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**Datasheet for the decision  
of 6 February 2019**

**Case Number:** T 1589/16 - 3.5.03

**Application Number:** 11166102.1

**Publication Number:** 2357868

**IPC:** H04W72/04

**Language of the proceedings:** EN

**Title of invention:**

Method, base station, and user terminal for implementing  
uplink resource indication

**Patent Proprietor:**

Huawei Technologies Co., Ltd.

**Opponent:**

Telefonaktiebolaget L M Ericsson (publ)

**Headword:**

Uplink resource indication/HUAWEI

**Relevant legal provisions:**

EPC Art. 76(1), 123(2)

**Keyword:**

Added subject-matter (no)

**Decisions cited:**

**Catchword:**



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Case Number: T 1589/16 - 3.5.03

**D E C I S I O N**  
**of Technical Board of Appeal 3.5.03**  
**of 6 February 2019**

**Appellant:** Huawei Technologies Co., Ltd.  
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**Representative:** Körber, Martin Hans  
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**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted on 18 May 2016  
revoking European patent No. 2357868 pursuant to  
Article 101(3) (b) EPC.

**Composition of the Board:**

**Chairman** F. van der Voort  
**Members:** T. Snell  
P. Guntz

## **Summary of Facts and Submissions**

- I. This appeal was lodged by the proprietor against the decision of the opposition division revoking European patent No. 2 357 868. This patent relates to a divisional application with publication No. EP 2 357 868 A2 relating to a parent application with publication No. EP 2 094 033 A1. In the reasons for the decision, the opposition division concluded that claim 1 of the patent as amended in accordance with either a main request or a first auxiliary request did not comply with Article 84 EPC. A second auxiliary request was not admitted.
  
- II. In the statement of grounds of appeal, the proprietor (henceforth, "appellant"), requested that the decision under appeal be set aside and that the patent be maintained in accordance with either the main request or one of 1st to 6th auxiliary requests as filed therewith. The claims of the main request were said to be the same as those of the main request rejected by the opposition division. Oral proceedings were conditionally requested.
  
- III. The opponent withdrew its opposition by letter dated 7 July 2016. Consequently, only the appellant is party to the current proceedings.
  
- IV. In a communication accompanying a summons to oral proceedings, the board noted that the opposition division had presented its objection to claim 1 of the main request as a lack of support under Article 84 EPC. However, for essentially the same reasons, the board was of the preliminary opinion that claim 1 of the main request comprised subject-matter extending beyond the content of both the parent application (NB: the present

patent derives from a divisional application) and the application as filed (cf. Articles 76(1) and 123(2) EPC respectively). The same applied to claim 1 of each of the 1st to 5th auxiliary requests. The board gave a preliminary opinion that claim 1 of the 6th auxiliary request appeared to comply with Articles 83, 84, 76(1) and 123(2) EPC, although there appeared to be issues with respect to independent claims 9 and 12 of the request.

V. In reply to the board's communication, the appellant submitted an amended main request and an auxiliary request to replace all previous requests on file.

VI. Oral proceedings were held on 06 February 2019. At the oral proceedings, the appellant submitted claims 1 to 13 of a new main request, including independent claims 1, 6, 9 and 12, to replace all requests on file.

The appellant requested that the decision under appeal be set aside and the patent be maintained in amended form on the basis of the claims of the main request filed during the oral proceedings.

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

VII. Claim 1 of the main request reads as follows:

"A method for implementing uplink resource indication, comprising:

receiving, by a user terminal, an uplink resource grant indication, ul grant, carrying an uplink resource index from a base station;

resolving, by the user terminal, the uplink resource index from the ul grant according to an obtained in advance corresponding relation between the uplink resource index and the at least one uplink subframe; wherein the uplink resource index is one of a plurality of uplink resource indices consisting of one or more uplink resource indices which each correspond to one group of one uplink subframe and one or more uplink resource indices which each correspond to one group of two uplink subframes, and wherein the uplink subframes in each group are not completely the same; and

performing, by the user terminal, resource grant on the obtained at least one uplink subframe, wherein in case that the received uplink resource index corresponds to a group of one uplink subframe, the user terminal performs resource grant on the one uplink subframe, and in case that the received resource index corresponds to a group of two uplink subframes, the user terminal performs resource grant on the two uplink subframes."

