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**Datasheet for the decision
of 27 June 2013**

Case Number: T 0058/09 - 3.4.03
Application Number: 00927297.2
Publication Number: 1194915
IPC: G09F 13/00, F21V 1/00
Language of the proceedings: EN

Title of invention:
Light panel

Patent Proprietor:
Modilis Holdings LLC

Opponent:
Nokia Corporation

Headword:
-

Relevant legal provisions:
EPC Art. 123(2)(3), 54(3), 101(3)(a)
EPC R. 80

Relevant legal provisions (EPC 1973):
EPC Art. 54(1), 56, 100(a)(b)(c), 87(1)

Keyword:
"Validity of priority date (yes)"
"Insufficiency of disclosure (no) - after amendment"
"Maintenance of the patent in amended form"

Decisions cited:
-

Catchword:
-



Case Number: T 0058/09 - 3.4.03

DECISION
of the Technical Board of Appeal 3.4.03
of 27 June 2013

Appellant: Nokia Corporation
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 10 November 2008
rejecting the opposition filed against European
patent No. 1194915 pursuant to Article 101(2)
EPC.

Composition of the Board:

Chairman: G. Eliasson
Members: V. L. P. Frank
T. Bokor

Summary of Facts and Submissions

I. This is an appeal by the opponent against the decision of the opposition division to reject the opposition against the European patent EP 1 194 915 (Article 101(2) EPC).

The patent was opposed in its totality. Grounds of opposition were lack of novelty and inventive step and insufficiency of disclosure (Articles 100(a), 100(b), 54 and 56 EPC 1973).

II. The appellant opponent requested in writing that the decision under appeal be set aside and that the patent be revoked.

At oral proceedings before the board, the respondent proprietor requested that the decision under appeal be set aside and that the patent be maintained in an amended form on the basis of claims 1-7 filed in the oral proceedings and an amended description page 4 as filed during the oral proceedings as Encl. 1.

III. The patent claims relevant to this decision read as follows:

"1. A light panel comprising a light source (1) and a panel element (2), said panel element (2) being manufactured from a substantially transparent material for transmitting light thereby, said panel element (2) being configured as a waveguide panel, inside which the light beams propagate with total reflection and get outcoupled therefrom with a diffractive light outcoupling system (2u),

characterized in that said diffractive light outcoupling system (2u), such as a grating structure or the like, is arranged on the entire panel element (2) all over its light surface (2a), such that divergent recesses and/or grooves of various sizes and/or shapes are used to constitute a plurality of divergent local grating pixels of various sizes and/or shapes having the filling factor, shape, profile and/or size thereof optimized, in such a way that the diffraction efficiency is a function of place."

"5. A light panel as set forth in any of preceding claims 1-4, characterized in that the diffractive outcoupling system (2u) for activating an illuminated light panel is configured such that the light panel (2) can be given a different colour in one or more sections thereof, and that the light surface (2a) of the light panel (2) activable for a different colour is designed by providing one or more independently controlled lighting units (1; 1a) with light means producing light of various colours, such as red/green/blue/white led (1a') or the like, and/or by varying the light source (1) in terms of its intensity and/or supply voltage."

IV. The following documents are cited in this decision:

D0 = English translation of FI 991216, priority document of the contested patent

D1 = EP 1 016 817 B

D2 = US 5,703,667 A

D3 = US 5,742,433 A

D19 = FI 982 825, priority document of D1

D22 = WO 97/32243 A

V. In the decision under appeal, the opposition division found that:

- The patent was entitled to the priority date, since the features added to granted claim 1 were directly and unambiguously derivable from the priority document (point 2 of the contested decision):
- The passage added to claim 1 could be split in the following features 1) to 5):
 - "the diffractive light coupling system is arranged on the entire panel element all over its light surface*
 - 1) such that divergent recesses and/or grooves*
 - 2) of various size and/or shapes*
 - 3) are used to constitute a plurality of divergent local grating pixels*
 - 4) of various size and/or shapes*
 - 5) having the filling factor, shape, profile and/or size thereof optimized in such a way that the diffraction grating efficiency is a function of place."*
- The opposition division considered that the term *"divergent local grating pixels"* meant different grating areas with independently assigned

