

Commissioner's Decision #1280

Décision du Commissaire #1280

TOPIC: O

SUBJECT: O

Application No : 2,286,794

Demande no : 2,286,794

COMMISSIONER'S DECISION SUMMARY

C.D.1280 App'n 2,286,794

Obviousness

The Examiner rejected this application on the basis that the invention claimed was obvious at the claim date over cited prior art consisting of a Canadian patent, a United States patent, and a French patent application. The Board concurred and the Commissioner refused the application. The Applicant appealed to the Federal Court, introducing new evidence and arguments in the appeal. The Court ordered that the case be returned to the Commissioner to reconsider the issue of obviousness in light of the new evidence filed on appeal, any further written legal submissions by the Applicant, and the record previously before the Commissioner. Upon reconsideration, the Board again found that the Applicant was claiming an invention which was obvious. The application was again refused by the Commissioner of Patents.

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application number 2,286,794 was refused by the Commissioner under Section 40 of the *Patent Act* (see (2006) C.D. No. 1264 (P.A.B. and Commissioner of Patents), *Re Blair Patent Application No. 2,286,794*, 48 C.P.R. (4th) 90). The Applicant appealed to the Federal Court under Section 41 of the *Patent Act*. In view of new evidence and arguments submitted by the Applicant, the Federal Court ordered that the application be returned to the Commissioner for a review of the issue of obviousness in light of the new evidence filed on appeal, any further written legal submissions by the Applicant, and the record previously before the Commissioner. The matter has been reconsidered by the Patent Appeal Board and by the Commissioner of Patents. The findings of the Board and the decision of the Commissioner are as follows:

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A. Introduction

[1] This decision deals with an order by the Federal Court (*Scott Blair v. Attorney General of Canada et al.*, Court File No. T-1176-06, 10 July 2007) to set aside the decision of the Commissioner dated 13 January 2006 with respect to the issue of obviousness, and to review the issue of obviousness in light of fresh evidence filed on the appeal, any further written legal submissions by the Applicant, and the record previously before the Commissioner.

B. Background

[2] The invention relates to the incorporation of a video display system in a subway car. The subway car includes multiple video terminals mounted near the ceiling to be used as a television public service message display, entertainment, and advertising system. The system displays televisual entertainment and advertising features of a duration suitable for a typical relatively brief subway ride to the subway riders. Figure 2 illustrates the disclosed invention.

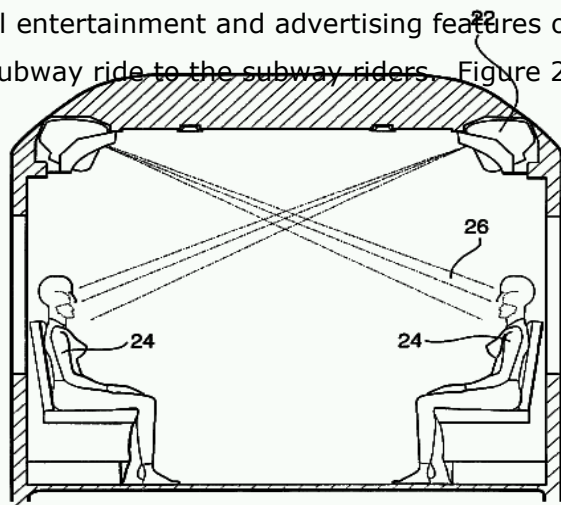


FIG.2

[3] Independent claim 1 reads as follows:

1. A subway car for mass transportation including longitudinal opposed sidewalls, a ceiling adjoining the sidewalls, a video display system comprising a plurality of video display monitors each having a video screen, and a video signal source unit operatively connected to said monitors, said monitors being spaced along the length of the car on opposed sides thereof, each of said monitor being mounted at the junction of the sidewall and ceiling, with the screen of the monitor substantially flush with the adjacent wall surface structure of the car, and directed obliquely downwardly toward the car seats, so that each video screen is readily visible to passengers in the subway car.

C. Chronology of Events

[4] Patent application number 2,286,794 was filed on 6 May 1998 and is entitled "SUBWAY TV MEDIA SYSTEM". Scott Blair is both the Applicant and inventor. The Examiner in charge issued a Final Action on 21 October 2002 rejecting claims 1 to 16 in view of U.S. patent 5,606,154 to Doigan *et al.* and common knowledge in the art as illustrated by French patent application 2,652,701 to Comerzan-Sorin and Canadian patent 1,316,253 to Tagawa *et al.* In his Final Action, the Examiner stated in part:

Subway cars for mass transportation have been disclosed by *Doigan et al.*, namely *light rail horizontal people movers having cars*. All three references describe a video signal source connected to the monitor. In view of the common use of video screens in bar rooms, it is obvious that monitors are mounted at the intersection of the wall with the ceiling, and are directed to the viewing audience.

The dependent claims do not add any patentable subject matter, and claims 1-16 therefore do not comply with Section 28.3 of the Patent Act, because the subject matter of these claims would have been obvious on the claim date, in view of *Doigan et al.*, and common knowledge of multiple monitors in passenger transport compartments, as taught by *Comerzan-Sorin* or *Tagawa et al.*

[5] In the reply of 17 April 2003, the Applicant cancelled claims 1-16 and substituted claims 1-11 therefor: claims 1-6 relating to the subway car/video display system combination; and claims 7-11 relating to the video display system for displaying televised material to passengers in a subway car. In the reply the Applicant stated, in part:

Attention is particularly drawn to a feature of claim 1 which specifies that "the screen of the monitor substantially flush with the adjacent wall surface structure of the car", a feature not to be found in any of the cited references, and an inventive, unobvious feature specifically adapted for subway rail car use of the video systems, where space is at a premium, and mounting of the video screens needs to be not only in locations where they are readily visible to all passengers (a feature also included in the claims) but also clear of windows, doors and exits and blending in with the general overall appearance of the subway car interior.

