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**Datasheet for the decision
of 11 January 2019**

Case Number: T 1559/14 - 3.5.07

Application Number: 05802369.8

Publication Number: 1877933

IPC: G06F17/30

Language of the proceedings: EN

Title of invention:

Methods and systems to process search information

Applicant:

eBay Inc.

Headword:

Processing search information/EBAY

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step - (no) - mixture of technical and non-technical features

Decisions cited:

T 0505/13



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Case Number: T 1559/14 - 3.5.07

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 11 January 2019

Appellant: eBay Inc.
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Representative: Schwegman Lundberg Woessner Limited
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted on 20 February
2014 refusing European patent application
No. 05802369.8 pursuant to Article 97(2) EPC

Composition of the Board:

Chairman R. Moufang
Members: P. San-Bento Furtado
R. de Man

Summary of Facts and Submissions

- I. The appeal lies from the decision of the Examining Division to refuse European patent application No. 05802369.8, which was filed as international application PCT/US2005/035308 and published as WO 2006/107333, for lack of an inventive step in the subject-matter of the independent claims of a sole request.

The Examining Division ruled that the subject-matter of the claims amounted to an arbitrary resizing of areas on a graphical user interface (GUI) that did not produce any further technical effect. In an *obiter dictum*, the Examining Division stated that claim 1 amounted to a mere automation of the process typically performed by the user of changing the size of areas that displayed data in a user interface. Resizing display areas to suit the user needs was well known in the prior art and disclosed in the documents cited in the search report.

- II. In its statement of grounds of appeal, the appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of a new set of claims filed with the grounds of appeal.
- III. In a communication accompanying the summons to oral proceedings, the Board expressed the preliminary opinion that the subject-matter of the independent claims was not inventive over a web-based online shop, such as the "network commerce system" acknowledged in the application, known at the date of priority of the present application.

- IV. By letter of 11 December 2018, the appellant submitted further arguments and filed new claims according to a main request and first and second auxiliary requests.
- V. Oral proceedings were held on 11 January 2019. At the end of the oral proceedings, the chairman pronounced the Board's decision.
- VI. The appellant's final requests were that the decision under appeal be set aside and that a patent be granted on the basis of the main request or, in the alternative, the first or second auxiliary request. All requests were filed with the letter of 11 December 2018.
- VII. Claim 1 of the main request reads as follows:
"A method at a first machine (28) to generate a user interface (297, 398, 400) to display data items (85) in a first area of the user interface (297, 398, 400) on a client machine (22), the method comprising:
 receiving a query and in response to the query determining a set of data items found (85) for display in the first area of the user interface (297, 398, 400) on the client machine (22);
 counting the number (472) of the data items found (85);
 comparing the number (472) of data items (85) with a predetermined threshold;
 if the number (472) of data items (85) is equal to or greater than the predetermined threshold, generating the user interface (297, 398, 400) for display on the client machine (22) to include the first area and a second area that is complementary in size to the first area, wherein the first area displays data items (85) and the second area displays user selectable browsing

options (303) to allow a user to identify data items (85),

if the number (472) of data items (85) is less than the predetermined threshold, generating the user interface (297, 398, 400) for display on the client machine (22) with the size of the first area maximized to display data items (85) and the size of the second area minimized to minimize the display of browsing options (303) and the first and second areas complementary in size, whereby the user interface emphasizes the data items (85) found rather than the browsing options (303); and

communicating the generated user interface (297, 398, 400) to the client machine (22) for display."

VIII. Claim 1 of the first auxiliary request differs from that of the main request in that the final part of the two features "if the number (472) of data items" have been amended as indicated in the following:

"if the number (472) of data items (85) is equal to or greater than the predetermined threshold, [...] the second area displays user selectable browsing options (303) as browsing set buttons (307) and associated browsing sets (301) of user selectable browsing values (286) to allow a user to identify data items (85),

if the number (472) of data items (85) is less than the predetermined threshold, [...] whereby the user interface emphasizes the data items (85) found rather than the browsing options (303) by not displaying the browsing sets (301) but displaying the browsing set buttons (307), each browsing set button (307) being selectable by the user to display an associated browsing set (301);"

IX. Claim 1 of the second auxiliary request differs from that of the first auxiliary request in that "a second area", "user selectable browsing options" and "display of browsing options" were replaced respectively with "the second area", "the browsing options" and "display of the browsing options". In addition, the text "receiving a query [...] on the client machine (22);" was replaced with the following text:

"receiving a keyword query entered by a user of the client machine (22) and in response to the query determining a set of data items found (85) for display in the first area of the user interface (297, 398, 400) on the client machine (22) and selecting browsing options (303) for display in a second area of the user interface (297, 398, 400) on the client machine (22) based on the keyword query;"

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

Reasons for the Decision

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

The invention

2. The general purpose of the invention is to facilitate client-side user searching for data items provided by a computer system, e.g. a web server in a network-commerce system (see paragraphs [0006], [0007], [0061] and [0065] and Figure 2 of the international publication).

