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Datasheet for the decision
of 4 November 2020

Case Number: T 0428/18 - 3.5.07

Application Number: 11752020.5

Publication Number: 2606441

IPC: G06F17/30

Language of the proceedings: EN

Title of invention:
Predictive query completion and predictive search results

Applicant:
Google LLC

Headword:
Predictive search results II/Google

Relevant legal provisions:
EPC Art. 123(2)
RPBA 2020 Art. 12(2), 13(2)

Keyword:
Amendments - first to third auxiliary requests - added
subject-matter (yes)
Amendment after summons - main request and fourth auxiliary
request - exceptional circumstances (no)

Beschwerdekammern

Boards of Appeal

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Case Number: **T 0428/18 - 3.5.07**

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 4 November 2020

Appellant: (Applicant)	Google LLC 1600 Amphitheatre Parkway Mountain View, CA 94043 (US)
Representative:	Robinson, David Edward Ashdown Marks & Clerk LLP 1 New York Street Manchester M1 4HD (GB)
Decision under appeal:	Decision of the Examining Division of the European Patent Office posted on 12 October 2017 refusing European patent application No. 11752020.5 pursuant to Article 97(2) EPC

Composition of the Board:

Chair	R. de Man
Members:	P. San-Bento Furtado
	C. Almberg

Summary of Facts and Submissions

I.   The appeal lies from the decision of the Examining
        Division to refuse European patent application
        No. 11752020.5, published as international application
        WO 2012/024580.

        The contested decision cited the following documents:
        D1: US 2009/0119289 A1, published on 7 May 2009;
        D2: US 2009/0094211 A1, published on 9 April 2009.

        The Examining Division decided that the subject-matter
        of claim 1 of the main request and second auxiliary
        request was not inventive over the disclosure of
        document D1 and that claim 1 of the first auxiliary
        request added subject-matter beyond the content of the
        application as originally filed.

II.   In the statement of grounds of appeal, the appellant
        maintained the three requests considered in the
        appealed decision.

III.   In a communication accompanying a summons to oral
        proceedings, the Board expressed its preliminary
        opinion that claim 1 of the main request and of the
        first and second auxiliary requests did not fulfil the
        requirements of Articles 56, 84 and 123(2) EPC. The
        subject-matter of claim 1 of all three requests did not
        appear inventive over the disclosure of document D1.

IV.   With a letter of reply the appellant filed a new main
        request and new first to third auxiliary requests to
        replace the requests on file.

V.   Oral proceedings were held as scheduled. During the
          oral proceedings, the appellant replaced the main
          request with an amended main request (submitted at
          13:50) and filed a fourth auxiliary request (submitted
          at 15:05). At the end of the oral proceedings, the
          chairman pronounced the Board's decision.

VI.   The appellant's final request was that the decision
          under appeal be set aside and that a patent be granted
          on the basis of the amended main request or one of the
          first to fourth auxiliary requests.

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

          "A system, comprising:
             a client device (106; 302); and
             a computer storage medium encoded with a computer
          program, the program comprising instructions that when
          executed by the client device (106; 302) cause the
          client device (106; 302) to perform operations
          comprising:
             generating a search interface (120) that includes a
          query input field (122);
             providing query characters input in the query input
          field (122) to a search service as a first query
          suggestion request (Rb);
             receiving, in response to the first query suggestion
          request (Rb), first query suggestions (QSb), the first
          query suggestions (QSb) being ranked according to a
          first order;
             in response to receiving the first query suggestions
          (QSb), starting a timer (T1) associated with first
          search results (SRbank) for the query suggestion ranked
          first in the first query suggestions (QSb), the timer
          being set to expire after a time period;
             rendering the first query suggestions (QSb)
          according to the first order;

providing a second query suggestion request (Rba) to the search service after the first query suggestion request (Rb) before the timer has expired;

