Citation: Benjamin Moore & Co. (Re), 2020 CACP 15
Commissioner's Decision no 1535
Décision du Commissaire #1535
Date: 2020-05-08

TOPIC:	J00	Meaning of Art
	J40	Mental Steps
SUJET:	J00	Signification de la technique
	J40	Processus psychologique

Application No. : 2,695,146
Demande nº 2 695 146

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2,695,146, having been rejected under subsection 30(3) of the *Patent Rules* (SOR/96-423) as they read immediately before October 30, 2019 ("*former Rules*") has consequently been reviewed in accordance with paragraph 199(3)(c) of the *Patent Rules* (SOR/2019-251) ("*Patent Rules*"). The recommendation of the 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 Canadian patent application number 2,695,146 ("the instant application"), which is entitled "COLOR SELECTION SYSTEM" and is owned by BENJAMIN MOORE & CO. ("the Applicant"). A review of the rejected application has been conducted by the Patent Appeal Board ("the Board") pursuant to paragraph 199(3)(c) of the Patent Rules. As explained in more detail below, our recommendation is that the Commissioner of Patents refuse the application.

[2] This recommendation and Commissioner's Decision are being released concurrently with the recommendation and Commissioner's Decision for co-pending Canadian patent application number 2,695,130 ("the '130 Application"), also owned by the Applicant.

BACKGROUND

The Application

[3] The instant application was filed under the provisions of the Patent Cooperation Treaty and has an effective filing date in Canada of July 11, 2008. It was laid open to public inspection on January 15, 2009.

[4] The instant application relates to a computer-implemented colour selection method that uses experimentally derived relationships for colour harmony and colour emotion, which relationships model human reactions to various colour combinations. The user may select their desired level of colour harmony or colour emotion from a scale, such as 'very exciting' or 'slightly calming' from within the range of exciting-to-calming. The method uses the experimentally derived relationships, in conjunction with a colour database, to determine combinations of colours that reflect the users desired level of harmony and/or emotion.

Prosecution History

[5] On May 15, 2017, a Final Action ("FA") was written pursuant to subsection 30(4) of the *former Rules*. The FA stated that the instant application is defective on the ground that all of the claims 1-36 on file at the time of the FA ("claims on file") encompass non-statutory subject-matter and therefore do not comply with section 2 of the *Patent Act*.

[6] In a June 29, 2017 response to the FA ("R-FA"), the Applicant submitted proposed claims

1-35 (“proposed claims”), which included modifications to the independent claims on file. Arguments in favor of the patentability of the claims on file as well the proposed claims were submitted.

[7] As the Examiner considered the application not to comply with the *Patent Act*, pursuant to paragraph 30(6)(c) of the *former Rules*, the application was forwarded to the Board for review on December 15, 2017 along with an explanation outlined in a Summary of Reasons (“SOR”). The SOR set out the position that the claims on file were still considered to be defective due to non-statutory subject-matter. The SOR also indicated that the proposed claims did not overcome the non-statutory subject-matter defect.

[8] In a letter dated December 19, 2017, the Board forwarded to the Applicant a copy of the SOR and requested that the Applicant confirm its continued interest in having the application reviewed.

[9] In a letter dated February 5, 2018, the Applicant confirmed its interest in having the review proceed.

[10] The present panel (“the Panel”) was formed to review the instant application under paragraph 199(3)(c) of the *Patent Rules*.

[11] In a preliminary review letter (“PR letter”) dated November 5, 2019, the Panel set out its preliminary analysis of the statutory subject-matter issue with respect to the claims on file and the proposed claims. The Panel also provided the Applicant with an opportunity to make oral and/or written submissions.

[12] The Applicant did not provide any written arguments in response to the PR letter, but did request an oral hearing in a communication dated November 19, 2019.