A further inventive feature is incorporated into claim 5 (which is itself dependent on claim 1 and therefore contains all the

features of claim 1), namely a rigid transparent unit overlying the screen of each monitor and shaped to coincide with the shape of the internal wall of the subway car. No such feature is to be found in any of the cited references. Its significance is discussed in the disclosure of the application, page 7 lines 17-30. It enables the viewing unit to be concavely curved so as to blend as a continuum with the subway car walls, as further specified in claim 6. Applicant respectfully disagrees to the Examiner's holding that the Doigan et al. reference, U.S. patent 5,606,154, discloses subway cars. The phrase pointed out by the Examiner, "light rail horizontal people movers having cars" does not mean subway cars. Light rail horizontal people movers are above ground operations. If Doigan et al. had thought of subway cars for installations, they would clearly have said so. Doigan envisages shuttles moved by ropes, linear induction motors or otherwise, at the relevant passage at column 2, line 55-66, and had Doigan et al. been intending to apply his invention to subway cars, he would surely have said so in this passage, and refer clearly to subway cars. Light rail horizontal people movers are of the type which run above ground on elevated trackways. Totally different considerations apply to subway cars.

...

Thus, not only is there nothing in the cited prior art evidencing that the incorporation of t.v. video system in subway cars has ever been contemplated before, but also the claims are clearly restricted to special features which overcome structural and installation problems encountered with subway car systems. The inventor has not only had the novel idea of incorporating such systems into subways, but has also solved technical and aesthetic problems associated with such installations, in non-obvious manner.

...

Also on the issue of obviousness, the Examiner is respectfully reminded of the expert opinion in the form of affidavits/declarations which were presented during the international prosecution phase, and are of record in the file. The assembled expert opinion is that the invention disclosed is herein not obvious.

[6] At a hearing before the Board held via teleconference, the Applicant indicated that claims 7-11, submitted on 17 April 2003 in response to the Final Action, were to be dropped from consideration.

[7] After a review of the prosecution and the points raised at the hearing, the Board found that the claims on file were obvious and recommended that the Commissioner support the rejection of the application. In that decision, the Board addressed the issue of obviousness as follows:

During the teleconference, the Applicant highlighted two aspects which he wished to be considered in determining the inventive nature of the claims.

- 1) Was it obvious to incorporate TV entertainment and advertising systems into subway cars?
- 2) Was the precise manner in which this was accomplished obvious?

...

Based on the information present in Doigan et al., it is evident that it was clearly envisaged to incorporate TV type entertainment and advertising systems, in the form of ads, or other video messages, in a rail car type environment. Applicant has argued that "light rail horizontal people movers" does not include subway cars and that these are of the type which run above ground on elevated trackways. However the Board cannot agree with this interpretation. Subway systems are indeed a form of "light rail" and it is common for them to run both above and below ground while traversing their assigned lines. Therefore the answer to the first question posed must be that it was obvious to incorporate TV entertainment and advertising systems into subway cars.

Turning to the second question, whether the precise manner in which the incorporation was accomplished would have been obvious, the Board will first look to the Doigan et al. reference. The Doigan et al. reference leaves the particular installation of the video display system to the abilities of the skilled person. This person, it seems, is to determine the exact nature of the system and where and how it is to be mounted in the "shuttle". Some guidance is provided, for example at col. 1, lines 53-55,

According to the present invention, a message is selected ... and is played within the perception of passengers (i.e. in the car or at the landing).

Therefore, it seems that the skilled person is expected to make any minor adaptations as are necessary to ensure the proper operation of the video display system in a particular venue (i.e. mounting system, placement, wiring, etc.). It would seem that

this would be the case in any media system which must be installed in a particular location by a technician. It would not seem to involve invention for the technician to determine the most appropriate mounting location for the components (speakers, monitors, etc.), or to determine an appropriate routing for wiring. Such decisions would be based on the technicians common knowledge and good judgement.

Looking to the Comerzan-Sorin reference, this document discloses an international cable video network, controlled by computer, made up of several TV monitor units which are to be installed aboard planes, trains, cars, boats, etc. The monitors are to display closed circuit information relative to each locale and to display entertainment programs in the form of films, commercials, weather information, etc. The programs are to be received from satellites, or alternatively from pre-recorded video cassettes or video discs. The TV monitors may be, for example, cathode ray tube-type monitors or liquid crystal systems. This invention aims to provide each passenger with an individually controllable monitor and to provide a central large screen monitor for general viewing. For the individual monitors, various locations are specified around the passengers, including mounting on the armrest, on a floor pedestal, or on the back of the seats. Again in this reference the particular mounting of the monitor and system installation is left to the capable hands of the skilled person, as the use of such distributed video systems is known per se. The system would have to be adapted to each transport system (trains, planes, cars, boats, etc.).

Looking now to the Tagawa et al. reference, this document discloses an apparatus for transmitting a plurality of video and audio signals in parallel to each of a plurality of remote terminal units which may be located at or near a passenger seat of a passenger vehicle such as an aircraft, train, bus, or the like. This reference is similar to the Comerzan-Sorin reference in that it seeks to provide a TV unit at each passenger location with a central video and audio signal supply. In this case, the invention is concerned more with longer distance travel, and in the case of aircraft, the terminals are preferably mounted on the back of a plurality of passenger seats. The terminal may comprise a flat cathode ray tube or an LCD, or the like, and the user is provided with the ability to select the information which they wish to view. This reference is particularly concerned with the transmission system and the components involved in the user selectivity of the programs. Again some guidance is provided as to the particular mounting locations, but it is generally left to the skilled person to determine their exact nature.

From the above references, it becomes clear that the authors do not deem it important to their inventive concepts to indicate an exact mounting system for the display terminals of their systems. This is left to the skilled person to determine. The

Doigan et al. reference does not make any particular statement about mounting, merely that it be placed "within the perception of passengers". Comerzan-Sorin and Tagawa et al. are both more concerned with longer travel times than Doigan et al. and focus on situations where passengers all have prearranged seating so that each may have individual screens, and some ability to control the display, although they do mention several modes of transportation, which may require further adaptation. In these two references though, it is, as in Doigan et al., left to the skilled person to determine the exact nature of the mounting of the monitors and the placement of the signal supply and transmission means.

The Board must now look to the claims 1-6 to determine if the precise mounting arrangement claimed by the applicant involves an inventive step in view of the discussed state of the art and common general knowledge of the skilled person. Looking to claim 1, aside from the known characteristics of the subway car, it is claimed that the monitors are mounted,

at the junction of the sidewall and ceiling, with the screen of the monitor substantially flush with the adjacent wall surface structure of the car, and directed obliquely downwardly toward the car seats, so that each video screen is readily visible to passengers in the subway car.

