

Ridout & Maybee LLP

CANADA'S INTELLECTUAL PROPERTY AND TECHNOLOGY LAW FIRM
Canadian patent practice 101

Patenting computer-implemented inventions in Canada

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it all starts somewhere

A white pen is positioned diagonally across the bottom right of the slide, pointing towards the center. The background is a close-up photograph of a piece of paper with a faint pencil sketch of a tree and some handwritten notes. The text "it all starts somewhere" is overlaid on the paper in a small, white, sans-serif font.

Numbers of Canadian patents relating to computer subject matter

2,497 patents claim “software”

2,063 patents claim “network” and “server”

1,712 patents claim “Internet”

15,429 patents claim “computer”*

Conclusion: patents on computer-implemented inventions are routine

* Based on keyword search in CIPO database of granted CA patents

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Patent Act s. 2: patentable inventions

any new and useful:

art

process

machine

manufacture or

composition of matter

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Excluded subject matter

“Mere” scientific principle or abstract theorem

eg mathematical formula/algorithm, natural phenomenon, law of nature

Invention consisting of solely of intellectual/aesthetic significance

eg printed matter consisting of a literary work

Mental steps, even if implemented by computer

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Other exclusions from patentability

- Disembodied idea : distinct from idea reduced to practical form; must result in a new product, a new result or a new process for producing a product or result
- “forms of energy” eg electromagnetic signals, waveforms, data structures, computer-generated signals
- “schemes, plans, rules and mental processes: eg series of purely mental steps, including disembodied computer program (not on a carrier)
- Software/computer programs (when disembodied from a recording medium)
- Games, rules of play

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Patentable “art”

A disembodied idea is not *per se* patentable. But it will be patentable if it has a method of practical application... "art" is a word of very wide connotation and is not to be confined to new processes or products or manufacturing techniques but extended as well to *new and innovative methods of applying skill or knowledge provided they produced effects or results commercially useful to the public.* (Shell Oil v. Comm’r of Patents)

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Amazon.com v. A.G. Canada (Federal Court of Appeal)



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Canadian patent application no. 2,246,933

Claim 1 (simplified). A **method** comprising:

- receiving from a server system a client identifier;
- storing the client identifier;
- when an item is ordered, displaying information identifying the item;
- sending to the server system a request to order the identified item;
- and
- sending the updated account information to the server system.

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Claim 44 (simplified). A **system** for ordering an item comprising:
a component that receives and stores a client identifier;
a component that orders an item; and
a component that updates account information.

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Comm'r of Patents decision

- Business methods are not patentable
- Invention must include a “contribution” over the prior art
- “Contribution” must be in itself patentable
- Here, the contribution was not “technical” therefore invention was not patentable

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Federal Court decision (upheld by FCA)

- A business method can be patentable
- Invention does NOT have to be “technical/technological in nature to be patented
- A business method or other “art” can be a patentable if it includes:
 - an act performed by a physical agent on a physical object and produces change of character or condition (practical application rather than a disembodied idea)
 - a new and inventive method of applying skill and knowledge
 - a commercially useful result
- Application sent back to CIPO for review; subsequently allowed

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CIPO guidelines (after *Amazon.com* case)

Inventions excluded from patentability:

disembodied inventions (including those lacking a method of practical application);

e.g. inventions that lack physicality (*i.e.* are not "something with physical existence, or something that manifests a discernible effect or change");

e.g. inventions where the claimed subject-matter is a mere idea, scheme, plan or set of rules

(CIPO Practice Notice PN 2013-03 March 8, 2013)

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Open questions after *Amazon.com*

- Scope of “change of character or condition” of a physical object required to be patentable
- Example: investment method that generates a change of investment portfolio?
- Is there any requirement for a “technical solution to a technical problem”? Meaning of this requirement still uncertain

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Computer implementation of a process

- The use of a computer to implement a discovery does not in itself transform unpatentable subject matter into patentable subject matter; underlying process/art must be patentable (re *Schlumberger* Fed. Ct of Appeal)
- Example: well-logging algorithm embodied in software: mere mathematical formula and not patentable

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Example of patentable method

Re WESTINGHOUSE ELECTRIC (Comm'r of Patents)

“A method of providing elevator service for a special floor of a building...
comprising:

providing means for registering up and down hall calls from the special floor
determining when registered and up and down calls coexist from the special
floor

and giving a predetermined one of such coexisting hall calls priority over the
other, according to the location of the special floor in the building,

said step of giving priority to a predetermined one of coexisting hall calls at the
special floor including ...”

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Data carriers/programs

- Information stored in a data carrier is not patentable if the information itself is not patentable (eg “passive” data; pure information)
- Computer program by itself is not patentable
- Information/instructions embodied in a signal are not patentable
- CIPO test: program stored in data carrier can be patentable if it performs an operation that is a technical solution to a technical problem
- CIPO test may have to be modified after FCA decision in *Amazon.com* – no requirement for “technical” subject matter

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“Device” inventions

- Potentially patentable if computer is an essential element of invention
- Subject matter provides a “technical solution to a technical problem” (may have to be modified in light of *Amazon.com* case)
- If no essential elements of invention are patentable, then device will not be patentable, eg. device programmed for storage of data
- Device can be patentable if programmed to control its operation
- Similar principles for a computer, programmable device, system that includes programmable devices (eg computer/telecomm network)

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Additional examples

- improved efficiency or other physical functioning: patentable
- System for allocating cell phone traffic channels: patentable
- computer programmed to associate a traffic channel with a control channel using algorithm X: performing the operation generates only information, not a physical event - unpatentable

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Written description requirements

- Description of the invention
- Description of immediate cooperating environment of invention, such as data processing system, wireless network, etc.
- Must enable a skilled person in the art to build and practice invention
- Detailed flow charts, block diagrams of operation of system
- Physical aspects: change of character or condition of physical objects resulting from use of the invention; other physical aspects of invention

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Description (continued)

- Flow charts/block diagrams with a supporting description of the method implemented by the software
- any new interactions, interfaces with conventional hardware elements
- code or pseudocode may be added, but is not required in most instances

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Written description requirements

- For business methods:
 - Describe computer implemented and non-computer implemented embodiments where possible
 - Emphasize the “technical” results or interfaces
 - Consider invention as a method operating on generic objects which only incidentally are business-oriented in nature

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Some of the categories of potentially patentable “arts”

E-Commerce

Logistics

Banking

Financial Services

Credit Card & Reward Programs

Human Resource Management

Accounting

Insurance

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Summary: software and computer-implemented inventions

- Wide scope of subject matter
- Includes computer-implemented methods, systems and products
- “physical” element required eg includes an element with physical existence or makes a change to a physical object
- Requires careful patent drafting to include “physical” aspects
- Different tests in other countries: inventions patented in Canada may not be patentable elsewhere and vice versa

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Thank You

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