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D E C I S I O N
of 4 December 2002

Case Number: T 1073/98 - 3.4.2

Application Number: 91906562.3

Publication Number: 0523084

IPC: G02B 6/16, G02B 6/16, Go2B 6/34, G02B 5/18

Language of the proceedings: EN

Title of invention:
A method of forming a refractive index grating in an optical waveguide

Applicant:
BRITISH TELECOMMUNICATIONS public limited company

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 123(2), 56
EPC R. 67

Keyword:
"Added subject-matter - yes (main and first to fourth auxiliary requests)"
"Novelty and inventive step - yes (fifth auxiliary request)"
"Reimbursement of appeal fee (no)"

Decisions cited:
-

Catchword:
T 0331/87, T 0957/97, T 0921/94

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1073/98 - 3.4.2

D E C I S I O N
of the Technical Board of Appeal 3.4.2
of 4 December 2002

Appellant: BRITISH TELECOMMUNICATIONS public limited company
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Representative: Read, Matthew Charles
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Decision under appeal: Decision of the Examining Division of the European Patent Office posted 25 June 1998 refusing European patent application No. 91 906 562.3 pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: E. Turrini
Members: M. A. Rayner
B. J. Schachenmann

Summary of Facts and Submissions

I. The applicant has appealed against the decision of the examining division refusing European patent application number 91 906 562.3 (EP-A-0 523 084 the international publication number being WO-A-91 15787 with filing date of 26 March 1991 and claiming priority date of 6 April 1990). The patent application relates to a method of forming a photo-induced refractive index grating in an optical waveguide and during the first-instance proceedings reference was made, *inter alia*, to the following documents:

D3: WO-A-86 01303

D4: "Optical Fiber Communications: Principles and Practice", J. M. Senior, 2nd edition, 1992, Prentice Hall International Ltd, GB; pages 360 to 362 and 373

D5: US-A-4 955 025 (published 4 September 1990)

D6: EP-A-0 435 217 (designated States GB, FR, DE)

D7: Journal of Lightwave Technology, Volume LT-4, No. 7, 1986, pages 956 to 960; L Reekie *et al.*, "Tunable single-mode fibre lasers"

II. In the decision under appeal, the examining division found that features relating to a block of refractive material were disclosed as essential in the application as originally filed and that the omission of these features in the then current claims constituted an unallowable generalization under Article 123(2) EPC.

During the examination proceedings, the applicant had also submitted arguments (see letter dated 23 November 1994) in support of a claim directed to a method of making a laser device and including *inter alia* formation of a photo-induced grating by means of the block of refractive material. The examination division indicated that it was convinced by these arguments of the applicant (see point 1 of communication dated 20 January 1995).

According to the minutes of oral proceedings held before the examining division, the division explained its view that Article 123(2) EPC was contravened (see points 4, 6, 7 and 11). The applicant presented its case in reply to the objections of the division in connection with Article 123(2) EPC (see points 5, 7, 9 and 11).

The examining division also advanced its view that in the light of its objections under Article 123(2) EPC, it would not be procedurally efficient to deal with issues relating to Rule 86(4) EPC).

III. In the appeal proceedings, the appellant requests setting aside of the decision, the grant of a patent, reimbursement of the appeal fee and on an auxiliary basis oral proceedings. Oral proceedings were in consequence appointed by the board.

In a communication annexed to the summons to oral proceedings, the board informed the appellant as follows:

Amendments - Article 123(2) EPC

The board drew attention to seemingly essential features relating to the block of refractive material as disclosed in original claim 1, page 2, lines 7

to 26, page 3, first paragraph, and the paragraph bridging pages 3 and 4 the application as published. In addition, according to page 4, third paragraph, and the paragraph bridging pages 6 and 7 the manufacture of the fibre laser including a photo induced grating also involves forming the grating by means of the block of refractive material (see in particular page 5, lines 30 to 32 and page 6, lines 9 to 12 and 28 to 32). The board doubted whether the skilled person understands that the teaching of document D3 is to be used. Thus claims not referring to the "block" appeared to involve an impermissible extension.

Reimbursement of the appeal fee - Rule 67 EPC

The board doubted whether procedural deficiencies alleged by the appellant amounted to substantial procedural violations justifying reimbursement of the appeal fee. This was because the appellant appeared to have had adequate opportunity to present their case during the oral proceedings before the division and once the division reached a negative view on Article 123(2) EPC, it was no longer obliged to consider further any claims containing in its view offending subject matter.