receiving second query suggestions (QSba) responsive to the second query suggestion request (Rba), the second query suggestions (QSba) being ranked according to a second order;

rendering the second query suggestions (QSba) according to the second order;

determining whether the first ranked of the first query suggestions (QSb) is the same as the first ranked of the second query suggestions (QSba); andin [sic] response to a positive determination and before or on expiry of the timer (T1), retrieving, from a local cache, the first search results (SRbank) responsive to the query suggestion that is ranked first in the first and second query suggestions (QSb, QSba), independent of user selection of a query suggestion and independent of sending a completed query to the search service, and generating an indication in the search interface that indicates the first ranked query suggestion of the second query suggestions (QSba); and

rendering the first search results (SRbank)."

VIII.   Claim 1 of the first auxiliary request reads as follows:

"A system, comprising:
    a client device (106; 302); and
    a computer storage medium encoded with a computer program, the program comprising instructions that when executed by the client device (106; 302) cause the client device (106; 302) to perform operations comprising:
    generating a search interface (120) that includes a query input field (122);

providing query characters input in the query input field (122) to a search service as a first query suggestion request (Rb);

receiving, in response to the first query suggestion request (Rb), first query suggestions (QSb) and first search results (SRbank), the first query suggestions (QSb) being ranked according to a first order, and storing the first search results (SRbank) in a local cache;

in response to receiving the first query suggestions (QSb), starting a timer (T1) associated with first search results (SRbank) for the query suggestion ranked first in the first query suggestions (QSb), the timer being set to expire after a time period;

rendering the first query suggestions (QSb) according to the first order;

providing a second query suggestion request (Rbr) to the search service after the first query suggestion request (Rb) before the timer has expired;

receiving second query suggestions (QSbr) responsive to the second query suggestion request (Rbr) and second search results (SRbrink), the second query suggestions (QSbr) being ranked according to a second order, and storing the second search results (SRbrink) in a local cache;

rendering the second query suggestions (QSbr) according to the second order;

determining whether the first search results (SRbank) responsive to the query suggestion that is ranked first in the first query suggestions (QSb) are also responsive to a query suggestion that is ranked first in the second query suggestions (QSbr); and

in response to a positive determination and before or on expiry of the timer (T1), retrieving, from the local cache, the first search results (SRbank) responsive to the query suggestions that are ranked

first in the first and second query suggestions (QSb,
QSba), independent of user selection of a query
suggestion and independent of sending a completed query
to the search service, and generating an indication in
the search interface that indicates the first ranked
query suggestion of the second query suggestions (QSba)
for which the first search results (SRbank) are
responsive; and
   rendering the first search results (SRbank); and
   in response to a negative determination:
      not retrieving the first search results
   (SRbank);
      starting a timer (T2) associated with the second
   search results (SRbrink) for the first ranked query
   suggestion in the second query suggestions (QSbr),
   the timer (T2) being set to expire after a time
   period;
      upon a determination that the timer (T2) has
   expired without further query suggestion requests,
   retrieving and rendering the second search results
   (SRbrink)."

IX.   Claim 1 of the second auxiliary request differs from
       that of the first auxiliary request in that the passage
         "determining whether the first search results
       (SRbank) [...] ranked first in the second query
       suggestions (QSbr);"
       has been replaced with
         "determining whether the first search results
       (SRbank) responsive to the query suggestion that is
       ranked first in the first query suggestions (QSb) are
       of interest to the user;".