[13] Prior to an oral hearing, in a communication dated December 11, 2019, the Applicant submitted a set of proposed claims 1-35 for consideration. At the hearing, the Applicant confirmed that this proposed claim set was the same as that submitted with the R-FA. Therefore, this claim set also represents the “proposed claims” identified above.

[14] The in-person oral hearing was held on January 31, 2020. The Applicant made oral submissions in relation to both the instant application and the co-pending ‘130 Application.

ISSUE

[15] The issue to be addressed by the present review is whether:

- claims 1-36 on file are directed to statutory subject-matter.

[16] If the claims on file are considered to be defective, we will turn to the proposed claims and consider whether they constitute amendments necessary for compliance with the *Patent Act* and *Patent Rules*, pursuant to subsection 86(11) of the *Patent Rules*.

LEGAL PRINCIPLES AND OFFICE PRACTICE

Claim Construction

[17] In accordance with *Free World Trust v Électro Santé Inc*, 2000 SCC 66 [*FreeWorldTrust*], 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 [*Whirlpool*]). In accordance with the *Manual of Patent Office Practice* [*MOPOP*], §13.05 (revised June 2015), the first step of purposive claim construction is to identify the person skilled in the art 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.

Statutory Subject-Matter

[18] The definition of invention is set out in section 2 of the *Patent Act*:

> "invention" means any new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of matter.

[19] The Office examination memo PN 2013-03 entitled "*Examination Practice Respecting Computer-Implemented Inventions*" ("*PN 2013-03*") clarifies examination practice with respect to the Office's approach to computer implemented inventions.

[20] As stated in *PN 2013-03*, Office practice considers that where a computer is found to be an essential element of a construed claim, the claimed subject-matter will generally be statutory. Where, on the other hand, it is determined that the essential elements of a construed claim are limited to matter excluded from the definition of invention (for

example, fine arts, methods of medical treatment, features lacking in physicality, or claims where the subject-matter is a mere idea, scheme, rule or set of rules), the claim will not be compliant with section 2 of the *Patent Act*.

ANALYSIS

Claim Construction

[21] In the PR letter, we stated that "[a]s there are no issues relating to the meaning of any terms used in the claims on file, the analysis below focuses on the determination of those features that are essential and those that are not." The Applicant did not dispute this approach and we apply it below.

[22] In the PR letter at pages 3-4, we addressed the Applicant's submissions in the R-FA concerning the Patent Office approach to purposive construction:

> In the R-FA at pages 6-10, the Applicant presented arguments that the Office approach to purposive construction was not supported by Canadian jurisprudence, pointing to the Supreme Court of Canada's decisions in *FreeWorldTrust* and *Whirlpool*, highlighting the importance of the material effect criteria and the inventor's intent in determining the essentiality of elements of a claim. The Applicant also pointed to the Federal Court of Appeal decision in *Halford v Seed Hawk Inc*, 2006 FCA 275 [*Halford*] at para. 14, where the Court stated that the essentiality of an element is not based on whether it is novel or inventive.
>
> With respect to *FreeWorldTrust* and *Whirlpool*, these cases are discussed in MOPOP §12.02:
>
> > In *Canada (Attorney General) v Amazon.com Inc*, the Federal Court of Appeal observed that, during examination, Supreme Court jurisprudence "requires the Commissioner's identification of the actual invention to be grounded in a purposive construction of the patent claims".
> >
> > The application of the principles of purposive construction to the examination of a patent application must take into account the role of the patent examiner and the purpose and context of examination.
> >
> > In *Free World Trust* and *Whirlpool*, the Supreme Court outlined that purposive construction is performed by the court to objectively determine what the person skilled in the art would, as of the date of publication of the patent application and on the basis of the particular words or phrases used in the claim, have understood the applicant to have intended to be the scope of protection sought for the disclosed invention.
>
> *MOPOP §12.02.01* then sets out the steps to be followed in purposively construing a claim:

> When examining a claim, an examiner must read the claim in an informed and purposive way. Prior to construing a claim an examiner will:
>
> 1. Identify the person of ordinary skill in the art [see 12.02.02b]; and
> 2. Identify the relevant common general knowledge of the person of ordinary skill in the art at the time of publication [see 12.02.02c].
>
> The above steps provide the context in which the claim is to be read. Once the context is determined the examiner will:
>
> 3. Identify the problem addressed by the application and its solution as contemplated by the inventor [see 12.02.02d]; and
> 4. Determine the meaning of the terms used in the claim and identify the elements of the claim that are essential to solve the identified problem [see 12.02.02e].
>
> Reference is also made to the *Halford* case in *MOPOP §12.02.02e* for the principle referenced above by the Applicant.
>
> The claim construction analysis below has been performed in accordance with the steps set out in *MOPOP §12.02.01,* which discusses the case law cited by the Applicant in the R-FA.

[23] At the hearing, the Applicant questioned the validity of statements made in the FA that:

> there may be elements required to the functioning of the invention but which are not essential for the solution to the problem and these elements are part of the context of the invention
>
> …
>
> [a]lthough required for the operation of the invention, they do not form part of the essential elements for solving the problem.

[24] We note that *MOPOP §12.02.02e* states a similar principle in respect of office practice:

> One must, however, approach each claim with an understanding that not every element that has a material effect on the operation of a given embodiment is necessarily essential to the solution. Some elements of a claim define the context or the environment of a specific working embodiment, but do not actually change the nature of the solution to the problem.

[25] In our view, the principles applied in the FA regarding the essentiality of elements of a claim are consistent with office practice.

The person skilled in the art

[26] In the PR letter, we identified the person skilled in the art in light of the Applicant's submissions in the R-FA:

> In the R-FA at page 5, the Applicant contended that the person skilled in the art was more appropriately identified as "a technician familiar with color space, color wheels, color co-ordinate systems and CIELAB values, but not necessarily advanced color theory such as color harmony or color emotion" and that the specification is not directed at an end consumer.
>
> In our preliminary view, as for the '130 Application, the person skilled in the art in this case is best represented by a team that includes the technician identified by the Applicant above, as well as a computer programmer familiar with mathematical modelling techniques.

[27] At the oral hearing, the Applicant expressed concern with the earlier identification of the person skilled in the art in the FA as including interior designers and the possible impression that the claimed invention may have been perceived as something having solely aesthetic significance.

[28] The skilled person identified in the PR letter does not include an interior designer. The Applicant did not contest our characterization of the skilled person and we therefore adopt this characterization for this review.

The relevant common general knowledge

[29] In the PR letter, the Panel summarized the relevant CGK as including knowledge of:

- conventional colour selection tools and methods of selecting colour combinations, such as colour wheels and colour co-ordinate systems;
- conventional computer programming and modelling techniques, as well as various conventional computer components and network configurations to implement computer-related methods; and
- the CIELAB model of representing a colour space.

[30] CIELAB refers to the three dimensional colour space model defined by the *commission international de l'éclairage* (CIE), where L represents a lightness value from black to white, A represents a colour value from green to red and B represents a colour value from blue to yellow.

[31] The above was not disputed by the Applicant and we apply it in our analysis below.

The problem to be solved

[32] In the PR letter, we identified the problem to be solved as being that identified in the FA,

namely:

> a need for a colour selection system that can assist consumers or other users in reaching confident and satisfying colour section (*sic*) choices. Further, the selection of appealing colour combinations from an abundance of choices can be challenging even with colour selection tools.