At the end of the oral proceedings, the board gave its decision.

IV. The case of the appellant as presented for decision at the oral proceedings before the board can be summarised as follows:

(i) *Requests*

Grant of a patent on the basis of claims according to a main request or a first to a fifth auxiliary request filed during the oral proceedings, or on the basis of

sets of claims according to a sixth or a seventh auxiliary request corresponding respectively to sets of claims according to fifth and the sixth auxiliary requests filed with the statement of grounds of appeal.

(ii) *Wording of independent claims*

In the following, the versions I are for designated states SE, NL, IT, SE and the versions II for designated states DE, FR, GB.

Main request - Version (I)

"1. A method of making a resonant laser device comprising an optical fibre configuration including a laser-active dopant, positioned between first and second reflective means to define an optical cavity of the laser device, characterised by forming at least one of the reflective means as a photo-induced refractive index grating (2) in the fibre configuration."

"11. A resonant laser device comprising an optical fibre (2) configuration including a laser-active dopant positioned between first and second reflectors which together define an optical cavity of the laser device, characterised in that at least one of said reflectors comprises a photo-induced refractive index grating in the fibre configuration."

Main request - Version (II)

The wording of claim 1 differs from that of claim 1 of version (I) according to the main request in that "including" is replaced by "that includes" and "characterised by" is replaced by "the method including", and by virtue of addition at the end of the claim of, "reflective at a wavelength in the region of 1.3 μm or 1.5 μm or 2.7 μm".

The wording of claim 11 differs from that of claim 11 of version (I) according to the main request in that "characterised in that" is replaced by "wherein", and "in the fibre configuration" is replaced by "in said fibre configuration, reflective at a wavelength in the region of 1.3 μm or 1.5 μm or 2.7 μm".

First auxiliary request - Version (I)

The wording of claims 1 and 11 is identical to the respective wording of claims 1 and 11 of version (I) according to the main request.

First auxiliary request - Version (II)

The wording of claims 1 and 11 correspond to the respective wording of claims 1 and 11 of version (II) according to the main request subject to deletion of the expression "or 2.7 μm".

Second auxiliary request - Version (I)

The wording of claims 1 and 11 is identical to the respective wording of claims 1 and 11 of version (I) according to the main request.

Second auxiliary request - Version (II)

The wording of claims 1 and 11 correspond to the respective wording of claims 1 and 11 of version (II) according to the main request subject to deletion of the expressions "1.3 μm or" and "or 2.7 μm".

Third auxiliary request - Version (I)

The wording of claims 1 and 11 is identical to the respective wording of claims 1 and 11 of version (I) according to the main request.

Third auxiliary request - Version (II)

The wording of claim 1 differs from that of claim 1 of version (I) according to the main request in that "including a laser-active dopant" is replaced by "that includes an erbium dopant", and "characterised by" is replaced by "the method including".

The wording of claim 11 differs from that of claim 11 of version (I) according to the main request in that "a laser-active dopant" is replaced by "an erbium dopant", and in that "characterised in that" is replaced by "wherein".

Fourth auxiliary request - Version (I)

"1. A method of making a resonant laser device comprising an optical fibre configuration including a laser-active dopant, positioned between first and second reflective means to define an optical cavity of the laser device, characterised by forming one of the reflective means as a photo-induced refractive index grating (2) in the fibre configuration, wherein the refractive index grating is formed by positioning the fibre against a first face (4, 24) of a block (5, 20, 30) of refractive material, and directing a beam of coherent optical radiation into the block so as to produce first and second beam portions (A,B) therefrom, the first beam portion (B) propagating directly to the first face of the block, and the second beam portion (A) passing to the first face after having been reflected at a second face (8, 16, 28) of the block whereby to produce interference between the beam portions and form a standing wave field within the fibre to record the grating therein."

The wording of independent claim 10 corresponds to that of claim 11 of version (I) according to the main request subject to deletion of the expression "at least".

Fourth auxiliary request - Version (II)

The wording of claim 1 differs from that of claim 1 of version (I) according to the fourth auxiliary request in that "including a laser-active dopant" is replaced by "that includes an erbium ion dopant", and "characterised by" is replaced by "the method including".

The wording of claim 10 differs from that of claim 11 of version (I) according to the main request in that "a laser-active dopant" is replaced by "an erbium ion dopant", "characterised in that at least one" is replaced by "wherein one", and "in the fibre configuration" is replaced by "in said fibre configuration".