As discussed above, it was suggested by Doigan et al. to place video display systems in shuttles such as light rail cars. In implementing such an embodiment, the skilled person would necessarily have to determine the appropriate mounting location. Looking at the first characteristic, namely "at the junction of the sidewall and ceiling", as anyone who has traveled on a subway or transit bus will attest, the conventional location for advertisements is, in fact, at the junction of the ceiling and sidewall, as also attested to by the applicant at p. 10, lines 19-21 of the subject application. Therefore this is the logical location, indeed perhaps the only available location, for the skilled person to place the video screen. Looking to the second characteristic, "with the screen of the monitor substantially flush with the adjacent wall surface structure of the car", this appears to be a characteristic which provides an aesthetic feature. Looking to the final characteristic, that the screens are "directed obliquely downwardly toward the car seats, so that each video screen is readily visible to passengers in the subway car", this idea follows from that of mounting the screens at the junction of the sidewall and ceiling, and from the Doigan et al. principle of mounting the screens, "within the perception of passengers". Therefore, the Board concludes that there is no invention in the combination of features of claim 1, and the skilled person would not have to overcome any significant difficulties in putting the idea of placing video screens in subway cars into practice. Rather, he would only

have used his common knowledge and the general guidance provided by the state of the art.

Looking to claims 2 and 3, these merely specify the particular video display system components, which are, as applicant has disclosed, conventional. These are further illustrated by the references applied.

Looking to claim 4, "a self contained wiring cabling system" would seem to be part of any such video display system in view of the prior art.

Looking to claims 5 and 6, here it is claimed that a rigid transparent unit overlies the screens and is shaped to coincide with the internal wall of the subway car, which is then specified in claim 6 as concavely curved. Firstly, a rigid transparent unit overlying the screen appears to be nothing more than a protective shield. The Board believes that placing a protective shield over a video screen in a subway, bus, or the like is a prudent measure which the skilled person would be forced to consider, given the obvious potential for damage to the screen by the persons frequenting the subway system. It is difficult to imagine such a delicate piece of equipment being placed in such an environment without some sort of protective cover.

It is also noted that applicant has submitted several affidavits from experts in the field of mass transportation to support his arguments. These statements are not persuasive and merely seem to indicate that these experts are not aware of such a system as that of the claims at issue. However, the issue of novelty has not been raised by the examiner. The issue is, rather, whether or not the claimed invention would have been obvious to the skilled person given his common general knowledge and the state of the art.

As a result of the above, the Board is of the opinion that it was obvious at the claim date to incorporate TV entertainment and advertising systems into subway cars and the precise manner in which it was accomplished would have been obvious to the unimaginative skilled technician.

[8] The Commissioner concurred with the Board and refused the application under Section 40 of the *Patent Act*.

[9] The Applicant appealed to the Federal Court under Section 41 of the *Patent Act*, introducing further evidence and arguments to the Court. The Court then issued its order returning the application to the Commissioner. The Court Order reads in part:

1. The decision of the Commissioner of Patents made the 13th day of January, 2006 is set aside with respect to the issue of obviousness.

2. This matter is hereby returned to the Commissioner of Patents for review on the issue of obviousness in light of the fresh evidence filed on this appeal, any further written legal submissions that the appellant may wish to make, and the record previously before the Commissioner of Patents.

[10] On 16 August 2007, the Applicant presented the Commissioner with their written legal submission (hereafter the "Submission" or "Applicant's Submission") including the new evidence and arguments that had been presented to the Court.

[11] The Applicant requested a review by the Commissioner in consideration of the Submission, without a further hearing before the Board.

D. Applicant's Submission to the Commissioner

[12] In the Applicant's Submission, he discussed the cited prior art, secondary factors, advantages over the prior art, expert evidence, and significance of the Applicant's corresponding U.S. patent.

1. The Prior Art

[13] In respect of the Doigan reference, starting at page 4, the Applicant stated:

9. Doigan is not directed to a subway video display system nor to the location of its placement within a subway car. A review of the figures of Doigan shows only flowcharts relating to the selection and playing of the appropriate length advertisements. Doigan does not teach the location for placement, characteristics, and manner of configuration of video monitors generally, and certainly not in relation to their placement in mass transit subway cars.

...

...it should be noted that Doigan referred to shuttles "as those used for people movers at airports and universities" that "may stop in response to service requests". Subways are not "used for people movers at airports or universities"; they have fixed stops and are not responsive to service requests. Doigan does not disclose subways at all.

[14] In discussing the Comerzan-Sorin reference, starting at page 5:

13. Comerzan-Sorin contemplates only standard airplane and intercity train and bus seating, that is, parallel, homogenous rows of seats. It does not contemplate subways, where seating varies widely and passengers are often standing. It teaches specific locations for its disclosed video monitor installations, as indicated above. None of the disclosed locations is "the junction of the sidewall and the ceiling" of a subway car. In fact, Comerzan-Sorin teaches away from locating video monitors at "the junction of the sidewall and the ceiling".

...

...Comerzan-Sorin provides specific locations for video monitors as set out above and does not locate them "throughout a train". Furthermore, a train is not a subway, and the obstacles facing the installation of a video display system in a subway, with its random seating, crowded condition, standing passengers and short journeys, is completely different from the obstacles that arise in airplanes and trains with orderly seats, no crowding and longer journeys.

[15] And finally the Tagawa reference at page 6:

It [the Tagawa reference] does not teach the placement of monitors at the junction of the sidewall and ceiling. In fact, it teaches away from placing monitors in such a location and teaches placing them on the seat backs of chairs.

2. Secondary Factors

[16] The Applicant listed a number of secondary factors which he felt suggested inventive ingenuity, including:

(a) the device was commercially successful;

- (b) the age of the prior art cited;
- (c) the device has since been used widely and in preference to alternative devices;
- (d) experts in the field had never thought of the device;
- (e) conventional wisdom at the relevant date pointed away from the teaching of the patent; and,
- (f) amazement accompanied the first publication of the device.

3. Advantages Over Prior Art

[17] At page 17 of the Submission, the Applicant set out three advantages “as set out in the application”, namely:

- 1. being safer for passengers in the event of an accident;
- 2. being viewable by the maximum number of passengers; and,
- 3. being resistant to vandalism.

The Applicant then stated that the cumulative effect of these advantages indicated that the claimed subject matter was not obvious.

4. Expert Evidence

[18] The Applicant submitted new evidence, comprising Affidavits from experts. These are in addition to the letters and Affidavits that were previously on the record. The two new Affidavits are from Mr. Wilkins and Ms. Gibson.