[33] In addressing the Applicant's submissions in the R-FA, the Panel stated:

> In the R-FA at pages 18-20, the Applicant contends that the problem to be solved in the instant application (and the solution as discussed below) is a technical one and that as such, in accordance with *PN2013-03*, the claimed invention is directed to statutory subject-matter. The Applicant contends that since the claimed subject-matter relates to colour science, it is technical in nature. The Applicant points to the work done by the International Commission on Illumination (CIE), in particular its CIELAB and its work in respect of colour harmony/colour emotion (CH/CE). In the Applicant's view, the objective numerical representation of a color by use of CIELAB values and the mathematical modelling of colour emotion and harmony based on psychophysical research imparts a technical aspect to the colour research field.
>
> In support of this view, the Applicant submitted a declaration of a co-inventor of the instant application, Carl Minchew. Mr. Minchew's declaration reiterates the technical aspect of colour science research and discusses some of the history of colour selection software. He states that the claimed invention was based on the insight of the inventors that it was not necessary to follow conventional colour theory based on a color wheel or the selection of a colour expert. Instead, the inventors used color scores based on psychophysical perception, colour emotion, color harmony and the like. Mr. Minchew states that he and his co-inventors developed systems and methods that require a computer and associated components for their implementation.
>
> With respect to the instant application being related to colour science, whether or not the problem relates to a scientific field is not determinative of whether or not the problem is technical ("technical" being a good indicator of statutory subject-matter as set out in *PN2013-03*). The problem is identified based on the specification and the relevant common general knowledge, which may indicate whether a problem existed with respect to the implementation of a method in a computer environment.
>
> In the present case, the description at paragraphs [0025] to [0030] indicates that generic well-known computing and storage devices and associated components are used to perform the operations and store data associated with the color models disclosed. In our preliminary view, the lack of technical detail indicates that there were no problems associated with the implementation of the disclosed mathematical color models on a computer system and therefore no computer problem to be overcome. The problem relates to assisting the consumer or others in selecting a color or colors.

[34] At the hearing, one of the co-inventors listed on the instant application and the declarant discussed above, Mr. Carl Minchew, discussed the background work leading up to the

presentation of the instant application. Mr. Minchew explained that the invention was developed based on the problem that the public has difficulty when choosing a colour, in this case a paint colour from among the myriad choices available. This choice becomes even more difficult when a combination of colours are to be chosen to coordinate colour choices for an area. This role is traditionally filled by designers who use their knowledge and expertise to advise clients on colour coordination. Mr. Minchew's discussion in respect of the above is consistent with the information presented in the BACKGROUND INFORMATION portion of the instant application.

[35] Consistent with the information presented in the instant application, and that of the '130 Application, according to Mr. Minchew, the subject-matter of the instant application was created to address the issue of how to repeatedly and reproducibly provide suitable colour coordination choices to a consumer, in order to in some manner provide the kind of advice that a designer would traditionally supply.

[36] At the hearing, the Applicant reiterated the need to address the subjective skill and judgment that is traditionally present in colour selection and coordination, and he emphasized how the mathematical relationships that were developed from subject test data remove such skill and judgment. The Applicant's representative characterized the need for an objective statistically significant correlation between a combination of colours and a resultant psychophysical effect as a first technical problem that needed to be solved. A second technical problem was how to usefully present this information to a user. According to the Applicant, any implementation that would not involve a computer would become impractical, given the number of variations that must be accounted for in a colour or colour combination choice.

[37] At the hearing, the Applicant conceded that they were not making computers operate in a better way and in that respect, they were not attempting to solve a computer problem. Rather, the Applicant's position is that a technical problem or problems, as set out above, existed, which problems were addressed by the research, experimental data and mathematical relationships developed as a result.

