

## **Riel, Louis-Pierre: #CIPO - OPIC**

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**From:** Peter K Wang [pkwang@ca.ibm.com]  
**Sent:** Wednesday, November 24, 2004 11:39  
**To:** Riel, Louis-Pierre: #CIPO - OPIC  
**Subject:** Re: Chapters 12 and 16 of MOPOP



Comments to draft  
MOPOP Chaps ...

Louis-Pierre,

I attach my comments to these two chapters. My apologies for being late: it's been extremely busy for me these last few weeks since moving to my new place of employment.

Regards,

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## **Comments to Proposed draft Chapter 12 and 16 of MOPOP**

Ad Hoc Committee Member  
Peter K. Wang

### ***General Comments***

#### **Chapter 12**

As a general observation with the language used in Chapter 12, many of the restrictive conditions as to the subject matter that may be patentable and the expressions used to describe these conditions may be questionable in that the authorities that are provided may not be completely relevant. The referenced jurisprudence may not actually be supportive of the restrictions or it may be that the language in the cases have been misconstrued or interpreted in an overly broad manner.

#### **Chapter 16**

One point of note is the conspicuous absence of discussion in this chapter on the leading cases in the field, such as Schlumberger, Progressive Games, and perhaps even PAB decisions such as Re: Motorola 2,047,731 and Re: Motorola 2,085,228. Instead, the proposed chapter focused on judicial requirements on "art" from Lawson, a case in a totally unrelated field.

If "economic result" were to become an important requirement for patentable subject matter, then the Office should define this term as guidance to inventors and examiners, or at least provide examples of what would come within and fall outside of the patentable class of subject matter as a result.

## **CHAPTER 12**

### **12.02.01**

The Patent Act defines invention in Section 2 as: "any new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of matter"

#### ***Comment:***

*Lawson v. Commissioner of Patents*, (1970) 62 CPR 101 ("Lawson") is relied upon greatly both in this section and throughout chapters 12 and 16; however, Lawson dealt with plan of land subdivision that was largely artistic in nature. Because of the peculiar nature of the subject matter the court had to deal with it does not appear to be authoritative for the full spectrum of inventions. Lawson has been stretched beyond its scope.

**Art:** The quote “An art or operation is an act or series of acts performed by some physical agent upon some physical object and producing in such object some change either of character or of condition.” While perhaps being sufficient for the matter at hand in *Lawson* represents only a subset of the meaning of “art”. A more accurate description of art could be stated: “An art or operation may include an act or series of acts performed by some physical agent upon some physical object and producing in such object some change either of character or of condition.” The court in *Lawson* was merely asked to rule on one narrow fact situation, a form of land division, not on the whole field of invention. The court did not have before it sufficient evidence and information to make a pronouncement that would affect all fields of invention.

The need for the last italicized sentence from *Lawson* is questionable. The need for a “physical agent” or a “physical object” seems too restrictive. For example, one may interpret the data stored in a computer as not being a “physical object”. Perhaps the Federal Court interpretation in *Progressive Games* ((2000) 3 CPR (4th) 517 at p. 522) of the *Shell Oil* definition of art may be more applicable, namely:

Accordingly, the definition of the term of “art” as provided by the Supreme Court includes a process that:

- (i) is not a disembodied idea but has a method of practical application;
- (ii) is a new and innovative method of applying skill or knowledge; and
- (iii) has a result or effect that is commercially useful.

Thus I would suggest an alternative definition, namely:

An art includes a process that has a practical application that applies skill or knowledge, provided the process is innovative and has a result or effect that is commercially useful.

**Process:** The definition provided for process appears unduly limiting being mostly confined to chemical processes. There are many other processes understood in the sciences.

**Machine:** No support is given for the definition of machine: the definition is unduly limiting. Perhaps in the days of the original Statute of Monopolies (circa 1624) a machine was regarded may be purely mechanical; now machines are more than mechanical. A more apt definition may be: “A machine may include a physical embodiment of ....”.

**Manufacture:** No support is given for the limitation of a manufacture which “must be a vendible product of a process.” To the extent this may have been extracted from *Lawson*, *Lawson* is being misquoted and stretched. The correct statement is: “Thus it is seldom that there can be a process of manufacture unless there is a vendible product of the process. It must accomplish some change in the character or condition of material objects.” *Lawson* at 111. It should be left to parliament to make law.

