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November 12, 2020

A Decade in the Making: Federal Court Weighs in on Non-patentable Subject Matter

Many know Amazon as the world's largest online retailer, a mantle it carries, in part, because of just how easy it is to buy about anything. In fact, as many Canadians know, you can buy something on Amazon with as little as "1-Click".

However, those familiar with Canada's patent system also know Amazon and its one-click method of internet shopping as the subject of Canada's leading case on patentable subject matter for business methods and inventions implemented using a computer.

By way of background, the Commissioner of Patents only grants patents for inventions that claim subject matter set out in the *Patent Act* (*i.e.*, art, process, machine, manufacture or composition of matter) and not "mere scientific principle or abstract theorem".

In 2011, the Federal Court of Appeal, in the context of Amazon's patent application for its one-click technology, provided guidance to applicants and the Commissioner on (i) whether a business method can ever be patentable subject matter, and (ii) whether patentable subject matter must be something with physical existence or something that manifests a discernible effect or change (see *Canada (Attorney General) v Amazon.com, Inc*, referred to herein as "***Amazon***"). The Federal Court of Appeal answered both questions in the affirmative. It also ordered the Commissioner to re-examine the patent, which was later granted without substantive amendment.

In its analysis, the Federal Court of Appeal confirmed that the " determination of subject matter must be based on a purposive construction of the patent claims" (i.e., not solely the inventive concept of those claims or the substance of the invention used by the Commissioner).

In response to the Federal Court of Appeal's decision in *Amazon*, the Canadian Intellectual Property Office ("CIPO") subsequently issued a Practice Notice, entitled Examination Practice Respecting Computer Implemented Inventions – PN 2013-03 (the "**2013 Practice Notice**").

The 2013 Practice Notice focused examination on essential elements rather than claimed subject matter. As described in greater detail below, in practice, the manner in which CIPO identified essential elements was problematic and resulted in an improper determination of subject matter akin to the inventive concept or substance of the invention approaches repudiated in *Amazon*. As a result, patents implemented using a computer were unnecessarily held to a higher standard than the *Patent Act* required.

Notwithstanding, the value of business methods and inventions implemented using a computer—Amazon's one-click patent was estimated to be worth billions—in the nearly 10 years following *Amazon*, the Federal Court did not have an opportunity to weigh in on this issue. That changed in August 2020, when the Federal Court rendered its decision in *Choueifaty v Canada (Attorney General)* ("***Choueifaty***").

Choueifaty is the appeal from a decision of the Commissioner refusing a patent application on the ground that the essential elements of the claimed patent fell outside the subject matter set out in the *Patent Act*. The Federal Court allowed the appeal and determined that the Commissioner had not applied the proper test when construing the essential claims of the patent application.

Examination of the Application at CIPO

The patent application at issue in *Choueifaty* (Patent Application No. 2,635,393, the "**393 Application**") claims a computer implementation of a new method for selecting and weighing investment portfolio assets that minimizes risk without impacting returns.

During examination at CIPO, both the patent examiner and the Patent Appeal Board ("**PAB**") rejected the 393 Application, finding that the subject matter of the claims lay outside the subject matter set out in the *Patent Act* (see *Choueifaty* here). Ultimately, the Commissioner concurred with the PAB's recommendation (see *Choueifaty* here).

Significantly, the PAB applied the problem-solution approach—first introduced in the 2013 Practice Notice and subsequently outlined in CIPO's Manual of Patent Office Practice—to determine the essential elements of the 393 Application:

> 1. The PAB identified the problem being solved by the applicant as "a financial portfolio engineering and investing problem";

2. The PAB identified the solutions disclosed as “the construction of an anti-benchmark portfolio”;

3. The PAB found that the essential elements of the claims were “directed to a scheme or rules involving mere calculations” for weighing securities, and that the essential elements of the claims were only the rules and steps of an abstract algorithm; and

4. The PAB ultimately found no discernible physical effect to satisfy the definition of ‘invention’ (see *Choueifaty* here).

The PAB also rejected the applicant’s proposed amended claims, which the applicant argued fell within the subject matter set out in the *Patent Act* according to the 2013 Practice Notice. The 2013 Practice Notice states that “where a computer is found to be an essential element of a construed claim, the claimed subject-matter will generally be [subject matter set out in the *Patent Act*].” The applicant unsuccessfully argued that the amended claims constituted an improvement in computer processing making the ‘computer’ an essential element of the claims (see *Choueifaty* here).

Decision under Appeal

The Federal Court in *Choueifaty* was asked to determine (i) if the Commissioner erred in applying the problem-solution approach when determining the essential elements of the claimed invention; and (ii) if the Commissioner, in construing the problem-solution approach, erred in not concluding that the essential elements included a computer element. The Court did not find it necessary to address the second issue.

The Commissioner Applied the Wrong Test When Construing the Claims

As noted above, the Commissioner applied the problem-solution approach. The Federal Court determined that using this approach to claims construction is akin to using the “substance of the invention” approach discredited by the Supreme Court of Canada in *Free World Trust v Électro Santé Inc* (“***Free World Trust***”) (see also *Choueifaty* here).

This is the case because the problem-solution approach stipulates that the “identification of the essential elements of a claim cannot be performed without having first properly identified the proposed solution to the disclosed problem” (see *Free World Trust* here and *Choueifaty* here).

In contrast, *Free World Trust* sets out the principles to apply when determining whether a claim element is essential or non-

essential. That test asks the following separate questions:

> 1. Would it be obvious to a skilled reader that varying a particular element would not affect the way the invention works? If modifying or substituting the element changes the way the invention works, then that element is essential.
>
> 2. Is it the intention of the inventor, considering the express language of the claim, or inferred from it, that the element was intended to be essential? If so, then it is an essential element.

