

Commissioner's Decision #1429

Décision du commissaire #1429

TOPIC: O-00 (Obviousness);
B-22 (Not Supported by Disclosure);
C-00 (Adequacy or Deficiency of Description)

SUJET: O-00 (Évidence);
B-22 (Portée Excessive);
C-00 (Caractère Adéquat ou Inadéquat de la Description)

Application No.: 2,792,456

Demande n°.: 2,792,456

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2,792,456, having been rejected under subsection 30(3) of the *Patent Rules*, has been reviewed in accordance with paragraph 30(6)(c) of the *Patent Rules*. The recommendation of the Patent Appeal Board and the decision of the Commissioner are to refuse the application.

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INTRODUCTION

- [1] This recommendation concerns the review of rejected patent application number 2,792,456, which is entitled “Universal External Drive” and is owned by Igor Stukanov. The outstanding substantive defects to be addressed are whether the claimed subject matter is obvious and whether the specification is sufficient. A review of the rejected application has been conducted by the Patent Appeal Board pursuant to paragraph 30(6)(c) of the *Patent Rules*.
- [2] As explained in more detail below, our recommendation is that the application be refused as it does not comply with section 28.3 of the *Patent Act* because the subject-matter of claims 1-14 would have been obvious to the person skilled in the art.

BACKGROUND

The Application

- [2] Patent application 2,792,456 (the “instant application”) was filed in Canada on October 22, 2012 and was laid open on April 22, 2014.
- [3] The instant application relates to external drives which may be connected to computers having different operating systems and not having specific drivers to work with external drives. The external drives comprise:
- a connecting interface for connecting a computer with the device;
 - a memory with different types of partitions;
 - a processor and software for managing operations of data exchange between the computer and the external drives; and
 - software to manage operations of data exchange between the memory partitions of the external drives.

Prosecution history

- [4] On March 4, 2015, a Final Action (“FA”) was written pursuant to subsection 30(4) of the *Patent Rules*. The FA stated that the application was defective on the grounds that:
- claims 1-14 (the “claims on file”) would have been obvious and thus do not comply with section 28.3 of the *Patent Act*;
 - claims 1-2 are not fully supported by the description and thus do not comply with section 84 of the *Patent Rules*; and
 - the specification is not sufficient and thus fails to comply with subsection 27(3) of the *Patent Act*.
- [5] In a March 24, 2015 response to the Final Action (“R-FA”), the Applicant submitted that the claims would have been inventive, that the claims are fully supported by the description and that the specification provides sufficient information for a person skilled in the art to practice the invention.
- [6] As the Examiner considered the application not to comply with the *Patent Act* and *Patent Rules*, pursuant to subsection 30(6) of the *Patent Rules*, the application was forwarded to the Patent Appeal Board (the “Board”) for review on October 8, 2015, along with an explanation outlined in a Summary of Reasons (“SOR”). The SOR maintained the rejection of the instant application on the same grounds as the FA, albeit with the section 84 defect extended to all claims.
- [7] In a letter dated October 20, 2015, the Board forwarded the Applicant a copy of the SOR and offered the Applicant an opportunity to make further written submissions and to attend an oral hearing. In a response to the Board’s letter dated December 29, 2015, the Applicant provided written submissions in response to the SOR but declined the offer to attend an oral hearing. The Applicant maintained that the claims on file would have been inventive, that the claims are fully supported by the description, and that the specification provides sufficient information to the skilled person.

- [8] The present panel (“the Panel”) was thereafter formed to review the instant application under paragraph 30(6)(c) of the *Patent Rules* and to make a recommendation to the Commissioner as to its disposition.
- [9] In a letter dated April 27, 2017 (the “Panel Letter”), the Panel set out a preliminary analysis and rationale as to why, based on the record, the claims are supported by the description and the specification is sufficient. However, the subject-matter of the claims on file does not comply with section 28.3 of the *Patent Act* as the claims would have been obvious to the person skilled in the art.
- [10] The Applicant, in a letter dated May 15, 2017, provided written submissions in response to the Panel Letter (the “Reply Letter”). The Applicant maintained that the claims on file would have been inventive.

ISSUES

- [11] The three issues to be addressed are whether the claims on file would have been obvious, whether claims 1-14 are fully supported by the description and whether the specification is sufficient. More precisely:
1. Would the subject matter defined by claims 1-14 have been obvious to a person skilled in the art as of the instant application’s claim date and therefore not compliant with section 28.3 of the *Patent Act*?
 2. Are claims 1-14 fully supported by the description to comply with section 84 of the *Patent Rules*?
 3. Does the specification comply with subsection 27(3) of the *Patent Act* so as to correctly, fully describe and enable the subject matter of the claims on file?

