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**Datasheet for the decision
of 12 September 2018**

Case Number: T 1648/17 - 3.5.03

Application Number: 10850600.7

Publication Number: 2568625

IPC: H04B10/297

Language of the proceedings: EN

Title of invention:

Long reach optical amplification device, passive optical network and method for transmitting optical signals

Applicant:

ZTE Corporation

Headword:

Long reach optical amplification device/ZTE

Relevant legal provisions:

RPBA Art. 12(4)

Keyword:

Admissibility of requests (no)

Decisions cited:

G 0010/93, T 1569/13



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Case Number: T 1648/17 - 3.5.03

D E C I S I O N
of Technical Board of Appeal 3.5.03
of 12 September 2018

Appellant: ZTE Corporation
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 10 February
2017 refusing European patent application No.
10850600.7 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman F. van der Voort
Members: A. Madenach
P. Guntz

Summary of Facts and Submissions

- I. The present appeal is against the decision of the examining division refusing European patent application No. 10850600.7, published as EP 2 568 625 A1, on the ground that the subject-matter of claims 1 and 8 of the sole request did not involve an inventive step (Articles 52(1) and 56 EPC), having regard to D9, the common technical knowledge as exemplified by D1 and the teaching of D10.
- II. In its statement of grounds of appeal, the appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the claims of a main or, in the alternative, a first auxiliary request, both requests filed with the statement of grounds of appeal. As an auxiliary measure, it requested oral proceedings.
- III. In a communication pursuant to Article 15(1) RPBA accompanying a summons to oral proceedings, the board noted, referring to Article 12(4) RPBA, that the admissibility of the requests filed with the statement of grounds of appeal would have to be discussed at the oral proceedings.
- IV. No substantive reply to the board's communication was received.
- V. With a letter dated 10 August 2018, the appellant informed the board that it would not attend the oral proceedings.
- VI. Oral proceedings took place on 12 September 2018 in the absence of the appellant.

At the end of the oral proceedings, after due deliberation, the chairman announced the board's decision.

VII. Claim 1 of the main request reads:

"A long reach optical amplification device comprising a first optical diplexer (202), one downlink optical amplifier (204), a second optical diplexer (206), and one uplink optical amplifier (208), wherein

the first optical diplexer (202) is configured to transmit multiple downlink optical signals in a plurality of different wavelength ranges corresponding to different passive optical networks from a first segment of Feeder fiber to the downlink optical amplifier (204), and couple multiple uplink optical signals in the plurality of different wavelength ranges corresponding to the different passive optical networks outputted by the uplink optical amplifier to the first segment of Feeder fibre; and the first optical diplexer (202) has an interface connected to the first segment of Feeder fiber, an output terminal connected to the downlink optical amplifier (204), and an input terminal connected to the uplink optical amplifier;

the downlink optical amplifier (204) is configured to amplify the multiple downlink optical signals of the passive optical networks, and to output the amplified downlink optical signals to the second optical diplexer (206);

the second optical diplexer is configured to couple the multiple downlink optical signals of the passive optical networks outputted by the downlink optical amplifier (204) to a second segment of Feeder fiber,

and transmit multiple uplink optical signals of the passive optical networks from the second segment of Feeder fiber to the uplink optical amplifier; and the second optical diplexer (206) has an interface connected to the second segment of Feeder fiber, an output terminal connected to the uplink optical amplifier, and an input terminal connected to the downlink optical amplifier (204); and

the uplink optical amplifier (208) is configured to amplify the multiple uplink optical signals associated with the passive optical networks, and to output the amplified uplink optical signals to the first optical diplexer (202);

wherein the first segment of Feeder fiber is a Feeder fiber connected between the device and an optical line termination (OLT); and the second segment of Feeder fiber is a Feeder fiber connected between the device and an optical splitter;

wherein the device further comprises a local management box (210) which controls and manages the uplink optical amplifier (208) and the downlink optical amplifier (204) under instruction from the optical line termination;

wherein the local management box (210) comprises a local controller and an embedded optical network termination (EONT); and

wherein EONT is configured to receive the instruction from the optical line termination, and transfer the instruction to the local controller, which controls the multiple downlink optical signals in the downlink optical amplifier (204) and the multiple uplink optical

signals in the uplink optical amplifier (208) according to the instruction."