[19] The Submission states that Mr. Wilkins is an expert in the field of public transportation, having been a free-lance journalist for over 30 years and a former Managing Editor and Contributing Editor to several journals in the field. The Applicant summarised the Wilkins Affidavit at page 3 of the Submission as follows:

...he [Mr. Wilkins] was not aware of any installations of a subway video display systems, let alone one at the junction of the wall and ceiling of subway cars.

...

...it would not have been apparent to him, an expert in the field, to place subway video display systems at the junction of the walls and ceilings of subway cars (*sic*) but that he is aware that, in 2006, nine years after the claim date of the '794 Application, some transit authorities are attempting to do just that.

[20] While the Board has considered the Gibson Affidavit, it notes that it appears not to have been made before a person authorized by law to administer oaths. The Affidavit appears to have been made before Mr. Blair (*i.e.*, the inventor) and there is no indication that he is authorized to administer oaths.

[21] The Applicant stated that Ms. Gibson is an expert in subway advertising, having been employed by Urban Outdoor Trans Ad as Director of Marketing and Corporate Relations from 1991-1999, and responsible for all advertising aboard the Toronto Subway. The Applicant summarized Ms. Gibson's Affidavit at page 4, as follows:

10. Prior to 1998, Ms. Gibson had been approached by several parties who had considered the possibility of including some form of video display system or similar unit on Toronto subways. None of those parties suggested placing the video monitors at the junction of the wall and ceiling of the subway cars.

11. In fact, according to Ms. Gibson, it would not have been apparent to her that installing video monitors at the junction between the subway car wall and ceiling would overcome some of the obstacles to the installation of the video display system in a subway. Furthermore, she noted that the Berlin Subway system had recently installed video display systems that were not located at junction of the subway car wall and ceiling but, rather, in pairs in the centre of the ceiling of the subway car. Thus, as of 2006, it was not apparent to those skilled in the art that video display systems should be installed at the junction of the subway car wall and ceiling.

At page 13, in reference to the Berlin Subway system discussed by Ms. Gibson, the Applicant stated:

39. In this case, where there is a clear example that the subway video display systems disclosed and claimed by the Applicant is not the only

way to install such a system on a subway and, in fact, that experts in the field have installed such a system in a completely different location, as they have done in the Berlin Subway system, it is respectfully submitted that the only conclusion that can be reached is that the Applicant's subway video display systems is not obvious.

[22] At pages 7 and 8 the Applicant recapitulated the three letters from experts that were previously on file before the Commissioner, from Mr. Gillespie, Mr. Wilkins, and Mr. Berry.

5. Applicant's Corresponding U.S. Patent

[23] Beginning at page 8 of the Applicant's Submission, the Applicant pointed out that their U.S. patent 6,700,602 issued with claims that were "virtually identical" to those presently on file and that the U.S. Examiner considered the presently cited prior art.

[24] The Applicant later restated that patentability of the present claims is supported by the fact that the corresponding U.S. patent application issued to patent. They also acknowledged that decisions in the United States are not binding in Canada, but that they are persuasive given the similarities in the respective statutes (see pages 17 and 18 of the Applicant's Submission).

6. Conclusion

[25] The Applicant's Submission concludes at page 18 with the following:

53. It is respectfully submitted that upon applying the correct test for obviousness and upon a careful consideration of all relevant considerations, including that:

(a) experts in the field had never thought of the system and have opined that it would not have been obvious to them at the relevant date;

(b) those skilled in the art today have implemented a system where the location of the monitors is not in the location disclosed and claimed by the '794 Application;

(c) the prior art cited does not disclose or suggest the subway video display system disclosed and claimed in the '794 Application;

(d) Comerzan-Sorin was published almost 6 years before the relevant date and Tagawa almost 4 years before the relevant date; and,

(e) Comerzan-Sorin and Tagawa and the conventional wisdom in the art as of the relevant date pointed and taught away from the invention disclosed and claimed in the '794 Application;

the record before the Commissioner leads to the inevitable conclusion that the claims of the '794 Application are not obvious in view of Doigan, Comerzan-Sorin or Tagawa; or a combination thereof, and the common general knowledge in the art, especially in view of the fresh evidence now before the Commissioner. In addition, a conclusion of non-obviousness is also supported by the fact that a patent has been granted in the United States for claims that are, in all material respects, identical to the claims of the '794 Application.

E. Issue

[26]___In accordance with the Court Order, the Board must now reconsider the question of whether the claims on file are obvious under section 28.3 of the *Patent Act*.

[27] For the reasons that follow, the Board finds that the present claims would have been obvious on the claim date.

F. Obviousness: Legal Standard

[28] The statutory provision for obviousness is Section 28.3 of the *Patent Act*. It reads as follows:

Invention must not be obvious

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.

1993, c. 15, s. 33.

[29] The most frequently cited authority on obviousness is *Beloit Canada Ltée/Ltd. v. Valmet Oy* (1986), 8 C.P.R. (3d) 289 (F.C.A.) at page 294, per Hugessen J.A.:

The classical touchstone for obviousness is the technician skilled in the art but having no scintilla of inventiveness or imagination; a paragon of deduction and dexterity, wholly devoid of intuition; a triumph of the left hemisphere over the right. The question to be asked is whether this mythical creature (the man in the Clapham omnibus of patent law) would, in the light of the state of the art and of common general knowledge as at the claimed date of invention, have come directly and without difficulty to the solution taught by the patent. It is a very difficult test to satisfy.

More recently, the Federal Court of Appeal considered the law on obviousness in *Janssen-Ortho Inc. v. Novopharm Ltd.*, 2007 FCA 217, 59 C.P.R. (4th) 116. In that decision, after quoting *Beloit, supra*, the Federal Court of Appeal had the following to say about obviousness:

24 The inquiry mandated by the *Beloit* test is factual and functional, and must be guided by expert evidence about the relevant skills of the hypothetical person of ordinary skill in the art, and the state of the art at the relevant time. The expert evidence must be carefully assessed as to its credibility and reliability. The classic warning from *Beloit* about hindsight must always be borne in mind (at page 295, per Hugessen J.A.):

Every invention is obvious after it has been made, and to no one more so than an expert in the field. Where the expert has been hired for the purpose of testifying, his infallible hindsight is even more suspect. It is so easy, once the teaching of a patent is known, to say, "I could have done that"; before the assertion can be given any weight, one must have a satisfactory answer to the question, "Why didn't you?"