LEGAL PRINCIPLES AND OFFICE PRACTICE

Purposive construction

[12] In accordance with *Free World Trust v. Électro Santé Inc.*, 2000 SCC 66, essential elements are identified through a purposive construction of the claims done by considering the whole of the disclosure, including the specification and drawings (see also *Whirlpool Corp. v. Camco Inc.*, 2000 SCC 67 at paras 49(f) and (g) and 52). In accordance with the *Manual of Patent Office Practice*, revised June 2015 (CIPO) at §13.05, the first step of purposive claim construction is to identify the skilled person and their relevant common general knowledge (“CGK”). The next step is to identify the problem addressed by the inventors and the solution put forth in the application. Essential elements can then be identified as those required to achieve the disclosed solution as claimed.

Obviousness

[13] The *Patent Act* requires that the subject-matter of a claim not be obvious. Section 28.3 of the Act provides as follows:

28.3 The subject-matter defined by a claim in an application for a patent in Canada must be subject-matter that would not have been obvious on the claim date to a person skilled in the art or science to which it pertains, having regard to

(a) information disclosed more than one year before the filing date by the applicant, or by a person who obtained knowledge, directly or indirectly, from the applicant in such a manner that the information became available to the public in Canada or elsewhere; and

(b) information disclosed before the claim date by a person not mentioned in paragraph (a) in such a manner that the information became available to the public in Canada or elsewhere.

[14] In *Apotex Inc. v. Sanofi-Synthelabo Canada Inc.*, 2008 SCC 61 at para 67 [*Sanofi*], the Supreme Court of Canada stated that it is useful in an obviousness inquiry to follow the following four-step approach:

- (1)(a) Identify the notional “person skilled in the art”;
- (b) Identify the relevant common general knowledge of that person;

- (2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;
- (3) Identify what, if any, differences exist between the matter cited as forming part of the “state of the art” and the inventive concept of the claim or the claim as construed;
- (4) Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

Sufficiency

[15] Section 84 of the *Patent Rules* and subsection 27(3) of the *Patent Act* are related since both are concerned with the relationship between the disclosure and the scope of the claims.

[16] Section 84 of the *Patent Rules* states that “[t]he claims shall be clear and concise and shall be fully supported by the description independently of any document referred to in the description.” The courts have provided little judicial interpretation of section 84 of the *Patent Rules* or any of its predecessor equivalents.

[17] The relevant portions of subsection 27(3) of the *Patent Act* read as follows:

The specification of an invention must:

- (a) correctly and fully describe the invention and its operation or use as contemplated by the inventor;
- (b) set out clearly the various steps in a process, or the method of constructing, making, compounding or using a machine, manufacture or composition of matter, in such full, clear, concise and exact terms as to enable any person skilled in the art or science to which it pertains, or with which it is most closely connected, to make, construct, compound or use it;

...

[18] The courts have indicated that sufficiency of disclosure primarily relates to two questions that are relevant for the purpose of paragraphs 27(3)(a) and 27(3)(b) of the *Patent Act*: i) What is the invention? and ii) How does it work? (*Consolboard v. MacMillan Bloedel*, [1981] 1 SCR 504 at 526, 56 CPR (2d) 145 at 157). With respect to each question, the description must be correct and full in order that when the period of the monopoly has expired, the public, having only the specification, will be able to make the same successful use of the invention as the inventor could at the time of his application, without having to display inventive ingenuity or undertake undue experimentation.

ANALYSIS

Purposive Construction

[19] A purposive construction of the claims is not set out explicitly, as there was no dispute regarding the essentiality of the claim elements or the meaning of any terms recited in the claims. As stated in the Panel Letter at page 2, all claim elements will be considered essential for the purposes of this review.

Obviousness

Sanofi step (1)(a) – Identify the notional person skilled in the art

[20] The Panel Letter at page 3 characterized the person skilled in the art as “a computer hardware/software engineer specializing in external hard drives operable with multiple operating systems”. The Applicant did not disagree with this characterization.

