

Preface

The following is the submission of SAP on the proposed Chapters 16 (“Computer Implemented Inventions”) of the Manual of Patent Office Practice (“MOPOP”) as published on the website of the Canadian Intellectual Property Office (“CIPO”).¹

Because of the number and complexity of new proposals in the draft Chapter, SAP has chosen to focus on specific issues and leave more comprehensive comments to the Intellectual Property Institute of Canada (“IPIC”), and others. SAP is supporting the comments from IPIC as well as providing our own.

Who is SAP?

These comments are submitted on behalf of SAP Canada, Inc. on behalf of itself and related companies including SAP AG of Germany, and Business Objects Software Ltd. of Ireland. These entities are collectively called “SAP”.

SAP, is a patent holder and industry leader in the area of business software and computer based business solutions. SAP conducts significant research and development and invests heavily in commercializing innovative technologies. SAP has an interest in the proper development and application of patent laws and in ensuring that patents are granted for deserving applications and enforceable only where appropriately and fairly secured. SAP has particular interest and expertise in Computer Implemented Inventions (“CIIs”).

Statement of Support for Comments from Others

Chapter 16 Consultation

SAP supports the submission of IPIC on the proposed Chapter 16.² We would particularly like point out our support for the following:

- Much of the content of Chapter 16, like Chapters 12 and 13, is inappropriate and inconsistent with Canadian law.³
- The terms “technological”, “field of technology”, and the like in the proposed chapter are neither consistent with the *Act*, the *Rules* or decided court cases, nor helpful in framing the inquiry of whether the subject matter of an invention is statutory.⁴
- The “problem/solution” approach is not used in Canada.⁵

¹ Canada - Canadian Intellectual Property Office, 2010 “Proposed Changes to MOPOP – Chapter 16” Web document. Published 2010 June 16, <http://www.cipo.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/wr02486.html>

² Intellectual Property Institute of Canada, 2010, “Draft Chapter 16 of the Manual of Patent Office Practice: Computer Implemented Inventions” Hereinafter, IPIC, 2010.

³ IPIC, 2010, see note 2 above, pp. 4, A-8, for example.

⁴ IPIC, 2010, see note 2 above, p. A-15

⁵ IPIC, 2010, see note 2 above, p. 7, for example.

- The publication of the proposed chapter should be delayed until the Federal Court has made its decision in the Amazon.com “One Click” case.^{6,7}
- The proposed chapter includes examples where issues of statutory subject matter are conflated with other issues like novelty and obviousness.⁸
- Commissioner of Patents and Patent Appeal Board decisions, which may clarify how *Schlumberger*⁹ should be applied, are not referred to at all in the proposed Chapter 16 but should be.¹⁰

Chapter 12 and 13 Consultation

SAP supports previous comments on the importance MOPOP and office practice. The overlap between the proposed Chapter 16 and the recently proposed Chapters 12 and 13 are significant. Previously submitted comments on those chapters could apply here.

In our respectful view, [the] draft Chapter[s] ... appear to improperly apply the relevant legislation and current case law and if implemented as Patent Office policy, would seriously limit the patent rights of applicants using the patent system in Canada. If implemented, the result would be the application of principles that are not based in current Canadian law, which would lead to uncertainty, more Office actions than are necessary, more appeals, more costs to applicants and ultimately retreat from such principles as the courts would be increasingly called upon to cause the law to be correctly applied. The result would be increased costs for questionable protection and a long lasting distaste for the use of the Canadian patent system from applicants around the world. This could lead to a reluctance to use the Canadian patent system and would tarnish Canada's reputation among the intellectual property community ...¹¹

This comment is thought relevant to companies like SAP who actively manage international patent portfolios. At SAP, we make decisions for our portfolio based on factors from technology, business, and law, as well as practical factors. Changes in, and clarity of, patent law and practice for a specific country are examples of factors we may include in determining whether to file in the specific country.

⁶ *Re Application No. 2,246,933 (Amazon.com)* (2009), CD 1290, 60 CPR (4th) 322; and Notice of Appeal, in *Amazon.com, Inc. v The Attorney General of Canada, The Commissioner of Patents*, Docket T-1476-09, dated 2009-09-03

⁷ IPIC, 2010, see note 2 above, p. 8

⁸ IPIC, 2010, see note 2 above, p. 7, for example.