25 There is no single factual question or a set of questions that will determine every case, or any particular case. Justice Hughes, at paragraph 113 of his reasons, proposes a list of factors to be considered when the validity of patent is challenged on the basis of obviousness. The list is apparently derived from a survey of numerous cases from Canada, the United States and the United Kingdom. In my view, despite the continual debate as to whether the legal test for obviousness is the same in all of those countries, the list of factors proposed by Justice Hughes is helpful to guide the required factual inquiry, and as a framework for the factual analysis that must be undertaken...

...

26 Justice Hughes included as a secondary factor "subsequently recognized advantages", referring to the advantages of the claimed invention that are perceived only after the date of the invention. Justice Hughes said that this factor is of limited usefulness in considering inventive ingenuity, and should be given little weight. I find it difficult to envisage a situation where a subsequently recognized advantage to a claimed invention would be of any assistance in determining whether inventive ingenuity was required to make it. I can imagine a situation where the commercial success of an invention is attributable to a subsequently recognized advantage, but that would not assist the inquiry as to inventive ingenuity. I recognize that it is impossible to imagine every possible situation, but given the current state of the jurisprudence I would be inclined to give this factor no weight except in the most extraordinary case.

27 I emphasize that this list is a useful tool, but no more. It is not a list of legal rules to be slavishly followed; nor is it an exhaustive list of the relevant factors. The task of the trial judge in each case is to determine, on the basis of the evidence, sound judgment and reason, the weight (if any) to be given to the listed factors and any additional factors that may be presented.

28 I would also repeat the caution of Justice Hughes that catchphrases derived from this list or from the jurisprudence

are not to be treated as though they are rules of law. I agree with the following comment of Justice Hughes from paragraph 113 of his reasons:

In this regard phrases such as "worth a try" and "directly and without difficulty" and "routine testing" have been used by the courts. It is not useful to use such phrases as they tend to work their way into expressions of law or statements of expert witnesses. Sachs L.J. deprecated the coining of such phrases in *General Tire & Rubber Company v. Firestone Tyre & Rubber Company Limited*, [1972] R.P.C. 195 at pages 211-12.

G. Analysis

1. Prior Art

[30] The prior art being considered is the same prior art that was previously on record.

[31] The Applicant submits that the Doigan patent is not relevant since it concerns a video display system for use in "shuttles" as opposed to a system for use in subway cars, and since Doigan does not teach the placement of video terminals in subway cars.

[32] The Applicant previously argued these points and they were previously considered by the Examiner and the Board (see page 2 of Applicant's Response to the Final Action dated 17 April 2003; and, page 7 of the first Commissioner's Decision on this matter). As there is nothing new to reconsider, the Board affirms the previous conclusion on these points.

[33] Nonetheless, the Board notes that the Applicant's quote from Doigan regarding the definition of the term "shuttles" therein appears to have been removed from its context and that the Applicant's quote does not fully reflect the breadth of the term as intended by Doigan. A review of the complete passage reveals that the term "shuttle" is restricted neither to "airports and universities" nor to shuttles having fixed stops, as the Applicant has suggested in his Submission. The full quote from Doigan from column 2, lines 47-66 is as follows (emphasis added):

The invention herein is described only in terms of elevators, but the invention is also applicable to other types of shuttle transports, such as those used as people movers in airports and

universities, in which a car traverses a predetermined path, providing access at predetermined points along the path, either automatically, or in response to requests for service. A shuttle usually makes a run between stops in a few minutes or a fraction of a minute, but in all events, in a few tens of minutes or less. As used herein, the term "shuttle" therefore means elevators, in which case landings or stops refer to floors, and the term "shuttle" also means light rail horizontal people movers having cars moved by ropes, linear induction motors, or otherwise, in which case landings or stops refer to preselected points where the car stops, or where it may stop in response to service requests. In the case of horizontal shuttles, the car may traverse either direction on precisely the same path, or may traverse only in a single direction about a closed loop path, or it may traverse in one direction on one path, and traverse in the opposite direction on an adjacent path.

A subway car is a car traversing a predetermined path, automatically providing access at predetermined points along the path. A subway car is a form of rail that travels horizontally and transports people. Thus the term "light rail horizontal people movers", though not the colloquial term used to describe subway cars, would appear to be included within the meaning of this term. In any event, even if "light rail horizontal people movers" and subway systems cannot be regarded as identical systems, they at least can be considered closely related or analogous art fields with which the person of ordinary skill in the art would be familiar. Therefore the Doigan reference cannot be excluded from consideration on the question of obviousness on the basis of the limited interpretation urged by the Applicant.

[34] As for the Comerzan-Sorin reference, the Applicant now submits that:

- 1) it does not contemplate subways;
- 2) it teaches specific locations other than the junction of the sidewall and ceiling;
- 3) it teaches away from locating TV monitors at the junction;
- 4) it does not locate monitors throughout a train; and,
- 5) a train is not a subway and a subway presents different obstacles to installation therein.

[35] With respect to the Tagawa reference, the Applicant argues that it does not teach, but rather teaches away from, the placement of monitors at the junction of the sidewall and ceiling.

[36] These differences between the Applicant's claimed invention and the teachings of the supporting references (Comerzan-Sorin and Tagawa) can be grouped under three basic arguments:

- 1) that the Applicant's claimed invention belongs to a different art field, and thus the references are not citable;
- 2) that the references do not teach the particular locations for the monitors claimed in the Applicant's combination; and
- 3) that the references teach away from the locations set forth in the Applicant's claimed invention.

[37] As to the first argument, the Comerzan-Sorin reference teaches the installation of video terminals aboard planes, trains, cars, boats, etc. The Tagawa reference discloses installations for use in passenger vehicles such as airplanes, trains, buses, or the like. The Board considers that the teachings of both Comerzan-Sorin and Tagawa are related or analogous to the field of the Applicant's application, namely, such installations for use in subway cars. Therefore, the Board's finding made with respect to the Doigan reference, that it cannot be excluded from consideration on the question of obviousness merely because it does not refer to an identical art field to that which the Applicant's invention relates, applies equally to the Comerzan-Sorin and Tagawa references.

[38] Further, the Board previously considered the Applicant's submission that different factors apply to subways when compared to other forms of transportation. There is nothing new in this submission warranting reconsideration on this point.