Fifth auxiliary request - Version (I)

The wording of claim 1 is identical to that of claim 1 of version (I) according to the fourth auxiliary request, and independent claim 10 reads as follows:

"10. A resonant laser device comprising an optical fibre (2) configuration including a laser-active dopant positioned between first and second reflectors which together define an optical cavity of the laser device, characterised in that one of said reflectors comprises a photo-induced refractive index grating in the fibre configuration, the resonant laser device being obtainable by a method according to any of claims 1 to 9."

Claims 2 to 9 and claims 11 to 13 are appendant to claims 1 and 10, respectively.

Fifth auxiliary request - Version (II)

The wording of claim 1 is identical to that of claim 1 of version (II) according to the fourth auxiliary request.

The wording of independent claim 10 differs from that of claim 10 of version (I) according to the fifth auxiliary request in that "a laser-active dopant" is replaced by "an erbium ion dopant", "characterised in that" is replaced by "wherein", and "in the fibre configuration" is replaced by "in said fibre configuration".

Claims 2 to 9 and claims 11 and 12 are appendant to claims 1 and 10, respectively.

The wording of the claims according to the sixth and the seventh auxiliary requests is not subject of the present decision and therefore not given here (see point 6 of the reasons below).

(iii) *Arguments*

Amendments - Article 123(2) EPC

The skilled person would appreciate from the structure and the content of the application as originally filed that the application discloses two independent aspects. On the one hand, there is disclosed a first aspect relating to a new method of forming a photo-induced refractive index grating in an optical waveguide involving the use of a block of refractive material (claim 1 and page 2, lines 16 to 26 of the original application) and solving the problem of controlling the

positional alignment of prior art arrangements involving plural optical parts (page 2, lines 12 to 15 of the original application). On the other hand, there is disclosed a second aspect relating to a new tunable fibre laser including a reflective element constituted by a photo-induced grating and the corresponding method of manufacture. It is immediately apparent to the skilled reader that page 4, lines 7 to 17 of the original application sets out the technical problem to be solved by this second aspect, i.e. the provision of readily tunable fibre lasers for use in optical communication networks, and that the subsequent paragraph (page 4, lines 18 to 29) sets out a solution to the problem. As both the technical problem and the solution defining the second aspect are different from the technical problem and the solution according to the first aspect, the skilled reader would immediately understand that the original application discloses the second aspect as an independent aspect of the invention. Therefore, a solution to the problem of the second aspect is not prejudiced by the features deemed essential according to the first aspect, i.e. the use of a block of refractive material during the formation of the grating. This conclusion is further supported by

- the absence in the original disclosure of any explicit indication that the block might be essential for the manufacture of the fibre laser;

- the reference on page 4, lines 7 to 9 to "this tunability", which, as the skilled person would readily recognize, can be achieved by means of the block but also by other alternative means such as those disclosed in document D3 acknowledged on pages 1 and 2 of the original application and involving the use of mirrors instead of a block of refractive material;

- the reference on page 4, lines 18 and 19 to "the provision of new, specifically tuned lasers", this passage clearly pointing at novel, and hence potentially patentable lasers;

- the reference on page 4, lines 18 to 24 to the reflected frequency from the grating being monitored and adjusted during manufacture of the same "as described above", wherein "above" must be understood as referring to the whole portion of the specification preceding the paragraph and therefore as including not only the first aspect of the invention relating to the block, but also alternatively the prior art method disclosed in document D3; and

- original claim 14 defining as an additional independent invention a doped fibre laser *per se* including a grating "formed by any method previously claimed", where the product-by-process feature is to be interpreted as "formable" rather than "formed", and therefore as relating to subject matter patentable independently of the process, and in particular independently of the first aspect of the invention involving the use of the refractive block.

Furthermore, the gratings produced according to document D3 are indistinguishable from those formed by means of the block and for this reason the skilled person would recognise that the first aspect was merely one way of producing gratings for use in a laser according to the first aspect.

Therefore, the examining division was incorrect in concluding that the features relating to the use of a block of refractive material were essential in the method of manufacture of a photo-induced grating in a fibre laser.

