

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No. PCT/EP2018/077373	International filing date (day/month/year) 09.10.2018	Priority date (day/month/year) 09.10.2017
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International Patent Classification (IPC) or both national classification and IPC
INV. G02B6/44

Applicant
COMMSCOPE CONNECTIVITY BELGIUM BVBA

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:  European Patent Office P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Fax: +31 70 340 - 3016	Date of completion of this opinion see form PCT/ISA/210	Authorized Officer Lehtiniemi, Henry Telephone No. +31 70 340-0	
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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of

☐ the entire international application

☒ claims Nos. 6-37

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international search (*specify*):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed (*specify*):

☒ no international search report has been established for the whole application or for said claims Nos. 6-37

☐ a meaningful opinion could not be formed without the sequence listing; the applicant did not, within the prescribed time limit:

☐ furnish a sequence listing in the form of an Annex C/ST.25 text file, and such listing was not available to the International Searching Authority in the form and manner acceptable to it; or the sequence listing furnished did not comply with the standard provided for in Annex C of the Administrative Instructions.

☐ furnish a sequence listing on paper or in the form of an image file complying with the standard provided for in Annex C of the Administrative Instructions, and such listing was not available to the International Searching Authority in the form and manner acceptable to it; or the sequence listing furnished did not comply with the standard provided for in Annex C of the Administrative Instructions.

☐ pay the required late furnishing fee for the furnishing of a sequence listing in response to an invitation under Rule 13*ter*.1(a) or (b).

☐ See Supplemental Box for further details

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has, within the applicable time limit:
- ☐ paid additional fees
 - ☐ paid additional fees under protest and, where applicable, the protest fee
 - ☐ paid additional fees under protest but the applicable protest fee was not paid
 - ☒ not paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- ☐ complied with
 - ☒ not complied with for the following reasons:
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
 - ☒ the parts relating to claims Nos. 1-5

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-5</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-5</u>
Industrial applicability (IA)	Yes: Claims	<u>1-5</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

1 **Re Item IV**

Lack of unity of invention

- 1.1 This Authority considers that the application does not meet the requirements of unity of invention and that there are five (5) inventions.
- 1.2 The reasons, for which the inventions are not so linked as to form a single general inventive concept, as required by Rule 13.1 PCT, are as follows:
- 1.3 The common matter linking together the independent claims is the following:
A fiber optic telecommunications tray comprising: a base plate; and a cable containment wall (structure) extending from the base plate and defining a cable management space on the base plate.
- 1.4 This common matter does not comprise a single general inventive concept, based on same or corresponding special technical features within the meaning of Rule 13.2 PCT, because US2016161693 (**D1**) discloses (see Figs 5-7) a fiber optic telecommunications tray (140) comprising: a base plate (144); and a cable containment wall (structure) extending from the base plate and defining a cable management space on the base plate.
- 1.5 Furthermore, **D1** discloses a fiber storage device arranged in the cable management space and configured to route and store fibers as recited in independent claim 1, and a fiber termination device (168) arranged in the cable management space and configured to hold connectorized ends of the fibers as recited in independent claims 1 and 9.
- 1.6 Hence, the following separate inventions or groups of inventions are not so linked as to form a single general inventive concept:
- 1.6.1 **Group I:** Claims 1-5 wherein the technical feature, representing the difference over the non-inventive common matter, of claim 1 is "*a fiber splice device arranged in the cable management space and configured to hold spliced fibers*", which provides the technical effect of enabling the holding of spliced fibers and solves the objective technical problem of providing this technical effect.
- 1.6.2 **Group II:** Claims 6-8 wherein the technical feature, representing the difference over the non-inventive common matter, of claim 6 is "*a plurality of fiber termination devices arranged in the cable management space and configured to hold connectorized ends of the fibers.*", which provides the technical effect of providing structural redundancy and solves the objective technical problem of providing this technical effect.