⁹ *Schlumberger v The Commissioner* (1981), 56 CPR (2d) 204 FCA

¹⁰ IPIC, 2010, see note 2 above, pp. 13–14

¹¹ Storey, Robert, Alain Leclerc, John Knox, and Allan Brett, 2009 “FICPI Canada Submissions to CIPO Proposed Amendments to MOPOP Chapters 12 and 13” Web Document, [http://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/vwapj/commentaires16092009-3-comments16092009-3-eng.pdf/\\$FILE/commentaires16092009-3-comments16092009-3-eng.pdf](http://www.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/vwapj/commentaires16092009-3-comments16092009-3-eng.pdf/$FILE/commentaires16092009-3-comments16092009-3-eng.pdf)

SAP's Comments

In view of comments to follow, SAP urges CIPO to amend the proposed Chapter 16 of MOPOP before publication. Specific comments and proposed text is provided but our general comments are:

- Note “technological solution to a technological problem” has no basis in Canadian patent law.
- There is no basis for only applying the “technological solution to a technological problem” proposal to computer implemented inventions.
- Pseudocode should not be dismissed as it can be a good way to describe software.
- Computer readable instructions can be statutory subject matter when “stored in” as well as “stored on” a physical medium.
- The public would be better served if the language “*per se*” and “as such” were harmonized.

Many further comments are possible but SAP has limited the number of comments so as not to overburden CIPO in the difficult task of creating guidelines on CII.

“Technological solution to a technological problem” has no basis in Canadian law.

The proposed chapter has many references to “technological” as a requirement for patentability when this is not found in the *Patent Act*. See, for example:

- “achieve a technological result” p. 16-2, ln. 32.
- “That is, the device must provide a novel and unobvious technological solution to a technological problem.” p. 16-3, ln. 17.
- “The question to be addressed in such cases remains whether the device provides a novel and inventive technological solution to a technological problem.” p. 16-3, ln. 27.
- “Note that the ‘technological solution to a technological problem’ does not have to be ...” p. 16-3, ln. 36.
- “technologically adapted” p. 16-3, ln. 39.
- “the program is viewed as modifying the technological nature of the computer as a whole.” p. 16-6, ln. 7.
- “the program will be considered to be technological in nature.” p. 16-6, ln. 16.
- “technological innovations” p. 16-8, ln. 23.

At the very least these various phrases should be homogenized to what is thought to be the core requirement proposed in Chapter 16 – “technological solution to a technological problem”.¹² No specific edits are proposed because a greater rewrite is needed.

¹² Proposed chapter, p. 16-3, ln. 36

The requirement that a CII be a “technological solution to a technological problem” has no basis in Canadian law. This requirement is not found in the *Patent Act*, *Rules*, and case law. It is settled law that the commissioner has no discretion independent of the *Act* to refuse an application. This is so despite the broad wording of section 40, as “by law ... is not a matter of discretion”.¹³ “No doubt the Commissioner of Patents ought not to refuse an application for a patent unless it is clearly without substantial foundation.”¹⁴ The commissioner can refuse for subject matter, invention, novelty, inutility, incorrect inventor, and insufficient specification.¹⁵ Therefore, unless relevant authorities can be provided this proposal may amount to a new limitation for patentability and, as such, is an error in law.

“Technological” is uniquely applied to CII

A review of the published Chapter 12 and proposed Chapter 16 shows only CII have a “technological solution to a technological problem” requirement.¹⁶ There is no authority cited as to why this distinction exists. Further, no reason is provided as to why the non-CII don’t have a “technological solution to a technological problem” requirement. This suggests a much of the proposed Chapter 16 needs to be revisited.

“Technological” is an odd word

Despite serious misgivings of the concept “technological solution to a technological problem” the public would be better served if the term “technological” should be replaced with “technical”.

Should the Commissioner want to proceed without substantive changes to the chapter please consider not using technological. Technological is a cumbersome word. Its definition in the *Concise Canadian Oxford Dictionary* is “*adjective* of or using technology”. Technical is a better term. Technical is defined in the same source as “*adjective* 1 of or involving or concerned with the mechanical arts and applied sciences ... 2 of or relating to a particular subject or craft etc.”¹⁷ It appears at Paragraph 80(1)(d) of the *Patent Rules*. The term “technical nature” is used to describe an invention in *Dairy Foods v Co-op. Agricole De Granby*.¹⁸ Technical problem is used in *Free World Trust*.¹⁹ However, neither of these authorities are discussing section 2 of the *Act* and only are speaking of inventions in general terms. If CIPO wishes for the term technological to stand distinct from technical it should say so explicitly in Chapter 16. Otherwise, technical is a more user friendly term.

