

Commissioner's Decision # 1361
Décision du Commissaire # 1361

TOPICS: A-50, H-00, O-00
SUJETS: A-50, H-00, O-00

Application No: 2,408,456

Demande no: 2,408,456

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application 2,408,456 having been rejected by the examiner under subsection 30(3) of the *Patent Rules*, was reviewed by the Patent Appeal Board and by the Commissioner of Patents. The recommendation of the Board and the decision of the Commissioner are as follows:

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Introduction

- [1] This decision deals with a review of the findings of the examiner in respect of Canadian patent application No. 2,408,456, entitled “*Interactive Bed Display*”, filed on 17 October 2002 and currently assigned to Tempur World, Inc..
- [2] The subject matter of the application relates generally to advertising displays used in a retail setting for the promotion and sale of mattresses. The invention disclosed is an interactive bed (mattress) display comprising a self-contained audio/video unit positioned near a person lying on a bed, the unit comprising a touchscreen and multiple stored audio/video segments containing information about a mattress.
- [3] The examiner in charge issued a Final Action (FA) to the applicant on 7 April 2009, rejecting the application for obviousness (including a defect related to aggregation). Having found that the applicant’s response to the FA did not overcome the defects, a Summary of Reasons (SOR) was sent to the Patent Appeal Board (“the Board”) on 23 November 2012, maintaining the rejection of the application on the same grounds identified in the FA. The SOR was forwarded to the applicant, along with an invitation to a hearing.
- [4] In June 2013, a panel of three PAB members was formed to review the rejection (“the panel”). After an initial review of the application, the panel requested a Supplemental Analysis (SA) from the examiner to investigate and revisit the grounds of rejection in view of three additional prior art references. The SA was provided to the applicant on 8 July 2013, including an invitation to address the SA in writing and/or at a hearing.
- [5] The applicant requested that the FA be withdrawn in view of the new grounds presented in the SA. The Board advised the applicant on 18 September 2013 that the FA was not issued in error and thus would not be withdrawn. In view of the SA, the Board did provide the applicant a revised hearing date and the opportunity to submit a proposed set of claims, if desired.
- [6] The applicant responded on 18 November 2013 with a written submission and a proposed claim set in advance of the hearing (held 4 December 2013). In addition to addressing the grounds of rejection under section 28.3, the applicant’s submission included reasons why

the SA is improper for raising a new defect subsequent to a Final Action. For those reasons, the applicant proposed that the three additional references should not be considered by the panel.

Issues

[7] Three issues are before the panel for determination in this recommendation:

- Can the Board raise a new defect based on the three additional cited references after the examiner's Final Action has been issued?
- Are claims 1-21 directed to an unpatentable aggregation?
- Are claims 1-21 on file obvious and therefore non-compliant with section 28.3 of the *Patent Act*?

[8] For the reasons that follow, we find that it was appropriate for the Board to raise the new defect after the Final Action in this application and thus the issuance of the SA citing the three references was not improper. The panel also finds that the claims are directed to an unpatentable aggregation and would have been obvious.

First Issue: Can the Board raise a new defect subsequent to a Final Action

Applicant's Position:

[9] In the response letter of 18 November 2013 and submission at the hearing, the applicant submits that the raising of new defects based on the three additional prior art references (D5, D6 and D7, cited below) after the examiner's FA is improper. Accordingly, the applicant submits that obviousness based on D5-D7 should not be considered.

[10] The applicant cites the decisions of the Federal Court in *Belzberg v. Canada (Commissioner of Patents)*, 2009 FC 657 (*Belzberg*) at paras 39-44 and *RWB Trust v Canada (Commissioner of Patents)*, 2011 FC 873 (*Bartley*) at paras. 79-82, and refers to guidance found in the "*Manual of Patent Office Practice*" (*MOPOP*), section 21.02.

[11] The applicant contends that *Belzberg* establishes that a final action must deal with all outstanding grounds for rejection, and that it is impermissible to subsequently raise new grounds not in a final action; to do otherwise deprives the applicant of finality of

prosecution. With respect to *Bartley*, the applicant argues that the Court clarified that this principle of finality applies both to issues previously raised by the examiner but not referenced in a final action, and to new issues raised for the first time subsequent to a final action. In *MOPOP*, office practice states a final action must be comprehensive and deal with every ground for which the application is considered defective. Furthermore, *MOPOP* states that the appeal process is restricted to the issues discussed in the final action and there is no opportunity for the examiner to make objections which may have been missed.

- [12] At the hearing, the applicant reiterated these points by stating a final action is “final” and that it closes the door on any further issues being raised. The applicant maintains the present case deals with the raising of new art by the Office after the FA was sent, and thus there is no distinction from the cited decisions.

Analysis:

- [13] In the view of the panel, there are significant differences which distinguish the present case under review from the fact situation of the two cited Court decisions.
- [14] In *Belzberg*, the Court was faced with a situation where further prosecution by an examiner was performed after a completed review by the Board and the issuance of a Commissioner’s Decision, despite no earlier indication during the PAB review of any outstanding issues or areas requiring investigation. Based on the facts in that case, the Court (at para. 44) stated that following a PAB hearing, the Commissioner must make one of two decisions: either refuse the patent application or grant the patent application.
- [15] In *Bartley*, a final action on a single issue was forwarded to the Board for review. At that time, the Board informed the applicant that there were additional defects held in abeyance by the examiner. The Commissioner overturned the rejection based on the single issue and returned the application to the examiner for further prosecution based on the withheld defects. The Court found that it was improper to hold certain defects in abeyance: the final action must be comprehensive and the review by the PAB must consider all defects. Furthermore, the Court reiterated that the applicant must be provided an opportunity to be heard regarding procedural matters, and thus be assured of transparency in Board proceedings.
- [16] In contrast to the present application, these Court decisions did not address the identification of new issues during the review by the Board prior to the issuance of a

Commissioner's decision. Both decisions dealt with subsequent prosecution after a review by the Board and Commissioner. The decisions emphasize that it is improper for prosecution to continue after a decision of the Commissioner; the only remaining option at that stage is either the refusal or the grant of the patent application. In the present case, no decision has been made, and the panel is in the process of ensuring that all defects are comprehensively reviewed.

