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**Datasheet for the decision
of 13 June 2007**

Case Number: T 0991/05 - 3.4.02

Application Number: 00954995.7

Publication Number: 1136850

IPC: G02B 6/44

Language of the proceedings: EN

Title of invention:

Optical fiber line, optical transmission line, production method of optical cables and method of laying optical transmission lines

Applicant:

Sumitomo Electric Industries, Ltd.

Opponent:

-

Headword:

-

Relevant legal provisions:

EPC Art. 52(1), 54, 56

Keyword:

"Novelty and inventive step (no) decision according to the state of the file"

Decisions cited:

-

Catchword:

-



Case Number: T 0991/05 - 3.4.02

D E C I S I O N
of the Technical Board of Appeal 3.4.02
of 13 June 2007

Appellant: Sumitomo Electric Industries, Ltd.
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Chuo-ku
Osaka-shi,
Osaka 541-0041 (JP)

Representative: HOFFMAN EITLE,
Patent- und Rechtsanwälte
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 10 March 2005
refusing European application No. 00954995.7
pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: A. G. Klein
Members: F. Narganes-Quijano
B. Müller

Summary of Facts and Submissions

I. The appellant (applicant) lodged an appeal against the decision of the examining division to refuse European patent application No. 00954995.7. The application is based on the International application No. PCT/JP00/05713 published as WO 01/18572, the English translation of the application having been published in accordance with Article 158(3) EPC as EP-A-1136850.

During the first-instance proceedings the examining division referred, among others, to the following documents:

D1: "8 x 10 Gb/s transmission through 280 km of dispersion-managed fiber" A. R. Chraplyvy *et al.*, IEEE Photonics Technology Letters Vol. 5, No. 10, 1993, New York (US); pages 1233 to 1235

D2: WO-A-9720403

D3: GB-A-2299473

and in the decision under appeal the examining division held that the subject-matter of the claims then on file did not involve an inventive step (Articles 52(1) and 56 EPC).

II. With the statement setting out the grounds of appeal the appellant submitted a new claim 1 amended according to a main request replacing the claim 1 of the set of claims upon which the decision was based, and a set of claims amended according to an auxiliary request. The appellant requested setting aside of the decision under appeal and the grant of a patent. The appellant also requested oral proceedings on an auxiliary basis.

III. Oral proceedings were appointed, as requested by the appellant. In a communication pursuant to Article 11(1) of the Rules of Procedure of the Boards of Appeal (RPBA), annexed to the summons to attend oral proceedings, the Board gave a preliminary assessment of the case. In particular, the Board noted that claim 1 of the main request would not appear to define novel subject-matter (Articles 52(1) and 54 EPC) with regard to the disclosure of documents D1, D2 and D3, and that the remaining independent claims of the main request and the independent claims of the auxiliary request would not appear to define patentable subject-matter (Articles 52(1), 54 and 56 EPC). More particularly, as far as the subject-matter of claim 1 of the main request is concerned, the Board commented as follows:

"According to claim 1 of the main request, the plurality of positive dispersion optical fibres "are selected from a positive dispersion optical fiber group the cumulative dispersion value of which conforms to a distribution with a first average value (D_A) which is positive and a first standard deviation", wherein the average value and the standard deviation satisfy the conditions specified in the claim. However, since the claim is silent as to the selection criteria, the aforementioned feature does not determine any structural or functional technical feature of the plurality of positive dispersion optical fibres because, for any arbitrary plurality of positive dispersion optical fibres, there is always a group of positive dispersion optical fibres having the features as claimed and such that the arbitrary plurality of optical fibres can be considered to result from a

selection from among the fibres of this group [...]. Therefore, the selection procedure mentioned above does not impose any structural or functional technical limitation on the plurality of positive dispersion optical fibres.

It is noted that during the first-instance examination proceedings the appellant and the examining division agreed in interpreting the aforementioned feature in the sense that the "plurality" of fibres is constituted by the "group" of fibres itself and that the features of the group of fibres are those of the plurality of fibres (point 2.1 of the reasons of the contested decision and point 3.1 of the minutes of the oral proceedings held before the examining division). However, this interpretation is at variance with the express wording of the feature and, in addition, there appears to be no basis in the English translation of the application in support of such an interpretation. Accordingly, the Board is not in a position to follow the interpretation of the aforementioned feature made by the examining division during the first-instance proceedings.

As a matter of fact, the appellant has acknowledged in the statement of grounds of appeal (page 2, last paragraph) that "no specific selection criteria apply" for selecting the plurality of fibres from the corresponding group, so that the claims specifying the selection procedure mentioned above encompass as particular embodiments any possible selection criteria.

Document D1 discloses an optical fibre line comprising a plurality of positive and a plurality of negative

dispersion optical fibres having respectively a positive and a negative chromatic dispersion in a signal wavelength band (page 1233, second column, lines 2 to 11). Furthermore, the positive and the negative dispersion optical fibres are alternately arranged and coupled in the longitudinal direction of the optical fibre line (Figure 3).

In addition, for the reasons already given [...] above, the plurality of positive dispersion optical fibres disclosed in document D1 has the same technical features as - and therefore is technically indistinguishable from - a plurality of positive dispersion optical fibres that has been selected from a positive dispersion optical fibre group having the features specified in claim 1 of the main request. Indeed, it would be enough adding the plurality of positive dispersion optical fibres of document D1 to a series of optical fibres having the appropriate characteristics such that the resulting group of fibres satisfy the claimed conditions, and the plurality of fibres of document D1 would then constitute a "selection" from among the fibres of the group of fibres, it being noted that the group of fibres itself does not fall within the scope of protection sought by the claimed subject-matter. The same applies to the plurality of negative dispersion optical fibres defined in the claim.