The authority for the characteristic ‘an essentially economic result’ here and in subsequent sections should be provided. Such a restriction may be extreme as a development pertaining to intermediate components or steps may be inventive and yet this requirement may allegedly attempt to negate patentability without proper authority.

The apparent example provided in this section in italics in the latter portion of the first paragraph, should be identified as an example so as to minimize the possibility of improper overly broad applications. Similarly, in the second paragraph, the language is suggested to be changed to read in part ‘... is produced for example, by a chemical reaction...’

### 12.03

There should be some elaboration on the term ‘one skilled in the art’ as used in this section and in other sections of this chapter so as not to be interpreted in the extremes in the sense of a person having expert or novice skill. It would be more appropriate to use an expression such as ‘of ordinary skill in the art’.

#### 12.03.01

It appears that the notion of doctrine of sound prediction arose from chemical compound and medical cases. This should be made clear in this section so as not to improperly broaden its applicability to all other subject matter that may be inventive. By so doing applicants may needlessly be forced to consider and respond to unsound rejections in examiners reports.

In the last sentence of this section I do not read the *Patent Act* to indicate that this is the case. Perhaps a case reference, and if so adding a footnote here, would be helpful.

By reference of the requirement to establish utility at the claim date do you mean that an examiner may request such information during the prosecution process?

#### 12.03.03

I disagree with the assumption that the use of “human-factors” leads to non-reproducible results. Certainly in some cases they may, but I suggest that such a generalization is inaccurate. I suggest that;

Subject matter that accomplishes a result solely by means of a person’s interpretative or judgmental reasoning cannot form the basis of a patent.

Or alternatively;

Subject matter that accomplishes a result by means of a person’s reasoning, in which the quality or character of the result may vary depending upon the individual skilled in the art performing the process or method, cannot form the basis of a patent.

There are many methods that require a person skilled in the art to determine a quality or quantity based on the interpretation of data. The comparison of two things can be equally determined by mechanical means such as sensors. Such interpretation may simply be one step in a sequence of steps. Its presence should not disqualify patentability.

Human intervention is common during the steps of a process. When a human step is necessary, the examiner should determine whether the step has been fully integrated

within the process and whether the mental step is predictable and precise. If this is the case, such an invention constitutes patentable subject matter.

Support for the above suggestion may be found in *Re: Application For Patent Containing Claims That Read On Mental Steps Performed by a Human Operator in Deciding to Transmit a Signal*. (23 C.P.R. (2d) 99 at p. 95):

A mental step which is judgmental or interpretive (purely mental) is definitive of a process the result of which depends on the intelligence and reasoning of the human mind. It seems settled that it is only this latter type of mental step, which renders a process unpatentable.

Further at (p.96):

Therefore a process which includes a *mental* step involving the ascertaining and sensing facilities is patentable (provided all other attributes of patentability are present), since the effect of the mental step is precise and predictable no matter how skillfully it is performed. On the other hand, a process which includes a *mental* step, the nature of which is dependent upon the intelligence and reasoning of the human mind cannot satisfy the requirements of operability since the effect of the human feedback or response is neither predictable nor precise whenever the process is worked by its users.

It follows that the specific questions to be satisfied in this case are (assuming novelty and unobviousness):

- (1) Whether the steps involving human response are of the type that require subjective interpretive or judgmental considerations; or whether they are responses that are clearly defined and precise, and for example, can be performed otherwise by apparatus; and
- (2) Whether there is sufficient teaching of the human intervention so that the inventive process is operative when performed by its users.

#### **12.04.03**

I am not aware of any authority to clearly support the proposition that 'algorithms' is equivalent to 'mere scientific principles or abstract theorems'. This statement is misleading.

In *Re: Mobil Oil 1,254,297* (1988) 24 C.P.R. (3d) 571 at 576, it was stated: "the applicant's system is useful and does not relate solely to calculations or algorithms."

If it is considered necessary for MOPOP to include a comment on this subject a more accurate statement would be: "Subsection 27(8) of the Patent Act specifically excludes mere scientific principle or abstract theorem from patentability. Systems that relate solely to calculations or algorithms are excluded from patentability by subsection 27(8) of the Patent Act; however, systems that are useful, not relating solely to calculations or algorithms are not excluded from patentability."

#### **12.04.04**

No support whatsoever is given for this paragraph.

