

Commissioner's Decision No. 1444

Décision du commissaire n° 1444

TOPICS: A11 New Matter  
B00 Ambiguity or Indefiniteness (incomplete)  
B22 Not Supported by Disclosure  
O00 Obviousness

SUJETS: A11 Nouvelle matière  
B00 Caractère ambigu ou indéfini (incomplet)  
B22 Non appuyée par la divulgation  
O00 Évidence

Application No. 2 582 931

Demande n° 2 582 931



IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2 582 931, having been rejected under subsection 30(3) of the *Patent Rules*, has subsequently 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 if the necessary amendments are not made.

Inventor / Applicant:

**STUKANOV, IGOR**  
405 – 66 Oakmount Road  
TORONTO Ontario  
M6P 2M8



## **INTRODUCTION**

- [1] This recommendation concerns the review of rejected patent application number 2 582 931, which is entitled “A Low Cost, Secure, Convenient, and Efficient Way to Reduce the Rate of Fraud in Financial and Communication Transaction Systems” and is owned by Igor Stukanov. The outstanding substantive defects to be addressed are whether the description introduces new matter, whether the claimed subject-matter would have been obvious, whether the claims are supported by the description and whether the claims are indefinite.
- [2] A review of the rejected application has been conducted by the Patent Appeal Board (the “Board”) pursuant to paragraph 30(6)(c) of the *Patent Rules*. As explained in more detail below, our recommendation is that the Applicant be notified that the proposed description and proposed claims presented in the letter dated October 2, 2017 are “necessary” amendments under subsection 30(6.3) of the *Patent Rules* for compliance of the application with the *Patent Act* and *Patent Rules*.

## **BACKGROUND**

### **The Application**

- [3] Patent application 2 582 931 (the “instant application”) was filed in Canada on March 12, 2007 and published on September 12, 2008.
- [4] The instant application relates to a system that provides increased security of transactions and reduced rates of transaction fraud by using multiple Personal Identification Numbers (“PINs”) to authenticate transactions.

### **Prosecution History**

- [5] On August 6, 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:

1. the description received June 19, 2014 (the “description on file”) contains new matter not reasonably inferred from the specification or drawings as originally filed and does not comply with section 38.2 of the *Patent Act*;
2. the claims 1-9 received June 19, 2014 (the “claims on file”) would have been obvious to the person skilled in the art and do not comply with section 28.3 of the *Patent Act*; and
3. the claims on file are not fully supported by the description and do not comply with section 84 of the *Patent Rules*.

[6] In an August 25, 2015 response to the FA, the Applicant submitted that the description on file contains matter reasonably inferred from the specification as originally filed, that the claims are inventive and that the claims are supported by the description.

[7] As the Examiner considered the application not to comply with the *Patent Act* and *Patent Rules*, the application was forwarded to the Board for review on March 29, 2016, pursuant to subsection 30(6) of the *Patent Rules*, along with an explanation outlined in a Summary of Reasons (“SOR”) that maintained the defects as identified in the FA.

[8] With a letter dated April 6, 2016, the Board sent the Applicant a copy of the SOR and offered the Applicant the opportunities to attend an oral hearing and to make further written submissions. The Applicant’s response on May 13, 2016 declined the offer of an oral hearing but provided written submissions in response to the SOR.

[9] A Panel was formed to review the application under paragraph 30(6)(c) of the *Patent Rules* and to make a recommendation to the Commissioner as to its disposition.

[10] In a letter dated September 13, 2017 (the “Panel Letter”), the Panel set out a preliminary analysis and rationale as to why, based on the written record, the claims on file would have been inventive and therefore comply with paragraph 28.3(b) of the *Patent Act*. However it was our preliminary view that the description on file introduces new matter and does not comply with subsection 38.2(2) of the *Patent*

*Act*, that claims 2-9 on file lack support in the description and do not comply with section 84 of the *Patent Rules* and that the claims on file are indefinite and do not comply with subsection 27(4) of the *Patent Act*.

[11] The Panel Letter also set out potential amendments to the description and claims for consideration by the Applicant that would address the issues identified by the Panel.

[12] The Applicant's written response dated October 2, 2017 proposed an amended description and an amended set of claims to address these issues.