X.   Claim 1 of the third auxiliary request reads as
       follows:

       "A system, comprising:

a client device (106; 302); and

a server configured to implement a search service (304);

wherein the client device (106; 302) and the server are configured to perform operations comprising:

generating, at the client device (106; 302), a search interface (120) that includes a query input field (122);

providing query characters input in the query input field (122) from the client device (106; 302) to the search service (304) as a first query suggestion request (Rb);

receiving, at the client device (106; 302) from the server, in response to the first query suggestion request (Rb), first query suggestions (QSb), the first query suggestions (QSb) being ranked according to a first order;

in response to receiving the first query suggestions (QSb) at the server, starting a timer (T1) associated with first search results (SRbank) for the query suggestion ranked first in the first query suggestions (QSb), the timer being set to expire after a time period;

rendering, at the client device (106; 302), the first query suggestions (QSb) according to the first order;

providing a second query suggestion request (Rba) from the client device (106; 302) to the search service (304) after the first query suggestion request (Rb) and wherein the second query suggestion request (Rba) is received at the server before the timer has expired;

receiving, at the client device (106; 302), second query suggestions (QSba) responsive to the second query suggestion request (Rba), the second query suggestions (QSba) being ranked according to a second order;

rendering, at the client device (106; 302), the
second query suggestions (QSba) according to the second
order;

determining, at the server, whether the first search
results (SRbank) responsive to the query suggestion
that is ranked first in the first query suggestions
(QSb) are also responsive to a query suggestion that is
ranked first in the second query suggestions (QSba);
and

in response to a positive determination and before
or on expiry of the timer (T1), transmitting, from the
server to the client device (106; 302), the first
search results (SRbank) responsive to the query
suggestions that are ranked first in the first and
second query suggestions (QSb, QSba), independent of
user selection of a query suggestion and independent of
sending a completed query to the search service;

generating, at the client device (106; 302), an
indication in the search interface that indicates the
first ranked query suggestion of the second query
suggestions (QSba) for which the first search results
(SRbank) are responsive; and

rendering, at the client device (106; 302), the
first search results (SRbank)."

XI.   Claim 1 of the fourth auxiliary request reads as
        follows:

"A system, comprising:
    a client device; and
    a computer storage medium encoded with a computer
program, the program comprising instructions that when
executed by the client device cause the client device
to perform operations comprising:
    generating a search interface that includes a query
input field;

providing, in response to keystroke input received in the query input field, query suggestion requests to a search service;

in response to each query suggestion request being provided:

initializing and starting a timer that expires after a predefined time period having a non-zero short duration;

receiving, in response to the first query suggestion request, first query suggestions, the first query suggestions being ranked according to a first order;

rendering the first query suggestions according to the order;

determining (610) if a prediction criterion is met, the prediction criterion being independent of user selection of a first query suggestion and independent of sending a completed query to the search service, wherein the prediction criterion is determined to be met if the timer expires before another query suggestion request is provided;

in response to determining that the prediction criterion is met, and in response to the client device receiving first search results responsive to one of the first query suggestions:

retrieving, from a local cache, the first search results; and

rendering the first search results;

in response to determining that the prediction criterion is not met, not rendering the first search results."

XII.   The appellant's arguments, where relevant to this decision, are addressed in detail below.

Reasons for the Decision

1.   The appeal complies with the provisions referred to in
         Rule 101 EPC and is therefore admissible.

Application

2.   The application concerns providing search query
         suggestions and search results related to the search
         query suggestions (see page 2, lines 11 and 12 of the
         international publication). According to the
         description on page 1, line 28, to page 2, line 9,
         prior-art query suggestion systems require multiple
         inputs from the user. Some search systems also provide
         predicted search results with query suggestions but
         send many search results that do not satisfy the user's
         information need and use excessive bandwidth.

2.1   In the method proposed in the application, a client
         device generates a search interface that includes a
         query input field (page 9, lines 13 to 22; Figure 1).
         The query input field receives query characters from a
         user and provides each input to a search engine in the
         form of a query suggestion request. In response to the
         query suggestion request, the search engine identifies
         and ranks query suggestions, and provides them to the
         client device. The query suggestions may be based on
         search history data. Ranking may be based on the
         probability of selection by the user. The client device
         presents the query suggestions to the user in ranking
         order (page 9, line 23 to page 10, line 11; Figure 1;
         Figure 6, page 34, lines 17 to 32).