[38] While we appreciate the scope of experimental work performed and the value of the resulting mathematical relationships, in our view, a problem of identifying a mathematical correlation between colours and user response is not a technical problem that would lead to statutory subject-matter. In our view, such a scenario is similar to that of *Schlumberger*

Canada Ltd v Commissioner of Patents (1981), 56 CPR (2d) 204 (FCA) [*Schlumberger*], as discussed in *Canada (Attorney General) v Amazon.com Inc*, 2011 FCA 328 [*Amazon*] at para 62. *Schlumberger* did not address whether or not a technical problem existed. Nevertheless, similar circumstances did not lead to a patentable result. As stated in *Amazon*, *Schlumberger*:

> exemplifies an unsuccessful attempt to patent a method of collecting, recording and analyzing seismic data using a computer programmed according to a mathematical formula. That use of the computer was a practical application, and the resulting information was useful. But the patent application failed for want of patentable subject matter because the Court concluded that the only novel aspect of the claimed invention was the mathematical formula which, as a "mere scientific principle or abstract theorem", cannot be the subject of a patent because of the prohibition in subsection 27(8).

[39] In *Schlumberger*, the fact that the applicant found a better way of mathematically analyzing seismic data did not render the claimed invention patentable.

[40] Further, concerning the Applicant's proposed problem of usefully presenting the results, even though the Court in *Schlumberger* recognized the usefulness of the resulting information, which presumably would have been more useful than information derived from previous methods of analysis, this did not save the patent either.

[41] At the hearing, the Applicant contended that since the data gathered and used to develop the mathematical relationships was new, the present case is not like that of *Schlumberger* and a technical problem was therefore addressed in the pursuit of the objective correlations that were sought between colour combinations and human psychophysical effect.

[42] In our view, the novelty of the data gathered does not change the problem that was to be solved in the present case. The data was gathered in an effort to address the problem of the need for a colour selection system that could assist consumers or other users in reaching confident and satisfying colour selections, and this data was used to develop the mathematical relationships that are applied in the claims. The data as such is not a separate consideration. It is embodied in the mathematical relationships disclosed in the instant application. Further, the data gathering that was performed does not appear to have presented any technical problems (none are discussed e.g., at para [0045] of the instant application).

[43] Additionally, we are not convinced that the result in *Schlumberger* would have been different if the mathematical equations had been derived from novel data. Overall, the

invention would still have related to performing the same calculations using the same conventional borehole measurements and novel mathematical equations.

[44] Having considered the Applicant's oral submissions we are unable to agree that a technical problem was solved. Based on the specification as a whole, our conclusion is that the skilled reader would identify the problem solved as that set out in the PR letter and quoted above. We note that this is the same problem identified with respect to the '130 Application.

The solution

[45] In the PR letter, we identified the solution as:

> the solution relates to the improved evaluation, by use of mathematical modelling of user emotions or colour harmony, of the compatibility of colour choices, based on parameters set by the user.

[46] In the PR letter we expressed the view that since there was no computer problem to be solved, the computer and associated components were not part of the solution.

[47] As noted above as part of the discussion of the problem to be solved, at the hearing the Applicant conceded that the invention does not address a computer problem. However, the Applicant contended that it would be impractical to implement the invention without a computer, such an implementation requiring the development of an extensive physical array of colours and colour combinations that could be presented to a user.

[48] In our view, while it may be more convenient to implement the invention in a computer environment (as was the case in *Schlumberger*), such an implementation is not required as part of the solution. In our view, the solution relates to the use of mathematical models for colour harmony and emotion, which were derived from subject test data, to perform calculations based on selected user input parameters in order to produce information in the form of objective reproducible advice to assist consumers in choosing suitable colour combinations.

[49] In view of the above, we conclude that the solution is as set out in the PR letter.

Essential Elements

[50] In the PR letter, we preliminarily adopted the essential elements of independent claims 1,

20, 22-29, 31 and 32 on file as those identified in the FA:

> • the calculation of a colour emotion score for a threshold for a first colour emotion for a first human psychophysical perception; and
>
> • selecting, in dependence on a first mathematical model that models the first human psychophysical perception, which colours in a group of known colours would achieve the threshold for the first colour emotion when combined with the user chosen colour and with each other.