- [17] Furthermore, subsection 27(1) of the *Patent Act* gives the Commissioner the power to grant a patent where an application “*is filed in accordance with this Act and all other requirements for the issuance of a patent under this Act are met.*” If a condition exists which brings in doubt whether or not all the requirements of the Act have been met, it is required that the Board address this condition in its review, and advise the Commissioner in the panel recommendation, as appropriate.
- [18] In the present case, the panel identified prior art that appeared related to the subject matter of the current application and that had not been considered by the examiner. The panel presented the art to the examiner for review, and provided both the references and the examiner's analysis to the applicant in a Supplemental Analysis (SA). To ignore the references would be contrary to the Commissioner's duty to ensure that all requirements of the *Patent Act* were satisfied; in the interest of natural justice, the applicant was given notice of the new prior art and provided an opportunity to respond.
- [19] With regards to *MOPOP*, the manual states that a final action issued by an examiner is to be comprehensive, an examiner is not to raise further objections that may have been missed, and that the review process is limited to the issues identified in the Final Action. However, as stated in the Foreword, therein, *MOPOP* is a guide on the practices of the Office, and not a binding legal authority. It cannot negate the necessity that all requirements of the Act and Rules be satisfied before the grant of a patent. The Board, in conducting a review of a rejected application, must at all times verify whether or not those requirements are met, prior to any recommendation to the Commissioner.
- [20] We also note that in December 2013 a new version of the *MOPOP* was released. This new version no longer reflects the guidance relied upon by the applicant in the present case.

[21] In December 2013, the *Patent Rules* dealing with the review of rejected applications were significantly amended. Subsection 30(6.1) of the *Patent Rules* now explicitly provides authority for the Commissioner to identify defects other than those indicated in the Final Action notice, and provides that the Applicant be consequently invited to make submissions. As noted above (paras. 4 and 5), the Applicant was advised in the present review process of the further defects and was given an opportunity to make submissions. The present review is therefore compliant with both the previous and current *Patent Rules*.

Conclusion on First Issue:

[22] The facts of the current application are distinct from the facts before the Court in *Belzberg* and *Bartley*, and further, *MOPOP* is a guide which does not negate the responsibilities of the panel in its review of the present case. Accordingly, we do not consider the issuance of the SA (including three additional prior art references) to be improper.

[23] We therefore conduct our review of the application and determination of the two other issues, which include the consideration of the three references analysed in the SA.

Second Issue: Purposively construed, are claims 1-21 directed to an unpatentable aggregation?

Legal Principles

[24] The relationship between aggregations and other issues of validity has been considered in several court decisions. First, the requirement that a proper combination invention entail individual elements of the combination which cooperate to produce a “unitary” or “synergistic” result is well established in Canadian law. As stated by Thorson P. in *R. v. American Optical Co.*, [1950] Ex.C.R. 344 at 355, 13 C.P.R. 87:

It is essential to the validity of a patent for a combination invention, apart from considerations of novelty and inventive ingenuity that the combination should lead to a unitary result rather than a succession of results, that such result should be different from the sum of the results of the elements and that it should be simple and not complex.

- [25] Collier J., in *Domtar Ltd. v. MacMillan Bloedel Packaging Ltd.* (1977), 33 C.P.R. (2d) 182 at paras. 28 and 33 stated:

Mere juxtaposition of parts is insufficient for patentability. The elements must combine for a unitary result. If any element in the arrangement gives its own result, without any result flowing from the combination, then there is no invention.

.....

[The elements] do not collate to produce a new but common result. If any one of them were removed, the others, to my mind, would continue to perform their own individual function. There is here an aggregation, not a combination.

- [26] Collier J.'s statements were affirmed in *Crila Plastic Industries Ltd. v. Ninety-Eight Plastic Trim Ltd.* (1987), 18 C.P.R. (3d) 1 (FCA). Justice Urie, speaking for the Court pointed to *J.O. Ross Engineering Corp. v. Paper Machinery Ltd.*, [1932] Ex.C.R. 238 at 244 where MacLean J. held:

As was urged by plaintiffs' counsel each element functions in combination with all the others for the purpose of attaining the result, and if any one element was removed from the combination the usefulness of all of them would disappear, whereas in a mere aggregation if any one element is removed the remaining elements would continue to function.

- [27] A valid combination must, therefore, be comprised of elements which function in combination to produce a unitary or synergistic result. That is, there must be some functional relationship between them. If the one element or set of elements imposes no functional limitation on another within the same claim, then the two do not form a proper combination, but rather define an aggregation. In such a case, the removal of one element would have no effect on how the remaining elements (continue to) function.

- [28] In such a case it is not the patentability of the combination that need be assessed, since there is no proper combination. Instead, one is faced with a situation where there is a claim defining two or more collocated but distinct inventions, which must be assessed individually for validity. Although not binding on Canadian practice, Lord Hoffman in

Sabaf SpA v. MFI Furniture Centres Ltd., [2004] UKHL 45 at para 24, succinctly summarized this co-location nature of an aggregation:

But before you can...ask whether the invention involves an inventive step, you first have to decide what the invention is. In particular, you have to decide whether you are dealing with one invention or two or more inventions. Two inventions do not become one invention because they are included in the same hardware. A compact motor car may contain many inventions, each operating independently of each other but all designed to contribute to the overall goal of having a compact car. That does not make the car a single invention.