## **ISSUES**

[13] The issues to be addressed by this review are:

1. Whether the description on file contains matter reasonably inferred from the specification or drawings as originally filed, thus complying with subsection 38.2(2) of the *Patent Act*;
2. Whether the subject-matter defined by claims on file would not have been obvious to a person skilled in the art, thus complying with paragraph 28.3(b) of the *Patent Act*;
3. Whether the claims 2-9 on file are fully supported by the description, thus complying with section 84 of the *Patent Rules*; and
4. Whether the claims on file are definite, thus complying with subsection 27(4) of the *Patent Act*.

## **LEGAL PRINCIPLES AND PATENT OFFICE PRACTICE**

### **Purposive Construction**

[14] In accordance with *Free World Trust v. Électro Santé*, 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 v. Camco*, 2000 SCC 67 at paragraphs 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 person skilled

in the art and his or her relevant common general knowledge (“CGK”). The next step is to identify the problem addressed by the inventor and the solution put forth in the application. Essential elements can then be identified as those required to achieve the disclosed solution as claimed.

### **New Matter**

[15] Subsection 38.2(2) of the *Patent Act* sets forth the conditions under which amendments may be made to the specification of a patent application:

**Restriction on amendments to specifications**

**38.2 (2)** The specification may not be amended to describe matter not reasonably to be inferred from the specification or drawings as originally filed, except in so far as it is admitted in the specification that the matter is prior art with respect to the application.

[16] The question as to whether matter added to the specification by amendment complies with subsection 38.2(2) of the *Patent Act* is considered from the point of view of the skilled person.

[17] The assessment as to the presence of new matter requires a comparison of the pending specification with the originally filed specification and drawings and a determination as to whether the matter of the amendments is that which would have been reasonably inferred from the original specification or drawings by the skilled person.

### **Obviousness**

[18] 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.



[19] 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?

### **Claims Not Fully Supported by the Description**

[20] 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 Rules, or any of its predecessor equivalents.

### **Indefiniteness**

[21] Subsection 27(4) of the *Patent Act* states:

#### **Claims**

**27.** (4) The specification must end with a claim or claims defining distinctly and in explicit terms the subject-matter of the invention for which an exclusive privilege or property is claimed.

[22] In *Minerals Separation North American Corp. v. Noranda Mines Ltd.*, [1947] Ex CR 306, 12 CPR 99 at 146 [*Minerals Separation*], the Court emphasized the obligation for an Applicant to make clear in the claims the ambit of the monopoly sought and the requirement for terms used in the claims to be clear and precise:

By his claims the inventor puts fences around the fields of his monopoly and warns the public against trespassing on his property. His fences must be clearly placed in order to give the necessary warning and he must not fence in any property that is not his own. The terms of a claim must be free from avoidable ambiguity or obscurity and must not be

flexible; they must be clear and precise so that the public will be able to know not only where it must not trespass but also where it may safely go.

## **ANALYSIS**

[23] The Panel notes that the Applicant did not dispute any of the preliminary views taken by the Panel as presented in the Panel Letter and responded with proposed amendments to the description and claims. Our recommendation below therefore provides an overview of our analysis and rationale presented in the Panel Letter.

### **Purposive Construction**

#### *The person skilled in the art*

[24] The Panel Letter at pages 2-3 characterized the person skilled in the art as follows:

[t]he skilled person, which may be a team, is skilled in the art of financial and communications transactions, and authenticating users during those transactions. The skilled person is also familiar with general purpose computing systems and programming techniques.

[25] We adopt this characterization for the purposes of this review.

#### *The common general knowledge*

[26] The Panel Letter at page 3 identified the following items as CGK of the person skilled in the art:

- use of PINs for authenticating transactions;
- use of secondary transaction numbers to increase transaction security;
- one-time authentication numbers;
- dynamic passwords;
- generating passwords; and
- user interfaces.

[27] We adopt this list of CGK for the purposes of this review.

*The problem to be solved*

[28] Based on a review of the instant application, the Panel Letter identified the problem as a need for improved transaction security and reduced fraud by countering attacks on PIN distribution channels.

[29] We adopt this problem statement for the purposes of this review.

*The solution proposed*

[30] The Panel Letter at page 4 identified the solution to the problem as being:

... to increase transaction security and reduce fraud by providing means of generating PINs delivered via multiple different communication channels, specified by an owner of an online account. Transactions are accepted or rejected based on the number of correctly entered PINs. A report on access to the online account is displayed.

[31] We adopt this solution statement for the purposes of this review.