[51] Independent claim 1 on file is set out below as representative of the subject-matter of the independent claims:

> 1. A computer implemented color selection method, comprising:
>
> selecting, using a controller, a group of known colors from a storage;
> receiving user input from a user input device, through a visual user interface of a color display screen, identifying a user chosen color;
> receiving user input from the user input device identifying a threshold for a first color emotion based on a first human psychophysical perception, wherein the threshold comprises a numerical color emotion score and wherein the first color emotion comprises at least one of exciting-calming, light-dark, clean-dirty, happy-sad, fun-serious, warm-cool, or inviting-uninviting color emotion;
> selecting, using the controller, in dependence on a first mathematical model that models the first human psychophysical perception, which colors in said group of known colors would achieve the threshold for the first color emotion when combined with the user chosen color and with each other,
> wherein the first color emotion comprises a bi-polar emotion scale having a plurality of levels between end points and wherein the first mathematical model is based on psychophysical responses of a plurality of test subjects to a plurality of test colors indicating a degree of color emotion on the bi-polar emotion scale for the plurality of test colors; and
> providing an output for the user identifying the selected colors on the visual user interface by at least displaying on the color display screen a color sample of each of the selected colors, displayed concurrently on the color display screen.

[52] In the PR letter at pages 6-7, we addressed the contention by the Applicant in the R-FA that the "computer (controller), the group of known colours or colour library stored in a storage, and display screening having a visual interface are part of the overall system, which add additional technical and essential features to the claims," stating that:

> As discussed above, our preliminary view is that the problem to be solved and the solution do not involve any computer implementation of the mathematical models associated with user emotions. Likewise, there would have been no problems associated with the selection and input of information to such models or the display of any outputs since the computer

> implementation of mathematical models and the associated input and output functions was part of the relevant CGK.
>
> Further, the colour library is a group of stored colours that may be used as inputs to the color emotion models. It was already part of the relevant CGK that such colors could be represented by an objective value such as the CIELAB values. Therefore, there was no problem associated with the representation of colours in such a manner, and as such, the stored colour library would not be part of the solution. It was part of the relevant CGK to select colours from a group of colours or library, whether on a colour wheel or some other colour co-ordinate system, to evaluate whether the desired effect of a colour combination was achieved.

[53] At the hearing, the Applicant did not make any direct submissions in relation to the essential elements identified in the PR letter. Instead, their submissions focused on the problem and solution, namely the contentions that a technical problem was solved and that the implementation of the invention would be impractical without a computer.

[54] Having already addressed the relevant submissions above, it is our view that the essential elements of the independent claims on file are those set out in the PR letter.

[55] With respect to the dependent claims, as we stated in the PR letter:

> these primarily relate to variations on the input and output/display of information to/from the mathematical models used to evaluate compatibility, which inputting and outputting of information we have already identified as non-essential. Further, the nature of the inputs to the models will depend on the model, whether it is one used to represent colour emotion or harmony. In our preliminary view, the only additional essential features of the dependent claims relate to the mathematical evaluation of color emotion or harmony.

Past Commissioner's Decisions and granted patents

[56] In the PR letter at page 7, we addressed the Applicant's submissions in the R-FA regarding the outcomes of past Commissioner's Decisions and the contention that the examples supplied supported the essentiality of the computer and associated components in the present case:

> In the R-FA at pages 13-17, the Applicant pointed to the outcomes of past Commissioner's Decisions, in particular *Re Progressive Casualty Insurance Co's Patent Application 2,235,566* (2013), CD 1349 (Pat App Bd & Pat Commr) and *Re Weyerhaeuser Co's Patent Application 2,333,184* (2013), CD 1345 (Pat App Bd & Pat Commr), as supportive of the essentiality of the computer and associated components in the present case. However, the assessment of essentiality of claim elements in each case depends on factual determinations

> specific to that case, as it does in the present one, and therefore the outcome of the analysis in one case is not determinative of another.
>
> In the R-FA at pages 20-24, the Applicant asserts that it is entitled to consistency in the examination of patent applications in a similar field such as color selection and has pointed to a number of issued patents in this field to support the technical nature and patentability of the claims on file. However, as is the case with past Commissioner's Decisions, the outcome of each case depends on the factual determinations made in that case. In each case, the person skilled in the art, the relevant CGK, the problem and the solution can vary and affect the outcome and there is no indication in the Applicant's submissions that these factual determinations in the patents listed were so similar that they should be directly compared with those of the present case.