2.2   In the embodiment of Figures 2 and 3, after a first
         query suggestion request, the system determines a
         highest-ranked query suggestion "bank" from among first

query suggestions, identifies the corresponding search
results SR_{bank}, and starts a timer (page 14, lines 21
to 27). If a second query suggestion request "ba" is
received, second query suggestions QS_{ba} are generated.
Then the system checks whether the second query
suggestions QS_{ba} include the query suggestion "bank"
with the highest probability of being selected by a
user. If so, the search results SR_{bank} are provided
together with the query suggestions QS_{ba} before the
timer expires (page 15, line 30, to page 16, line 6).

Amended main request

3.   *Admission into the proceedings*

3.1   The amended main request was filed during the oral
        proceedings before the Board and hence in a late phase
        of the already advanced stage referred to in
        Article 13(2) RPBA 2020. In accordance with this
        provision, it shall in principle not be admitted into
        the appeal proceedings unless there are exceptional
        circumstances which have been justified with cogent
        reasons by the appellant.

3.2   The request was filed after a discussion of the Board's
        objections under Article 123(2) EPC with regard to
        claim 1 of all the requests.

        In this discussion, the Board explained that the
        requests submitted with the letter of reply did not
        overcome the Board's objection under Article 123(2) EPC
        raised against the features specifying the steps of
        "determining [...]" and "in response to a positive
        determination, receiving [...]" of the requests
        considered in the Board's preliminary opinion (see
        points 7.4 and 11.1 of the Board's communication).

The appellant argued that the amended main request, which attempted to overcome this objection, should be admitted because the appellant had understood the objection only at the oral proceedings before the Board.

3.3   The Board disagrees that in the present case these circumstances are exceptional within the meaning of Article 13(2) RPBA 2020.

In its communication, the Board described in some detail the embodiment described on page 15, line 26, to page 16, line 6 with reference to Figure 3, which the appellant had given as the basis for features introduced into the claims, taking into account the context of the related embodiment of Figure 2. The Board then raised objections for added subject-matter. One of these objections was that the original application did not disclose the determination "whether the first search results responsive to a query suggestion that is first in the first order are also responsive to a query suggestions that is first in the second order of query suggestions", as specified in claim 1 of the then main request. In particular, the determination of whether the second query suggestion request "can be interpreted as a confirmation that the search results SR_{bank} are of interest to the user" (as stated on page 16, lines 1 to 3) did not appear to mean directly and unambiguously that the search results SR_{bank} were responsive to the first ranked query suggestion in the second query suggestions.

3.4   In the Board's view, this indication in the Board's communication was sufficient to inform the appellant of the Board's concern. It was then up to the appellant to consider, at the earliest opportunity, whether it was necessary to amend the application to overcome the new

objection and to carefully examine whether any such
amendment found a basis in the application as filed
(Article 123(2) EPC). In the case of the main request
filed with its letter of reply, the appellant chose not
to address the objection by amendment but by arguing
that the objected-to features in fact did have a basis
in the application as filed.

3.5   Therefore, the Board does not deem the circumstances
        mentioned by the appellant to be exceptional so as to
        justify admitting the amended main request submitted at
        the oral proceedings. The Board cannot for that matter
        see any other circumstances which would qualify as
        exceptional. In view of this, the Board, in accordance
        with Article 13(2) RPBA, does not admit the amended
        main request into the appeal proceedings.

First, second and third auxiliary requests

4.   *Admission into the proceedings*

        The first, second and third auxiliary requests were
        filed in response to the Board's communication
        accompanying the summons to oral proceedings. That
        communication raised new objections under Articles 84
        and 123(2) EPC. The requests reflect legitimate
        attempts by the appellant to overcome those objections,
        were filed at the earliest opportunity, and were
        accompanied by arguments explaining why the appellant
        considered them to overcome the new objections. In
        exercising its discretion under Article 13(1) and (2)
        RPBA 2020, the Board therefore acknowledges the
        presence of exceptional circumstances which justify
        admitting these requests. Consequently, the Board
        admits the first, second and third auxiliary requests
        into the appeal proceedings.