characteristics that were provided by means of recesses and/or grooves and having some difference in the size and/or shape of the recesses and/or grooves. This interpretation also corresponded to the description and Figure 1b. The opposition division considered hence that features 1), 2) and 3) defined above could be derived directly and unambiguously from the priority document as a whole. Page 10, lines 12-14 of the translated priority stated that *"such structures can be continuous profiles/contours, which may vary liberally in terms of shape and size"*. Feature 4) was therefore directly and unambiguously derivable from this passage. Concerning feature 5), the opposition division was of the opinion that different grating pixels (ie having different characteristics in term of shape, size of the grooves/recesses) had different diffraction grating efficiency. Therefore the fact that the filling factor, shape, profile and/or size of the pixel structure was optimized in such a way that the diffraction grating efficiency was a function of place was a direct consequence from the fact that grating pixels having different diffraction grating efficiency were placed at different positions on the outcoupling system. This feature seemed to be a redundancy with the previous features of the claim and was directly and unambiguously derivable from the priority document. The priority of the opposed patent was thus valid.

- The light panel of claim 1 was new over the device disclosed in document D22, since in the device of D22 the outcoupling diffractive system was not

arranged on the entire light panel element but only on a relatively small part thereof (ibid point 3).

- The light panel of claim 1 was inventive over the combination of documents D2 and D22, since the skilled person would not have combined both documents. D2 disclosed a light panel and D22 related to an optical splitter which separated the wavelengths of an incoming signal and focused each beam at a point external to the panel. Hence the skilled person would not have consulted D22 to solve the problem of better uniformisation of the light outcoupled by the panel disclosed in D2 (ibid point 4).

- Finally, the claimed invention was sufficiently disclosed, since the fact that the filling factor, shape, profile and/or size of the pixel structure was optimized in such a way that the diffraction grating efficiency was a function of place resulted from the fact that the pixels had different diffractive properties (ibid point 5).

VI. The appellant opponent argued essentially as follows:

- The identity of the patent proprietor was uncertain. The records of the EPO showed as proprietor Oy Modilis Ltd of Finland. However, according to the Finnish trade registry no company of such name existed. The name Oy Modilis Ltd was changed to Oy Silidomia on 18 October 2010. Hence it was not clear who was the actual proprietor of the patent (the respondent) and who was empowered to represent the patent proprietor and make requests in his name.

- The claimed invention was not sufficiently disclosed. Optimisation of filling factor and/or shape and/or profile and/or size in such a way that the diffraction efficiency was a function of place was an essential characteristic of claim 1, but yet there was no guidance how to optimize them so that the desired effect was achieved.

- There was also no teaching to the skilled person how to carry out the embodiments of granted claims 5 and 6. There was no explanation how the diffractive outcoupling system could be configured such that the light panel could be given different color in one or more sections thereof.

- The priority claim was not valid. The earlier Finnish application only described in very general terms that an outcoupling system could be arranged on the entire panel element all over its light surface in such a way that the diffraction efficiency was a function of place. However, claim 1 of the patent specified a number of different specific embodiments that were not directly derivable from the priority document. The embodiment shown in Figure 1b was not covered by claim 1, since the light surface and thus the diffractive structure did not extend on the entire panel element. Hence the disclosure of Figure 1b as well as the corresponding description should have been ignored in the priority document. When assessing the right to priority everything in the claim and all variants thereof should have been taken into account, not only what was now considered to be the essential

features of the invention. The earlier application did not provide a direct and unambiguous disclosure wherefrom the skilled person could derive the claimed divergent local grating pixels of various sizes and/or shapes, and the various combinations of divergent recesses and grooves and the manner how these were used to constitute a plurality of divergent local grating pixels, and the various alternative manners to optimize the various alternative features thereof.

