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# Datasheet for the decision of 8 January 2009

**Case Number:** T 1231/06 - 3.4.02

**Application Number:** 97310466.4

**Publication Number:** 0851257

**IPC:** G02B 6/44

**Language of the proceedings:** EN

**Title of invention:**
Optical fiber connector housing

**Applicant:**
SIECOR CORPORATION

**Opponent:**
-

**Headword:**
-

**Relevant legal provisions:**
-

**Relevant legal provisions (EPC 1973):**
EPC Art. 54, 56

**Keyword:**
"Novelty and inventive step: yes (after amendment)"

**Decisions cited:**
-

**Catchword:**
-

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**Case Number:** T 1231/06 - 3.4.02

# D E C I S I O N
**of the Technical Board of Appeal 3.4.02**
**of 8 January 2009**

**Appellant:** SIECOR CORPORATION
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Hickory
NC 28601-0489 (US)

**Representative:** Wilson Gunn
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**Decision under appeal:** **Decision of the Examining Division of the European Patent Office posted 13 March 2006 refusing European application No. 97310466.4 pursuant to Article 97(1) EPC.**

**Composition of the Board:**

**Chairman:** A. Klein
**Members:** M. Stock
C. Rennie-Smith

## Summary of Facts and Submissions

I. The applicant and appellant has appealed against the decision of the examining division refusing European patent application number 97310466.4 (published as EP 0 851 257 A1). In the decision reference was made to the following document:

D4: EP-A-0 640 852

In the communication preceding the decision reference had been made in addition to the following documents:

D1: US-A-5 142 607
D2: DE 44 13 136 C
D3: US-A-4 971 421
D5: US-A-5 129 030

The examining division reasoned in its decision that document D4 disclosed all features indicated in claim 1 as amended and therefore that the subject-matter of claim 1 was not novel.

II. In its statement of grounds of appeal the appellant requested that the decision of the examining division be set aside and a patent be granted on the basis of amended claims according to a main request or an auxiliary request. The appellant argued that the subject-matter claimed is novel.

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

1. An optical fiber connector housing for providing cross-connection functions for optical fibers

terminated with connectors and having a minimum bend radius, said housing arranged to be mounted in a frame and comprising:

(a) first and second plate members (40, 42) which are generally parallel and spaced apart from one another;

said plate members being adapted for attachment to a supporting frame and each having front and rear edges (52, 54, 56, 58);

the front edge (54) of said second plate member (42) extending further forward than the front edge (52) of said first plate member (40);

(b) a connector panel (30) having a front face (66) and a rear face (68) and being adapted for mounting a plurality of optical fiber adaptors (70) therethrough wherein each said optical fiber adaptor (70) has a front side (72) and a rear side (74) and is adapted for receiving and mounting in optical alignment a pair of optical fibers (32), said fibers being routed from opposite sides of said adaptor (70) and each being terminated with a connector (76);

(c) a door (36) movable between an open position (36b) and a closed position (36a) in which one edge thereof is adjacent the front edge of said second plate member (42); and

(d) means (44) for releasably securing said door (36) in said closed position, the arrangement in use being such that when in said closed condition, said door (36) has a generally vertical orientation and is spaced from and parallel with said connector panel (30) thereby defining a forward cable area (92) bounded by said door (36), the front face (66) of said connector panel (30), and the forward portion (62) of said second plate member (42), and further being such that when in

said open position, said door (36) is not aligned with said connector panel (30), thereby allowing unrestricted access to said forward cable area (92);

wherein the connector panel (30) extends generally at right angles from the front edge (52) of said first plate member (40) and is connected to said second plate member (42) along an attachment line (60) which is rearwardly disposed with respect to the front edge (54) of said second plate member (42), thereby defining a forward portion (62) and a rear portion (64) of said second plate member (42);

said forward portion (62) of said second plate member (42) being between the front edge (54) of said second plate member (42) and said attachment line (60); and

said rear portion (64) of said second plate member (42) being between the attachment line (60) and the rear edge (58) of said second plate member (42);

and providing at least one side aperture (94) between at least one side edge (88) of said door (30) and the front face (66) of said connector panel (30), and a further aperture (96) between the front face (66) of said connector panel (30) and an edge (84) of said door (36) which is substantially perpendicular to said one edge (88),

whereby, when said door (36) is in the closed position, a plurality of optical fibers (32) each being terminated with a connector (76) and connected to the front side of an adaptor (70) on said connector panel (30) can be routed out of said forward cable area (92) by routing a first portion of said plurality of fibers (32) through said at least one side aperture (94) and routing a second portion of said plurality of fibers (32) through said further aperture (96), thereby

reducing the density of the cables routed in each direction while said door (36) protects said connectors (76) and optical fibres (32) in said forward cable area (92) from damage and maintains the minimum required bend radius of the optical fibres (32).