Specifically no support is given for the statement: "Software expressed as lines of code or listings in a patent application or claims are not considered as patentable subject matter, but may be protected as literary works under the Copyright Act." The former statement is not authorized by Parliament, and is not supported by the jurisprudence. The latter statement is irrelevant as overlapping intellectual property regimes are allowable.

The statement "Software in the form of an abstract theorem or algorithm is automatically excluded from patentability under subsection 27(8) of the *Patent Act*" is a distortion of the law. Even the leading case *Schlumberger v. Commissioner of Patents*, (1981) 56 C.P.R. (2d) 294 does not support this interpretation of the law.

The continuation of the statement: "...but software that has been integrated with a traditionally patentable subject matter may be patentable." is unduly restrictive in view of the jurisprudence. If this approach had been used by the Patent Office in the past virtually nothing that has developed in modern times would be patentable. Considering that the Patent Act was directed to the future by Parliament, limiting patentable inventions to traditional patentable subject matter is contravening Parliament's clear direction and is seeking to make law.

A more appropriate statement for consideration is: "Software solely in the form of a mere scientific principle or abstract theorem is excluded from patentability under subsection 27(8) of the Patent Act, but software that meets the definition of invention or that has been integrated with traditionally patentable subject matter may be patentable."

The term 'algorithm' should not be considered as equivalent to 'theorem' as this is an improper interpretation of subsection 27(8) of the Patent Act. The term 'algorithm' should thus be deleted from this section. The language in the second sentence should also be revised to read in part '... but software which meets the definition of invention or has been integrated with traditional patentable subject matter may be patentable.' so as not to mislead examiners and readers of MOPOP.

## 12.05

Caution should be expressed in this section in generally extrapolating rejections in cases for specific subject matter to cover inventions in all subject matter as this may be misleading. Although it may have been held that an intermediate product in a chemical application may not have utility, it may very well be that intermediate products in other technical fields may have commercial use and meet the requirements of the statutory definition of invention. Similarly to state that 'a rule for doing business' or 'a method of accounting' is not statutory subject matter when it is not and cannot be supported by the *Patent Act* and without any authority being provided is misleading. It should be sufficient to determine if the subject matter meets the conditions of paragraphs (b) and (c) in this section.

The provisions of Chapter 12 should also be reviewed taking into consideration of Canada's obligations under Article 27 of the TRIPS Agreement. Section 27.1 makes it clear that patents should be available without discrimination as to field of technology as

long the inventions are new, involve an inventive step and are capable of industrial application. It would seem that some of the provisions of the Draft Chapter 12 may be contrary to this obligation.

In the section on examples of subject matter not recognized as being patentable, in particular the second last bullet point, I submit that "new rules for playing games or the like" is too broad. In particular the *Progressive Games* decision and the subsequent dismissal of appeal by the FCA accepted that a method of playing poker with cards would qualify as "art" provided it was also new and innovative, given the test set out in *Shell Oil*. Accordingly, I suggest that the reference to new rules for playing games should be deleted.

In the other examples there are more illustrations of overextension, for instance, for intermediates: "inseparable intermediate transitory product..."

The listing of "a rule for doing business, a method of accounting or providing statistics, a personality or I.Q. test and the like" is unsupported by any jurisprudence or statutory references and is combined with "Mere scheme, plan, speculation or idea.." and unnecessarily fetters invention.

## CHAPTER 16

### 16.01

It would more in accordance with the law if the last statement of the paragraph reads: "Computer related inventions, including those relating to hardware or software, or combinations thereof, are examined in a manner equivalent to inventions in other fields of technology and the same principles." There is no justification in law to reduce the field of patentability of computer related inventions.

### 16.02

In reference to the first paragraph it would be more appropriate if it read: "The specification must describe the invention in normal language as in other technical fields and not solely as source code. Computer program listings alone do not fully describe the invention, but may be useful in illustrating specific embodiments. The invention should be described in sufficient detail for one skilled in the art to make and work the invention; this may include descriptive detail in terms of hardware, a computer program depicted in functional modules, and or data or a combination thereof.

#### Computer program

The term "process algorithms" in the paragraph in this section is unknown. It is suggested that the term "algorithms" is more appropriate.

The terminology used to describe various computer program related features is inconsistent. This section refers to "computer program", "software", "functional modules", "modules in the system", "particular components". Perhaps by referring simply to a computer program having functional modules would make this a bit clearer.