- [29] We note, however, that if one of the alleged inventions is found patentable, then the addition of the other elements in the claim would not be fatal to patentability. At worst, the additional elements would define unnecessary or non-essential limitations to the scope of the claimed invention.
- [30] Reflecting this jurisprudence, our letter of 8 July 2013 indicated that if the panel determines the claimed elements do not define a proper combination (where elements of the claims have some functional relationship), but rather define an aggregation (two or more inventions collocated a single claim), then the individual inventions would be considered separately for compliance under each section of the *Patent Act and Rules*.

Claim construction

- [31] Although there was no dispute on file between the applicant and the examiner as to the construction of the claims, an understanding of the features and scope of the claims is critical before addressing the issue of aggregation. This entails a consideration of the specification as a whole as read by the person skilled in the art, in light of their common general knowledge, and including an understanding of the problem and solution addressed by the application, so as to identify both the meaning of terms used in the claims and the essential elements of the claims.

The person skilled in the art

[32] The SOR (under the obviousness analysis) characterized the skilled person as a bed manufacturer with knowledge of modern conveniences; the SA re-defined this as a business marketing professional with knowledge of modern conveniences such as audio-video (a/v) devices. The applicant's written submission of 18 November 2013 (page 8) referred to the skilled person as a "mattress marketing professional." We would agree that the skilled person includes a mattress marketing professional; however, our cover letter to the SA (8 July 2013) clarified that "knowledge of modern conveniences" would be that knowledge of an audio/video technician (further discussed below). Therefore, we consider the person skilled in the art as a team of a mattress marketing professional and a/v technician.

The common general knowledge

[33] In our opinion a "mattress marketing professional" would inherently have knowledge of the features and advantages of a mattress, and the conventional methods, techniques or display systems utilized for the marketing or selling of mattresses. This includes the use of displays (signs, still pictures, video or audio, etc) to inform customers of a mattress (see Background of the Invention, page 1).

[34] In addition to skills in mattress marketing, the SA stated that the skilled person has "knowledge of modern conveniences." Our letter clarified that "knowledge of modern conveniences" would be understood as knowledge of audio/video units and other advertising display components. Support for this is also found in the application (Background, page 1), where it is disclosed that with advancing technology, additional media supplement the still displays, including media such as audio tracks, graphical animation, and stored video tracks (on a cassette or compact disc).

[35] The panel letter further noted that the application's Background to the Invention stated that it was known to use displays to attract potential customers, using a visual statement, so as to encourage a customer to purchase a product. The panel letter also noted it was commonly known to a business (mattress) marketing professional that advertising displays to sell mattresses could include an actual mattress in the display for a person to lie on, as commonly seen in stores or mattress advertising displays. The applicant's letter of August 2012 confirmed this conventional mattress showroom practice.

[36] One point raised by the applicant was that the SA was incorrect in describing the person skilled in the art as faced with the problem of using a known bed display mounted touch

input video display to select a product based on content displayed from a database. We agree with the applicant that, in this case, it is not appropriate to consider the POSITA to be faced with the problem as stated by the examiner. If the stated problem were part of the common general knowledge, it could be concluded otherwise, but in the present case the formulation of the problem, which inherently contains part of the solution of the claims, relies on hindsight and can inappropriately influence the definition of the skilled person and common general knowledge.

- [37] We do not consider the problem as stated by the examiner in the SA to be part of the common general knowledge, and have conducted our analysis accordingly.

Background to the invention: problem and solution

- [38] The Background of the Invention (page 1) states that advertising displays involve attracting attention, spreading information and encouraging the purchase of a product. Traditional displays at first used only still pictures or graphics to make a visual statement; as technology advanced, the displays incorporated visual improvements such as audio, graphical animation or stored video tracks. However, even with these additional features, the application states that *“the capabilities of traditional displays are still somewhat limited.”*
- [39] A reading of the application reveals that the problem addressed by the invention is to provide an improved display that will attract and engage customers in relation to a product (mattress) so that they may appreciate the product’s benefits or features and ultimately purchase the product. The description (pages 7 and 8) further refers to the desire to maintain a person lying down in contact with a mattress (i.e. for a period of time) so they may be informed or educated about the benefits associated with the mattress.
- [40] In clarifying this problem, the applicant’s response to the SA stated that it was often recognized that in mattress showrooms, customers would not lie down on the available mattress displays for a sufficient period of time to be able to adequately experience the mattress and assess its features. This points to the problem being at least known in the mattress selling marketplace.
- [41] To solve this problem and overcome limitations of previous displays, the application proposes to improve mattress displays by providing an interactive bed display comprising a

self-contained audio/video unit with a touchscreen and multiple stored audio/video segments, positioned within reach of a person lying on a mattress. Based on the user's input, different multiple stored audio/video segments are delivered to the user to describe or display content regarding the features of the mattress. In this manner, the expectation is that a person will remain on the mattress longer and thereby better experience its features.

Claims

[42] There are 21 claims on file, including 4 independent claims. Claims 1, 20 and 21 define an interactive bed display apparatus, whereas claim 13 defines a method of presenting a mattress. Claim 1 is representative of the proposed interactive bed display:

An interactive bed display to provide information to a person, the interactive bed display comprising:

- a bed including a mattress adapted to support the person; and

- a self-contained audio/video unit positioned within reach of the person when lying on the bed such that the person is in a position to experience the mattress, wherein the self-contained audio/video unit includes multiple stored audio/video segments regarding the mattress and is adapted to receive an input generated from the person on the mattress via user contact with a screen of the self-contained audio/video unit, and wherein the self-contained audio/video unit is adapted to deliver different ones of the multiple stored audio/video segments regarding the mattress to the person on the mattress based on the input.