[57] At the hearing, the Applicant submitted a further example of a granted patent related to colour selection, namely Canadian Patent no. 2,823,944. While we acknowledge that the patent relates to a computer implemented method of colour selection, as we stated in the PR letter, the outcome of each case depends on the determination of the person skilled in the art, the relevant CGK, the problem and the solution, and the granting of a particular patent application is not determinative of the outcome of another.

Statutory Subject-Matter

[58] In the PR letter, after reviewing the Applicant's submissions in the R-FA, including the case law cited, we expressed our preliminary view that the claims on file are directed to non-statutory subject-matter:

> In the R-FA at pages 10-11, the Applicant asserts that due to the presence in the claims of a controller, a user input device and a colour display screen, the subject-matter of the claims on file relate[s] to a method of practical application and [is] therefore patentable in view of the criteria set out in *Progressive Games Inc v Canada (Commissioner of Patents)* (1999), 3 CPR (4th) 517 (FCTD); aff'd (2000), 9 CPR (4th) 479 (FCA).
>
> However, in light of our analysis under Claim Construction above, the computer and associated components of the claims on file are non-essential features. In our preliminary view, as set out above, the essential elements of the claims on file are directed to the calculations and mathematical models associated with colour emotion and harmony. Since the essential elements of the claims on file are directed to calculations and mathematical formulae, which are akin to scientific principles or abstract theorems, the subject-matter of the claims on file is not directed to "something with physical existence, or something that manifests a discernable effect or change" (*Canada (Attorney General) v Amazon.com Inc*, 2011 FCA 328 at paragraph 58).
>
> We note that in the R-FA at page 24, the Applicant referred to *Schlumberger Canada Ltd v Commissioner of Patents* (1981), 56 CPR (2d) 204 (FCA) [*Schlumberger*], and suggested

> that in light of the list of granted patents submitted, which presumably would be patentable in light of *Schlumberger*, the subject-matter of the claims on file would also be patentable.
>
> In our preliminary view, the invention in *Schlumberger* and that comprising the essential elements of the claims on file in the instant application are very similar. In both cases, a computer may be used to perform the calculations that make up the methods, but it is not essential that the methods be implemented in this manner. Both cases relate to the analysis of inputs through various calculations. The use of a computer, though convenient, is not essential to perform the analysis.

[59] At the hearing, the Applicant pointed to *Amazon* and the analysis endorsed by the Court at para 50, as provided by Phelan J. at the Federal Court level, particularly the test for patentable subject-matter as presented in *Shell Oil Co v Commissioner of Patents*, [1982] 2 SCR 536 and further clarified in *Progressive Games Inc v Canada (Commissioner of Patents)* (1999), 3 CPR (4th) 517 (FCTD); aff'd (2000), 9 CPR (4th) 479 (FCA). In particular, the Applicant pointed to the "method of practical application" criteria and asserted that the invention claimed in the instant application satisfied this criteria. However, as we stated in the PR letter, quoted above, the computer and associated elements of the claims that the Applicant asserted as providing a method of practical application are non-essential.

[60] Having construed the claims above in light of the steps set out in *MOPOP §12.02.01*, it is our view that the essential elements are directed to the mathematical models associated with colour emotion and harmony, abstract calculations and the resulting information. As such, the essential elements of the claims on file are not directed to "something with physical existence, or something that manifests a discernable effect or change" (*Amazon* at paragraph 58).