5.   *Added subject-matter – claim 1*

5.1   Claim 1 of the first auxiliary request specifies the
        following steps:

        (i)   determining whether the first search results
               (SRbank) responsive to the query suggestion that
               is ranked first in the first query suggestions
               (QSb) are also responsive to a query suggestion
               that is ranked first in the second query
               suggestions (QSbr); and
        (ii)   in response to a positive determination and
               before or on expiry of the timer (T1),
               retrieving, from the local cache, the first
               search results (SRbank) responsive to the query
               suggestions that are ranked first in the first
               and second query suggestions (QSb, QSba).

        Claim 1 of the second auxiliary request includes
        step (ii) and replaces step (i) with the following
        step:

        (i.2) determining whether the first search results
               (SRbank) responsive to the query suggestion that
               is ranked first in the first query suggestions
               (QSb) are of interest to the user.

        Claim 1 of both the first and the second auxiliary
        request concerns a "client-based version" of the system
        in which the steps of starting the timer, and steps
        (i)/(i.2) and (ii) are performed at the client using a
        local cache.

        Claim 1 of the third auxiliary request does not mention
        a local cache and specifies a "server-based" system in
        which the steps of starting the timer and steps

corresponding to steps (i) and (ii) are performed at
the server.

5.2   Steps (i) and (ii) and the corresponding steps of the
        second and third auxiliary requests are not specified
        in the original claims. In particular, the original
        claims refer to results responsive to either a first or
        a second query but do not specify that "first search
        results (SRbank) responsive to the query suggestions
        that are ranked first in the first and second query
        suggestions" are retrieved as a result of a
        determination as specified in steps (i) and (ii) of
        claim 1 of the first auxiliary request and in the
        corresponding features of the second and third
        auxiliary requests.

5.3   The appellant argued that features (i) and (ii) were
        disclosed on page 4, lines 21 to 29, and on page 15,
        line 33, to page 16, line 6. According to the
        appellant, when the two passages were read in
        conjunction, the skilled person would understand that
        the "query suggestion 'bank' with the highest
        probability of being selected by a user" was the first
        ranked query suggestion in the second set of query
        suggestions.

5.4   However, the Board notes that the cited passage on
        page 4 refers to search results associated with one
        highest-ranked query suggestion only, not with two
        highest-ranked query suggestions, one associated with a
        first set of query suggestions and the other associated
        with a second set of query suggestions.

5.5   The passage bridging pages 15 and 16 describes further
        steps of the process described starting on page 14 with
        reference to Figure 2. According to that example, after
        identifying the first query suggestions QS_b in response

to a first request ("b"), the search service determines the highest-ranked query suggestion, in this case "bank", and the respective search results SR_{bank}. It provides the first set of query suggestions to the client at time t_1 and initialises and starts a timer T_1 associated with the search results SR_{bank} (page 14, lines 21 to 30).

The description from page 15, line 30, onwards then explains that when "ba" is received as the second query suggestion request, this "can be interpreted as a confirmation that the search results SR_{bank} are of interest to the user". If that is the case, at time t_3 before the timer T_1 expires, the search service sends the search results SR_{bank} together with the query suggestions QS_{ba} to the client.

In view of the passage as a whole, the skilled person understands that this is so because the highest-ranked first query suggestion ("bank") corresponding to the first query suggestion request ("b") is still a valid query suggestion for the second query suggestion request ("ba"). However, step (i) refers not to a determination whether the highest-ranked first query suggestion is also a valid query suggestion for the second query suggestion request but to a determination whether the first search results are also valid for ("responsive to") a highest-ranked query suggestion in the set of query suggestions for the second query suggestion request.