- Since the patent did not benefit from the priority date, the whole content of document D1 could be presented against the novelty of the claims of the opposed patent according to Article 54(3) EPC. Figure 9A of D1 disclosed a diffractive light outcoupling system, such as a grating structure, arranged on the entire panel element all over its light surface. The purpose of the pixelization and/or orientation of the pixels was to influence the uniformity of the light at the first end of the light pipe by means of diffraction. One of the parameters that could be optimized in D1 was the fill factor as a function of place. Hence all elements of claim 1 were disclosed in D1.

- The device of claim 1 was not novel even when only the portions of document D1 covered by document D19, its priority document, were taken into account. According to the proprietor the inventive concept of the patent was the use of divergent local grating pixels. However the description stated that not only divergent recesses and grooves of pixel structures but also binary pixels could be used, and that a

recess/groove could have its length modifiable from dot to infinity. Hence the grooves could extend from one edge of the light panel to the other. As shown in the figures of D19, periodic local structures comprising grooves and ridges provided the smallest element of the display surface that could be assigned independent characteristics. Hence these structures should be considered as grating pixels. Hence the portions of D1 benefiting from the priority date took away the novelty of the light panel of claim 1.

- The opposition division had found that the only difference between the claimed light panel and the one disclosed in document D22 was that the diffractive light outcoupling system was arranged on the entire panel element all over its light surface. There was however nothing in the claim that required the panel element to equal in size the surface of the light panel, ie the panel element could have any size. Figure 3a of D22 showed a panel element where the entire surface thereof was covered by a diffractive structure. Hence the light panel of claim 1 was not novel over document D22.

- Document D3 also disclosed a light panel having a grating pattern that varied as function of location. The plurality of grating elements of D3 were the smallest elements of display surface having independent characteristics and therefore should be considered local grating pixels. Hence the light panel of claim 1 was also not novel over document D3.

- The light panel of claim 1 did not involve an inventive step when starting from document D22, D2 or D3:

- When starting from D22 the objective technical problem was how to improve the efficiency of the diffractive outcoupling system on the surface of the panel element. Even without looking at the prior art it was immediately obvious to the skilled person that in order to provide efficient outcoupling on the entire panel element the sheet used to couple light out and thus controlling the efficiency needed to extend on the entire panel element all over its light surface, as otherwise not all of the available area would be used for coupling light out. There was nothing in D22 that would have told the skilled person not to apply the diffractive sheet on the entire panel element. Hence the light panel of claim 1 lacked an inventive step already when considering document D22 alone.

- The skilled person, trying to improve the efficiency of the panel of D22, would have had a look at D3 which disclosed that by means of the diffractive structure the diffraction efficiency was improved over the entire device and that the diffractive light uncoupling system should be arranged over the entire panel element. Hence the claimed light panel did not involve an inventive step over the combination of D22/D3.

- According to the opposition division documents D22 and D2 could not be combined, as D22 related to a splitter which separated the wavelengths of an

incoming signal. However, D22 also provided lightning if a light source other than a laser was used. There was thus no reason not to extend the diffractive structure all over the surface of the panel element to improve the lighting uniformity of the panel of D2. Hence the claimed light panel did not involve an inventive step over the combination D2/D22.

- Also a combination of documents D2 and D3 rendered the claimed panel not inventive, since in order to solve the problem of uniform efficiency the skilled person would have applied the diffractive structure of D3 on the panel of D2. Hence the claimed light panel also did not involve an inventive step over the combination D2/D3.

VII. The respondent proprietor argued essentially as follows:

- It was requested to record the transfer of the patent from Oy Modilis Ltd. to Modilis Holdings LLC. A copy of the Assignment of Patent Rights signed in Helsinki, Finland on 4 October 2010 was annexed to this request. The authorization on EPO Form 1003 from Modilis Holding LLC dated 16 January 2013 authorized the representative to act on behalf of the patent proprietor. Hence the proprietor of the patent and his representative were clearly identified.
- The teaching of claim 1 was clear for a person skilled in the art. The pixels having different diffractive properties were optimized in such a way that the diffraction efficiency was a function of

place. With the adaptation of the parameters – filling factor, shape, profile and/or size – the different diffraction properties could be adapted to fulfill the object of the invention of uniform lighting as mentioned in the introductory portion of the description. How to realize the technical teaching was routine work for a person skilled in the art with the help of computer programs for diffractive optics.

