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**Datasheet for the decision  
of 8 September 2021**

**Case Number:** T 0362/17 - 3.4.01

**Application Number:** 12773459.8

**Publication Number:** 2761615

**IPC:** G10L15/28

**Language of the proceedings:** EN

**Title of invention:**

SYSTEMS AND METHODS FOR CONTINUAL SPEECH RECOGNITION AND  
DETECTION IN MOBILE COMPUTING DEVICES

**Applicant:**

Google LLC

**Headword:**

Trigger words / Google

**Relevant legal provisions:**

RPBA 2020 Art. 13(2), 13(1)

EPC Art. 84, 123(2)

Guidelines for examination (Edition March 2021) F. IV. 4.6.1

**Keyword:**

Main request- Amendments during oral proceedings - suitability to overcome objections (no)

Previous main request and auxiliary request 1 - Amendments after summons - exceptional circumstances (yes)

Auxiliary requests 2 and 3 - Amendments on appeal - considered (yes)

Auxiliary requests 1 and 2 - clarity (no)

Auxiliary request 3 - clarity (no), amendments allowable (no)



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Case Number: T 0362/17 - 3.4.01

**D E C I S I O N**  
**of Technical Board of Appeal 3.4.01**  
**of 8 September 2021**

**Appellant:** Google LLC  
(Applicant) 1600 Amphitheatre Parkway  
Mountain View, CA 94043 (US)

**Representative:** Pediani, Steven Peter  
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**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted on 21 July 2016  
refusing European patent application No.  
12773459.8 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

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

## **Summary of Facts and Submissions**

- I. This appeal is by the applicant, against the decision of the Examining Division to refuse the European application 12773459.8.
- II. The following prior art document was cited during the examination proceedings as prejudicial to the patentability of the invention:
- D3 US 2011/0223893 A1 15 September 2011
- III. At the oral proceedings before the Examining Division, objections under Articles 84 and 123(2) EPC were discussed. Subsequently, proceedings concentrated on novelty.
- IV. The Examining Division found the independent claims of all requests before it to lack novelty over document D3, and presented this as a reason for the refusal.
- V. Also indicated as reasons for the refusal were findings that:
- (a) the dependent claims of all requests also either lacked novelty or an inventive step in view of D3;
  - (b) that the requests included unallowable amendments;
  - and
  - (c) that some of the claims were not clear.

- VI. With the statement of grounds of appeal, a new main and two new auxiliary requests were filed. The main and first auxiliary requests included amendments with regards to the first auxiliary request of the decision, and the second auxiliary request included amendments with regards to the second auxiliary request of the decision.
- VII. In reply to a communication accompanying a summons to oral proceedings before the Board, the appellant submitted a new main request, replacing the previous main request, and a new first auxiliary request to rank before the previous auxiliary requests.
- VIII. During oral proceedings, the appellant submitted a further replacement for the main request.
- IX. At the end of the oral proceedings before the Board, the requests consisted of a main request submitted at the oral proceedings, a first auxiliary request submitted in reply to the summons to the oral proceedings, and a second and a third auxiliary requests, identical to the first and second auxiliary requests filed with the statement of grounds.
- X. Claim 1 according to the main request reads:

*A method comprising:*

*determining (401) whether a mobile computing device (100; 300) is receiving operating power from an external power*

source, wherein the mobile computing device (100; 300) has a trigger word detection subroutine that is activatable by a user input and automatically in response to determining that the mobile computing device is receiving external power; and

in response to determining that the mobile computing device (100; 300) is receiving operating power from the external power source, activating (402) the trigger word detection subroutine, wherein the trigger word detection subroutine includes:

receiving (402a) spoken input via a microphone (304) of the mobile computing device (100; 300), based on speech recognition performed on the spoken input, obtaining (402b) text,

determining (402c) whether the text includes one or more trigger words associated with a voice command prompt application, and

in response to determining that the text includes the one or more trigger words associated with the voice command prompt application, launching (402d) the voice command prompt application, wherein the voice command prompt application is configured to receive via the microphone (304) a spoken command string comprising an action, an object of the action, and at least one of one or more parameters associated with the action and one or more

*parameters associated with the object of the action,*

*wherein the spoken command string causes the mobile computing device (100; 300) to launch another application (306; 307) corresponding to the action and execute the another application based on the object of the action,*

*wherein launching the voice command prompt application comprises displaying a voice command prompt (305) on the mobile computing device (100; 300), and*

*wherein the mobile computing device (100; 300) caches a brief history of spoken words, said brief history comprising up to 10-20 spoken words, and analyzes the cached words to identify the action, the object of the action, and the at least one of one or more parameters associated with the action and one or more parameters associated with the object of the action.*

- XI. Claim 1 according to the first auxiliary request differs from claim 1 of the main request, in that it does not include the specification *said brief history comprising up to 10-20 spoken words* and further in that it adds, at the end, the specification *so that a user does not need to pause after speaking the one or more trigger words to wait for the mobile computing device (100; 300) to launch the voice command prompt application or after speaking the action to wait for*

*the mobile computing device (100; 300) to launch the other application (306; 307).*

XII. Claim 1 according to the second auxiliary request differs from claim 1 of the first auxiliary request in that it merely specifies that *the spoken command string causes the mobile computing device (100,300) to launch another application*, without specifying said another application as *corresponding to the action*, or that the spoken command string further causes the mobile computing device to *execute the another application based on the object of the action*.