Sanofi step (1)(b) – Identify the relevant common general knowledge (“CGK”) of that person

[21] As stated in the Panel Letter, the Panel is of the view that the individual claimed elements are CGK of the person skilled in the art, as stated in the specification (instant application, pages 3-4) and stated by the Applicant (R-FA at pages 1-2).

[22] Specifically, the Panel Letter at page 4 recognized the following problems and needs as CGK of the person skilled in the art, as stated in the specification:

- known external drives are restricted to operation with computers having a specific operating system compatible with the drive’s partition (instant application, page 1); and

- a known problem of users lacking control to install software drivers on computers to allow operation with external drives (instant application, page 2).

[23] Furthermore, the Panel Letter identified the following elements as CGK:

- Computer systems having different operating systems;
- External drives operable with computers having different operating systems;
- External hard drives having a connecting interface, for example a USB connection, for connecting said external drive to a computer;
- An external hard drive memory partitioned into a multiple partitions where the size and format of each partition can be set by the user;
- Memory partitions configured to have different file formats compatible with different operating systems such as FAT32, NTFS, etc.;
- External hard drives containing a dedicated processor and software to control the operation of the external hard disk to perform read and write operations;
- Memory partitions configured with various file system formats to make them recognizable/operable with different computer operating systems;
- Memory partitions formatted as FAT32 file format for use with computer operating systems such as Microsoft Windows[®] and MacOS[™];
- processor used to determine the type of memory partition on an electronic device;
- management software for data exchange and synchronization between two different memory partitions wherein each partition corresponds to a different operating system and consequently different file format;
- modern device drivers installed on computers;
- computer programming techniques;
- file backup to a secondary storage device (through file synchronization, mirroring, etc.) to protect against loss of information in the event of a failure in a primary storage device;
- wired or wireless connections between computers and external drives;

- solid state or hard drive technologies used in memory devices; and
- processors acting on software instructions stored either local or remote to the processor.

Sanofi step (2) – Identify the inventive concept of the claim in question or if that cannot readily be done, construe it

[24] The Panel Letter identified that, although all the elements defined in the claims are known individually in the prior art, the combination of all claim elements defines the inventive concept.

[25] Independent claim 1 recites the following:

1. A universal external drive for digital data comprising of the following parts:
 - a connecting interface for connecting said universal external drive to a computer or an electronic device;
 - a memory device with at least two different types of partitions, each partition corresponding to a different operation system;
 - a processor to control operations of said universal external drive;
 - software to manage operations of data exchange between said memory device and a computer or an electronic device via said connecting interface;
 - software to manage operations of data exchange between parts of said memory device with the different partitions.

[26] Independent claim 2 recites:

2. A universal external drive for digital data comprising of the following parts:
 - a connecting interface for connecting said universal external drive to a computer or an electronic device;
 - at least two memory devices with different types of partitions on each device, where said partitions correspond to different operation systems;
 - a processor to control operations of said universal external drive;

- software to manage operations of data exchange between said universal external drive and a computer or an electronic device;
- software to manage operations of data exchange between said memory devices.

[27] Dependent claims 3-14 recite further limitations regarding:

- the connecting interface as wired or wireless (dependent claims 3-6);
- the memory device as solid state or hard drive (dependent claims 7-10); and
- the software as inside or outside the processor (dependent claims 11-14).

Sanofi step (3) – Identify what, if any, differences exist between the matter cited as forming part of the “state of the art” and the inventive concept of the claim or the claim as construed

[28] The Panel Letter identified the “state of the art” as reference D3 (US Patent Application 2011/0125937 A1, to Ito, *et al.*, published May 26, 2011), cited in the FA. D3 discloses a peripheral device that is usable on a plurality of operating systems without installing a device driver or software in a computer (see, for example, D3, para [0008]).

[29] As stated by the Panel Letter at page 6:

D3 also discloses a number of embodiments, including a second embodiment (D3, Figs 9 and 10; paras [0083]-[0088]), wherein a disk image 900 includes multiple partitions 901 and 902 formatted by different file systems (e.g., FAT and HFS) corresponding to different operating systems (e.g., Microsoft WindowsTM and MacOSTM) (see, for example, D3, Fig 9, para [0085]). D3 also discloses a sixth embodiment (D3, Figs 16-25; paras [0115]-[0229]) wherein an image reading device comprises “a file storage unit capable of reading/writing a file from the information processing apparatus, and includes the steps of causing the information processing apparatus to recognize the image reading device as an external storage device of the information processing apparatus” (D3, para [0121]).