[43] Claim 13 defines a method of presenting a mattress, comprising method steps which generally correspond to the apparatus features in claim 1. Claims 20 and 21 define alternative embodiments of the interactive bed display apparatus. Claim 20 defines a similar arrangement as claim 1 with the additional features being: the a/v unit is positioned to encourage the person to lie on the mattress; the unit is above a person; the screen of the a/v unit substantially faces the top surface of the mattress; and the video segments likewise encourage the person to remain on the mattress. Claim 21 defines similar features as claim 1 with no substantial differences.

- [44] Additional proposed claim amendments were presented to the panel in a written submission prior to the hearing. We will consider these proposed changes at the end of our analysis of the claims on file.

Claim language

- [45] Generally, from a reading of the specification as a whole, the skilled person understands that an “advertising display” or bed display in the present application includes a sign, still picture, graphic, animation, audio information or a video image, any of which may be used to attract potential customers to a product. This particular meaning of the term “*display*” shall be used in this review, as distinct from a video or television display/monitor.
- [46] In claim 1, the multiple stored a/v segments “*regarding the mattress*” are understood from the description to contain information concerning the features of the particular mattress, including the technology and materials used (description, pg 8).
- [47] Additionally, the claims refer to the a/v unit as self-contained. This is understood from the description (page 6) to mean that the a/v segments are stored locally within the a/v touchscreen unit, for example a solid state memory card such as a compact flash card, as opposed to an external source.
- [48] The independent claims also define that the person is in a position to “*experience*” the mattress. We construe “*experience*” simply to mean the person can lie on the mattress and have a physical, tactile connection to a mattress. This also corresponds with the applicant’s 18 November 2013 submission, page 4, “*...the person’s perception of lying on the mattress to enable the person to have a tactile experience of the mattress*”. This construction is consistent with the skilled person’s knowledge of a customer lying on a mattress in a showroom to experience the mattress. But “*experience*” of the mattress is not fairly construed to mean that the person will *necessarily* sense or perceive the benefits and features of the mattress as expressed by the content of the a/v segments being viewed. Whether or not a person can sense or perceive the benefits, advantages, technology or materials of the mattress is subjective and determined in the mind of the person lying on the mattress.
- [49] In claim 20, two uses of the term “*encourage*” are defined. First, the a/v unit is positioned facing the mattress and close enough that a person is “*encouraged*” to lie on the mattress, to

reach and interact with the screen. We consider this to simply mean that the physical positioning of the a/v unit is such that a person must lie on the mattress so as to view the screen. This corresponds with the further limitation in claim 20 that the screen faces the mattress top.

- [50] Secondly, “encourage” is used in claim 20 in the context of the content of at least one of the stored segments being such that it “encourages” the person to remain on the mattress. The disclosure mentions that the content is “scripted” (description, page 7) to include various segments to explain the materials and benefits of the mattress to encourage the person to remain on the bed. However, whether or not someone will remain on the mattress for an extended time based on the content of a segment depends on the interpretation of the content in the mind of the person viewing the segment (for example, if they desire or choose to continue watching). We therefore understand that “encourage” in this use means simply that the content relates to the features and benefits of the mattress.

Essential elements

- [51] The process of claim construction involves distinguishing those elements of the claimed invention which are “essential” from those which are “non-essential.” In this case, the construction analysis is related to the question of whether there is more than one invention present in the claims (i.e., is there an aggregation of elements which do not define a proper combination?). If this is the case, then each may have its own set of essential elements which then must be assessed for patentability
- [52] On its face, representative claim 1 is directed to an interactive bed display comprising the following elements:
- a bed comprising a mattress; and
 - a self-contained a/v unit positioned within reach of a person lying on a bed, comprising a touchscreen for user input, and multiple stored a/v segments regarding a mattress delivered based on the user’s input.
- [53] In our analysis of the second issue below, we determine whether these elements are to be considered together or separately for the purposes of patentability.

Analysis

- [54] The panel must consider whether the claims define a proper combination or define an aggregation of more than one invention in a single claim, in view of the legal principles we have cited. In construed claim 1, we see two main elements defined: a bed/mattress element and a self-contained a/v unit. The remaining independent claims also define variations of these two main elements.
- [55] The question becomes whether or not the bed and a/v unit have a functional relationship which produces a unitary and synergistic result in combination. We cannot find one.
- [56] The bed functions to support a person lying upon it, independent from the a/v unit. The removal of the a/v unit from the claim does not alter or affect how the bed continues to function. The a/v unit does not impose any functional limitation on the bed or mattress. Likewise, the a/v unit functions to interact with a user to provide user selected stored content regarding a mattress. The removal of the bed from the claim does not alter the functioning of the a/v unit. The bed provides no functional limitation on the a/v unit.
- [57] There is no direct synergy between the bed and the a/v unit. The only defined relationship between the bed and the a/v unit is that the a/v unit is to be positioned within reach of a person on the bed. This is a positional relationship dependent on the reach of the person. However, this does not impose a limitation on the mattress, and does not establish a synergistic link between the bed and the a/v unit.
- [58] In our opinion, the only potential unifying or synergistic link between the bed/mattress and the a/v unit is one that is made in the mind of the person experiencing the mattress. The person lying on the mattress is not an element of the claimed invention, nor can a functional relationship be contained within a person's mind. Any such relationship is wholly dependent on the intellectual assessment and interpretation of the person lying on the mattress. As we discussed during the construction of the term "experience", the person's assessment or experience of the mattress depends on their subjective perception, and is therefore uncontrollable. The person is the only element linking the abstract information of the stored content with the physical features of the mattress. This cannot be considered to create a synergistic, functional relationship between these elements.
- [59] The applicant submits that the particular combination of the bed, the user, and the type of stored content viewed by the user work in a synergistic manner to address the problem of having a person lie on a mattress for a sufficient time to experience the features and benefits of the mattress. However, part of the solution to this problem depends, as we have