¹³ *Monsanto v The Commissioner* (1979), 2 SCR 1108, 42 CPR (2d) 161 SCC, p. 178.

¹⁴ *Vanity Fair Silk Mills v Commissioner of Patents* [1939] SCR 245, [1938] 4 DLR 657, SCC, p. 246.

¹⁵ Fetherstonhaugh, Fred B., and Harold G. Fox, 1926, *The Law and Practice of Letters Patent of Invention in Canada*, Carswell, Toronto, p. 31.

¹⁶ MOPOP, Chapter 12, §12.06.06b. Only this section has the full phrase “technological solution to a technological problem”.

¹⁷ Barber, Kathrine, ed, 2005 *Concise Canadian Oxford Dictionary* ISBN-13: 978-0195423686.

¹⁸ [1976] 2 SCR 651 SCC, at pp. 659, 669

¹⁹ *Free World Trust v Électro Santé Inc.*, 2000 SCC 66, 9 CPR (4th) 168 SCC, ¶ 27.

Pseudocode

Pseudocode is a valuable way to describe CII inventions. It should not be given the same treatment in MOPOP as source code. The statements on p. 16-14, lns. 18–23, are problematic.

16.05.02 Source code or pseudocode

Providing source code listings or pseudocode in the description will generally not be considered, by itself, to be a full or enabling description of a claimed invention. The significance of the commands used in specific code may depend on the intended platform, and the code itself will not generally be a clear and unambiguous description of the invention.

We take this to mean absent a textual and other description source code and pseudocode would not be a sufficient description for most inventions. With that there is no disagreement. However, it is also possible to read the section as saying pseudocode has no greater descriptive value than source code. Source code and pseudocode are clearly not the same. The description in the proposed chapter is closer to source code than pseudocode. Indeed, the proposed language appears to confuse pseudocode with p-code, or precompiled code, a machine read language.²⁰

Various dictionaries show pseudocode is semi-structured, descriptive, and generic. These and various authorities show it is useful. Pseudocode does not follow the syntax of any particular programming language.²¹ It is an alternative to flowcharts.²² Pseudocode allows for natural language text and narrative prose to describe the functioning of a procedure.²³ This natural language description is not intended for compilation or interpretation.²⁴ Pseudocode is one of the

²⁰ Pountain, Dick, 2003, *The Penguin Concise Dictionary of Computing*, Penguin Books, ISBN: 0140514368.
(p-code) An alternative name for the INTERMEDIATE LANGUAGE or BYTECODE generated semi-compiled programming languages such JAVA or VISUAL BASIC.

²¹ McDaniel, George, 1994, *IBM dictionary of computing*, McGraw-Hill, ISBN 13: 9780070314887.
Pseudocode: A set of instructions that has a logical structure but **does not follow the syntax of any particular programming language**.

²² Daintith, John, ed., 2006, *The Facts on File Dictionary of Computer Science*, Infobase Publishing, ISBN 13: 9780816059997.

A programlike but informal notation consisting of text in natural language ... Pseudocode is used mainly as a design aid and is **an alternative to FLOWCHARTS**.

²³ Pyle, Ian C., Edward Glazer, and Valerie Illingworth, eds., 1983, *Dictionary of Computing*, Oxford University Press, New York, ISBN: 0198539053.

Pseudocode: A program-like but informal notation containing **natural-language text**, used to describe the functioning of a procedure or program. Usually the control is expressed in programming terms, if ... then ... else, repeat ... until, etc., while the actions are **elaborated narrative prose**. Used mainly as a design aid, it is superior to flow diagram since it allows the structure of a program to appear explicitly and facilitates top-down design. (Ellipsis in original.)

²⁴ Howe, Denis, ed., 2010, *The Free On-line Dictionary of Computing*, Web Document, <http://foldoc.org>, updated 2010-02-25.