[30] The differences between D3, representing the state of the art, and the inventive concepts of the claims are identified below.

Independent Claim 1

[31] The Panel, in the Panel Letter, expressed the view that as the identified inventive concept resides in the combination of all claim elements, the identified difference between independent claim 1 and D3 is “software to manage operations of data exchange between parts of said memory device with the different partitions, used in combination with an external drive such as that of D3.”

[32] The Applicant submitted in the Reply Letter that the identification of differences between D3 and the claimed invention “had missed the most important and critical element – structure”. Specifically, the Applicant submitted that:

D3 claims an universal interface to connect external devices such as a printer, scanner, etc. to computers with different OSs. It is based on multiple control programs corresponding to different OSs. For simplicity, let's call [*sic*] them internal OSs. The crucial characteristic of this interface is that the number of internal OSs can not be reduced to one. (If it will be reduced to one than it can work only with one OS, therefore the universality is lost).

D3 does not describe a hard drive with this interface, but we can be sure that any such invention based on the universal interface (let's call it a hard drive with the universal interface) will have this characteristic -multiplicity of internal OSs.

In contrast to the hard drive with the universal interface, the proposed universal external drive has only one internal OS, but multiple number of partitions each corresponding to different OS. The table below summarize the key differences:

	Universal External Drive	Hard Drive with the Universal Interface
Number of internal OSs	1	>1
Number of different partitions	>1	>=1

As we can see from this table, these inventions are different inventions and there is no a simple or obvious way to come from one to the other, because they are based on different concepts.

The Universal External Drive is based on the concept of multiple partitions.

The Hard Drive with the Universal Interface is based on the concept of multiple internal OSs.

[33] Based on the table summarizing the key differences, the Applicant submits that one key difference between D3 and the claimed invention is the use of multiple control programs corresponding to different operating systems of the connected computers. This position is similar to the submission made by the Applicant in the R-FA that D3 discloses two storage areas but only one is used for the data storage while the other is used to store a plurality of operating systems. The Panel Letter at page 7 addressed this submission:

However, the Panel disagrees that the disk image of D3 is an operating system; rather, the disk image stores a plurality of files systems corresponding to the plurality of operating systems (D3, para [0056]). In the specific second embodiment referenced above, the disk image includes two partitions, one formatted by the FAT file system and a second partition formatted by the HPS file system (D3, para [0085]). The computer recognizes the storage area as a folder (see, for example, Fig 5) containing control and capture application files, corresponding to the detected operating system of the computer (see, for example, D3, para [0110]). Such files do not constitute an operating system.

[34] In the Panel's view, the software of D3 (that is, the control and capture files) used to manage data operations between the disk image and the connected computer are no different from the claimed element "software to manage operations of data exchange between said universal external drive and a computer or an electronic device."

[35] Therefore the Panel concludes that the identified difference between independent claim 1 and D3 is "software to manage operations of data exchange between parts of said memory device with the different partitions, used in combination with an external drive such as that of D3".

Independent Claim 2

[36] The Panel, in the Panel Letter, identified the following elements as differences between the inventive concept of independent claim 2 and the state of the art, represented by D3:

- at least two memory devices with different types of partitions on each device; and
- software to manage operations of data exchange between said memory devices, used in combination with an external drive such as that of D3.

[37] As the Applicant did not make any further submissions on this position, other than those discussed above in relation to claim 1, the Panel views the identified differences as presented in the Panel Letter.

Dependent Claims 3-14

[38] The Panel, in the Panel Letter, identified that the dependent claim limitations constitute the identified differences between dependent claims 3-14 and D3:

- the connecting interface as wired or wireless (dependent claims 3-6);
- the memory device as solid state or hard drive (dependent claims 7-10); and
- the software as inside or outside the processor (dependent claims 11-14).

[39] As the Applicant did not make any further submissions on this position, the Panel views the identified differences as presented in the Panel Letter.

Sanofi step (4) – Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

Independent Claim 1

[40] The Panel, in the Panel Letter, submitted that with respect to the identified difference between independent claim 1 and D3, namely “software to manage operations of data exchange between parts of said memory device with the different partitions used in combination with an external drive such as that of D3”, the primary question is whether the combination of known components to address multiple problems, including universality of external hard drives and reliability, is obvious.

[41] As stated in the Panel Letter at page 9:

In the Panel’s preliminary view, it would be obvious to the skilled person to combine these aspects. The skilled person, having the external drive of D3 and a need to provide data reliability in case of partial storage device or partition failure, would turn to well-known techniques, such as data synchronization (see CGK above).