In addition, contrary to the division's view, the omission of the features relating to the block in the claims directed to the manufacture of the laser satisfy the three conditions for the removal of a feature from a claim set out in decision T 331/87. Firstly, as explained above, the skilled person would recognise that the features relating to the block are not described in the original application as essential for the second aspect. Secondly, the gratings of the laser can be manufactured by other alternative methods, and therefore the block is not indispensable. Thirdly, no real modification to other features are required to compensate for the replacement or removal of the block.

With reference to the amended claims directed to the fibre laser and omitting any reference to the refractive block, these claims are directed to the fibre laser *per se* and the inclusion of a reference to the manufacture of the grating by means of the block would not restrict the claim as it would not be possible to distinguish it from the grating of the fibre laser itself whether the grating has been manufactured using the refractive block according to the first aspect or using other alternative arrangement such as that known from document D3, both manufacturing methods resulting in gratings having substantially the same structure and operating in the same way.

Reimbursement of the appeal fee - Rule 67 EPC

In the annex to summons to oral proceedings the examining division discussed objections under Rule 86(4) EPC in detail and briefly mentioned Article 123(2) EPC, but failed to set out a clear and detailed discussion of the matters that were then raised under Article 123(2) EPC during the oral proceedings. In addition, no reason was given in writing in advance of the oral proceedings as to why the submissions made by the applicant in relation to Article 123(2) EPC were not correct. The applicant's representative was therefore not duly warned in advance of the matters that were then discussed during the oral proceedings, and the division's refusal to consider the objections under Rule 86(4) EPC and instead focusing the discussion on Article 123(2) EPC came as a surprise to the representative. The course of action of the examining division was therefore contrary to Rule 71a (1) EPC and offended the principles established in decision T 951/97. The appellant also pointed to decision T 921/94.

In addition, at the oral proceedings the examining division was not prepared to consider at all the objections under Rule 86(4) EPC that were discussed in detail in the annex to the summons. The procedure adopted by the division ran the risk of delaying unnecessarily the proceedings and was therefore counterproductive from the point of view of both speed and efficiency, thus unduly prejudicing the applicant's interests.

Each of these two procedural deficiencies amounts to a substantial procedural violation justifying the reimbursement of the appeal fee under Rule 67 EPC.

Reasons for the Decision

1. *Admissibility of the appeal*

The appeal complies with the provisions mentioned in Rule 65(1) EPC and is therefore admissible.

2. *Amendments (Article 123(2) EPC)*

Main request, versions (I) and (II)

2.1 Claim 1 of version (I) relates to a method of making a laser device including the formation of a photo-induced refractive index grating in a fibre configuration of the laser device. No reference is made in this claim to features involving the formation of the photo-induced refractive index grating by means of a block of refractive material according to the invention defined in original claim 1 in the light of page 2, line 16 to page 4, line 6 of the published international application (which published application corresponds to the application as originally filed).

In the board's view, the skilled person reading the original application would directly and unambiguously recognize from the application as filed that the manufacture of a laser device is disclosed as an application of, and therefore as definitely not being separable from, the formation of the photo-induced refractive index grating by means of a block of refractive material. This follows logically from the introductory paragraph of the passages of the original disclosure on page 4, lines 7 to 29 ("**This tunability** is anticipated to have a significant impact **on the production of lasers** for optical communications networks ..." [*emphasis added*]), which clearly ties the production of the lasers to tunability resulting from

the fine tuning and monitoring characteristics achieved by the use of the block of refractive material in the process of formation of the grating (see the paragraph bridging pages 3 and 4 immediately preceding the paragraph referred to above). The subsequent paragraphs in lines 18 to 29 on page 4 ("**The present invention** greatly simplifies the provision of new, specifically tuned lasers [...], the reflected frequency [of the grating of the laser] being monitored and adjusted, **as described above** [...], the laser being formed by making a grating **according to the method of the present invention** [...]" [*emphasis added*]) constitute further explicit indications that the grating of the fibre laser is to be manufactured according to the disclosure of the invention, which disclosure encompasses the preceding paragraphs (see in particular page 2, lines 16 to 26, and page 3, lines 1 to 5), all the particular embodiments(see Figures 1, 2 and 5 to 7 and the corresponding disclosure) and the original claims, all of which consistently require the use of the block of refractive material in the formation of the grating.

In the absence of any express or implied indication in the original disclosure of the application towards the omission of the block of refractive material or towards its replacement by other means, the board cannot consider a direct and unambiguous consequence of the application as filed to be that the skilled person would inject his own counter teaching into the disclosure that the tunability taught to be achieved by means of the block of refractive material could also be achieved by other means, in particular on the basis of means presented as prior art means such as those known from document D3 cited in the introductory part of the application. The board therefore sees no logical reason

for introducing the teaching of replacing the block of refractive material by other equivalent means and thus cannot see the disclosure directly and unambiguously leading to the omission of the block.