*The essential elements*

[32] Independent claim 1 on file recites:

1. A system for increasing security of transactions and reducing fraud rates comprising the following components:
  - a. multiple different communication channels of different types;
  - b. a generator of multiple different PINs, which automatically and periodically generates new PINs with validity on a fixed time interval, and these PINs are delivered via said multiple different communication channels to an owner of an online account;
  - c. an interface, where the owner of the online account select the different communications channels, time intervals for automatic generation of the new PINs;
  - d. an interface, where the owner of the online account specify business rules for accepting or rejecting transactions based on a number of correctly entered PINs;
  - e. a database, where all data from the said interfaces is stored;
  - f. an interface, where report on access to the online account with time of the access and channels via which the PINs were sent, is displayed.

[33] The Panel Letter identified the essential elements of independent claim 1 as the elements a. through f.

[34] The Panel Letter also identified with respect to the dependent claims that:

The skilled person would consider the dependent claims to include additional limitations of the essential elements of the claims on which they depend, specifically, use of digits and symbols in PINs, dynamic and static parts of account/card numbers, generation of PINs via random generator or algorithm, options to store or not store the PINs account/card numbers, and financial or commercial transactions.

[35] We adopt the independent claim 1 elements a. through f. as the set of essential elements for the purposes of this review.

### **New Matter**

[36] After considering the assertions of both the Examiner and the Applicant on this issue, the Panel reiterated that the statutory requirement is to assess whether the matter of the amendments would have been reasonably inferred from the original specification or drawings by the person in the art, as stated by subsection 38.2(2) of the *Patent Act*. The Panel Letter noted that not all that is known by the person skilled in the art is inferable.

[37] The Panel reviewed the description on file (received June 19, 2014) that added text containing examples of possible implementations of the proposed system to the original description. The Panel Letter provided the Panel's assessment of the amended description text.

[38] For example, the Panel viewed that while the use of a “database” is reasonably inferred from the claims as originally filed, a specific type of database, a “SQL database”, is not reasonably inferred. As a further example, an algorithm that generates PINs is reasonably inferred from the original filed claims, however a specific algorithm to be used and its pseudo code is not reasonably inferred.

[39] In light of this assessment, it was the Panel’s preliminary view that the description on file introduced new matter that would not have been reasonably inferred from the original specification or drawings by the person skilled in the art.

[40] In light of the fact that the Applicant did not dispute our preliminary view and proposed amendments to address the above noted defect, we view that the description on file does not comply with subsection 38.2(2) of the *Patent Act*.

### **Obviousness**

*Sanofi step (1)(a) – Identify the notional person skilled in the art and step (1)(b) – Identify the relevant common general knowledge of that person*

[41] We adopt the characterizations of the person skilled in the art and the CGK as identified above.

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

[42] The Panel Letter identified that the inventive concept resides in the combination of claim 1 elements a. through f. We adopt this inventive concept for our review.

*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*

[43] The Panel Letter identified document D1 (US Patent Number 7,103,576 B2 to Mann, III et al. published September 5, 2006), cited in the FA, as representing the “state of the art” in the *Sanofi* step (3) analysis. D1 discloses a variety of techniques for using a selected alias and a selected personal identification entry (PIE) in conjunction with use of a transaction card, such as a credit card, debit card or stored value card (D1, abstract).

[44] In addition to the Panel Letter, we note that a PIE may take the form of a conventional PIN (D1, column 2, lines 19-21).

[45] The FA identified similarities between claim 1 on file and D1. The Panel Letter at page 9 stated:

Of particular interest is claim 1 element d that recites “an interface, where the owner of the online account specify business rules for accepting or rejecting transactions based on a number of correctly entered PINs”. The FA cited D1 column 9, lines 30 to 64 and column 13, lines 44 to 67 to support the argument that D1 disclosed this element.

The Panel has reviewed these passages and sees no reference to transactions being accepted or rejected based on a specified number of correctly entered PINs. D1 column 9, lines 30 to 64 disclose the specification of validity periods for a PIE, equivalent to a PIN, using parameters such as a number of transactions or a time period. In the Panel's preliminary view, and as indicated in the FA, this passage from D 1 discloses claim 1 element c, but does not disclose claim 1 element d. D 1 column 13, lines 44 to 67 discloses the use of two partial PIEs that must be entered within a specified time period in order to authenticate a transaction, thus disclosing the use of multiple PINs in a transaction. But in this disclosure, each PIN must be valid for the transaction to be accepted. Again, in the Panel's preliminary view, this passage does not disclose claim 1 element d.