- 1.6.3 **Group III:** Claims 9-13 wherein the technical feature, representing the difference over the non-inventive common matter, of claim 9 is "*wherein the cable containment wall includes: a main outer wall arranged at a distal side of the fiber optic telecommunications tray; a first entrance outer wall arranged at a first cable entrance side of the fiber optic telecommunications tray and connected to the main outer wall; and a second entrance outer wall arranged at a second cable entrance side of the fiber optic telecommunications tray and connected to the main outer wall, the second cable entrance side being opposite to the first cable entrance side, wherein the first entrance outer wall has a height lower than a height of the main outer wall, and the second entrance outer wall has a height lower than the height of the main outer wall*", which provides the technical effect of simplifying access to the cable management area and solves the objective technical problem of providing this technical effect.
- 1.6.4 **Group IV:** Claims 14-21 wherein the technical feature, representing the difference over the non-inventive common matter, of claim 14 is "*a fiber funneling structure defining a fiber passage thereunder to retain a fiber that routes through the fiber passage in the cable management space, the fiber funneling structure having a fiber insertion slot that receives the fiber into the fiber passage therethrough, the fiber funneling structure configured to guide the fiber to be inserted to the fiber passage through the fiber insertion slot when being pushed from a first side of the fiber funneling structure in a first direction extending across to the fiber funneling structure*", which provides the technical effect of simplifying manipulation of fibers and solves the objective technical problem of providing this technical effect.
- 1.6.5 **Group V:** Claims 22-37 wherein the technical feature, representing the difference over the non-inventive common matter, of claim 22 is "*a connectorized fiber connection device arranged in the cable management space and including one or more adapter holder arrangements, each adapter holder arrangement including: an adapter access aperture defined through the base plate and configured to allow a fiber optic adapter to at least partially pass therethrough; and a pair of adapter holding blocks extending from the base plate and arranged oppositely with the adapter access aperture therebetween, the pair of adapter holding blocks configured to movably hold the fiber optic adapter therebetween by an interference fit and selectively allow the fiber optic adapter in a storage position or in an access position, wherein, in the storage position, the fiber optic adapter is held by the pair of*

adapter holding blocks above the adapter access aperture and arranged to be parallel with the base plate, and, in the access position, the fiber optic adapter is held by the pair of adapter holding blocks and arranged to pass through the adapter access aperture at an angle relative to the base plate.", which provides the technical effect of providing fiber optic adapter storage and solves the objective technical problem of providing this technical effect.

- 1.7 Hence, the claims comprise neither the same, nor corresponding special technical features, so the technical relationship between the subject matter of the claims required by Rule 13.2 PCT is lacking and the claims are not so linked as to form a single general inventive concept as required by Rule 13.1 PCT.
- 1.8 Consequently, the application does not meet the requirement for unity of invention.

2 **Re Item V**

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

- D1 US 2016/161693 A1 (LOEFFELHOLZ TODD [US] ET AL) 9 June 2016 (2016-06-09)
- D2 US 2015/346449 A1 (CLATANOFF WILLIAM J [US] ET AL) 3 December 2015 (2015-12-03)
- D3 US 2006/067636 A1 (BLUDAU THOMAS E [US] ET AL) 30 March 2006 (2006-03-30)
- D4 US 2013/108225 A1 (RAY CRAIG DWAYNE [US] ET AL) 2 May 2013 (2013-05-02)

- 2.1 The present application does not meet the criteria of Article 33(3) PCT, because the subject-matter of claim 1 does not involve an inventive step.
- 2.1.1 **D1** may be regarded as being the prior art closest to the subject-matter of claim 1, and discloses (see Figs 5-7) a fiber optic telecommunications tray (140) comprising:
a base plate (144); a cable containment wall structure extending from the

base plate and defining a cable management space on the base plate; a fiber storage device (150, 152, 154, 160, etc) arranged in the cable management space and configured to route and store fibers; ~~a fiber splice device arranged in the cable management space and configured to hold spliced fibers~~; and a fiber termination device arranged in the cable management space and configured to hold connectorized ends of the fibers.

- 2.1.2 The subject-matter of claim 1 therefore differs from this known fiber optic telecommunications tray in that it further comprises a fiber splice device arranged in the cable management space and configured to hold spliced fibers.
- 2.1.3 This provides the technical effect of enabling the holding of spliced fibers and solves the objective technical problem of providing this technical effect.
- 2.1.4 The solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons:
- 2.1.5 **D2** discloses (see Fig 2) a fiber optic telecommunications tray comprising a fiber splice device (214) arranged in a cable management space and configured to hold spliced fibers as at least implicitly providing the same advantages as described in the application. **D3** discloses (see Fig 4) a fiber optic telecommunications tray comprising a fiber splice device (470) arranged in a cable management space and configured to hold spliced fibers as at least implicitly providing the same advantages as described in the application.
- 2.1.6 A skilled person, starting from **D1** and facing the objective technical problem identified above would consider it straightforward to incorporate the teachings of either **D2** or **D3** into the **D1** device, thereby solving the problem posed by the combination of features recited in claim 1.
- 2.2 Dependent claims 2-3 define slight constructional modifications and do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect inventive step.
- 2.3 The additional subject-matter of dependent claim 4 (adapters) is disclosed in **D1** (paragraph [0062]), and claim 4 does hence not meet the requirements of the PCT in respect inventive step.
- 2.4 The additional subject-matter of dependent claim 5 (splice slots) is rendered obvious by **D4** (abstract), and claim 5 does hence not meet the requirements of the PCT in respect inventive step.

3 **Re Item VII**

Certain defects in the international application

- 3.1 Independent claim 1 is not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (**D1**) being placed in the preamble (Rule 6.3(b)(i) PCT) and the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).
- 3.2 The features of claim 1 are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
- 3.3 Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in **D1-D4** is not mentioned in the description, nor are these documents identified therein.