[39] Regarding the second argument, a review of the record shows that neither the Examiner nor the Board stated that the supporting references taught the specific location of the monitors at the junction of the wall and ceiling of the subway car. These references were cited by the Examiner in order to show that it was common knowledge to install video monitors on a variety of public transportation means. As this argument was considered by the Board in the earlier decision, it provides the Board with no reason to arrive at a different conclusion.

[40] For clarity, the Board wishes to add a comment concerning this argument. While the fact that the prior art references do not disclose the specific location of the video monitors as claimed by the Applicant would be material in considering the question of anticipation, we are in this case dealing with the question of obviousness. In such cases it is not always necessary to show that each and every detail of a claimed invention is specifically taught by one or other prior art references in order to prove obviousness. Persons skilled in the art

are expected to make adjustments and variations in order to adapt to different situations and user requirements. It is not realistic to expect that every such adaptation and variation will be made available as a published document. Thus, the lack of prior disclosure of a detail claimed as part of an invention does not necessarily lead to the conclusion that the invention is unobvious.

[41] Finally, the third argument against the applicability of the supporting references is that they teach away from the presently claimed subject matter. The Board does not agree. While the references do not specify the particular location now emphasized by the Applicant as forming an important part of the invention, it does not necessarily follow that they teach away from installation of TV monitors at the junction of the sidewall and ceiling of a subway car. The Comerzan-Sorin and Tagawa references are concerned with different seating configurations and both aim to provide a monitor at each seat as they are generally concerned with longer travel times. They do not lead the person of ordinary skill in the art or science away from adapting the installation to account for factors presented by each type of transportation means. For instance, one skilled in the art would select certain locations for the monitors in one vehicle in which the seats are arranged in rows, oriented generally in the same direction, and certain other locations in another vehicle in which the seats are otherwise arranged, for instance as in a subway. It does not follow that these references teach away from installation of monitors in the claimed location.

[42] The Applicant appears to recognize that even when faced with the installation of monitors within subway cars, certain adaptations would need to be left to the person of ordinary skill in the art to account for "...different constructions of subway cars currently in use...". Page 12 of the Description states (emphasis added):

It will be appreciated that the specific embodiments illustrated and described herein are by way of example only, and are not to be construed as limiting on the scope of the invention. The description pertains specifically to the type of subway car currently in use in the Toronto Transit System, and illustrates a means and location for mounting the video monitors in such a system. Details of construction, and hence details of appropriate mounting for video monitors may differ from subway system to subway system according to the form of car in use. Such mounting details do not depart from the scope of the present invention. In all cases, it is contemplated that a plurality of monitors will be provided in each car, each rigidly mounted at a convenient location clear of the doors and windows, and at a disposition where it can be viewed by passengers riding the subway car, without difficulty. The provision of such video monitors mounted in their own enclosures as described herein, and faced with a transparent screen of, for example, polycarbonate, allows for considerable variation in the detail of mounting means and locations, to adapt them to different constructions of subway cars currently in use on different mass transit systems.

[43] It is notable that the Applicant requires the skilled reader to select mounting details, including location, when faced with different subway car designs. The Board agrees with this assessment of the level of skill attributed to the skilled reader. Accordingly, the Board attributes this same level of skill to the skilled person in adapting the installations taught by the cited prior art in order to arrive at the subject matter of the present claims. The Board sees no ingenuity in determining such mounting details nor in selecting a suitable location within a subway car.

[44] Thus the Board finds that the present claims would have been obvious in light of the prior art as cited by the Examiner. Although it is thus unnecessary to go further, the Board is all the more convinced of the correctness of this conclusion given that the same conclusion could also have been reached from a different starting point, namely, subway cars having advertising posters located at the junction of the sidewall and ceiling.

[45] The Applicant acknowledges that it is commonplace to provide visual advertising displays such as posters in mass transit subway cars (see page 1, lines 7-10; pages 2, lines 2-4 of the Description). The Applicant also acknowledges that these posters are located in the same location as is presently proposed for the mounting of the TV monitors (see pages 10, lines 19-21 of the Description). The Description speaks of advertisement posters flanking the video monitors along the length of the car at the junction of the sidewall and ceiling (page 12, lines 6-12 of the Description and Figure 7). The Board sees the installation of TV monitors for providing advertising in the same location where advertisement posters were located as a mere substitution of an element in a combination for an equivalent element in an obvious manner (*Globe-Union Inc. v. Varta Batteries Ltd.* (1981), 57 C.P.R. (2d) 132 (F.C.T.D.), *aff'd* (1984), 80 C.P.R. (2d) 1 (F.C.A.); (1971) C.D. No. 78 (P.A.B. and Commissioner of Patents), *Re Application No. 021,626 (Now Patent No. 914,401)*, 10 C.P.R. (2d) 79; and (1982) C.D. No. 975 (P.A.B. and Commissioner of Patents), *Re Application for Patent by Lawrence et al. (Now Patent No. 1,175,803)*, 3 C.P.R. (3d) 427. This is nothing more than a routine upgrade of an old, known poster with modern technology – using conventional video installations, which themselves are neither described nor claimed by the Applicant as his advance in the art – commonly available as of the claim date.

2. Secondary Factors

[46] Only three of the secondary factors listed by the Applicant in the Submission are discussed therein, namely:

- 1) the age of the prior art cited;

- 2) experts in the field had never thought of the device; and,
- 3) conventional wisdom at the relevant date pointed away from the teaching of the patent.

However, the three factors are either not supported by the evidence or do not carry sufficient weight to tip the balance in the Applicant's favour.

[47] As for the first of these secondary factors, the age of the prior art cited, the Applicant asserts the publication dates of the Comerzan-Sorin and Tagawa references (six and four years prior to the claim date of the present application, respectively) to be a relevant factor in considering the question of obviousness. While the Board considers that the age of the prior art may be a material circumstance in certain situations, it does not consider such to be the case based on the state of the record in the present situation.

[48] The Board considers that the age of prior art, *in and of itself*, is not a material factor in every instance in which the question of obviousness is at issue. As the Applicant has not expanded on the reasons why the age of the prior art is relevant in this case, the Board is left to conclude that the Applicant is attempting to demonstrate that the invention overcame a defect or problem in the prior art, which created a long felt want in the industry, and which was filled by the Applicant's invention.

[49] Assuming such to be the case, the answer to such an argument is that the length of time that elapsed between the publication of some of the prior art and the claim date of a later application does not, by itself, indicate that inventive ingenuity was required in order to produce the claimed invention. While it is a matter to be taken into consideration, it cannot be regarded in any sense as conclusive; its value depends upon other circumstances.