VIII. Claim 6 reads as follows:

"A user terminal, comprising:

an instruction receiving module (801), configured to receive an uplink resource grant indication, ul grant, carrying an uplink resource index from a base station, BS;

an instruction resolving module (802), configured to resolve the uplink resource index from the ul grant according to an obtained in advance corresponding relation between the uplink resource index and the at least one uplink subframe; wherein the uplink resource index is one of a plurality of uplink resource indices

consisting of one or more uplink resource indices which each correspond to one group of one uplink subframe and one or more uplink resource indices which each correspond to one group of two uplink subframes, and wherein the uplink subframes in each group are not completely the same; and

an execution module (803), configured to perform resource grant on the obtained at least one uplink subframe, wherein in case that the received uplink resource index corresponds to a group of one uplink subframe, the execution module is adapted to perform resource grant on the one uplink subframe, and in case that the received resource index corresponds to a group of two uplink subframes, the execution module is adapted to perform resource grant on the two uplink subframes."

IX. Claim 9 reads as follows:

"A method for implementing uplink resource indication, comprising:

carrying, by a base station, an uplink resource index in an uplink resource grant indication, ul grant, wherein a corresponding relation exists between the uplink resource index and the at least one uplink subframe; the uplink resource index is one of a plurality of uplink resource indices consisting of one or more uplink resource indices which each correspond to one group of one uplink subframe and one or more uplink resource indices which each correspond to one group of two uplink subframes, the corresponding relation is obtained by the following means:

combining one or two uplink subframes into one group, wherein the uplink subframes in each group are not completely the same; and

making each group corresponding to one of the plurality of uplink resource indices, and establish the corresponding relation between the uplink resource index and the one or two uplink subframes;

sending, by the base station, the ul grant to a user terminal, wherein in case that the uplink resource index corresponds to a group of one uplink subframe, the ul grant carries the uplink resource index corresponding to the one uplink subframe, and in case that the uplink resource index corresponds to a group of two uplink subframes, the ul grant carries the uplink resource index corresponding to the group of two uplink subframes."

X. Claim 12 reads as follows:

"A base station, BS, comprising:

an index carrying module (701), configured to carry an uplink resource index in a uplink resource grant indication, ul grant, wherein a corresponding relation exists between the uplink resource index and the at least one uplink subframe; wherein the uplink resource index is one of a plurality of uplink resource indices consisting of one or more uplink resource indices which each correspond to one group of one uplink subframe and one or more uplink resource indices which each correspond to one group of two uplink subframes, and wherein the uplink subframes in each group are not completely the same; and



a mapping module (703), configured to establish the corresponding relation between the uplink resource index and the one or two uplink subframes, and

an instruction sending module (702), configured to send the ul grant to a user terminal, wherein in case that the uplink resource index corresponds to a group of one uplink subframe, the ul grant carries the uplink resource index corresponding to the one uplink subframe, and in case that the uplink resource index corresponds to a group of two uplink subframes, the ul grant carries the uplink resource index corresponding to the group of two uplink subframes."

### **Reasons for the Decision**

1. *Main request - claim 1 - Articles 76(1) and 123(2) EPC*
2. As the present patent relates to a divisional application (see point I above), amendments have to comply both with Articles 76(1) and 123(2) EPC. The board notes that in the present case there is essentially no difference between the parent application and the divisional application as published as regards the description of the detailed embodiments. In the following, references are made to the description of the divisional application as published.
  - 2.1 The presently claimed subject-matter can be summarised as follows: An uplink resource index (e.g. consisting of a number of bits) is received and resolved by the user terminal which grants resources to a corresponding group of uplink subframes (SF). A group consists of either one or two uplink SFs. The index resolved by the user terminal belongs to a set of uplink resource indices. One or more uplink resource indices of the set

each correspond to a group of one uplink SF and one or more uplink resource indices each correspond to a group of two uplink SFs.