Original claim 14 is directed to a fibre laser including "a grating formed by any method previously claimed", i.e. including a grating manufactured using the block. No support is offered for manufacture of the originally claimed fibre laser by any other means. A claim to the manufacture of a laser device version must therefore be restricted to this supported disclosure.

The board therefore concludes that the original disclosure requires the use of the block of refractive material as an essential feature in the manufacture of the grating of the laser device. In addition, the conditions for the removal of a feature from a claim according to decision T 331/87, OJ EPO 1991, 22 (point 6 of the reasons) cited by the appellant are not satisfied as the first of the three conditions, i.e. that the skilled person would directly and unambiguously recognise that the feature was not explained as essential in the disclosure, is not fulfilled in the present case, so that the amendment falls at the first hurdle.

Accordingly, the omission of the features relating to the block of refractive material in the manufacturing method according to claim 1 of version (I) of the main request constitutes an unallowable generalization under Article 123(2) EPC.

2.2 Independent Claim 11 of version (I) is directed to a laser device including a photo-induced refractive index grating in a fibre configuration of the laser device. This claim therefore is, generally speaking, rooted in original claim 14 with further inclusion of features

disclosed in the original application on page 4, lines 7 to 29 and in the paragraph bridging pages 6 and 7.

However, unlike original claim 14 which was formulated as a product-by-process claim, claim 11 of version (I) does not include any reference to the method of manufacture of the grating. The reformulation of a product-by-process claim into a claim defining the corresponding product only in terms of the structural and functional features of the product, i.e. without reference to its method of manufacture, although not objectionable *per se* under Article 123(2) EPC, has nonetheless to satisfy the requirements of Article 123(2) EPC, i.e. it should not contain subject matter extending beyond the content of the application as filed.

As is apparent from the considerations advanced in point 2.1 above, the original application requires the photo-induced refractive index grating of the laser device to be manufactured using the block. In addition, the formulation of original claim 14 as a product-by-process claim inevitably restricts the subject matter of the claim to laser devices including a grating that can be so formed. Therefore, the application as filed supports only laser devices including a photo-induced refractive index grating having the technical structural and functional features of photo-induced gratings that can be formed according to this method. Present claim 11 of version (I), however, is directed to a laser device including a photo-induced refractive index grating, the claim omitting any additional feature and in particular any reference to the manufacture of the grating that would restrict the claim to laser devices including a grating having the technical structural and functional features of the gratings originally disclosed in the application as

filed. For this reason, the subject matter of present claim 11 of version (I) includes laser devices including photo-induced refractive index gratings that cannot be so obtained and therefore extends beyond the content of the application as filed, in contravention of the requirements of Article 123(2) EPC.

The appellant presented the view that the manufacturing process involving the block and other alternative methods of manufacturing photo-induced refractive index gratings such as the prior art mirror arrangement disclosed in document D3 result in gratings having the same structural and functional features and therefore in gratings that are indistinguishable from one another. However, although the formulation of claim 11 of version (I) includes gratings having a photo-induced pattern structure formable by other alternative methods, in particular by the method of document D3, the appellant failed to convince the board that taking account of the physical constraints concerned, these gratings would necessarily be the same as those formed under manufacturing conditions imposed by the use of the block of refractive material.

Accordingly, the subject matter of independent claim 11 of version (I) according to the main request constitutes an unallowable generalization under Article 123(2) EPC.

2.3 When compared with the respective claims 1 and 11 of version (I), independent claims 1 and 11 of version (II) of the main request differ, apart from amendments of a purely formal character, in the specification of the wavelengths at which the photo-induced refractive index grating is reflective. These amendments do not affect the conclusion reached in points 2.1 and 2.2 above with regard to the subject matter of claims 1 and 11 of version (I) and,

consequently, the subject matter of claims 1 and 11 of version (II) of the main request contravenes the requirements of Article 123(2) EPC for the same reasons as put forward in points 2.1 and 2.2 above with regard to claims 1 and 11 of version (I) of the main request, respectively.