- Claim 5 required that the diffractive outcoupling system be configured such that different colors could be given to different sections of the light panel. [0015] of the patent in dispute described how to implement the features of claim 5: multiple light sources having different colors could provide their light to different portions of the light panel. In another implementation, the intensity of light sources (having different colors) could be changed (changing the voltage, for example) to provide different amounts of particularly colored light to different portions of the light panel. In other words, the diffractive outcoupling system was adapted to deal with light of any color (not only white light) and provide the colored light on the light emitting surface thereof.

- The priority document disclosed that the light diffractive structure on the light panel was a pixilated structure. The divergent grooves of the pixilated structure were illustrated in figure 1b. The grating of the pixels could be divergent recesses and/or grooves. Divergent recesses and/or grooves were disclosed in the sense of different

directions – horizontal (type A), vertical (type B) – but also in the sense of different recesses and/or grooves, which was a redundancy with the feature size and/or shape of the recesses and/or grooves. Figure 1b showed different pixels type A and type B differing in the size and/or shape of the recesses and/or grooves – binary/squared, prismatic/triangle, sinusoidal, blazed. The grating pixels having different diffraction efficiency were placed at different positions on the outcoupling system. Thus, the person skilled in the art received all the information claimed in present claim 1 from the priority document.

- As the priority of the patent in dispute was valid document D1 was not relevant with respect to novelty according to Article 54 (3) EPC. Independent from this fact claim 1 of the patent in dispute was new over the whole content of D1. D1 disclosed patterns with pixel-like areas. Some areas had an orientation of a diffractive surface formation to distribute light coming from the light source to form macroscopically uniform lighting. Other areas had a diffractive surface formation to couple light out from the light pipe in order to produce lighting. In other words, some pixels were for distribution of light in the light pipe and other pixels were for outcoupling the light from the light pipe. However, this was not the teaching of the patent. According to claim 1 of the patent the diffraction efficiency was a function of place to optimize lighting. The diffraction efficiency was based on the structures of the pixels. According to the patent in dispute there were pixels with more or less outcoupling of

light and more or less distribution of light. However, the technical teaching was not to use pixels only for distribution and pixels only for outcoupling. Insofar, claim 1 was new over D1 as the characterizing part of the claim was not disclosed in D1.

- Document D22 related to a splitter which separated the wavelengths of an incoming signal. The wavelengths were outcoupled from the planar waveguide and each beam corresponding to a wavelength was focused at a point out of the panel. The aim of this document was not to make the outcoupled illumination uniform but, on the contrary, to focus different wavelengths at different points out of the panel. The purpose and functions of the subject matter disclosed in D22 concerned signal handling and optical storage arrangements. In contrast thereto, the invention concerned a light panel for illumination purposes.

- Document D3 did not disclose pixilated structures, but continuous grooves on the illuminating surface. The characterizing part of claim 1 was not disclosed in this document. Thus, the subject matter of claim 1 of the patent was new over D3.

- According to the patent it was the object of the invention to provide a more uniform illumination from the light panel. Document D2 was the closest state of the art. This document disclosed a light guide plate using diffraction of light. The light guide plate consisted of a transparent plate. A light source was located at one end of the

transparent plate. The light guide plate had a diffraction grating printed on its bottom surface such that a grating part width/non-grating part width ratio was varied so as to enhance the uniformity of illumination on the top surface of the light guide plate. The grating structures were grooves over the width of the light guide. However, a uniform outcoupling could not be achieved with this construction. D2 disclosed the features of the preamble of claim 1. D2 did not disclose pixilated grating structures.

- There was no link between D2 and D22, as D2 was concerned with uniform illumination and D22 related to a beam splitter. Consequently, the person skilled in the art would not combine the disclosures of these two documents.