## Reasons for the Decision

*Amendments*

1. The subject-matter of Claim 1 according to the main request is based on a rearranged version of claim 1 as originally filed with the addition and modification, respectively, of the following features:

(i) The housing is arranged to be mounted in a frame.

(ii) Providing a further aperture (96) between the front face (66) of said connector panel (30) and an edge (84) of said door (36) which is substantially perpendicular to said one edge (88).

For the disclosure of feature (i) in the original application documents reference is made to the published application, column 4, lines 49-57.

Feature (ii) is disclosed in the application, Fig. 2 and column 7, lines 13-15. The definition of the edge 84, as amended, is clearer than the original definition "an edge of said door opposite said one edge".

Therefore the Board is satisfied that the subject-matter of claim 1 according to the main request does

not extend beyond the content of the application as originally filed.

*Novelty*

2. Claim 1 defines an optical fiber connector housing which inter alia comprises a connector panel for mounting a plurality of optical fiber adaptors having each a front side and a rear side for receiving and mounting in optical alignment a pair of optical fibers routed from opposite sides of the adaptor and terminated each with a connector. The Board could not in D4 identify any such adaptor for receiving optical fibers routed from opposite sides of the adaptor and terminated by a connector. The only elements in the device of D4 which could be equated to such adaptors are the "couplers" 11 as shown e.g. in Figures 3 or 5, but the couplers receive optical fibers from the front side only. At the rear side, the couplers are not adapted for receiving connectors terminating optical fibers as set out in present claim 1. They are operably engaged to circuit boards 50 provided there (see also column 3, lines 42 to 48). Furthermore claim 1 defines at least one side aperture between at least one side edge of the door and the front face of the connector panel and a further aperture between the front face of the connector panel and an edge of the door which is substantially perpendicular to the side edge. Document D4, see Figures 3 and 6, discloses a tray for organising optical fibers 20, comprising side apertures between one edge of the base plate 31 of the tray 30 and the front face of the panel of connectors 21. The base plate 31 referred to in D4 can be considered as a door in the meaning of present claim 1, because it is

movable between an open and a closed position, see D4, Figure 6. Therefore the apertures formed in D4 at both ends of the tray 30 can be considered as the side apertures indicated in present claim 1. However, there is no further aperture between the front face of the panel of connectors 21 and an edge of the door which is perpendicular to the side edge (base plate 31). Even though the lower flange 34 having openings 36 (see Figures 3 and 5) is generally arranged perpendicular to the side edges, it is not an edge of the door and its openings 36 only allow routing of fibres from the buffer area 34 to the inside of the tray.

3. Thus the Board concludes that the subject-matter of claim 1 according to the main request is not anticipated by D4. In its only communication preceding the decision the examining division stated that the claimed subject-matter was also disclosed in D5. In fact the trays of the shelves 11 and 14 described in D5 provide apertures 16 and 17, which could be identified with the side apertures defined in present claim 1. However, the device of document D5 does not exhibit the general structure set out in claim 1. It does not in particular comprise first and second plate members such that the second extends further forward than the first. Neither are there in this device any adaptors for receiving optical fibers from opposite sides.

4. Since the other documents cited are less relevant, the Board concludes that the subject-matter of claim 1 according to the main request is novel.

*Inventive step*

5. Moreover the subject-matter of claim 1 in the Board's view involves an inventive step. The Board indeed could not identify any way in which a person skilled in the art would be lead in an obvious manner from the closest prior art represented by D4 or D5 to an optical fiber connector housing with all the details defined in present claim 1. The Board in this respect shares the examining division's view set out in its only communication that the citations D1 to D3 are not particularly relevant, despite their categorisation as "X" in the European search report. The subject-matter of claims 2 to 5 also involves an inventive step by virtue of their dependence upon claim 1.

*Other matters*

6. A new page 5 containing a reference to claim 1 and the dependent claims replaces pages 5 to 7 as originally filed which are cancelled, accordingly. Moreover, in the description, at page 3, a reference to document D4 has been added to the existing three references including D5. Thus the Board is satisfied that the requirements of the EPC 1973 are met with respect to the claims according to the main request and the adapted description.

7. Since the appellant's main request is allowable, there was no need to discuss the auxiliary request or to appoint oral proceedings.

## Order

## For these reasons it is decided that:

1. The decision of the examining division is set aside.

2. The case is remitted to the first instance with the order to grant a patent in the following version:

Description:
Pages: 1, 2, 4, 8, 10 to 16 as originally filed.
Pages: 3 filed with letter dated 13 January 2005.
Pages: 5, 9 and 17 filed with letter dated 12 July 2006.

Claims:
Nos.: 1 to 5 according to the main request filed with letter dated 12 July 2006.

Drawings:
Sheets: 1/3 to 3/3 as originally filed.

The Registrar: The Chairman:

M. Kiehl A. G. Klein