[50] On this point, the case of *International Vehicular Parking Ltd. v. Mi-Co Meter (Canada) Ltd.* (1948), [1949] Ex. C.R. 153, 9 C.P.R. 97, is relevant. In that case, the patentee had argued that the invention overcame a defect in the prior art. At paragraph 21 the Court quoted with approval from an earlier English case in which this point was considered:

21 Reference may usefully be made to *Longbottom v. Shaw*, 8 R.P.C. 333, where, in giving judgment in the House of Lords, Lord Herschell stated at p. 336: --

If it were shown that the defects which this apparatus is designed to remedy, or does remedy, were defects which had been felt, and the knowledge of which had come to the public so that there was a demand for a new apparatus which did not possess those defects, and if it were shown that that demand had lasted for a considerable time, so that men's minds were likely to have been engaged upon a mode of remedying those defects, and they were not remedied until the apparatus was devised for which the patent is taken out, no doubt that would have afforded considerable evidence that the adaptation or arrangement of the patentee was not obvious, inasmuch as you would then have a demand for some considerable time not met although known, and the fact that it was not met for a considerable time though known would indicate that the mode by which it was ultimately met could not have been so obvious as otherwise might have been supposed. Therefore, in that way, the demand for an improved article might become a very material circumstance. But it appears to me that the elements which would make it very material are altogether wanting in the present case. We have here no evidence that the defects, though they existed, seriously pressed upon those who used this apparatus, and that they had indicated a desire for a machine which was free from those defects. There is no evidence that men's minds had been applied to the removal of these defects, which in some cases has been thought a very material circumstance ... But nothing of that sort appears here. We have no history of the manner in which this invention came about.

The Court then concluded that the claimed invention was obvious, stating at paragraph 24:

There is no evidence that knowledge of the defect in the [prior art]—if, in fact, it be a defect—had lasted for any considerable length of time or that men's minds had been engaged upon a mode of remedying that defect. There is no evidence that the defect, although it may have existed, seriously pressed upon those who used the apparatus or that they indicated the desire for a[n apparatus] which was free of those defects. Further, there is no evidence that the [earlier apparatus] was commercially unsuccessful or that the [inventor's apparatus], with the improvement, was a commercial success over the [earlier apparatus].

In the case of the present application, the Board finds that the record provides no evidence that the defect in the prior art allegedly solved by the Applicant's invention had lasted for any considerable length of time or that men's minds had been engaged upon a mode of remedying that defect. The primary reference, *Doigan et al.*, was published mere months before the claim date of the present application. There is no evidence that the defect seriously pressed upon those who used the apparatus or that they indicated the desire for an apparatus that was free of those defects.

[51] For the foregoing reasons, the Board considers that the age of the prior art, as a secondary factor, is insufficient in this case to change our conclusion that the invention was obvious in view of the cited prior art.

[52] As for the second of these secondary factors, namely that experts in the field had never thought of the device, the expert evidence on this point from the Submission is addressed below under the heading "Expert Evidence".

[53] The third of the secondary factors, that conventional wisdom at the relevant date pointed away from the teaching of the patent, has been addressed above under the heading "Prior Art" with regard to the Tagawa and Comerzan-Sorin references. To reiterate, the Board considers that the evidence on record does not support the conclusion that the prior art teaches away from the claimed invention.

3. Advantages Over Prior Art

[54] The Applicant stated at page 17 of the Submission that the application sets out three advantages over the prior art, namely:

1. being safer for passengers in the event of an accident;
2. being viewable by the maximum number of passengers; and,
3. being resistant to vandalism.

With respect to the second advantage, the Applicant made this point in their response to the Final Action (see page 2, lines 3-4 of Response to Final Action), thus it was on the record previously before the Board. It is not a new point for the Board to now consider.

[55] The Board notes that the advantages attributable to locating the TV monitors at the junction of the sidewall and ceiling of resistance to vandalism and being safer in the event of an accident are not found within the specification as filed. These two advantages appear to be subsequently recognized advantages.

[56] In *Janssen-Ortho, supra*, the Federal Court of Appeal had the following to say about subsequently recognized advantages:

[26] Justice Hughes included as a secondary factor “subsequently recognized advantages”, referring to the advantages of the claimed invention that are perceived only after the date of the invention. Justice Hughes said that this factor is of limited usefulness in considering inventive ingenuity, and should be given little weight. I find it difficult to envisage a situation where a subsequently recognized advantage to a claimed invention would be of any assistance in determining whether inventive ingenuity was required to make it. I can imagine a situation where the commercial success of an invention is attributable to a subsequently recognized advantage, but that would not assist the inquiry as to inventive ingenuity. I recognize that it is impossible to imagine every possible situation, but given the current state of the jurisprudence I would be inclined to give this factor no weight except in the most extraordinary case.

[57] Likewise in this case, we are of the opinion that advantages that are perceived only after the relevant date are of limited use in considering inventive ingenuity. We decline to give them any appreciable weight.

[58] In any case, the Board considers that none of the three advantages impart inventiveness to the subject matter at hand. Rather, they flow from design choices that would have been made by the person of ordinary skill in the art in selecting a location to install the monitors, depending on the particular requirements of various subway cars and systems.

4. Expert Evidence

[59] The Board already considered the expert evidence that was on file prior to the earlier decision of the Commissioner. On this evidence, the Board comes to the same conclusion.

[60] With respect to the new Affidavits, the Board notes that both relate to facts and opinions that post-date the relevant date for assessing obviousness. Under Section 28.3 of the *Patent Act*, obviousness is to be assessed as of the “claim date” of the claim. Assuming the Applicant’s priority date to be valid, in accordance with Section 28.1 of the *Patent Act*, the present claims have a claim date of 7 May 1997. Turning to the new Affidavits, the Gibson Affidavit is based upon facts on and before 4 February 1998 (her meeting with the present inventor, see paragraph 6), and, as far as one can tell, 2006 (the Berlin subway system installation). The Wilkins Affidavit states Mr. Wilkins’ knowledge and opinion as of 1999 (see Wilkins Affidavit, paragraphs 7 and 10) as well as his knowledge of attempts to install video monitors in various transit systems as of 2006 (see Wilkins Affidavit, paragraph

11). Thus the facts and opinions stated in the new Affidavits post-date the relevant date for assessing obviousness under the *Patent Act*.

