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**Datasheet for the decision  
of 10 April 2024**

**Case Number:** T 2002/20 - 3.4.01

**Application Number:** 10715006.2

**Publication Number:** 2417473

**IPC:** G01S5/02, G01S5/14, H04W64/00

**Language of the proceedings:** EN

**Title of invention:**

METHODS AND APPARATUSES FOR PROVIDING PEER-TO-PEER POSITIONING  
IN WIRELESS NETWORKS

**Applicant:**

QUALCOMM Incorporated

**Headword:**

Peer to peer positioning in wireless networks / Qualcomm

**Relevant legal provisions:**

EPC Art. 123(2)  
EPC R. 137(3), 137(5)  
RPBA 2020 Art. 12(4), 12(6), 12(8)

**Keyword:**

Main request - amendments allowable (no)

Auxiliary requests 1 and 2 - error in use of discretion by the  
Opposition Division (yes) - admitted (yes) - amendments  
allowable (no)

Auxiliary requests 3 to 5 - admitted (no)



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Case Number: T 2002/20 - 3.4.01

**D E C I S I O N**  
**of Technical Board of Appeal 3.4.01**  
**of 10 April 2024**

**Appellant:** QUALCOMM Incorporated  
(Applicant) Attn: International IP Administration  
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**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted on 17 July 2020  
refusing European patent application No.  
10715006.2 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chairman** P. Scriven  
**Members:** A. Medeiros Gaspar  
C. Almborg

## **Summary of Facts and Submissions**

- I. The applicant appealed the Examining Division's decision to refuse the application.
- II. The Examining Division found, *inter alia*, that the subject-matter of amended claims 1 and 8 of the main request extended beyond the content of the application as filed.
- III. The Examining Division also decided not to admit auxiliary requests 1 and 2, under Rule 137(3) EPC, since they were prohibited by Rule 137(5) EPC.
- IV. On appeal, the appellant requested that the decision be set aside and that a patent be granted on the basis of a main request, or one of five auxiliary requests, all filed, in 2020, with the statement of grounds of appeal.
- V. The main request and auxiliary requests 1 and 2 are identical to the requests underlying the decision. Auxiliary requests 3 to 5 are new on appeal.
- VI. In a communication sent with a summons to oral proceedings, the Board expressed its preliminary opinion (Articles 15(1) and 17(2) RPBA 2020). It included, *inter alia*, a negative view on the question of added matter (Article 123(2) EPC) and expressed the

Board's views on the questions of admission and allowability of all the auxiliary requests.

VII. The sections of that communication that are relevant for this decision read as follows.

*Context of the application*

5. The application is concerned with the determination of the position of a mobile device (also referred to as target mobile station), such as, for example, a cellular telephone, within a wireless network.

6. In certain environments, a mobile device, even if equipped to use a satellite positioning system, might be unable to determine its own location. This might happen if it is inside a building, for instance, or if satellite positioning signals are otherwise blocked.

7. The application proposes to address this issue by employing peer-to-peer trilateration (PPT) for determining the position of such a mobile device.

8. In that context, PPT communication schemes are described, in which, in response to receiving a PPT request message from a base station, a target mobile device transmits PPT "beacon" signals for detection by other peer mobile devices, located nearby (possibly outside the

building) and asked by the base station to participate in the PPT operation. The time of arrival (TOA) of the beacon signals at different peer devices is measured and from three or more of them, the position of the target mobile device is determined.

*Added-matter [...] - All requests*

9. Independent claims 1 of the main request is based on original claims 7 and 8, with several further limitations, which are said to be based on the description of the original application (paragraphs [0043], [0047] to [0049], and [0058]).

10. The Examining Division came to the conclusion that claim 1 of the main request contravened Article 123(2) EPC, for the reason that the expression *first peer device whose location is to be determined* had no basis in the original application. Paragraph [0043], indicated as the basis for this amendment, referred to a *target mobile station whose location is to be determined*, rather than to a first peer device.

11. On appeal, the appellant argues that the expressions *first peer device* and *second peer device* were already present in original claim 1, and that the amendments introduced merely added limitations from the description, without modifying the terminology of the original claim.

12. While it is true that original claim 1 employed the expressions *first peer device* and a *second peer device*, it is also true that the limitation added from the description of the application seems to have been isolated from the remaining elements of the disclosure from which it originates.