Pseudocode: A notation resembling a programming language but **not intended for actual compilation**. It usually combines some of the structure of a programming language with an informal natural-language description of the computations to be carried out. It is often produced by C[omputer] A[ided] S[oftware] E[ngineering] systems as a basis for later hand coding.

best ways to describe a program for later implementation.²⁶ Stobbs (2000) writing on U.S. software patents speaks of the advantages and disadvantages of pseudocode.

Pseudocode is one notation to consider if the process you are describing is long and involved. ... Compared to flowcharts, pseudocode is quite compact. Because there are no boxes and diamonds to draw, you can get the content of many pages of flowcharts onto a single page of pseudocode. Also, where appropriate, you can prepare pseudocode in the word processor and include it as an appendix to the application. ... All these advantages are not without a price. Pseudocode is boring to look at ... If the pseudocode is particularly short, in the nature of a table, consider placing the pseudocode in the body of the specification as a table.²⁷

The statements on p. 16-5, lns. 30–33 are in conflict with the proposed language at section 16.05.02:

... Designing a computer program comprises steps such as developing a method to be implemented by the computer and creating flow charts, design diagrams or pseudocode to describe the method steps to be performed by the computer in order to solve a problem. ...

Pseudocode naturally fits requirements of a description found elsewhere in the proposed chapter. See for example, section 16.05.03, lns. 28–30:

The activities required to reduce a specific series of logic instructions to a computer code are considered to form part of the common general knowledge of a skilled programmer.

POSITA may be able to use the pseudocode to create the invention without inventive skill especially if combined with a functional description,²⁸ one or more flowcharts, or the like.

²⁶ Downing, Douglas, Michael A. Covington, Catherine Anne Covington, and Melody Maudlin Covington, eds., 2009, *Dictionary of Computer and Internet Terms*, Barrons Educational Series Inc., ISBN 13: 9780764141058.

Pseudocode an outline of a computer program, written in a mixture of a programming language and English. Writing pseudocode is one the **best ways to plan a computer program**.
; and Howe, 2010, above at note 24“... a **basis for later hand coding**.”

²⁷ Stobbs, Gregory A., 2000, *Software patents*, 2nd Ed., Aspen Publishers Online, ISBN: 0735514992, §7.05[A] and §7.05[B].

²⁸ The PAB has ruled that functional descriptions can be sufficient descriptions. See, *Re Application No. 2,119,921 (Belzberg)* (2007), CD 1274, 60 CPR (4th) 322 **PAB**; and *Belzberg v Commissioner of Patents*, 2009 FC 657 FC; affirmed 2009 FCA 275.

Patentable subject matter is determined without reference to novelty or inventiveness. Software may be described by its function since this allows implementation the invention without requiring undue experimentation. (pp. 3–4)

The statement on p. 16-14, lns. 18–23 should be rewritten to something like:

16.05.02 Source code or pseudocode

16.05.02a Source code

Providing source code listings ~~or pseudocode~~ in the description will generally not be considered, by itself, to be a full or enabling description of a claimed invention. The significance of the commands used in specific code may depend on the intended platform, and the code itself will not generally be a clear and unambiguous description of the invention. Software expressed as lines of code or listings is considered to be a literary work under the *Copyright Act*.

16.05.02b Pseudocode

Providing a pseudocode listing in the description is an alternative method to describe the invention in part, but will generally not be considered, by itself, to be a full or enabling description. Pseudocode is text including logical structures found in many programming languages, but does not follow the syntax of any particular language, and natural language text elaborating on these structures to describe the functioning of software. It can be used as a supplement to other ways to describe inventions. Shorter sections of pseudocode can be placed in the description as a table. Longer sections may be placed in the drawings or an appendix listing.

The rationale for such changes is expressed above with the exception of the reference to the *Copyright Act*. The added statement is true and will serve to remind a member of the public that their software creation may receive protection via another form of intellectual property.

When stored “on” a physical medium is too narrow

The current draft assumes a type of computer readable storage medium unfairly prejudicing existing, alternative, or emerging media. This is found in this statement:

The concept of a non-*machine* computer product applies to a physical memory having computer-executable instructions stored thereon. ... When stored on a physical medium, the resultant product may be considered a *manufacture*.²⁹

The text appears to be assuming that all computer readable physical media store information on their surface or at least a substrate coplanar to the surface. While this is true for computer hard drives and optically read media – e.g. Digital Versatile Disk – it does not hold for things like magnetic core memory³⁰, various solid state technologies, holographic storage³¹, and the like.