Furthermore, the feature "that the search results SRbank are of interest to the user" in the paragraph bridging pages 15 and 16 cannot be isolated from the teaching that it is confirmed that the first highest-ranked query suggestion is also responsive to the

second query suggestion request. Therefore, there is no basis for feature (i.2) in the context of claim 1 of the second auxiliary request.

Finally, comparing the query suggestion request "ba" with the highest-ranked first query suggestion "bank" and sending the search results SR_{bank} to the client, as disclosed in the paragraph bridging pages 15 and 16, results in the retrieved results SR_{bank} being (a) the first search results for the highest-ranked first query suggestion that are confirmed valid for the second query suggestion request, not (b) the "first search results (SRbank) responsive to the query suggestions that are ranked first in the first and second query suggestions" as specified in feature (ii) of claim 1 of the first and second auxiliary requests and in the corresponding feature of claim 1 of the third auxiliary request. Even assuming that a highest-ranked second query suggestion is determined in the embodiment described in the paragraphs bridging pages 15 and 16, which is not unambiguously derivable from the application as filed, if the search results of the highest-ranked first and second query suggestions are e.g. (x,y,z) and (x,y), respectively, the search results obtained in (a) are (x,y,z) and those according to a possible interpretation of (b) are (x,y). There is no basis in the application as filed for an embodiment corresponding to (b).

5.6   The Board's interpretation of the passage on page 15, line 30, to page 16, line 6, is confirmed by the passage on page 15, lines 5 to 11, which discloses that when "the second character in 'bank' is not 'r' so the user is not typing 'bank' into the query input field", it is determined "that the search results SRbank are not responsive to the second query suggestion

request R_{br}" (not to a highest-ranked second query suggestion). The skilled person understands that there is only a determination of whether the input into the query input field is satisfied by the highest-ranked first query suggestion. There is no direct determination of search results responsive to both the highest-ranked first query suggestion and a highest-ranked second query suggestion.

5.7   The other passages cited by the appellant are even less relevant for the question of added subject-matter of features (i), (i.2) and (ii). Therefore, claim 1 of the first auxiliary request, which includes features (i) and (ii), claim 1 of the second auxiliary request, which includes features (i.2) and (ii), and claim 1 of the third auxiliary request, which includes features corresponding to features (i) and (ii), add subject-matter beyond the content of the application as filed.

5.8   Therefore, none of the first to third auxiliary requests satisfies the requirements of Article 123(2) EPC.

Fourth auxiliary request

6.   *Admission into the proceedings*

6.1   The fourth auxiliary request was filed during the oral proceedings and hence in a late phase of the already advanced stage referred to in Article 13(2) RPBA 2020.

6.2   The appellant argued that the request addressed the Board's objections and justified the late submission with the circumstance that the objections had become clear to the appellant only at the oral proceedings.

The Board disagrees with the appellant's justification, for the same reasons as given above for the amended main request.

6.3   Moreover, the Board notes that the subject-matter of claim 1 of the fourth auxiliary request is very different from that of the previous requests. It no longer concerns the use of first search results after a second query suggestion request has been provided to the search service and rather focuses for the first time on the prediction criterion being met "if the timer expires before another query suggestion request is provided".

        The Board is thus of the opinion that the fourth auxiliary request represents an inadmissible shift of the subject of the appeal proceedings and amounts to a completely new case being presented to the Board for the first time at the oral proceedings. To admit such a request would be contrary to the primary object of the appeal proceedings of performing a judicial review of the decision under appeal (Article 12(2) RPBA 2020).

6.4   In view of this, the Board, in accordance with Article 13(2) RPBA, does not admit the fourth auxiliary request into the appeal proceedings.

Concluding remark

7.   Since none of the requests admitted into the proceedings is allowable, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chair:

S. Lichtenvort   R. de Man

Decision electronically authenticated