13. The application, starting at paragraph [0042] and with Figure 1, describes embodiments in which the "first peer device" is a "target mobile station (MS)", the "other device" is a "base station (BS)" and the "at least second peer device" is a "plurality of peer devices" (application: paragraphs [0042] to [0049]).

14. However, these limitations are not comprised in claim 1. Consequently, the methods of claim 1 encompass methods for locating non-mobile devices, and methods that do not involve a base station, for which there is no basis in the original application.

15. Therefore, the Board is not persuaded by the appellant's arguments in this regard.

16. It is furthermore noted that, as result of the amendments, method steps originally disclosed as carried out by the base station (BS) have been introduced into a claim that originally defined only steps

carried out by the target mobile station (MS), without proper consideration of the necessary adaptations.

17. For instance, while the steps of receiving a message broadcast from a base station and, in response to said message, transmitting at least a first PPT beacon signal are indeed disclosed as carried out by the target mobile station, the steps of requesting at least a peer device to participate in a PPT operation and assigning one or more time slots are only disclosed as carried out by the base station. This is not rendered apparent by the wording of the claim, that seems to indicate all steps as being carried out by the target mobile station.

18. Also, the steps disclosed in paragraph [0048] as carried out by the peer devices, in response to the request, by the base station, for participation in the PPT operation, are missing. Claim 1 merely refers to the sending of a request for peer device participation, and then that PPT beacons are sent out to a participating peer device, without specifying that the request to participate is sent by the base station, nor how participation is determined. Paragraph [0048] discloses, however, that, in response to a request for participation, peer devices assess whether they can determine their own positions and that only those that can participate in the PPT operation.

19. For these reasons, claim 1 of the main request contravenes Article 123(2) EPC.

[...]

*Admission and allowability - Auxiliary requests 1 and 2*

38. The Examining Division decided to make use of their discretion under Rule 137(3) EPC not to admit auxiliary requests 1 and 2, because of the prohibition in Rule 137(5) EPC.

39. Under Article 12(6), first sentence, RPBA 2020 (applicable under Articles 24(1) and 25(2) RPBA 2020), the Board shall not admit requests which were not admitted in the proceedings leading to the appealed decision, unless the decision not to admit them suffered from an error in the use of discretion or the circumstances of the appeal justify their admission.

40. Rule 137(5) EPC stipulates that amendments may not relate to unsearched subject-matter which does not combine with the originally claimed invention or group of inventions to form a single general inventive concept.

41. A search was carried out for original claim 1. Any claim that comprises all the features of original claim 1, falls

then within the scope of the search that was carried out. If there were any limitations to the search, the Search Division would have said so.

42. Since claim 1 of each of auxiliary requests 1 and 2 comprises all the features of original claim 1, and adds further limitations to it, it relates to searched subject-matter.

43. Hence, the prohibition in Rule 137(5) EPC does not apply and, therefore, this provision should not have been indicated as the reason for not admitting these auxiliary requests under Rule 137(3).

44. Under these circumstances, Article 12(6), first sentence, RPBA 2020, is no reason to disregard auxiliary requests 1 and 2 in appeal proceedings.

45. Still, it is evident that these requests suffer from at least some of the issues identified above under [Article ...] 123(2) EPC with regards to the main request (paragraphs 16 to [19]) [...].

46. Therefore, even if these requests were to be admitted, they would be not allowable.

*Admission - Auxiliary requests 3 to 5*

47. Auxiliary request 3 to 5 were filed for the first time with the statement of grounds of appeal, in 2020, without any justification as to why they were only submitted at this stage, contrary to the requirements of Article 12(4) RPBA 2020 (which, together with all other relevant parts of Article 12 RPBA 2020 are applicable under Articles 24(1) and 25(1) RPBA 2020).

48. While it is apparent that these requests are based on on the main request and on auxiliary requests 1 and 2, respectively, and introduce some modifications that seem directed at addressing the reasons for the refusal, it is not apparent why these requests were not submitted before the Examining Division.

49. They should have been submitted before the Examining Division, at the latest when the oral proceedings were interrupted and the appellant was given the opportunity to consider whether to submit further requests, but they were not (minutes, page 9, 6th and 7th paragraphs). Not there seem to be circumstances otherwise justifying their admission are also not apparent (Article 12(6) RPBA 2020 [sic]).

