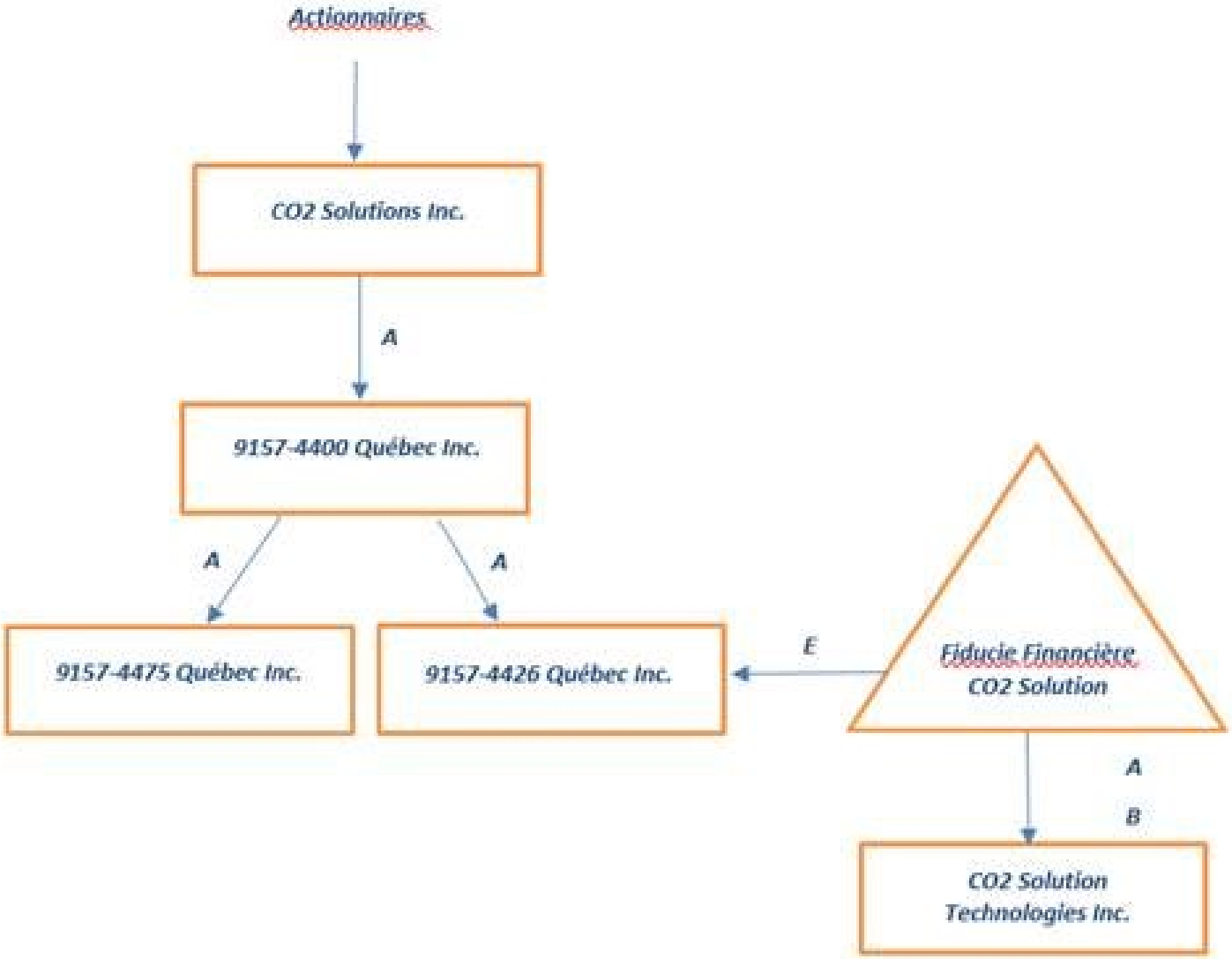
Corporate structure



Claimant arguments

[24] **appellant maintains** analysis must be made based on all years carried on business, 2005 to 2012.

- recognizes it was a start-up business ,
- funding from several sources,
- including subsidiaries of CO2 Publique,
- maintains management of business & BOD autonomous &
- distinct from CO2 Publique **in operational terms**.
- It had its own bank account, accounting, financial statements, and so on.

[25] If any link between appellant & CO2 Publique, it was the latter

- retained intellectual property.
- appeared in the public company's consolidated financial statements.
- members of the **board of directors were the same,**
- BUT they had an understanding of their functions and operated on behalf of the appellant independently and independently.
- Therefore no factual control.

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Ruling & Rationale - LOSS

[67] Appellant's certificate of incorporation provided only certain entities “may hold shares in issued & outstanding share capital”, either

- CO2 Publique or its wholly owned subsidiaries or
- a trust where beneficiaries are CO2 Publiques or its wholly owned subsidiaries.

“It seems to me that this is a legally binding contract, the purpose of which was to secure control of the appellant by the public company, within the meaning of subsection 256 (5.1).”

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Our comments

- ITA 256(5.1) is likely to catch any companies with “common control” via BOD

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Dean's Knight Income - Use of SR&ED pool & losses - WIN

Facts:

[1] Appeal involves deduction of accumulated and unclaimed non-capital losses & SR&ED ITCs ("Tax Attributes")

- subsequent series transactions 2008 -2009.
- move assets & liabilities to new corp.
- use Appellant's remaining corporate shell
- raise money through an "IPO"
- to fund a new business whose profits
- sheltered by the Tax Attributes.
- refer to as a "recapitalization & restart transaction".

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Ruling & Rationale - WIN

[166] circumstances referred to by the CRA do not,

- indicate [public co] control over majority of voting shares of the Appellant prior to the IPO &
- I find Avoidance Transactions do not amount to abuse of 256(8) & 251(5)(*b*) of the *Act*.

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Our comments

Usually no problem

- rolling profitable business into loss company
- Unless “acquisition of control” then
  - Limited to same or similar business

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