explained, on the subjective experience and assessment of the person. There is no synergy that accrues directly from the elements of the apparatus or steps of the method apart from, or outside of, the person on the mattress. The applicant's solution to the problem as defined requires the person to form the synergistic link between the bed and the content of the a/v segments in their mind, which, as discussed above, does not define a unitary result flowing from the apparatus or method of the invention. Therefore, we consider that claim 1 defines an aggregation of a bed/mattress and an interactive a/v unit with stored a/v segments regarding a mattress.

- [60] Similar reasons apply to the other independent claims, which likewise fail to define a functional relationship between the bed/mattress and the a/v unit. None of the remaining claims define any such link either. Claim 2 does define an interconnecting support arm, which couples the a/v unit to the bed and provides the positioning function for the a/v unit relative to the person. However, the mere physical connection of the a/v unit to the bed does not create a synergistic or unitary result which is more than the individual functions of the aggregate elements. The support arm is simply physically co-locating the a/v unit with the bed.

Assessment of individual inventions under aggregation

- [61] Hence we are faced with two separate inventions which must individually be assessed for validity purposes (at paras. 71 to 107 we conduct an analysis presuming the elements to be a combination, as was done by the examiner). For this, as in any obviousness question, we consider the question in terms of the Sanofi framework. We have already considered the skilled person and their common general knowledge.
- [62] On its face, there is nothing inventive about the bed/mattress element, as it is well known from the common general knowledge, as used in mattress retail showrooms.
- [63] We need only assess the second separate invention. For this, the inventive concept is a self-contained a/v unit positioned within reach of a person lying on a bed, comprising a touchscreen for user input and multiple stored segments regarding a mattress delivered to a user based on the input. For the purposes of the present assessment, as shown below, even assuming all the elements of this invention to be essential, we nonetheless find it to have been obvious.

[64] For the reasons given at paras. 86-92, in particular at para. 92, the differences at step (3) are:

- the state of the art does not define a use of an a/v unit for marketing mattresses, and thus would not necessarily provide content regarding a mattress; and
- the state of the art does not disclose a self-contained interactive video display.

[65] At step (4) of Sanofi, we find that these differences are not inventive. As we discuss in detail at paras. 93-99, it was common general knowledge to advertise mattresses using content regarding the features or benefits of a mattress. Previous mattress displays also incorporated video and audio segments, and people were encouraged to lie on a mattress to experience the features of the mattress in a retail showroom. Additionally, D5 discloses a video display device that can be positioned near a person lying on a bed and used to display any content to that person. To display mattress content requires no inventive modification or adaption to the video display device itself. Finally, the feature of a self-contained display employing locally stored a/v segments is simply one of a finite number of technical ways of storage and retrieval of content, known from the common general knowledge.

[66] The skilled person would not consider that the differences identified at para. 64 would in combination constitute an inventive step over the prior art. Thus we conclude that the a/v unit as defined in claim 1 is not an inventive device.

[67] Therefore, we consider that neither invention identified during the construction of claim 1 is individually inventive. None of the dependent claims rectify this situation as they likewise fail to define any synergistic, unitary result from the combination of the bed/mattress with the a/v unit.

Conclusion on the Second Issue

[68] We therefore consider that claims 1-21 are obvious and do not comply with section 28.3 of the *Patent Act*, as they define an unpatentable aggregation. However, although we have already concluded these claims define an aggregation, the obviousness prosecution between the applicant and examiner addressed the claims as if they defined a combination of the bed/mattress and the a/v unit. Although it is not necessary to do so, we likewise perform this analysis in the following section.

Third Issue: Are claims 1 to 21 obvious and thus non-compliant with section 28.3 of the Patent Act?

Legal Principles:

[69] Section 28.3 of the *Patent Act* sets out the information against which a claim is assessed in an obviousness inquiry:

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.

[70] A four step approach for assessing obviousness was set out by the Supreme Court in *Sanofi-Synthelabo Canada Inc. v. Apotex Inc.*, 2008 SCC 61, [*Sanofi*], as follows:

- (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?

Analysis: Obviousness in view of prior art

Step 1: Identify the person skilled in the art and their relevant common general knowledge

[71] The person skilled in the art and their common general knowledge has already been identified earlier (paras. 32-37) during our claim construction.

Step 2: Identify the inventive concepts

[72] Treating the claim as a whole, the examiner proposed that the inventive concept of claim 1 entails provision of “a bed/mattress with an a/v unit coupled thereto, where the a/v unit displays specific a/v segments regarding the product to the user based on their input.”

[73] The applicant’s reply to the FA and SA stated that the claimed solution is a bed in combination with a self-contained a/v unit positioned within reach of a person lying on the bed and stored a/v segments regarding the mattress. The applicant further explained that the arrangement encourages the person to remain on the bed and experience the benefits of the mattress.

[74] We do not find there to be a substantial difference between these inventive concepts, with the applicant’s inventive concept more aligned with the language used in the claims. Both inventive concepts include the combination of the essential features of the bed/mattress and the a/v unit. For consistency of our review in light of the prosecution between the examiner and applicant, we adopt the applicant’s inventive concept as correct.