- D3 disclosed a diffractive optical device having a substrate for transmission of light therethrough and a grating section located on the substrate. The gratings were formed by micro-grooves extending continuously across the entire light surface. The weakness of this diffractive optical device was a non-optimally designed grating pattern and a more or less non-uniform illumination. Thus, this document did not go beyond the preamble of claim 1 and did not render the subject matter of claim 1 obvious, neither alone or in combination with another document.

VIII. As announced with his letter of 24 May 2013, the appellant opponent did not attend the oral proceedings before the board.

Reasons for the Decision

1. The appeal is admissible.
2. *Absence of the appellant opponent at the oral proceedings*
 - 2.1 The appellant opponent was not represented at the oral proceedings before the board, as announced with his letter of 24 May 2013.
 - 2.2 According to Article 15(3) RPBA the board is not obliged to delay any step in the proceedings, including its decision, by reason only of the absence at the oral proceedings of any party duly summoned who might then be treated as relying only on its written case.
 - 2.3 The objections raised by the appellant opponent in writing were thus considered and discussed at the oral proceedings.
3. *Identity of the patent proprietor*
 - 3.1 The appellant opponent argued in the letter of 24 May 2013 that the identity of the patent proprietor was uncertain. The records of the EPO showed as proprietor Oy Modilis Ltd of Finland. However, according to the Finnish trade registry no company of such name existed. The name Oy Modilis Ltd was changed to Oy Silidomia on 18 October 2010.

3.2 With the letter of 11 June 2013 the respondent proprietor submitted a copy of the Assignment of Patent Rights from Oy Modilis Ltd to Modilis Holding LLC, a Delaware corporation, USA, mentioning the contested patent and signed in Helsinki, Finland on 4 October 2010. A corresponding entry was made to the EPO's records.

3.3 The board is thus satisfied that Modilis Holding LLC is the proprietor of the contested patent and as such the respondent in the present appeal proceedings.

4. *Sufficiency of disclosure (Article 100(b) EPC 1973)*

4.1 Claim 1

4.1.1 The appellant opponent argued that the invention claimed in claim 1 was not disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art, since one of the characteristics of claim 1 was optimization of filling factor and/or shape and/or profile and/or size in such a way that the diffraction efficiency was a function of place.

4.1.2 The diffraction efficiency is the relation between the light that is incident on and the light that is diffracted by a diffraction grating. It is known in optics that the diffraction efficiency depends on the filling factor, shape, profile and size of the diffraction grating. Stating that these parameters are optimized so that the diffraction efficiency is a function of place merely means that one or more of

these parameters varies from one point to another of the grating.

4.2 Claim 5

4.2.1 The appellant opponent also argued that there was no teaching to the skilled person how to carry out the embodiments of granted claims 5 and 6.

4.2.2 Claim 5 of the respondent's proprietor sole request is now a combination of granted claims 5 and 6. The basis of this embodiment is given in [0011]-[0015], in particular [0015] and Figure 1 of the patent. In this embodiment different sections of the light panel are illuminated by light sources 1, 1a having different color. The board considers hence that the skilled person is able to illuminate different regions of the light panel with different colors by using different light sources and corresponding diffraction structures.

4.3 The board judges for these reasons that the claimed invention is disclosed in a manner sufficiently clear and complete for it to be carried out by a skilled person.

5. *Validity of the priority date*

5.1 The appellant opponent argued that the earlier Finnish application merely described in very general terms that an outcoupling system was arranged on the entire panel element all over its light surface in such a way that the diffraction efficiency was a function of place. Claim 1 of the patent, however, claimed a number of different specific embodiments, each having been

limited considerably from the general disclosure by specific features and various specific combinations. Such level of detail was not part of the content of the alleged priority application.

5.2 In fact the portion of claim 1 *"such that divergent recesses and/or grooves of various sizes and/or shapes are used to constitute a plurality of divergent local grating pixels of various sizes and/or shapes having the filling factor, shape, profile and/or size thereof optimized,"* has no literal basis in the priority document D0.