3. *First to fourth auxiliary requests versions (I) and (II)*

Claims 1 and 11 of version (I) according to each of the first to third auxiliary requests is identical to the respective claims 1 and 11 of version (I) according to the main request, and claims 1 and 11 of version (II) according to each of the first to third auxiliary requests differ from the respective claims 1 and 11 of version (II) according to the main request in the omission or the replacement of features that do not affect the conclusions reached in point 2.3 above with regard to the respective claims 1 and 11 of version (II) according to the main request. Independent claim 11 of each of versions (I) and (II) according to the fourth auxiliary request differs from claim 11 of version (I) according to the main request in the replacement of features that do not affect the conclusion reached in point 2.2 above with regard to claim 11 of version (I) according to the main request.

Accordingly, the subject matter of claims 1 and 11 of each of versions (I) and (II) according to each of the first to third auxiliary requests and the subject matter of claim 11 of each of versions (I) and (II) according to the fourth auxiliary request contravene the requirements of Article 123(2) EPC for the same reasons as put forward in points 2.1 and 2.2 above with regard to claims 1 and/or 11 of version (I) according to the main request, as the case may be.

4. *Fifth auxiliary request, versions (I) and (II)*

Claim 1 of version (I) according to the fifth auxiliary request is based on original product-by-process claim 14 reformulated as a method claim, the claim further specifying features of the laser device according to page 4, lines 18 to 29 and the paragraph bridging pages 6 and 7 of the original application. The amended claim includes in addition the formation of the refractive index grating of the laser device by the method involving the use of the block of refractive material as defined in original claim 1, and therefore the amended claim is not subject to the deficiency under Article 123(2) EPC explained in point 2.1 above with regard to claim 1 of version (I) of the main request.

Independent claim 10 of version (I) according to the fifth auxiliary request is directed to a laser device. The claim is based on original claim 14 and further specifies features of the laser device according to page 4, lines 18 to 29 and the paragraph bridging pages 6 and 7 of the original application. As the claim specifies that the device is obtainable by the method of the amended claim 1 according to the same version, the claimed device only includes such gratings and thus is not subject to the deficiency raised under Article 123(2) EPC explained in point 2.2 above with regard to claim 11 of version (I) according to the main request.

When compared with the respective claims 1 and 10 of version (I) according to the fifth auxiliary request, claims 1 and 10 of version (II) differ, apart from formal amendments, in the replacement of the expression "a laser-active dopant" by "an erbium ion dopant", the replacement being based on the paragraph bridging pages 6 and 7 of the original application.

The amendments to the dependent claims are also supported by the application as filed.

5. *Novelty and inventive step*

5.1 Since the main and first to fourth auxiliary requests contain inadmissible amendments and for this reason are excluded from allowability, further consideration thereof with respect to novelty and inventive step of the subject matter concerned is not appropriate.

Fifth auxiliary request

5.2 The method of making a laser device according to claim 1 of version (I) includes the formation of a photo-induced grating by means of a block of refractive material, the patentability of which was already acknowledged by the examining division during the first-instance examination proceedings. The board sees no reason for diverging from the assessment of the examining division in this respect.

The laser device according to independent claim 10 of version (I) comprises an optical cavity constituted by a laser-active dopant fibre configuration positioned between two reflectors, one of the reflectors comprising a photo-induced refractive index grating. Among the documents considered during the first-instance examination proceedings, only documents D4, D5, D6 and D7 refer to doped fibre lasers involving the use of a reflecting grating. However, since document D4 was published after the international filing date of the present application, document D5 was published after the priority date of the present application, and document D6 is a European patent application constituting prior art within the meaning of Article 54(3) EPC and designating only the contracting states DE, FR and GB, none of these documents is

pertinent for the assessment of patentability under Article 52(1) EPC of the subject matter of the claims according to version (I). In addition, document D7 requires movement of the grating with respect to the doped fibre and therefore teaches away from provision of the grating as an integral part of the fibre as known for instance from document D3. For these reasons, the board does not see any reason for calling into question the patentability under Article 52(1) EPC of the subject matter of claims 1 and 10 of version (I).

The same conclusion applies with regard to independent claims 1 and 10 of version (II) the subject matter of which corresponds substantially with that of the respective claims 1 and 10 of version (I) further specifying erbium ion dopant as the laser-active dopant. The subject matter of these claims is in addition novel over the disclosure of document D6, which constitutes prior art within the meaning of Article 54(3) EPC for the same contracting states DE, FR and GB to which version (II) pertains, by virtue of the erbium ion dopant specified in these claims.