[42] Also as presented in the Panel Letter at page 9:

Thus, it would have been more or less self-evident to the skilled person, in order to provide a reliable universal drive capable of transferring files between computers with different operating systems, to provide an external drive with known software to synchronize the files between external drive partitions providing reliability. The skilled person, using their own CGK, would be led directly and without difficulty to the solution that combines these known features. The Panel Letter notes that the specification does not indicate any technical challenges or issues overcome by combining software to provide data synchronization with the claimed external drive.

- [45] As the Applicant did not make any further submissions on this position, the Panel concludes that the differences between the inventive concept of independent claim 1 and the state of the art, represented by D3, constitute steps which would have been obvious to the person skilled in the art.

Independent Claim 2

- [43] The Panel Letter at page 10 submitted that:

As explained above with respect to independent claim 1, one difference between independent claim 2 and the state of the art, namely, software to manage operations of data exchange between said memory devices used in combination with an external drive such as that of D3, constitutes a step that would have been obvious to the skilled person, as explained above with respect to independent claim 1. This analysis applies equally to the second difference of independent claim 2 and the state of the art.

With respect to the additional identified difference between independent claim 2 and the state of the art, namely, at least two memory devices with different types of partitions on each device, the Panel Letter at page 10 submitted that it was well-known to the skilled person that the single memory device of D3 containing multiple partitions of different types may be substituted with multiple memory devices, each containing a partition of a different type, the two memory devices functioning in an equivalent manner to one memory device partitioned into different types, using their general computer system knowledge (see CGK above).

- [44] As the Applicant did not make any further submissions on this position, the Panel concludes that the differences between the inventive concept of independent claim 2 and the state of the art, represented by D3, constitute steps which would have been obvious to the person skilled in the art.

Dependent Claims 3-14

- [45] The Panel Letter at page 10 submitted that:

Regarding dependent claims 3-14, in our preliminary view, the identified differences between dependent claims 3-14 and the state of the art are well-known implementation options in the art, as are the advantages and disadvantages of choosing one over the other (see CGK above).

- [46] As the Applicant did not make any further submissions on this position, the Panel concludes that the differences between the inventive concepts of dependent claims 3-14 and the state of the art, represented by D3, constitute steps which would have been obvious to the person skilled in the art.

Summary of defects under obviousness

- [47] To summarize, it is the Panel's view that claims 1-14 on file would have been obvious in view of D3 when considered in light of the CGK of the person skilled in the art and therefore, claims 1-14 do not comply with section 28.3 of the *Patent Act*.

Sufficiency

- [48] The Panel, in the Panel Letter at pages 11-12, reviewed the FA and the Applicant's submissions with respect to paragraph 27(3)(b) of the *Patent Act* and section 84 of the *Patent Rules*.

- [49] The Panel Letter at page 12 set out our view that:

In the Panel's preliminary view, the person skilled in the art would understand the invention and how it works, based on the disclosure of well-known components in the configurations described in the instant application. Thus, the specification discloses in sufficient detail the invention and how it works.

In addition, in the Panel's preliminary view, as the claims recite a combination of well-known elements sufficiently described in the specification, the claims are fully supported by the description.

- [50] To summarize, it is the Panel's view that the claims 1-14 are fully supported by the description and comply with section 84 of the *Patent Rules*. Also, it is the Panel's view that the specification correctly, fully describes and enables the subject matter of the claims on file, in accordance with subsection 27(3) of the *Patent Act*.

RECOMMENDATION OF THE BOARD

[51] For the reasons set out above, the Panel recommends that the application be refused on the basis that the subject-matter of the claims on file, namely claims 1-14, would have been obvious to the person skilled in the art and are therefore non-compliant with section 28.3 of the *Patent Act*.

Lewis Robart
Member

Stephen MacNeil
Member

Leigh Matheson
Member

DECISION

[52] I concur with the conclusions and recommendation of the Board that the application be refused because the claims on file do not comply with section 28.3 of the *Patent Act*.

[53] Therefore, in accordance with section 40 of the *Patent Act*, I refuse to grant a patent on this application. Under section 41 of the *Patent Act*, the Applicant has six months within which to appeal my decision to the Federal Court of Canada

Johanne Bélisle

Commissioner of Patents

Dated at Gatineau, Quebec,

this 25th day of September, 2017