[75] The inventive concepts of the remaining independent claims and dependent claims were not explicitly set out by the examiner nor the applicant. In para 43 above, we have identified minor differences in the other independent claims. We consider that claims 13 and 21 have the same inventive concept as claim 1. For claim 20, the inventive concept is the same as claim 1 with the addition of explicit positioning of the a/v unit above a person and facing the top surface of the mattress, which we will address.

[76] There is nothing on file from the applicant addressing any particular feature in the dependent claims considered to further distinguish the claims over the prior art.

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

Cited References

[77] The SOR cites the following prior art:

Patent Documents:

D1:	US 3,889,910	17 June 1975	<i>Walters</i>
D2:	US 6,327,982	11 December 2001	<i>Jackson</i>
D3:	JP 6118880	28 April 1994	<i>Sanyo</i>
D4:	JP200201017411	January 2002	<i>Vires</i>

[78] The SA cites the following additional prior art:

Patent Documents:

D5:	US 6,104,443	15 August 2000	<i>Adcock, et al.</i>
D6:	US 5,053,956	1 October 1991	<i>Donald, et al.</i>
D7:	EP 109,189	23 May 1984	<i>Bushnell, et al.</i>

[79] We have reviewed all the references; we consider references D5-D7 to be the closest prior art, and will focus on them in this analysis.

[80] D5 discloses a suspended television and video monitor, having a flat panel touchscreen display, in a small lightweight package that can be oriented in any position, to suit the viewer’s comfort. Using the touch sensitive display, interactive menus can be displayed while operating as a video monitor. Based on user input, selected television (TV) channels or video is displayed while in a prone position lying on a bed. (note: for clarity, we will refer to the TV/monitor “display” in D5 as a video display, to distinguish from the application’s use of an advertising “display”.)

[81] D6 discloses an interactive system for retail transactions, including a video screen for displaying images and information on a variety of products accessible from an image storage arrangement, and accessed by user interaction via keyboard or touch screen. Based on the user input, images and information are retrieved from storage and displayed for the user. The information on the product is typically regarding price and availability,

although other types of information are envisioned (e.g. col. 8, sales information to present product features, such as the colours available for a bedspread).

- [82] D7 teaches another interactive retail system comprising a self-contained display kiosk for displaying and selling various products. As in D6, many stored images are retrievable based on user input via a keyboard, or alternatively a touchscreen (pg 19). The information displayed includes price, images, and a description of the product. A consumer can then place an order for the product desired. The device can operate in an “attract” loop of video segments, to encourage a consumer to engage with the device.
- [83] To summarize, we see D5 as teaching the state of the art for displaying information using an interactive video display unit (including a touchscreen) for a person lying on a bed. We see D6 and D7, published respectively 11 and 18 years earlier than the claim date, as teaching examples of self-contained interactive marketing or advertising display systems, which retrieve stored product information based on user selection.

Principal arguments by Applicant:

- [84] The applicant’s written submission argues that the features of D5 could not be modified by the teachings of D6 or D7 to arrive at the combined features of the independent claims. Specifically, the applicant’s main arguments are:
- a) the cited references do not pertain to mattress displays in a retail setting;
 - b) the references do not disclose any manner of experiencing a product in a tactile way;
 - c) there is no specific relationship between the tactile experience and the a/v content displayed based on user input (synergy); and
 - d) there is no motivation for the person skilled in the art to modify D5 in view of either D6 or D7.
- [85] At the hearing, the applicant further argued that D5 is not a self-contained a/v unit arrangement (i.e does not include stored a/v segments), as the computer containing the baseband video in D5 is external to the video display unit, and further, that at the claim date, “self-contained” was not even contemplated by those in the art. The hearing submission also reiterated the points listed above.

Analysis on Differences

- [86] D5 addresses the problem of comfortably allowing the viewing of television channels or video programs while lying down (in a prone position) on a bed. The comfort aspect includes the ability to reach and interact with the video display from the prone position. A flexible mounting arrangement allows the screen to be positioned in a manner that includes facing the bed and user, at any angle or position. By having the touchscreen video display so positioned, user comfort is increased.
- [87] Additionally, D5 is designed in part to allow a user to view television programs, which last typically 30 minutes. By allowing for adjustability in the screen position, and allowing for interactive use, D5 allows for a person to comfortably remain on the bed for an extended period of time. As we have construed “encourage” previously as the positioning of the display relative to the user and the viewing of specific content (leaving the desire to remain on a bed to the mind of the user), we find that D5 teaches a display which encourages a person to remain on the bed.
- [88] Additionally, D5 teaches a manner of experiencing a bed/mattress (in a tactile sense), as the screen in D5 is positioned within reach of a user to allow the user to experience (lie down) on the mattress. Furthermore, the video display in D5 is interactive, using a touchscreen positioned in reach of a user, where stored video can be displayed on the screen based on user input. Combined, these features allow the positioning of a video display unit to allow a user to lie down, and remain lying down while watching the chosen TV channel or video content. Hence the idea of using an interactive touch screen to encourage someone to remain lying down on a bed for a period of time while viewing selected a/v content is taught by D5.
- [89] However, D5 does not specifically define a use of an a/v unit for marketing or selling mattresses, and thus would not necessarily provide marketing information regarding a mattress. Nor does D5 explicitly define a relationship between the video content being viewed and the experience of lying on the bed. We also agree with the applicant’s submission (at the hearing) that the interactive video display in D5 is not wholly self-contained: in order to select and view video segments instead of watching TV channels with the display of D5, the system requires an external source such as a computer to be connected, from which the baseband video is sent to the touchscreen video display.
- [90] D6 and D7 do not appreciably add to the state of the art, except that they both illustrate the common general knowledge the skilled person in the art has with regards to audio and

video use in marketing displays, as we noted earlier (para 83). In particular, the two references both describe the common use of locally stored video or audio information in memory (for example, hard drives or video discs, and the like) within a display unit itself.