#### Data

The first paragraph appears to be illustrative of what might be needed in the description of a patent in relation to data; however, it appears proscriptive instead. It is suggested that the following introductory paragraph be inserted at the beginning of the section be added: "It is important like patent applications in other fields that a computer-related applications sufficiently describe the invention, for instance, the following examples are illustrative of information that might be important in a computer related invention."

The last sentence: "These questions usually should be answered by the description." is unduly restrictive and should be removed, leaving the choice of descriptive matter to the applicant.

The following paragraphs are unduly restrictive, without sufficient foundation in law. The following are suggestions for more appropriate language.

The second paragraph should be: "The description of the patent application is reviewed and correlated with claim limitations to ensure that the claimed features are fully disclosed in accordance with subsection 27(3) of the Patent Act."



The next paragraph is also an overstatement of the law. It appears to be derived from a law review article. It is suggested that the following is a more apt description: "It is important that these elements, features, and processing steps are sufficiently described."

The last paragraph is an inverse of the jurisprudence, and no authority exists for its assertion. It appears to a directive to patent examiners to apply stricter standards for computer-related inventions than those in other fields.

It is suggested that the following would be more appropriate: "In the absence of a sufficient description of the invention in accordance with the subject matter of the invention, describing hardware, software, or data structures among others as best lends itself to describing the invention, the requirements of the ss. 27(3) of the Patent Act may not be satisfied."

In the data section, I would suggest changing "How is the data structured or stored in the memory" to "What is the format of data when stored or transmitted?". Further the use of the term "data" may be a tad restrictive as some inventions may not utilize data but rather a simple hardware signal to instruct a circuit. If the signal is a hardware function than no data is required. Our point being that there will be inventions where all three of hardware, "a computer program" and a data structure may not be required. Hardware and computer programs are quite often interchangeable, one may build a chip to function in the same manner as a software program based upon the signals it receives. Thus it is our view that requiring all three features is ~~a-bit~~ restrictive. Perhaps a preamble indicating that typical features of an invention would utilize a combination of hardware, a computer program or "software" would be sufficient. Simply by not having one of the three features does not necessarily define an invention as being a "mere scheme".

#### **16.03.01**

Please see our comments on section 12.03.03 above.

The second paragraph which refers to Lawson is irrelevant and should be struck. The terms "professional skill" and "manual art" are not relevant to computer-related inventions.

#### **16.03.02**

Notwithstanding the provisions of the Patent Act, the Patent Rules and jurisprudence, since Canada is a signatory of the TRIPS Agreement, Canada is therefore bound by the conditions set out in the said Agreement.

Article 27.1 of the TRIPS Agreement requires that patents be available in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application, subject to certain limited exceptions. Article 27.1 contemplates broad circumstances for patentability of subject matter. Subject matter that is not specifically excluded from Article 27 is methods of doing business and software. See MOPOP Section 12.02.02: Article 27 of the TRIPS Agreement: Patentable Subject Matter.

In many countries, software-related inventions are patentable subject matter if they have a technical character or involve technical teaching, i.e., an instruction addressed to a

person skilled in the art on how to solve a particular technical problem using particular technical means. In other words, software-related inventions should have a technical effect. Provided that the software produces a technical effect, it is then necessary to examine whether the conditions of patentability are fulfilled. Though it is not the role of the Patent Office to supplant Parliament's role in all of this, nothing in the decided court cases prevent this interpretation of the relevant provisions of the *Patent Act*.

Specifically no support is given for the statement: "Software expressed as lines of code or listings is considered to be a literary works under the Copyright Act." This statement is irrelevant as overlapping intellectual property regimes are allowable.

The statement: "Software in the form of an abstract theorem or algorithm is automatically excluded from patentability under subsection 27(8) of the Patent Act..." is a distortion of the law. Even Schlumberger does not support this interpretation of the law. The citation of Re: Mobil Oil, patent 1,254,297 op. cit. does not support this statement. In Re: Mobil Oil, the applicant's system was found to be useful and did not relate solely to calculations or algorithms and as a result was found to be patentable. Comments by the court beyond the facts of that case are considered obiter, and do not bind the Patent Office or other courts.

The continuation of the statement: "...but software that has been integrated with a traditionally patentable subject matter may be patentable." is unduly restrictive in view of the jurisprudence. If this approach had been used by the Patent Office in the past virtually nothing that has developed in modern times would be patentable. Considering that the *Patent Act* was directed to the future by Parliament, limiting patentable inventions to traditional patentable subject matter is contravening Parliament's clear direction and is seeking to make law.