In order "to establish that a claim element is non-essential, it must show both (i) that on a purposive construction of the words of the claim it was clearly not intended to be essential, and (ii) that at the date of publication of the patent, the skilled addressees would have appreciated that a particular element could be substituted without affecting the working of the invention" (see *Shire Canada Inc v Apotex Inc here*).

The problem-solution approach to claims construction focuses only on the second aspect (the perspective of the skilled person), it fails to respond, as taught in *Free World Trust*, to the first aspect (the intention of the inventor) (see *Choueifaty* here). Accordingly, the Federal Court determined that the Commissioner erred in determining the essential elements of the claimed invention by using the problem-solution approach (see *Choueifaty* here).

Like the Federal Court of Appeal's decision in *Amazon*, the Federal Court's decision in *Choueifaty* set aside the Commissioner's refusal and ordered the Commissioner to re-examine the 393 Application in accordance with the reasons provided in the Court's decision.

CIPO's Recent Response to Choueifaty

Recently, in November 2020, CIPO released guidance (entitled "Patentable Subject-Matter under the *Patent Act*") allegedly building on the existing guidance in the Manual of Patent Office Practice, which is CIPO's interpretation of the *Patent Act*. According to CIPO, this guidance was provided taking into account this recent decision of the Federal Court in *Choueifaty*.

In this guidance, CIPO sought to clarify its position on the topics below. As a top line, while the new guidance provides clarification on the patentability of computer-implemented inventions in light of the Court's decision in *Choueifaty*, it does not track the language of the decision precisely and may leave room for patent examiners to more broadly refuse applications

of this type.

Purposive Construction

The subject-matter defined by a claim is determined on the basis of a purposive construction of the claim conducted in accordance with the principles set out by the Supreme Court of Canada in *Free World Trust v Électro Santé Inc* and *Whirlpool Corp v Camco Inc*. The problem-solution approach should not be applied. This is consistent with the Court's decision in *Amazon*.

Subject-Matter

For each claim, the identification of the actual invention must be grounded in a purposive construction of the claim. According to CIPO, an actual invention that includes a disembodied idea, a scientific principle or an abstract theorem is not patentable unless the disembodied idea, scientific principle or abstract theorem is part of a combination of elements that cooperate together, and that combination has physical existence or manifests a discernible physical effect or change and relates to the manual or productive arts.

It remains to be seen whether CIPO's inclusion of "actual invention" in this guidance—a term that did not feature prominently in *Choueifaty*—has the practical impact of once again holding inventions implemented using a computer to an unnecessarily high standard. As the Federal Court of Appeal held in *Amazon*, to the extent the determination of the "actual invention" morphs into an independent question not based on a purposive construction, this approach is improper (see *Amazon* here and here).

Similarly, time will tell whether the additional language "and relates to the manual or productive arts," which does not appear in *Amazon* or *Choueifaty*, has a practical impact on inventions implemented using a computer. CIPO justifies the addition of this language in a footnote which states "the actual invention must relate to the manual or productive arts and not to a fine art."

Interestingly, this same footnote cites the final paragraph of a section in *Amazon* for this proposition. That section criticizes CIPO for using an "unclear and confusing" "tag word" that "may represent an unhelpful distraction" (see *Amazon* here). The paragraph CIPO cites contrasts the fine arts with "the well understood classes of patent subject matter" (*i.e.*, the subject matter set out in the *Patent Act*) before noting "that [this] point could have been made more plainly" (see *Amazon* here).

Computer-Implemented Inventions

The mere fact that a computer is identified to be an essential element of a claimed invention for the purpose of determining the scope of the monopoly does not necessarily mean that the subject-matter defined by the claim is patentable subject-matter.

With regard to disembodied ideas (see the Supreme Court's decision in *Shell Oil* at page 554: "[a] disembodied idea is not *per se* patentable"), and scientific principles or abstract theorem (see section 27(8) of the *Patent Act*: "[n]o patent shall be granted for any mere scientific principle or abstract theorem"):

- the fact that a computer is necessary to put these into practice does not necessarily mean that there is patentable subject-matter even if the computer cooperates together with other elements of the claimed invention;
- a computer used in a well-known manner will not be sufficient to render these patentable; and
- a business method that is an abstract idea must cooperate with other elements of the claimed invention so as to become part of a combination of elements that has physical existence or manifests a discernible physical effect or change.

According to CIPO, if a "[mathematical] algorithm by itself is considered to be the actual invention, the subject-matter defined by the claim is not patentable subject-matter"; however, it is patentable subject matter if running the algorithm on the computer improves the functioning of the computer.

These statements, and particularly the statement that "a computer used in a well-known manner will not be sufficient to render these patentable" seem again to improperly move away from the question of whether the computer is an essential element of the claims. This statement also appears to confound questions of novelty and obviousness with questions of patentable subject-matter.

Diagnostic Methods and Medical Uses

Outside of the context of inventions implemented using a computer, CIPO provided guidance on the application of *Choueifaty* for medical diagnostic methods and medical uses, which have received substantial criticism from Canadian patent agents. Briefly, a medical diagnostic method would be considered patentable subject-matter when a claim that defines a combination of elements that cooperate together so as to form a single actual invention that includes physical means for testing or for identifying, detecting, measuring, etc., the presence or quantity of an analyte in a sample. A medical use claim has

physical existence or manifests a discernible physical effect or change would be patentable subject matter. But, where the actual invention includes one or more essential elements that comprise an active medical treatment step or surgical step or that restrict, prevent, interfere with, or require the exercise of the professional skill and judgment of a medical professional, the invention is an excluded method of medical treatment and is not patentable subject matter.

It will be interesting to see how CIPO applies this new guidance in practice to both computer-implemented inventions and diagnostic methods.