XIII. Claim 1 of the third auxiliary request differs from claim 1 of the main request by the steps that follow the *determining whether the text includes one or more trigger words associated with a voice command prompt application*, which in the case of this request read:

...  
*in response to determining that the text includes the one or more trigger words associated with the voice command prompt application, launching (402d) the voice command prompt application, wherein the voice command prompt application is configured to receive via the microphone (304) a spoken command string that causes the mobile computing device (100; 300) to launch another application (306; 307), and*  
  
*wherein launching the voice command prompt application comprises displaying a voice*

*command prompt (305) on the mobile computing device (100; 300),*

*wherein the one or more trigger words associated with the voice command prompt application and other trigger words are configurable by a user and wherein the configured other trigger words are associatable by the user with particular applications or computing tasks of the mobile computing device (100; 300).*

## **Reasons for the Decision**

*On the admission of the requests*

1. The main request was filed during oral proceedings before the Board and is based on an earlier request, itself filed in reaction to a communication setting out the Board's provisional view.
2. The first auxiliary request was also filed in reaction to the summons to the oral proceedings.
3. Consideration of the main and first auxiliary requests was at the Boards discretion under Article 13(2) RPBA 2020, given that they were amendments to the appellant's appeal case, made after notification of the summons to oral proceedings before the Board. The Board could also apply the criteria applicable under Article 13(1) RPBA 2020.

4. The circumstances of the present case are such that the criteria for admission set out in Articles 13(1) and (2) RPBA 2020 are met by the requests filed in reaction to the summons for oral proceedings. This is because:
  - (a) In the communication that accompanied the summons to oral proceedings, the Board expressed the opinion that the independent claims of the then main and first auxiliary requests extended beyond the content of the application as originally filed. This was for reasons that had not been identified by the Examining Division.
  - (b) It is immediately apparent that the requests are directed at those new issues.
  - (c) The amendments are straightforward and can be seen to resolve the issues, without raising new ones.
  - (d) The appellant convincingly complied with its obligations to justify the filing under Articles 13(1) and (2) RPBA 2020, arguing the above-mentioned circumstances justified admission, not only as a matter of fairness, but also because it would be procedurally expedient.
5. Therefore, the Board decided to consider the main and first auxiliary requests, as they stood at the beginning of the oral proceedings.
6. The same conditions for admission were not met by the replacement main request submitted during the oral proceedings. This was because:

- (a) even though it was filed in reaction to a clarity issue noted for the first time at the oral proceedings; and,
- (b) even though the appellant argued the circumstances to be such that they would justify consideration of the amendment,
- (c) the amendment *prima facie* did not solve, for reasons that will be explained below, that clarity issue.

7. Therefore, the Board decided not to admit the replacement main request, filed during the oral proceedings.
8. The second and third auxiliary requests are identical to the first and second auxiliary requests filed with the statement of grounds of appeal. They are based on the first and second auxiliary requests examined in the contested decision, respectively, and include amendments with regard to those.
9. In the present case, the Board is satisfied that these requests could not have been presented before the Examining Division and hence, are to be considered (see Article 12(4) RPBA 2007 and Article 25(2) RPBA 2020).
10. In fact, even though they are reactions to the clarity and added matter objections raised at the oral proceedings before the Examining Division, their submission was only effectively possible on appeal. This is because:
  - (a) Even though the objections were first raised at the oral proceedings before the Examining Division, and

the appellant expressed its willingness to remedy them through amendment, it was agreed, in the interest of procedural economy, first to discuss the issue of novelty in view of D3.

- (b) Since the Examining Division concluded that all requests lacked novelty over D3, and hence were not allowable, the applicant had effectively no occasion to amend in reaction to the clarity and added matter objections, other than for the first time on appeal.

11. Therefore the Board also considered the second and third auxiliary requests.

*Clarity - First and Second auxiliary requests*

12. Claim 1 of both the first and second auxiliary requests specifies that ... *the mobile computing device caches a brief history of spoken words and analyzes the cached words to identify the action, the object of the action, and the at least one of one or more parameters* ....
13. The term *brief* employed by reference to the *history of spoken words* cached is unclear, since it does not have a well-recognised clear meaning in the field of voice command recognition.
14. The appellant argued that the skilled person would understand this *brief history* as being long enough to enable the analysis of the cached words, which the claim also defines.
15. At best, this argument suggests that the skilled person would understand there to be some lower limit to the

length of the *brief history* of spoken words. However, the word *brief* itself suggests rather some upper limit to the length, though the claim does not define one.