[46] Thus the Panel's preliminary view, contrary to the position taken in the FA, was that at least one difference between D1 and the essential elements of claim 1 on file is element d. We adopt this difference for the purposes of this review.

[47] As discussed below in the *Sanofi* step (4), the inventiveness of claim 1 element d is determinative of the non-obviousness of claim 1 on file and of the remaining narrower claims.

*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?*

[48] The Panel assessed whether the step of claim 1 element d, namely, specifying by the owner of the online account a number of correctly entered PINs to determine whether a transaction is accepted or rejected, would require a degree of invention by the skilled person. The assessment was made by reviewing the FA cited references D2 (US Patent Application Number US 2004/0039651 A1 to Grunzig, et al. published February 26, 2004), D3 (US Patent Application Number US 2006/0076400 A1 to Fletcher published April 13, 2006) and D4 (US Patent Application Number US 2006/0156385 A1 to Chiviendacz, et al. published July 13, 2006). The relevant aspects of the cited references as assessed in the Panel Letter are as follows:

D2 discloses means for protecting a transaction over a computer network through the use of a one-time transaction password. The transaction password is transmitted over a mobile network to the user's mobile communication terminal (D2, abstract). In the Panel's preliminary view, D2 discloses the use of an alternate distribution channel for a

PIN but does not disclose transactions being accepted or rejected based on a number of correctly entered PINs.

D3 discloses means to facilitate transactions by providing a limited use PIN that is associated with a primary account and/or PIN number, wherein the limited use PIN (LUP) is presented to the merchant to initiate a transaction (D3, abstract). Parameters associated with a LUP may be specified and include, for example, parameters to specify the use of a LUP for a predetermined number of transactions before the LUP is declined (D3, paragraphs [0044]-[0045]). In the Panel's preliminary view, D3 discloses the specification of validity periods for a PIN but does not disclose transactions being accepted or rejected based on a number of correctly entered PINs.

D4 discloses means for providing authentication (D4, abstract), including out-of-band authentication that leverages an independent means to communicate with the user to protect against attacks that have compromised the primary channel. D4 teaches that the use of out-of-band authentication is an effective means of guarding against attacks such as man-in-the-middle where a legitimate online session may be used to piggy-back fraudulent transactions (D4, paragraphs [0223]-[0228]). In the Panel's preliminary view, D4 discloses multiple distribution channels for PINs, but does not disclose transactions being accepted or rejected based on a number of correctly entered PINs.

[49] The Panel's preliminary view was that while the person skilled in the art may be aware of the use of a secondary transaction number or PIN to authenticate a transaction (see the CGK above), the cited prior art discloses that each PIN must be correctly entered for a transaction to be accepted. The prior art does not teach, suggest or motivate the person skilled in the art to specify a number of correctly entered PINs used to authenticate or accept a transaction.

[50] Given that the Applicant did not dispute our preliminary view, it is our view that the step of specifying a number of correctly entered PINs to determine whether a transaction is accepted or rejected would require a degree of invention by the skilled person. As our view is that claim 1 is non-obvious, it follows that claims 2-9, which depend on claim 1, would also be non-obvious.

[51] We therefore view that claims on file comply with paragraph 28.3(b) of the *Patent Act*.

### **Claims Not Fully Supported by the Description**

[52] The Panel Letter at pages 11-12 provided the following assessment of claims 2-9 on file in light of section 84 of the *Patent Rules*:

The Panel agrees that the claims “shall be fully supported by the description” as required by section 84 of the *Patent Rules* and assesses the claims as follows:

- claim 2 recites “where instead of digits, combinations of digits and symbols are used in said PINs and account/card numbers” which is not described in the description;
- claim 3 recites “where a one part of the account/card number may be fixed and the other may be periodically changed with the said period” which is not described in the description;
- claim 4 recites “where a random generator generates different PINs” which is not described in the description;
- claim 5 recites “where an algorithm generates different PINs” which is not described in the description;
- claim 6 recites “where periodically generated PINs and variable parts of accounts/cards numbers are stored in the system's secured database” which is not described in the description;
- claim 7 recites “where periodically generated PINs and variable parts of accounts/cards numbers are not stored in the system” which is not described in the description;
- claim 8 recites “where a transaction is a financial transaction” which is not described in the description; and
- claim 9 recites “where a transaction is a communication transaction” which is not described in the description.