A more appropriate statement for consideration is: "Software solely in the form of a mere scientific principle or abstract theorem is excluded from patentability under subsection 27(8) of the Patent Act, but software that meets the definition of invention or that has been integrated with traditionally patentable subject matter may be patentable."

'Algorithm' should not be considered as equivalent to 'theorem' as this is an improper interpretation of subsection 27(8) of the *Patent Act*. The term 'algorithm' should thus be deleted from this section. The language in the second sentence should also be revised to read in part '..... but software which meets the definition of invention or has been integrated with traditional patentable subject matter may be patentable.' so as not to mislead examiners.

The next portion of section 16.03.02 which dictates that for a computer-related "method to be considered an art under section 2 of the Patent Act, the method must be:

- a) an act or series of acts performed by some physical agent ...; and
- b) it must produce an essentially economic result relating to trade, industry or commerce. "

is an overextension of the Lawson decision. Lawson was concerned with land subdivision, not with computer-related technology. Any application of statements of the court outside of the factual matrix of Lawson is inappropriate. The court did not have

before it any information on computer-related technology and thus was not in a position to speak to it.

At the best the quoted example is merely an illustration of one type of computer-related invention.

Please see comments on section 12.02.01 above with regard to the use of "physical object". By way of example in a computer related invention would a signal sent via a wireless transmission be a "physical object"? It may simply be the format of the signal in which the invention resides.

#### **16.03.2a**

I would suggest deleting paragraph 3 as a professional skill or method can certainly result in an "essentially economic result". For example think of the professional skills of those that can cap oil well fires or find treasure in the oceans. These skills certainly provide an economic result. Granted, such skills may not be patentable by judicial fiat, but this statement appears a bit too broad.

In paragraph 4, some reference numbers to the cases in points a) to e) would be advantageous.

As is well illustrated in many fields of endeavor art forms and skills evolve into trade industry or commercial activities of a modern nature such as manufacturing. Characteristics of this evolution include transforming these skills into precise highly repeatable activities that can be made subject of manufacturing plants and automation.

#### **16.04 Claim categories**

The statement "Three categories of claims are possible for computer implemented inventions in accordance with section 2 of the *Patent Act*." is too restrictive. The claims illustrated are merely examples.

One consideration that has been lost is the viewpoint of software as a machine. Consider a machine tool. In the past machine tools were likely programmed by selecting gear combinations. These gear combinations could have been preselected as "gear trains". The gear trains could have been made available in different configurations; with different gear trains being employed to achieve different results from the machine tool. It is respectfully suggested that these gear trains were in fact machines. The replaceable circuit modules of some computers are directly claimable as circuits. These circuits can be viewed as manufactures or as machines. The circuit modules themselves are not typically claimed as modules but more likely from the perspective of circuits as they appear in circuit or logic diagrams. They are not claimed in terms of their supporting boards, wiring or solder connections.

Likewise there is no need to confine software claim forms to art or process or articles of manufacture. Software is a form of machine. The carrier of the software is irrelevant to the design of the machine. It is merely a method of delivery which contributes little to the software. The software stands alone as a machine without the artificial support of it as a manufacture.

#### **16.04.01**

Consider adding an “and” to the penultimate phrases of each claim example as was done in example claims 7 and 9.

#### **16.04.02**

Regarding Claim 2, the preamble does not match that of Claim 1, in that it has “compressing” vs. “enrolling”. Since from the introduction one is providing an example of transforming a method claim to means plus function language, it may be better to maintain consistency. Also consider changing “b) filter” to “b) a filter”.

#### **16.04.03a**

Insert “Example” before claim 5 and consider changing “However, a computer medium claim may not carry...” to “However, a proposed computer medium claim may not carry...”.

#### **16.04.03b**

In the example, delete c), as it is the same as b) and change d) to c).

#### **16.05**

Change “claim” to “claims”

#### **16.05.01**

Examples shown as claim 8 and 9 illustrate unacceptable claims, while claims 10 and 11 show acceptable claims. Then claim 12 reverts to unacceptable claims. Consider moving claim 12 to the unacceptable section.

#### **Appendix 16.1**

It is not clear how the references apply to the text of the chapter. In contrast, the endnotes provide specific references. If the intent is simply to provide additional information than that is fine, but there is no context to aid the reader in determining which references may be applicable in a given situation.