50. It is also immediately apparent that these requests still suffer from the issues

identified above under [Article ...] 123(2) EPC with regards to the main request, see paragraphs 16 to [19], [...] (Article 12(4) RPBA 2020).

51. The Board sees therefore no reason to consider auxiliary requests 3 to 5.

VIII. More than one month after notification of this communication, the appellant informed the Board that they would not attend the oral proceedings, and that the request for oral proceedings was withdrawn.

IX. The oral proceedings were cancelled.

X. Claim 1 of the main request reads (reference signs omitted):

*A method for use in peer-to-peer trilateration, PPT, the method comprising: with a first peer device whose location is to be determined:*

*receiving a PPT request message broadcast from an other device over a wireless communication link to the first peer device and to at least a second peer device to:*

*request at least the second peer device to participate in a PPT operation, and*

*assign one or more time slots during which the first peer device transmits PTT beacon signals, wherein the one or*

*more time slots are synchronized to a satellite positioning system time, SPS, time;*

*in response to the PPT request message, transmitting at least a first PPT beacon signal to at least the second peer device participating in the PPT operation during at least a first portion of a first assigned time slot*

*if an acknowledgment message from the other device ending the PPT operation has not been received, transmitting at least a second PPT beacon signal to at least the second peer device participating in the PPT operation during at least a second portion of the first assigned time slot or at least a portion of a second assigned time slot; and*

*receiving location information from the other device, the location information identifying a location of the first peer device as determined, at least in part, by the other device (based on information obtained from at least the second peer device participating in the PPT operation).*

XI. Claim 1 of auxiliary request 1 replaces

*request at least the second peer device to participate in a PPT operation*

in claim 1 of the main request, by

wake up and request at least the second peer device to participate in a PPT operation (emphasis by the Board).

XII. Claim 1 of auxiliary request 2 replaces

request at least the second peer device to participate in a PPT operation

in claim 1 of the main request, by

wake up and request at least the second peer device to perform a position fix and participate in a PPT operation (emphasis by the Board)

XIII. Claim 1 of auxiliary request 3 replaces the following terms in claim 1 of the main request:

- the first occurrence of *first peer device* by *target mobile station, MS*;
- all other occurrences of *first peer device* by *target MS*;
- all occurrences of *second peer device* by *first peer device*.

XIV. Claim 1 of auxiliary request 4 replaces

request at least the first peer device to participate in a PPT operation

in claim 1 of auxiliary request 3, by

*wake up and request at least the first peer device to participate in a PPT operation (emphasis by the Board).*

XV. Claim 1 of the auxiliary request 5 replaces

*request at least the first peer device to participate in a PPT operation*

in claim 1 of auxiliary request 3 by

*wake up and request at least the first peer device to perform a position fix and participate in a PPT operation (emphasis by the Board).*

## **Reasons for the Decision**

1. The preliminary opinion, partly reproduced above, expressed and explained the Board's view that the subject-matter of claim 1 of the main request contravened Article 123(2) EPC (points 12 to 19 of the preliminary opinion).
2. It also indicated that the Board saw no reason to disregard auxiliary requests 1 and 2 in the appeal proceedings (points 38 to 44) - but that these requests also suffered from some of the added matter issues identified with regard to the main requests (points 45 and 46).

3. As for auxiliary requests 3 to 5, the Board was of the preliminary opinion that they should not be admitted into these appeal proceedings (points 47 to 51).
4. The appellant has not commented on, let alone contested, this preliminary opinion.
5. After reconsideration, the Board does not see any reason to depart from its preliminary opinion.
6. Therefore the main request and auxiliary requests 1 and 2 contravene Article 123(2) EPC and are not allowable for that reason; and auxiliary requests 3 to 5 are not admitted into these appeal proceedings (Article 12(4) and (6) RPBA).
7. In the absence of an allowable request, the appeal has to be dismissed.

*No partial reimbursement of the appeal fee*

8. Since the withdrawal of the request for oral proceedings was filed more than one month after notification of the Board's communication, issued under Article 15(1) RPBA, the appellant is not entitled to reimbursement of the appeal fee (Rule 103(4)(c) EPC).

**Order**

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

The appeal is dismissed.

The Registrar:

The Chair:



D. Meyfarth

P. Scriven

Decision electronically authenticated