[61] The Board recognizes, however, that certain facts that arise after the relevant date can be considered to a limited extent. For example, the Federal Court of Appeal stated in *Janssen-Ortho, supra*, at paragraph 25 that secondary factors in considering obviousness “may be relevant but generally bear less weight because they relate to facts arising after the date of the alleged invention”. The Board agrees with this reasoning. Thus while the facts and opinions of the new Affidavits are not excluded from consideration by reason of post-dating the relevant date, their weight is diminished in the Board’s consideration of obviousness.

[62] Further, the Board does not find that the new Affidavits improve the Applicant’s position since, like the evidence previously on file, the new Affidavits speak to the issue of anticipation rather than obviousness in stating that the experts had never seen such a particular installation before. Additionally, the Gibson Affidavit discusses television monitors that have been recently installed in Berlin transit system subway cars. A photograph showing such an installation is included with her Affidavit showing that the monitors are installed in the middle of the ceiling. This is taken by the Applicant to indicate that even in 2006, it was not apparent to those skilled in the art to install monitors at the junction of the sidewall and ceiling of a subway car. However, the Wilkins Affidavit appears to contradict Ms. Gibson’s conclusion as to the state of the art in 2006 as he indicates that:

...various transit systems around the world as of 2006 have attempted or are attempting to install video display systems on subway cars and that one of the ways that they are using to try to overcome the obstacles that face such installations is to mount the monitors of such systems at the juncture of the of the (*sic*) wall and ceiling of the subway car...

[63] Regarding the subway car installation of the Berlin transit system discussed in the Gibson Affidavit, in studying the photo and the related video on the web site cited in the Affidavit, it would appear as though installation of monitors at the junction of the sidewall and ceiling would have required displacing the existing lighting system. This would have been a factor to be considered by the skilled person when determining a suitable location for video monitor installation in that particular model of subway car. As the Applicant stated at page 12 of the present description, the application is described in reference to subway cars in use by the Toronto Transit System and that the description indicates a means and a location suitable for that system. As for other subway systems, the description states:

In all cases, it is contemplated that a plurality of monitors will be provided in each car, each rigidly mounted at a convenient location clear of the doors and windows, and at a disposition where it can be viewed by passengers riding the subway car, without difficulty. The provision of such video monitors mounted in their own enclosures as described herein, and faced with a transparent screen of, for example, polycarbonate, allows for considerable variation in the detail of mounting means and locations, to adapt them to different constructions of subway cars currently in use on different mass transit systems.

It is clear that the Applicant appreciated that for systems other than the Toronto Transit System, such as that of Berlin, certain variations, including the location of the monitors, would have to be made by the person of ordinary skilled in the art.

[64] The submission regarding the Berlin subway car installation does not persuade the Board that the presently claimed subject matter is inventive. If anything, it shows that there is nothing particularly inventive in selecting the location presently claimed for the installation of monitors in a subway.

[65] Finally both Ms. Gibson and Mr. Wilkins offer that the present subject matter would not have been apparent to them on 4 February 1998 and in 1999, respectively.

[66] The Supreme Court of Canada set forth the requirements of expert opinion evidence in *R. v. Mohan*, [1994] 2 S.C.R. 9 at page 16 (see also *Abbott Laboratories Ltd. v. Canada (Minister of Health)*, 2005 FC 989, 41 C.P.R. (4th) 289; *Eli Lilly Canada Inc. v. Apotex Inc.*, 2007 FC 455, 58 C.P.R. (4th) 353; *Merck & Co. v. Apotex Inc.*, 2005 FC 755, 41 C.P.R. (4th) 35; *Halford v. Seed Hawk Inc.*, 2002 FCT 764, 20 C.P.R. (4th) 474), as follows:

- (a) relevance;
- (b) necessity in assisting the trier of fact;
- (c) the absence of any exclusionary rule;
- (d) a properly qualified expert.

In *Mohan*, *supra*, the Court elaborated on the necessity requirement at page 19 (emphasis added):

What is required is that the opinion be necessary in the sense that it provide information "which is likely to be outside the experience and knowledge of a judge or jury": as quoted by Dickson J. in *R. v. Abbey*, *supra*. As stated by Dickson J., the evidence must be necessary to enable the trier of fact to appreciate the matters in issue due to their technical nature. In *Kelliher (Village of) v. Smith*, [1931] S.C.R. 672, at p. 684, this Court, quoting from *Beven on Negligence* (4th ed. 1928), at p. 141, stated that in order for expert evidence to be admissible, "[t]he subject-matter of the inquiry must be such that ordinary people are unlikely to form a correct judgment about it, if unassisted by persons with special knowledge".

As the subject matter before us is not overly technical in nature, the assistance of Ms. Gibson and Mr. Wilkins is not required. The Board finds that expert opinion is not necessary to assist the Board and Commissioner to appreciate the matter and to form a correct judgment about the issue of obviousness.

5. Applicant's Corresponding U.S. Patent

[67] Regarding the Applicant's submission concerning the grant of the corresponding U.S. patent, the Board agrees with the Applicant's statement at paragraph 52 of their Submission that U.S. decisions are not binding in Canada. Therefore, the fact that the corresponding U.S. application issued to patent, or the fact that corresponding applications filed in other jurisdictions did not issue to patent, is not determinative on the question of obviousness under Canadian law. The Board has considered the evidence in light of the law on obviousness established by Canadian courts in reaching its conclusion.

6. Dependent claims

[68] No further arguments or evidence were put forth by the Applicant in support of the dependent claims. Thus, the Board maintains that these claims fail to add any inventive features over the cited prior art, for the reasons provided in the previous decision.

H. Recommendation of the Board

[69] The Board finds that the claims would have been obvious to a person skilled in the art in view of the common general knowledge and the prior art applied by the Examiner.

[70] As a result, the Board concludes that claims 1 to 6 would have been obvious at the claim date and fail to comply with Section 28.3 of the *Patent Act*.

[71] Therefore, it is recommended that the decision in the Final Action to reject the application based on Section 28.3 of the *Patent Act* be affirmed.

M. Couture
Member

E. MacLaurin
Member

P. Fitzner
Member

I. Commissioner's Decision

[72] I concur with the findings and recommendation of the Patent Appeal Board. 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.

Mary Carman

Commissioner of Patents

Dated at Gatineau, Quebec,

this 26th day of October, 2007