

The examination is being carried out on the **following application documents**

Description, Pages

2-27 as originally filed

1 filed in electronic form on 20-06-2018

Claims, Numbers

1-15 filed in electronic form on 20-06-2018

Drawings, Sheets

1/19-19/19 as originally filed

1.1 The Examining Division has carefully considered the amendments and arguments provided by the applicant with his letter of reply dated 20.06.2018. However, the Examining Division is not in a position to grant the present application for the reasons given below.

1.2 Reference is made to the following documents; the numbering will be adhered to in the rest of the procedure:

D1 US 2013/286960 A1 (LI YING [US] ET AL) 31 October 2013
(2013-10-31)

2 Novelty and Inventive Step (Art. 52(1), 54 and 56 EPC)

2.1 The present application does not meet the requirements of Article 52(1) EPC because the subject-matter of claims 1, 8, 14 and 15 does not involve an inventive step within the meaning of Article 56 EPC.

2.1.1 Document D1 is considered to be the prior art closest to the subject-matter of claim 1 and discloses

a method of user equipment, in the following also referred to as UE, for transmission or reception using beamforming (see figure 14 in combination with paragraphs [0140]-[0145]), the method comprising:

receiving a first signal indicating a first information (see paragraph [0141]: "*BS 102 sends UE 116 the information 1420*");

deriving at least one specific UE beam based on the first information (see paragraphs [0141]-[0142]: *"BS 102 sends UE 116 the information 1420, which includes its TX beams to be used. The information 1420 also can include how the BS TX beams are transmitted, e.g., by steering, or the beams being concurrently transmitted. Alternatively, BS 1102 can inform UE 116, via the information 1420, which MS RX beams to use"*); and

using the at least one specific UE beam to receive or transmit at least one transmission see paragraph [0145]: *"UE 116 then uses 1435 RX beams corresponding to the informed BS TX beam(s) to receive the BS TX beam(s)"*), ~~wherein the at least one transmission is periodic channel state indication, and/or a periodic downlink signal for beam maintenance.~~

- 2.1.2 The subject-matter of claim 1 therefore differs from this known method in that *the at least one transmission is periodic channel state indication, and/or a periodic downlink signal for beam maintenance.*
- 2.1.3 The solution proposed in claim 1 of the present application cannot be considered to involve an inventive step (Articles 52(1) and 56 EPC) for the following reasons.
- 2.1.4 In the above mentioned letter, the applicant submits that in the embodiment of figure 14 of D1, the BS TX beam(s) carries resource allocation information for the UE, and does not relate to the periodic channel state indication and/or periodic DL signal for beam maintenance.
- 2.1.5 However, the embodiment of figure 14 of D1 does not exclusively disclose resource allocation information. Data control beams including information are disclosed, and resource allocation information is given as an example only (see [0140]: *"BS 102 decides 1410 which one or multiple data control beams to include the information (e.g., the resource allocation information) for UE 116"*). Other examples of control information, among which channel state information, are also disclosed in the embodiments of figures 15 and 16 and corresponding passages [0155]-[0160]. Moreover, periodic channel state indication, and periodic downlink signal for beam maintenance are considered among the information commonly included in a control channel and therefore including these particular signals in the control beams comes within the scope of the customary practice followed by persons skilled in the art. Consequently, the subject-matter of claim 1 appears to lack an inventive step.
- 2.1.6 The same reasoning applies, mutatis mutandis, to the subject-matter of claims 8, 14 and 15.

2.2 Dependent claims 2-7, 9-13 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the EPC with respect to inventive step.

2.2.1 The distinguishing technical features of claims 2, 6, 7, 9, 12 and 13 relating to transmitting first and second signal through higher layer signaling, namely MAC and RRC, are considered as normal design measures and form part of the common general knowledge of the skilled person.

2.2.2 The distinguishing technical features of claims 3-5, 10, 11 are already disclosed by D1 (see figure 14 in combination with paragraphs [0137]-[0154] and figure 25 in combination with paragraphs [0217]-[0228]).

3 **Procedure**

3.1 The applicant is requested to provide convincing arguments supporting the inventiveness of the independent claims or to file substantially amended claims, even though it is still not apparent which part of the application could serve as a basis for a new, allowable claim. Should the applicant nevertheless regard some particular matter as patentable, an independent claim should be filed taking account of Rule 43(1) EPC. The applicant should also indicate how the subject-matter of the new claim differs from the state of the art and the significance thereof.

3.2 Amendments should be made by filing replacement pages. Unnecessary recasting of the description should be avoided. An amended abstract is not required. The applicant should also take account of the requirements of Rule 50(1) EPC. According to Rule 50(1) in conjunction with Rule 49(8) EPC, amendments shall be typed or printed. Handwritten amendments may only be made in documents other than those replacing application documents (Rule 50(2) EPC); they may, for example, be used to fulfil the requirements of Rule 137(4) EPC (identifying amendments and indicating basis for them).