²⁹ Proposed chapter, p. 16-4, lns. 27–30; underlining added

³⁰ See, for example, Wright, Esmond, 1950 "Electric connecting device" U.S. Patent 2,667,542, issued 1954.

Admittedly in English a difference is made with instructions “in” memory and “on” disk. However, there is nothing wrong with writing “the instructions are in memory or in storage”. SAP would prefer language like:

The concept of a non-*machine* computer product applies to a physical memory ~~having storing~~ computer-executable instructions ~~stored thereon~~. ... When stored in or on a physical medium, the resultant product may be considered a *manufacture*.

This will allow different storage media to remain statutory as media evolves. This change would be consistent with the position in of the office³² on signal claims since a signal, when claimed as such, isn’t for storing information.

Use “as such” in place of “*per se*”

Likely all patent examiners and patent agents are comfortable with Latin phrases in MOPOP but the needs of the public in general should be considered. The public would be better served if the phrases “*per se*” and “as such” were harmonized. Parliament has replaced most if not all of the Latin in the *Patent Act* with English and French. CIPO should do the same in MOPOP since they are part of the manual’s audience.

The MOPOP is published to provide patent examiners, applicants, agents, and the public in general with a guide on the procedures and practices relative to the prosecution of patent applications in Canada under the current *Patent Act* and *Patent Rules*.³³

The statement in § 16.02 “Subject-matter” at p. 16-7, Ins. 7–9 is clear.

Certain subject-matter relevant in the computer arts may not be claimed as such, including computer programs, data structures, and computer-generated signals.

How this clear language is not used in the rest of the proposed chapter. The phrase *per se* should be replaced each instance. That is where the proposed chapter states algorithms, software, programs, GUIs, data structures, databases, signals, are not *per se* patentable. For example, in §16.02.04 “Manufacture” at p. 16-4, Ins. 28–29 replace:

³¹ See, for example, Ashley, J., M. Bernal, G.W. Burr, H. Coufal, H. Guenther, J.A. Hoffnagle, C.M. Jefferson, B. Marcus, R.M. Macfarlane, R.M. Shelby, and G. T. Sincerbox, 2000 “Holographic data storage” *IBM J. Res. Dev.* Vol. 44, No. 3 (May. 2000), pp. 341–368.

³² Canada - Canadian Intellectual Property Office, 2010 “Office Practice Regarding Signals” *Canadian Patent Office Record*, Vol. 135, No. 33, August 14, 2007, p. 10.

³³ Canada - Canadian Intellectual Property Office, 2010 “Proposed Changes to MOPOP – Chapter 16” Web document. Published 2010 June 16, <http://www.cipo.ic.gc.ca/eic/site/cipointernet-internetopic.nsf/eng/wr02486.html> (underlining added.)

A computer program *per se* is not statutory because it is disembodied.

with:

A computer program when claimed as such is not statutory because it is disembodied.

In §16.08.04 “Software product claims” at p. 16-19, Ins. 6–7 replace:

A computer program (software), when claimed *per se*, is considered by the Office to be an abstract scheme, plan or set of rules for operating a computer ...

with:

A computer program (software), when claimed as such, is considered by the Office to be an abstract scheme, plan or set of rules for operating a computer ...

In §16.09.01 “Graphical user interfaces” at p. 16-23, Ins. 5–7 replace:

A GUI *per se* is consequently considered to be merely a display of information and not an invention within the meaning of section 2 of the *Patent Act* ...

with:

A GUI when claimed as such is consequently considered to be merely a display of information and not an invention within the meaning of section 2 of the *Patent Act* ...

Conclusion

SAP thanks the Canadian Intellectual Property Office for the opportunity to comment on the proposed Chapter 16. SAP urges the Office to:

- Consider the comments from IPIC.
- Remove proposed “technological solution to a technological problem” requirement from the chapter.
- Rewrite section 16.05.02 to be more amenable to pseudocode’s use in patent applications.
- Rewrite statements that require computer readable instructions to be “stored on” a physical medium to allow them to be “stored in” as well.
- Harmonize the language “*per se*” and “as such” throughout the chapter.