5.3 The opposition division however made a detailed analysis of this portion of claim 1 (point V of the present decision). The board has studied this analysis and does not see any reasons in the appellant's arguments to depart from its conclusion, namely that the contested patent is entitled to the priority date of D0 (Article 87(1) EPC 1973).

6. *Amendments*

6.1 New claim 5 is a direct combination of granted claims 5 and 6. No new subject-matter has been added to the patent nor has its scope of protection been extended, since granted claim 6 depended only on granted claim 5, ie new claim 5 entirely corresponds to granted claim 6. Granted claim 5 has been deleted.

6.2 Paragraph [0024] of the description has been amended in that in the sentence *"The diffractive out- or incoupling system, such as diffractive structures or gratings, can be constituted by using not only*

divergent recesses and grooves of pixel structures but also binary pixels, whereby there is a distinctly perceivable ridge (top corner), a bottom, as well as a recess/groove, having its length modifiable from dot to infinity" the expression "*from dot to infinity*" has been deleted (page 4, line 54). The deletion of this expression from the description, however, does not extend the content of the patent, since on the contrary it restores to the term "*pixel*" its usual meaning of picture element, ie something having a small spatial extension. By defining in the granted patent that the length of a "*pixel*" could be from "*dot to infinity*" doubts could arise whether the present patent employed the term "*pixel*" in an unconventional manner and whether a diffraction grating extending across the whole light panel could be considered to be a "*local grating pixel*". These doubts have been now removed. This amendment was necessary to overcome an objection of lack of novelty over documents D1 and D3 and was hence occasioned by a ground of opposition (Rule 80 EPC).

6.3 The requirements of Article 123(2) and (3) EPC are thus fulfilled.

7. *Novelty*

7.1 The appellant opponent argued that each one of documents D1, D3 and D22 took away the novelty of the light panel of claim 1. He argued that the description of the contested patent redefined a "*pixel*" as being an element having its length modifiable from dot to infinity and that for this reason a recess or groove

extending across a panel element should be considered also a "*pixel*".

7.2 However, as mentioned under point 6.2 of this decision, the description has been amended to remove the doubts that could arise in relation to the scope of the term "*pixel*". It is the view of the board that by this amendment the term "*pixel*" maintains its usual meaning of pixel element, ie something having a reduced spatial extension.

7.3 Document D1

7.3.1 Document D1 is a European patent filed on 28 December 1999, claiming the priority date of 30 December 1998 of document D19. The corresponding patent application was published on 5 July 2000.

The patent under appeal was filed on 19 May 2000, claiming the priority date of 28 May 1999 of document D0. The corresponding PCT-patent application was published on 7 December 2000.

7.3.2 However, Figures 9A, 9B, 10A and 10B, as well as the corresponding portions of the description of document D1 are absent from document D19. These figures of D1 disclose a light panel with a grating structure formed by diffractive pixels 903, 904. A light panel with a grating structure formed by diffractive pixels is however not derivable from the priority document D19 which only discloses a grating structure formed by transverse or curved grooves extending from one side of the panel element to the other (D19; Figures 7A-7C; page 6, lines 15-26).

7.3.3 The board finds therefore that the portions of D1 that are entitled to the priority date of D19 and thus belong to the prior art under Article 54(3) EPC do not disclose a light panel element with a diffractive light outcoupling system constituted by a plurality of divergent local grating pixels of various sizes and/or shapes.

7.4 Document D3

Document D3 discloses a diffractive optical device having a plurality of linear or curved grooves (Figures 5, 8, 13 and 18). These devices are used as an off-axis lens or cylindrical lens for optical data recording devices (column 5, lines 15-16, lines 66-67; column 9, lines 34-35; column 12, lines 9-11, and lines 55-56). Document D3 however does not disclose any diffraction grating pixels.