As compared with claim 1 of the main request, claim 1 of the first auxiliary request comprises, apart from various essentially linguistic modifications, the additional features that

"each interface is configured to permit light to enter and exit" and that

"the uplink optical amplifier (208) is a semiconductor optical amplifier having a bandwidth equal to or greater than 70 nm;

the downlink optical amplifier (204) comprises:

a wave splitter (2042) being configured to split the multiple downlink optical signals into two paths according to wavelengths of the downlink optical signals, with one path being transmitted to a first optical amplifier (2044) and the other path to a second optical amplifier (2046),

the first optical amplifier (2044) being configured to amplify and output the downlink optical signals received by the first optical amplifier (2044) as first downlink optical signals,

the second optical amplifier (2046) being configured to amplify and output the downlink optical signals received by the second optical amplifier (2046) as second downlink optical signals; and

a wave combiner (2048) being configured to combine the first downlink optical signals outputted by the first

optical amplifier (2044) and the second downlink optical signals outputted by the second optical amplifier (2046) into an amplified downlink optical signal and output the amplified downlink optical signal to the second optical diplexer (206), and

wherein the first optical diplexer (202) and the second optical diplexer (206) are implemented using an optical circulator".

Reasons for the Decision

1. Admissibility of the requests (Article 12(4) RPBA)

1.1 In accordance with Article 12(4) RPBA, the board is empowered to not admit requests which could have been presented in the first-instance proceedings. In the present case, the examining division issued six communications (including the International Preliminary Report on Patentability, the European Search Opinion and the minutes of a telephone conversation), thus providing the applicant with ample opportunity to file requests during the first-instance proceedings. By not filing the present requests until with the statement of grounds of appeal, the applicant deprived the examining division of the possibility of rendering a decision on the basis of these requests. It is, however, established case law that *ex parte* proceedings before the boards of appeal are primarily concerned with examining the contested decision (G 10/93, OJ EPO 1995, 172, points 3 and 4 of the Reasons). The appeal proceedings are intended to review the correctness of the first-instance decision rather than to continue examination by other means.

- 1.2 In detail, the decision of the examining division is based on a request comprising a set of claims filed on 19 December 2016. As compared with claim 1 of that request, claim 1 of both present requests has *inter alia* been modified to include the additional feature that the uplink and downlink optical signals are in a plurality of different wavelength ranges corresponding to different passive optical networks, with consequential adaptations.
- 1.3 The appellant's arguments in the statement of grounds of appeal with respect to novelty and inventive step rely exclusively on this additional feature (see point 2.3 thereof), which was not considered by the examining division when examining the question of inventive step (Article 56 EPC) and could not reasonably have been considered since it derives from the description of a fourth embodiment (pages 13 and 14) and was not part of the claims as originally filed. The examining division also could not consider whether or not this feature introduces new aspects requiring, for the first time, examination for compliance with Article 123(2) EPC. *Prima facie*, the feature relating to a plurality of different wavelength ranges, which according to the appellant was originally disclosed in the fourth embodiment, appears to be an non-admissible intermediate generalisation of the specific wavelength ranges disclosed in connection with this fourth embodiment and omits the following features which the board considers to be inextricably linked to this embodiment: the wavelength ranges of 1480 - 1500 nm and 1575 - 1580 nm for the downlink and of 1290 - 1330 nm and 1260 - 1280 nm for the uplink.
- 1.4 The board further notes that, since neither the problem solved by the above-mentioned additional feature, which

it considers to be the possibility to connect the long reach optical amplification device to several passive optical networks, nor its solution has been discussed at any point during the examination proceedings, and since none of the previous claims on file (independent or dependent) included this feature, an entirely fresh case has been created.

If the requests were to be admitted, the board would thus have to remit the case to the examining division, *inter alia* in order that a further search can be carried out. This, however, would be entirely contrary to procedural expediency and to the purpose of the appeal procedure noted above. Clearly, if the applicant had wished to pursue this subject-matter, it could and should have filed corresponding amendments during the examination procedure. The applicant chose not to attend the oral proceedings before the examining division. Hence, it was clear that the applicant did not wish to submit any further amendments or requests in the examination procedure as from that point (cf. also T 1569/13, point 4 of the reasons).

- 1.5 The appellant made no submissions regarding the admissibility of the main request and the first auxiliary request.
- 1.6 For the above reasons, the board decided that the main request and the first auxiliary request were not admitted into the appeal proceedings (Article 12(4) RPBA).
2. *Conclusion*

As there is no allowable request, it follows that the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



G. Rauh

F. van der Voort

Decision electronically authenticated