16. Concretely, even if a history of 3 or 4 spoken words could be understood to be a *brief history of spoken words*, the skilled person would still not know whether a history of 20, 50, or 100 words would still be *brief* or not.
17. The appellant referred to section F.IV. 4.6.1 of the current Guidelines for Examination (edition of March 2021), in support of the argument that relative or similar terms such as this may be allowed.
18. While noting that the Guidelines for Examination are not binding to the Boards of Appeal, the Board considered the content of this section of the guidelines as arguments submitted by the appellant in support of his case.
19. The first paragraphs of this section of the Guidelines read:

*Relative or similar terms such as "thin", "wide" or "strong" constitute a potentially unclear element due to the fact that their meaning may change depending on the context. For these terms to be allowed, their meaning must be clear in the context of the whole disclosure of the application or patent.*

*However, if a relative or similar term is used by the applicant as the only feature to distinguish the subject-matter of a*

*claim from the prior art, the use of this term is objected to under Art 84 unless the term has a well-recognised meaning in the particular art, e.g. "high-frequency" in relation to an amplifier, and this is the meaning intended.*

20. These paragraphs appear to indicate that, in case a relative or similar term has a well-recognised meaning in the particular art, then the term is not unclear.
21. The Board would tend to agree with that, while noting that a term may be commonly used and accepted in a field, without having a clear meaning.
22. However, for the reasons already provided in paragraphs 13 to 16, the term *brief* has no well-recognised, clear meaning in the context of the present application, nor is its meaning clarified by the remaining wording of the claim.
23. This section of the Guidelines also includes a third paragraph, providing some guidance on how to deal in examination with terms which have no well-recognised meaning in the art:

*Where the relative term has no well-recognised meaning the division invites the applicant to replace it, if possible, by a more precise wording found elsewhere in the disclosure as originally filed. Where there is no basis in the disclosure for a clear definition and the term is no longer the only distinguishing feature, it may be retained in the claim, because excising it would generally lead to an extension of the*

*subject-matter beyond the content of the application as filed - in contravention of Art 123(2).*

24. In this regard, the Board notes that, while it is true that a clarity issue acquires particular relevance when present in a feature argued to distinguish the invention from the prior art, the requirement that the claims be clear is independent of the requirements that the invention defined be new and entail an inventive step, and that the application not extend beyond the content of the application as filed. Tolerating a term that is unclear, because clarification does not seem possible and the term is not seen to impact the assessment of inventive step would be incompatible with Article 84 EPC.
25. Since claim 1 of both the first and second auxiliary requests is not clear and so contravenes Article 84 EPC, these requests are not allowable.

*Clarity of the Main Request - prima facie assessment*

26. The replacement main request submitted at the oral proceedings before the Board attempted to solve the above-mentioned clarity issue, by introducing the further definition of *said brief history comprising up to 10-20 spoken words*.
27. The appellant argued that the expression *comprising* in combination with *up to*, excluded the presence of further elements. Hence *comprising up to 10-20 words* should be seen as equivalent to *consisting of up to 10-20 words* and hence as providing a clear upper limit

to what is to be understood as a *brief history of spoken words*.

28. The Board sees, to the contrary, the term *comprising* as preventing the definition a clear upper limit to the number of spoken words that would make a *history of spoken words* a *brief* one. Hence this addition *prima facie* does not solve the clarity problem.
29. Therefore the Board decided not to consider the replacement main request.

*Third auxiliary request - clarity and allowability of amendments*

30. The third auxiliary request diverges from the previous requests, as acknowledged by the appellant during the oral proceedings before the Board.
31. Its claim 1 neither defines the spoken command string as comprising an action, an object of the action, and respective parameters, nor does it comprise the feature defining the caching of a *brief* history of spoken words or the subsequent step of analyzing of the cached words to identify said object, action and parameters, features all present in the higher ranking requests.
32. Instead, it includes other limitations, that were not present in the higher ranking requests, defining a configurability of the device by the user, apparently based on the disclosure in original paragraph [0061], by reference to the previously defined *one or more triggers words*, and to other *trigger words*.

33. In the communication accompanying the summons to oral proceedings, the Board expressed the preliminary opinion that this request would not be allowable for several reasons. Concretely:
- (a) While paragraph [0061] referred to embodiments in which applications were directly launched based on the detection of application specific trigger words (i.e. without the need to first launch a voice command prompt), claim 1 still defined, as the previous requests, the launching of a voice command prompt application as comprised in the method.
  - (b) Additionally, claim 1 employed the expression *other trigger words*, which did not have a basis in the original disclosure.
  - (c) The reader was furthermore left confused as to which trigger words triggered which application and which of those words were configurable by the user.
34. The appellant did not comment on any of these points, either in the submission ahead of the oral proceedings, or at the oral proceedings.
35. The Board sees no reason to change its opinion on this request.
36. Therefore claim 1 of the third auxiliary does not comply with Articles 84 and 123(2) EPC and hence this request is also not allowable.
37. With no allowable request on file, the appeal must be dismissed.

**Order**

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

The appeal is dismissed.

The Registrar:

The Chair:



D. Meyfarth

P. Scriven

Decision electronically authenticated