2.2 The feature of claim 1 that "the uplink resource index is one of a plurality of uplink resource indices consisting of one or more uplink resource indices which each correspond to one group of one uplink subframe and one or more uplink resource indices which each correspond to one group of two uplink subframes" contains two aspects: (i) there are only indices corresponding to groups of one or two SFs (NB: this is reflected by the term "consisting of"); (ii) the set of uplink resource indices consists of one or more indices respectively corresponding to each type of group (i.e. groups of one or two SFs). A further essential aspect of claim 1, considering the performing step in the last clause of the claim, is that the user terminal can perform the function of recognising both indices which correspond to one group of one SF and indices which correspond to one group of two SFs. It has to be considered whether there is sufficient support for these aspects in the general form claimed.

2.3 In the description, there are a large number of examples comprising tables which specify the relationship between uplink resource indices and specific groups of SFs (cf. e.g. Tables 3 to 6, 9, 10, 12, 13 and 19). In all of these examples, insofar as a grant of resources is made (i.e. the index is not listed as "reserved"), there are groups of either one or two SFs which can be resolved by the user terminal. This observation is also reflected explicitly in the description in connection with some embodiments, e.g. the embodiment of Tables 3 and 4 (cf. paragraphs [0028] and [0029]; "In this combination, one or two uplink SFs

are combined into one group"). It is further stated that "Persons skilled in the art should understand that only some specific examples of the technical solutions according to embodiments of the present invention are illustrated below, and the present invention is not limited thereto" (cf. paragraph [0027]).

- 2.4 With regard to aspect (i), the principle of having groups of only one or two SFs is directly and unambiguously derivable from the many specific examples (e.g. Tables 3-6, 9 and 10) as well as the general statements referred to above.
- 2.5 With regard to aspect (ii), there are several embodiments disclosed in the description which require a plurality of indices corresponding to groups of one SF and a plurality of indices corresponding to groups of two SFs (cf. e.g. Tables 3 to 6). There are also embodiments with one index corresponding to groups of two SFs and two indices corresponding to groups of one SF (e.g. Tables 9, 10 and 19). It is however to be noted that there is no example, although embraced by claim 1 as a limiting case, in which there is one group of one SF and one group of two SFs. It has to be considered whether the skilled person, using common knowledge, would regard this embodiment as being implicitly embraced by the parent application and divisional application as filed.
- 2.6 In the present case, in which a group of examples each having N objects, where N takes a number of different values all greater than one is disclosed and wherein it is expressly stated that the disclosure is not intended to be limited to the disclosed embodiments, the question to be answered is whether or not, taking the particular technical circumstances into account, the

case of  $N=1$  is also implicitly disclosed. Consider the example of a disclosure of a room with  $N$  electric sockets, in which specific examples are given of rooms with respectively 2, 5 and 6 electric sockets, with the statement that the examples are not in any way limiting. The skilled person, without there being any technical considerations to the contrary, would in the board's view implicitly understand that  $N$  may generally take any integer value, i.e. be greater or equal to 1, rather than concluding that  $N$  must in any event be at least 2.

- 2.7 The board judges that the present case concerns such a situation. The board can identify no technical reason, when generalising the specific examples, as to why embodiments containing only one index corresponding to one group of one SF and one index corresponding to one group of two SFs must be ruled out (i.e. disclaimed).
- 2.8 Consequently, the board concludes that claim 1 complies with both Articles 76(1) and 123(2) EPC.
3. *Main request - claim 1 - Articles 84 and 123(3) EPC*
- 3.1 The board considers that the amendments made with respect to claim 1 as granted are clear within the meaning of Article 84 EPC.
- 3.2 Claim 1 is also considered to be supported by the description within the meaning of Article 84 EPC, essentially for the same reasons as given in connection with Articles 76(1) and 123(2) EPC.
- 3.3 Claim 1 is more limited than claim 1 as granted and therefore complies with Article 123(3) EPC.

4. *Independent claims 6, 9 and 12*

The above considerations apply, *mutatis mutandis*, to the remaining independent claims 6, 9 and 12 (see points VIII to X).

5. *Dependent claims*

The board finds no reason to raise objections in respect of the dependent claims.

6. *Conclusion*

As the claims of the main request are held to comply with Articles 76(1), 84, 123(2) and 123(3) EPC, the case is to be remitted to the opposition division in order that the ground for opposition pursuant to Article 100(a) EPC can be examined.

**Order**

**For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division for further prosecution on the basis of claims 1 to 13 of the main request filed during the oral proceedings.

The Registrar:

The Chairman:



G. Rauh

F. van der Voort

Decision electronically authenticated