Having regard to the above, claim 1 of the main request does not appear to define novel subject-matter over the disclosure of document D1 (Articles 52(1) and 54 EPC). The same conclusion can be drawn with regard to the disclosure of document D2 (abstract) and D3 (Figures 1,

3 and 7 together with page 10, line 24 to page 12, line 19)."

IV. In reply to the summons to attend oral proceedings, the appellant filed with letter dated 10.04.2007 a set of amended claims replacing the set of claims of the auxiliary request.

V. In a telephone conversation with the representative of the appellant, the rapporteur drew the attention of the appellant to document

DD: EP-A-0926519.

As recorded in the official notification of the telephone conversation, the rapporteur noted that the amended set of claims did not appear to satisfy the requirements of conciseness of Article 84 and Rule 29(2) EPC and that, in addition, "it would appear that the fact that the coupling loss at the junction between two optical fibres coupled to each other depends on the difference between the mode field diameters of the two fibres belongs to the common general knowledge of the person skilled in the art, see for instance paragraph [0027] of document [DD]. Consequently, the issue of inventive step (Article 56 EPC) of the subject-matter of claim 1 of the auxiliary request will have to be addressed during the oral proceedings."

VI. By letter dated 03.05.2007, the appellant submitted that there was not sufficient time available to consider the disclosure of the newly cited document DD and requested a change of date for the oral proceedings.

In reply to the appellant's request, the Board postponed to 13.06.2007 the oral proceedings initially scheduled for 08.05.2007.

VII. By letter dated 11.06.2007, the appellant informed the Board that it would not attend the oral proceedings and that no further written submission would be filed. The appellant withdrew the request for oral proceedings and requested a decision according to the state of the file.

VIII. Oral proceedings were held on 13.06.2007. As previously announced, the appellant was neither present nor represented at the oral proceedings. At the end of the oral proceedings the Board announced the decision reported in the order.

IX. Claim 1 amended according to the main request reads as follows:

"An optical fiber line (11) comprising:

 a plurality of positive dispersion optical fibers (14) having a positive chromatic dispersion in a signal wavelength band;

 a plurality of negative dispersion optical fibers (16) having a negative chromatic dispersion in the signal wavelength band;

 wherein the positive dispersion optical fibers (14) and the negative dispersion optical fibers (16) are alternately arranged and coupled in the longitudinal direction of the optical fiber line (11);

 characterized in that

 the plurality of positive dispersion optical fibers (14) are selected from a positive dispersion optical fiber group the cumulative dispersion value of

which conforms to a distribution with a first average value (D_A) which is positive and a first standard deviation;

the plurality of negative dispersion optical fibers (16) are selected from a negative dispersion optical fiber group the cumulative dispersion value of which conforms to a distribution with a second average value (D_B) which is negative and a second standard deviation;

the absolute value of the sum of the first and second average values (D_A , D_B) is not greater than 20% of the first average value (D_A); and

the absolute value of the difference between the first and second standard deviations is not greater than 20% of the first standard deviation."

Claim 1 amended according to the auxiliary request differs from claim 1 of the main request in that the claim further reads:

"and the ratio of the mode field diameter in the signal wavelength band of 1550 nm of any of said negative dispersion optical fibers (16) to the mode field diameter of any of said positive dispersion optical fibers (14) is at least 0.8 but not exceeding 1.2".

Both the main and the amended auxiliary requests include further independent claims and dependent claims the wording of which is not relevant to the present decision.

- X. During the written proceedings, no substantive argument was submitted by the appellant in response to the objections raised by the Board with regard to claim 1

of the valid main and auxiliary requests. The arguments in the statement of grounds of appeal in support of the appellant's requests pre-date, and thus have no bearing on the issues subsequently raised by the Board in the communication annexed to the summons to oral proceedings and in the telephone consultation.

Reasons for the Decision

1. The appeal is admissible.

2. In the communication pursuant to Article 11(1) RPBA annexed to the summons to oral proceedings the Board explained in detail why in its preliminary opinion the subject-matter of claim 1 amended according to the main request is not novel (Articles 52(1) and 54 EPC) with regard to the disclosure of any of documents D1, D2 and D3 (point III above). Subsequently, in the telephone consultation with the representative of the appellant (point V above), the Board noted that, as illustrated by the statements in paragraph [0027] of document DD, the further feature defined in claim 1 amended according to the auxiliary request appears to belong to the common general knowledge of the person skilled in the art and expressed its doubts as to whether the claimed subject-matter involved an inventive step (Article 56 EPC).

In the course of the proceedings the appellant made no substantive submissions in reply to the objections raised by the Board with regard to claim 1 of the present requests and, in addition, the appellant did not attend the oral proceedings and requested a

decision according to the state of the file. The appellant has therefore not availed itself of the opportunity to reply to the preliminary view expressed by the Board during the written proceedings.

After consideration of the issues addressed in the aforementioned communication and in the telephone conversation, and in the absence of any attempt by the appellant to refute or overcome the objections raised with regard to claim 1 of the main and auxiliary requests, the Board found no reason during the oral proceedings to depart from the preliminary opinion already expressed by the Board during the written proceedings.

Accordingly, noting that the appellant has had, and has failed to use, the opportunity to present comments on the objections raised by the Board (Article 113(1) EPC), the Board concluded during the oral proceedings that the subject-matter of claim 1 of the main and auxiliary requests does not comply with the substantive requirements of Articles 52(1), 54 and 56 EPC, and that consequently the requests of the appellant were not allowable. The appeal must therefore be dismissed for the reasons already communicated to the appellant and reproduced in points III and V above (Rule 66(2) (g) EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

M. Kiehl

A. G. Klein