7.5 Document D22

7.5.1 Document D22 discloses an optical arrangement for processing an optical wave. Although the opposition division accepted that the device of D22 could be considered to be a light panel (point 3.2 of the decision under appeal), the board disagrees. It is the established case law that the words used in a claim should be given their normal meaning unless there are reasons to depart from that meaning. In the present case the term "light panel" is intended to mean a device used for illuminating something and is intended to be observed by a person. This corresponds entirely to the usual understanding of this term. The device of

D22 to the contrary is not intended to illuminate anything and is not intended to be observed during use by a person, but is intended to be used in an optical interconnection system to focus most of the outcoupled optical power into desired spots in order to reduce power loss and suppress spurious light. It should provide the following functions: (1) radiating the guided optical wave out of the optical waveguide; (2) splitting the radiated optical wave into a number of optical waves; and (3) focusing the radiated optical wave(s) at a finite distance away from the optical waveguide (page 1, lines 14-29). These are not the properties one would usually associate with a "light panel".

The board finds for these reasons that document D22 does not disclose a "light panel".

7.5.2 Furthermore, as argued by the opposition division, the diffractive structure of D22 is not arranged on the entire panel element, but covers only a limited part of that panel (Figure 1c, 7a and 7b).

7.6 The board judges for these reasons that the light panel of claim 1 is new within the meaning of Article 54(1) EPC 1973.

8. *Inventive step*

8.1 The appellant opponent argued that the light panel of claim 1 lacked an inventive step over a combination of document D22 and the common general knowledge of the skilled person or a combination of document D22 either with document D2 or document D3.

- 8.2 Document D22 however does neither disclose a light panel nor is it related to the more general field of illumination. Hence any attack on inventive step that starts from document D22 faces the difficulty of explaining why the skilled person would choose as starting point a document that is not related to the device he wants to improve. For this reason the board considers that any inventiveness attack that starts from document D22 is bound to fail.
- 8.3 The appellant opponent also argued that the light panel of claim 1 was obvious having regard to a combination of document D2 with documents D3 or D22.
- 8.4 Document D2 discloses a conventional light panel using a diffraction grating. The back surface 2b of the light panel has a diffraction grating 3 formed thereon. The ratio between the widths of the grating parts to the widths of the non-grating parts is varied so as to become progressively greater in the direction away from the light source 4 so that the quantity of diffracted light increases as the light available from the light source 4 decreases (column 5, lines 18-34; Figures 1 and 2). The board considers therefore that document D2 is a reasonable starting point from which an attack on inventive step could be successfully launched. In other words, document D2 can be regarded as the closest state of the art.
- 8.5 The light panel of claim 1 differs from the light panel of D2 in that the diffraction structure is formed by divergent recesses and/or grooves of various sizes

- and/or shapes constituting a plurality of divergent local grating pixels of various sizes and/or shapes.
- 8.6 The technical problem addressed by the differentiating features is that of improving the uniformity of illumination in areas of the display. This corresponds to the problem originally stated in the contested patent (page 2, lines 35-36).
- 8.7 Document D3, however, does not disclose a structure formed by diffracting pixels. It discloses instead a diffraction grating formed by rectilinear or curved grooves (see point 7.4 of this decision). Hence a combination of documents D2 and D3 cannot render obvious the present invention, ie the use of local grating pixels. By using a structure formed by diffracting pixels the illumination uniformity can be improved, since it allows more freedom of design of the diffracting structure.
- 8.8 The board furthermore agrees with the finding of the opposition division in the decision under appeal that documents D2 and D22 cannot be combined as they relate, although both falling within the general field of optics, to different technical fields (see point 7.5.1 of this decision).
- 8.9 The board finds for these reasons that the light panel of claim 1 involves an inventive step within the meaning of Article 56 EPC 1973.
9. Hence, since in the board's judgment the patent as amended meets the requirements of the Convention, it shall be maintained as amended (Article 101(3) (a) EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to maintain the patent in an amended form in the following version:

Description: pages 2, 3, 5 of the patent specification;
pages 4 as filed in the oral proceedings as Encl.
1;

Claims: 1-7 as filed in the oral proceedings as new
main request;

Drawings: Figs. 1a, 1b, 1c, 2a, 2b, 3, 4, 5, 6a, 6b, 7
of the patent specification.

Registrar

Chair

S. Sánchez Chiquero

G. Eliasson