[53] The Applicant did not dispute the above noted preliminary views and instead proposed amendments to address the defects.

[54] We therefore view that claims 2-9 on file do not comply with section 84 of the *Patent Rules*.

### **Indefiniteness**

[55] The Panel Letter at page 13 identified a number of ambiguities and inconsistencies in the claims on file, namely:

- claim 1 recites “an interface” in steps c, d and f, making it unclear if there is one, two or three interfaces; the drawing figures 1 and 3 implies there are two interfaces;
- claim 7 recites that data items “are not stored in the system” without specifying the system component; and
- claims 8 and 9 introduce an antecedent issue with respect to the element “a transaction”.

The Panel considers that the recited steps are not framed in language that is clear and precise, such that the skilled person will be able to readily determine the limits of the recited steps and therefore the claim, contrary to *Minerals Separation*.



[56] The Applicant did not dispute the above noted preliminary views and instead proposed amendments to address the defects.

[57] We view that the claims on file do not comply with subsection 27(4) of the *Patent Act*.

### **Proposed Description and Proposed Claims**

[58] The Panel Letter highlighted to the Applicant that the instant application may be made compliant with the *Patent Act* and *Patent Rules* with specific “necessary” amendments:

- with respect to the new matter issue, the description text that would not have been reasonably inferred by the person skilled in the art may be removed;
- with respect to the claims not fully supported by the description issue, the description text that is reasonably inferred from the previous issue supports claims 2-9 with the exception of claim 7. As claim 7 was part of the originally filed claims, it may also be added to the description as matter reasonably inferred from the specification as originally filed; and
- with respect to the indefiniteness issue, the claims may be amended to address the ambiguities identified in the Panel Letter.

[59] The Panel Letter set out potential amendments to both the description and claims for consideration by the Applicant that would address the issues raised in the Panel Letter.

[60] The Applicant’s letter of October 2, 2017 proposed a description and proposed claims that in our view make the application compliant with the *Patent Act* and *Patent Rules*.

[61] Therefore, the proposed description and the proposed claims are considered “necessary” amendments under subsection 30(6.3) of the *Patent Rules* for compliance of the application with the *Patent Act* and *Patent Rules*.

## CONCLUSIONS

[62] This review has determined that:

1. the description on file contains matter that would not have been reasonably inferred from the specification or drawings as originally filed and thus does not comply with subsection 38.2(2) of the *Patent Act*;
2. the subject-matter defined by claims on file would not have been obvious to a person skilled in the art and thus complies with paragraph 28.3(b) of the *Patent Act*;
3. the claims 2-9 on file are not fully supported by the description and thus do not comply with section 84 of the *Patent Rules*; and
4. the claims on file are indefinite and thus do not comply with subsection 27(4) of the *Patent Act*.

[63] The review has also determined that the proposed description and proposed claims as presented in the Applicant's letter of October 2, 2017 overcome the three identified defects and do not introduce any new defects. Thus the proposed description and proposed claims are considered "necessary" amendments under subsection 30(6.3) of the *Patent Rules* for compliance of the application with the *Patent Act* and *Patent Rules*.

## RECOMMENDATION OF THE BOARD

[64] We recommend that the Applicant be notified, in accordance with subsection 30(6.3) of the *Patent Rules*, that the deletion of both the description and claims on file and the insertion of the proposed description and proposed claims as presented in the letter of October 2, 2017 are "necessary" for compliance of the application with the *Patent Act* and *Patent Rules*.

Lewis Robart  
Member

Stephen MacNeil  
Member

Leigh Matheson  
Member

**DECISION**

[65] I concur with the findings and the recommendation of the Panel. In accordance with subsection 30(6.3) of the *Patent Rules*, I hereby notify the Applicant that the following amendments and only the following amendments must be made in accordance with paragraph 31(b) of the *Patent Rules* within three (3) months of the date of this decision, failing which I intend to refuse the application:

- delete the description on file and insert the description as proposed in the letter of October 2, 2017; and
- delete claims on file and insert claims 1-9 as proposed in the letter of October 2, 2017.

Johanne Bélisle

Commissioner of Patents

Dated at Gatineau, Quebec,

this 5<sup>th</sup> day of March, 2018