Summary of Differences:

[91] Having considered the applicant's principal arguments on the prior art in light of the cited art, we are left with three main differences which we shall consider in step 4, re-ordered in list form for ease of discussion.

- i. the state of the art does not specifically address the use of an interactive a/v unit to market mattresses, and thus does not inform the person "regarding the mattress";
- ii. the state of the art does not teach a "self-contained" interactive display; and
- iii. the state of the art does not teach a relationship between the experience of lying on the mattress and the content being displayed or viewed.

[92] We note that differences i. and ii. above pertain to the a/v unit alone, whereas difference iii. relates to the combination of the a/v unit and the bed/mattress.

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?

- i. Is there any degree of invention using an interactive a/v unit to market mattresses, and thus inform the person "regarding the mattress"

[93] As we have discussed, the skilled person is a mattress marketing professional, looking to improve current advertising displays for mattresses, so as to get customers to lie on a mattress for a sufficient time to experience the mattress. It was already known in the art to use systems comprising displays of stored video and audio content to market products. The skilled person would know that any one of a number of devices would be capable of displaying video and audio content. Further, the actual marketing content (i.e. the features or attendant benefits of the mattress, its material, etc.) was already known and in use by the mattress professional. Therefore, any display associated with such a retail environment would utilize content related to the mattress.

[94] Furthermore, the display system functions the same way regardless of the content it is retrieving and displaying. Considering that the present application discloses no specific technical adaptations of the a/v unit to handle “mattress information” versus any other promotional or advertising information, we do not consider that there is any inventive limitation of playing “mattress” related content to the a/v unit itself.

[95] We do not see any inventive ingenuity that arises from the concept of defining the content as relating to the mattress, and thus informing the person regarding the mattress. This content is already known by the skilled marketing person, and capable of being displayed by the interactive television and video monitor system taught in D5. Likewise, it would be obvious to a skilled person that the video display unit of D5 will store, retrieve and display any type of desired stored content. Therefore, specifying that the interactive a/v unit will market mattresses and display content regarding mattresses does not define an inventive difference.

[96] Whether or not specific content of a video or other media file could be sufficient to render a claim inventive in any application generally is not a question before this panel. It was not necessary to answer that question for our analysis in this case, as the mattress content defined in the instant claims is known to be used in an advertising display, and thus the a/v unit cannot be patentably distinct in combination with said content.

ii. Is there any degree of invention in defining a “self-contained” interactive display?

[97] D5 teaches the use of an external baseband video link from an external computer, but is silent on using internal, local storage as the instant application does to achieve the “self-contained” limitation. We consider that the skilled person would know that the stored segments could be stored and accessed in any one of a finite number of technical ways. One solution noted as common general knowledge in the Background of the Invention is storage on a video cassette or compact disc. Another common general knowledge solution illustrated in D6 and D7 includes hard drives and/or video discs. The use of internally stored content allows both D6 and D7 to operate as standalone, self contained displays.

[98] Other known solutions the skilled person would employ, as technology naturally progresses, would include smaller hard drives or memory cards incorporated within the device. Another may be to use a network connection. However, whether the storage is

located within the a/v unit using one of these solutions, or stored externally and fed to the a/v unit is not an inventive distinction; these are merely known options available to the skilled person.

[99] For the above two differences we conclude that the a/v unit containing content regarding the mattress is itself not an invention (hence our conclusion at para. 66). We then consider the third difference, which relates to the combination as a whole.

iii. Is there any degree of invention in defining a relationship between the experience of lying on the mattress and the content being displayed or viewed?

[100] The idea of defining a relationship between the experience of lying on a bed/mattress and the viewing content regarding the mattress is obvious from the common general knowledge of a mattress professional in relation to the conventional retail setting. The applicant has already acknowledged that a known problem with prior art bed displays in retail showrooms is getting a person lying on a mattress to experience the benefits and features for a sufficient period of time. We also consider that it is common general knowledge that in such showrooms, product information is available to the person lying on the bed, either through brochures or signs to read, or by a salesperson attendant on the person. Thus the idea of having a person lying on a bed to experience a tactile feel of a mattress, while also receiving information regarding the mattress and its features is known.

[101] Given that video and audio display systems were known in the art of advertising, it would seem logical in marketing a mattress in a retail setting, that the content to be displayed on any chosen video or audio display system would relate to the product being marketed, showcased, or “experienced”, as in the case of lying on a mattress. The relationship defined in claim 1 between lying on the mattress and the content being viewed on the a/v unit is therefore not considered an inventive difference, but rather an obvious and analogous use of a known interactive video display, positioned over a bed.

[102] Therefore, considering the three differences as whole, the skilled person would not consider them to define any degree of invention. A person seeking a solution to the problem of providing an improved bed display to encourage a customer to lie for a period of time on a bed, so they may be informed about the benefits associated with a mattress, would immediately recognize that the video display device of D5 provides an appropriate solution. With the device taught in D5, a person can be encouraged to lie on a bed via the positioning of the interactive video display, and the user selection of desired TV or video content. To

use the device in a mattress marketing environment, as claimed, the skilled person need only change the a/v content displayed, and change the means to store and retrieve the content. The choice of local storage means is one of a finite well known number of options for storing retrievable a/v files. The motivation for choosing the particular claimed a/v content (to include segments regarding the mattress) comes from the desired application of the device.