Accordingly, the subject matter of claims 1 and 10 of version (I) and claims 1 and 10 of version (II) according to the fifth auxiliary request is considered to be novel and to involve an inventive step (Articles 52(1), 54 and 56 EPC). The same conclusion applies to dependent claims 2 to 9 and 11 to 13 of version (I) and to dependent claims 2 to 9, 11 and 12 of version (II) in view of their dependence from the respective independent claim.

6. *Sixth and seventh auxiliary requests*

In view of the positive conclusion reached by the board with respect to the claims according to the fifth auxiliary request of the appellant, consideration of the sixth and the seventh auxiliary requests is not necessary in the present decision.

7. *Reimbursement of appeal fee - Rule 67 EPC*

7.1 The discussion during the oral proceedings before the examining division was mainly focused on the objection under Article 123(2) EPC on which the decision was subsequently based. The applicant's representative had adequate opportunity to comment, and comprehensively did so, on the grounds advanced by the division for the refusal of the application. In these circumstances, the fact that the communication under Rule 71a (1) EPC annexed to the summons to oral proceedings contained a mere reference to objections under Article 123(2) EPC previously raised during the written proceedings (points 2 and 4 of the communication) without drawing the attention of the appellant to the specific objection that was then discussed during the oral proceedings and without giving any reason why the counter-arguments of the appellant were not convincing, although unfortunate, did not constitute any breach of the rules of procedure prescribed by the EPC and in particular of the right to be heard enshrined in Article 113(1) EPC. For these reasons, the course of action followed by the division does not constitute in the board's view a substantial procedural violation justifying the reimbursement of the appeal fee.

As regards the decision T 951/97, OJ EPO 1998, 440 referred to by the appellant, the board observes that in this decision the examining division introduced a new document into the proceedings for the first time during oral proceedings and the board concluded that in the circumstances of that case the contested decision was based on evidence on which the applicant did not have a sufficient opportunity to present his comments as required by Article 113(1) EPC (point 4.2 of the reasons). Therefore, the situation in the present case is different from that underlying decision T 951/97 as no new evidence was involved and in addition, in contrast thereto, the applicant did have in the present case sufficient opportunity to comment on the adverse finding of the examining division before the decision was taken at the end of the oral proceedings. Neither, for the same reason, does decision T 921/94 support the case of the appellant.

7.2 With respect to Rule 86(4) EPC, the board cannot see any procedural violation in the division's refusal to further consider the issues under Rule 86(4) EPC, since once the division reached the conclusion at the oral proceedings that the objection under Article 123(2) EPC would prejudice the grant of a patent, it was a matter of discretion, and not of procedural obligation, for the examining division to consider, according to principles of overall procedural efficiency and effectiveness, additional potential objections during the oral proceedings.

7.3 The board concludes that no substantial procedural violation justifying the reimbursement of the appeal fee was involved in the procedural deficiencies alleged by the appellant. The appellant's request for reimbursement of the appeal fee pursuant to Rule 67 EPC is therefore rejected.

8. *Further procedure - Adaptation of the description*

Having convinced itself that the claims according to the fifth auxiliary request meet the requirements of the EPC and in view of the adaptations necessary in the description, the board, in exercising its discretion under Article 111(1) EPC, considers it appropriate to remit the case to the examining division with the order to grant a patent on the basis the documents specified in point 3 of the Order below. The amendments made to the claims according to the fifth auxiliary request require consequential amendments to the description (Article 84 and Rule 27(1)(c) EPC), needing careful consideration to ensure that full consistency with the amended independent claims is guaranteed. In particular, the introducing paragraph of the description, the statements of invention on pages 2 to 4, and the description of the preferred embodiments require adaption to the more restricted subject matter now claimed. The content of documents D6 and D7 should also be appropriately acknowledged in the introductory part of the description (Rule 27(1)(b) EPC).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The request for reimbursement of the appeal fee is rejected.

3. The case is remitted to the department of first instance with the order to grant a patent as follows:

claims: claims 1 to 13 of version (I) for the contracting states SE, NL, IT and ES, and claims 1 to 12 of version (II) for the contracting states GB, FR and DE according to the fifth auxiliary request filed during the oral proceedings held on 4 December 2002;

description: to be adapted; and

drawings: sheets 1/5 to 5/5 filed with letter of 30 October 1992.

The Registrar: The Chairman:

P. Martorana E. Turrini