[61] At the hearing, the Applicant also referred to their position that since the underlying data that was used to develop the mathematical formulae of the claims was novel, the claims of the instant application are therefore distinguished from *Schlumberger*, where the data gathered was the same types of data gathered previously.

[62] We have addressed this position above in our discussion of the problem to be solved, and in our view, the use of novel data does not change the problem, solution or essential elements.

[63] In light of the above, we conclude that claims 1-36 on file are directed to non-statutory subject-matter and therefore non-compliant with section 2 of the *Patent Act*.

<u>Proposed Claims</u>

[64] As discussed above, the claims proposed in the Applicant's communication dated December 11, 2019 were the same as those submitted in response to the R-FA. We provided our preliminary view in respect of the patentability of these proposed claims in the PR letter:

> With the R-FA, the Applicant proposed amendments to the independent claims on file to specify that the "mathematical model is calculated from variables of a color space for the colors in said group of known colors and the user chosen color," as well as that the selected colors "are for a paint color or for a surface covering color."
>
> As discussed above, it was already part of the relevant CGK that colors could be represented by an objective value such as the CIELAB values, which are used to represent colour spaces. Further, the independent claims on file already specify the use of a color emotion score, which as disclosed in the instant application is calculated from CIELAB values. Therefore, there was no problem associated with the representation of colours by "variables of a colour space."
>
> In respect of the limitation that the selected colours are for a paint colour or surface covering color, the specific end application of the color selection method would not affect our earlier identification of the problem, solution and essential elements. Further, these limitations were already present in claim 35 on file, which in our preliminary view is directed to non-statutory subject-matter.
>
> As a result, in our preliminary view, the proposed claims would not alter the conclusion above with respect to the non-statutory nature of the claims on file.

[65] At the hearing, the Applicant expressed concern that based on the preliminary analysis above, the addition of a physical step to the claims such as mixing paints to obtain the recommended colours, would still not render the claims statutory. The Applicant interpreted the PR letter to mean that the claims would not be patentable unless a novel step was added.

[66] In our view, the addition of physical steps such as mixing paints to the claims on file would not render the claims statutory subject-matter. There is no indication in the specification that there were any problems to be solved associated with mixing paints to obtain a specific colour. Such steps would have been well-known to the skilled person. Based on the specification as a whole, our view is that the skilled person would not consider these steps as forming part of the solution and therefore not as essential elements required for the solution.

[67] Regarding the Applicant's interpretation of the PR letter to mean that only novel method steps would lead to a statutory claim, the determination of essential elements by the

purposive construction approach set out in *MOPOP §12.02* is not based on the novelty of the claim elements. In particular, *MOPOP §12.02e* notes that the essential elements are not only those that distinguish the claimed subject-matter from the prior art. The essential elements that are assessed for patentability are based on the CGK of the skilled person, as well as the problem and solution that are identified based on the patent application specification.

[68] In light of the above considerations, we conclude that the subject-matter of the proposed claims is directed to non-statutory subject-matter and is therefore non-compliant with section 2 of the *Patent Act*. As such, the claim set would not overcome this defect for the claims on file and is therefore not "necessary" for compliance with the *Patent Act* and *Patent Rules* as required by subsection 86(11) of the *Patent Rules*.

CONCLUSION

[69] We have determined that claims 1-36 on file are directed to non-statutory subject-matter and are therefore non-compliant with section 2 of the *Patent Act*.

RECOMMENDATION OF THE BOARD

[70] In view of the above, the Panel recommends that the application be refused on the ground that the claims on file are directed to non-statutory subject-matter and are therefore non-compliant with section 2 of the *Patent Act*.

Stephen MacNeil	Paul Fitzner	Cara Weir
Member	Member	Member

DECISION OF THE COMMISSIONER

[71] I concur with the conclusion and recommendation of the Board that the application be refused on the ground that the claims on file are directed to non-statutory subject-matter and are therefore non-compliant with section 2 of the *Patent Act*.

[72] 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 8th day of May, 2020