Additional arguments

[103] The applicant raised the issue of whether or not there is any motivation to combine D5 and D6 or D7. The applicant has argued that the examiner has created a mosaic of D5, D6 and D7, and points to *Laboratoires Servier v. Apotex Inc.*, 2008 FC 825 (*Servier*) at para. 254, for the requirement of the examiner to demonstrate why the person of ordinary skill in the art would have been led to combine the references. Additionally, at the hearing, the applicant raised the issue of D6 not being related as it pertained only to the use of a display where the product was not available to be experienced.

[104] While the examiner did apply D5, D6 and D7 as the state of the art, we have considered D5 as teaching the state of the art, while D6 and D7 are more appropriately characterized as references of interest, illustrating the common general knowledge. D5 is considered the primary reference on the state of the art on video display system for viewing video or audio content in close proximity to a person lying on a bed, including interactive capability. The content would be known to a person skilled in the art to be retrievable or stored in a number of ways. D6 and D7 illustrate alternative storage options for video and audio content in a product marketing setting. Accordingly, there is no issue of an improper mosaic of references.

Conclusion on claim 1

[105] Therefore, the panel finds there is no inventive step defined in the proposed combination of the features of claim 1, including the a/v unit and the bed/mattress together.

Claim 20:

[106] Claim 20 defines positioning the screen above a person lying on the bed, where the a/v unit faces the top of a mattress. D5 teaches an adjustable a/v unit, specifically designed to accommodate a person lying prone on a bed, yet retain an interactive function with the

touchscreen. Therefore, the inventive concept of claim 20 does not define any patentable difference.

Dependent claims:

[107] As we observed earlier, there is nothing on file from the applicant addressing any particular feature in the dependent claims considered to further distinguish the claims over the prior art. For completeness of our review, we note that the dependent claims define limitations primarily in regards to a support arm and LCD touch screen, a signal based on user touch of the screen, and a headboard with a lenticular sign. All of these features we consider as known to the mattress marketing professional or taught by the cited art. Hence none of the dependent claims appear to define any features or steps which would define an inventive difference (alone or in combination).

Proposed Claims:

[108] In the written submission, the applicant proposed claim amendments to the independent claims 1, 13, 20 and 21, to be considered by the panel. As explained on page 5 of the written submission, the changes to the claims specify that at least one of the stored a/v segments relates to the material used in the mattress, and that the segments are to educate the person about the material used in the mattress and the attendant benefits of the material. At the hearing, the applicant explained these changes address a dual purpose of allowing a user to both “experience” the mattress and to be “educated” on its features.

- at least one segment regarding a material used in the mattress

[109] This proposed change to the independent claims is not inventive. First, from our construction of the claims, we have already considered that the content “regarding the mattress” is understood from the description to contain information concerning the features of the particular mattress, including the technology and materials used (description, pg 8).

[110] Second, while none of the prior art explicitly teaches an a/v segment about the “material” used in a mattress, we consider that it would be uninventive in view of the common general knowledge of selling mattresses in a retail setting that one feature to be included in any stored segments would be in regards to the material used in the construction of the mattress. As noted, the skilled person is a mattress marketing professional, and thus it is reasonable

that among various features of a mattress, the person would know about the materials used in making the mattress, and thus include this as content for the a/v segments.

[111] Finally, as with our earlier analysis of the first difference (paras. 93-96), it would be obvious to a skilled person that the a/v unit will store, retrieve and display any type of desired stored content. Therefore, in our review of the facts of this case, specifying one particular type of content (mattress material) would not define a patentable limitation to the claims of the a/v unit and stored a/v segments. We again note that this recommendation does not address whether or when media or content can patentably distinguish a device in general.

- to educate a user about the materials and attendant benefits

[112] As we have considered in difference iii) above, the goal of educating a person on the material being used and the attendant benefits of the mattress would be an obvious objective for the skilled person, and thus the skilled person would include the necessary information in the stored video segments, or any other advertising material. It was known that in marketing a bed or mattress in a retail setting, a person would be educated (by a salesperson or brochure) as to the benefits or features of a mattress, and it would be reasonable to include in this information the type of material used in the mattress. Therefore, there is no inventive step in this proposed change to the claims.

[113] Furthermore, similar to our earlier construction on “experience” and “encourage”, in our opinion, whether or not a user will become educated about the materials and benefits of the mattress depends on what transpires within the mind of the user upon viewing and interpreting the specific mattress information. While educating a person may be a desired marketing or advertising goal, we see no functional limitation which would distinguish the obvious features of claim 1 on file.

[114] The same analysis is applicable to the identical proposed changes to claims 13, 20 and 21. Accordingly, we see nothing in the proposed claim amendments which would render the claims on file unobvious.

Conclusion on Third Issue:

[115] Having found that there is no inventive step over the prior art, the panel finds that claims 1-21 are obvious and do not comply with section 28.3 of the *Patent Act*.

Recommendation

- [116] In view of the above findings, the Board recommends that the application be refused as claims 1-21 on file are obvious and therefore non-compliant with section 28.3 of the *Patent Act*.
- [117] Furthermore, for the reasons provided, the Board concludes that the proposed changes to independent claims 1, 13, 20 and 21, would not render the claims on file compliant under section 28.3 of the *Patent Act*. As a result, there are no proposed amendments that would make the application compliant with the *Patent Act* and *Rules*.

Andrew Strong
Member

Stephen MacNeil
Member

Paul Sabharwal
Member

Decision

[118] I concur with the Patent Appeal Board's findings and its recommendation that the application be refused as claims 1-21 are obvious and therefore non-compliant with section 28.3 of the *Patent Act*.

[119] Accordingly, 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.

Sylvain Laporte
Commissioner of Patents

Dated at Gatineau, Quebec,
this 26th day of March, 2014