2.1 When a user enters a query in the client system, the query is communicated to the computer system, where it

is processed by search applications (paragraphs [0052] to [0055], Figure 1). A user interface is generated and sent to the client system (paragraphs [00150], Figures 19 and 20). Different passages of the international application describe how the user interface is generated, as explained below.

- 2.2 According to the description in paragraph [0073], search applications "may enable the classification of information (e.g., item listings) published via the computer-based system 12, and may also enable the subsequent searching of the items with keyword queries, concept queries, and multi-path browsing".
- 2.3 The determination of areas of a user interface is also described in paragraph [0010] and original claims 64 to 81. In those embodiments, a search application receives a request for a user interface that includes a first area for displaying data items and a second area for displaying other information such as browsing options. These two areas are "complementary in size". The display area of the first area is increased and that of the second area is decreased if the number of data items to be displayed is less than the predetermined threshold. The size of the first area is decreased and that of the second area is increased if the number of data items is equal to or greater than the predetermined threshold.

Main request

3. *Inventive step - claim 1*

- 3.1 Claim 1 defines a method, to be performed in a first machine, of generating a user interface for displaying data items in a first area of the user interface on a

client machine. The method essentially comprises the steps of receiving a query, determining a set of data items found for display on the client machine in response to the query, generating the user interface for display on the client machine that includes the first area for the data items and a second area for the browsing options, and communicating the generated user interface to the client machine for display. If the number of data items is under a threshold, the size of the first area is increased relative to the second area.

- 3.2 At the priority date of the present application, web-based systems implementing online shops were well known. Such systems comprised a server machine running server applications, e.g. a search application for searching data items corresponding to a query, and a client machine running a browser. In such a well known electronic commerce system, the server obtained queries from the client, determined a set of data items corresponding to the query and communicated the results to the client for display. The results sent to the client for display were typically transmitted in the form of one or more web pages for displaying the set of items.

In fact, the present application acknowledges the existence of such "network commerce systems" or "electronic marketplace[s]" in paragraphs [0003] to [0005] of the application and describes the implementation of parts of the invention with existing technology or systems, including a web browser, a seller application to be employed as a web programmatic client and the "Buy-it-Now (BIN) technology" (see paragraphs [0061], [0065], [0068] and Figure 2).

That network commerce system acknowledged in the application is the starting point for assessing inventive step in the following.

At the oral proceedings, the appellant conceded that the features defined in the first part of the claim were known from the acknowledged prior art, namely, the features describing a method to generate, in a first machine, a user interface for displaying data items in a first area of the user interface on a client machine, the method including the steps of receiving a query and, in response to the query, determining a set of data items found for display in the first area of the user interface on the client machine. It argued that the claimed method differed from the prior art in that it included all the further steps defined in claim 1.

However, the user interface for displaying data items on a client machine is generated in the first machine for the purpose of displaying the items on the client. The step of communicating the generated user interface to the client machine is hence intrinsically linked to that first feature and known from the acknowledged prior art.

- 3.3 The claim further specifies the steps of:
- (a) counting the number of data items found;
 - (b) comparing the number of data items with a predetermined threshold;
 - (c) including in the user interface a second area for displaying browsing options that is complementary in size to the first area, in which
 - (c1) if the number of data items is equal to or greater than the predetermined threshold, user-selectable browsing options that allow a user to

identify data items are displayed in the second area,

(c2) if the number of data items is less than the predetermined threshold, the size of the first area is maximised and the size of the second area minimised, whereby the user interface emphasises the data items found rather than the browsing options.

3.4 At the oral proceedings, the appellant argued that the threshold had a technical function and allowed switching between two types of interfaces depending on the amount of data being displayed. For example, if a user received fifty results, there was no need to further narrow the search because fifty results was small enough to be processed by the user. In such a case, the second area would be de-emphasised so that the user could concentrate on the displayed items. The distinguishing features solved the problem of improving the user interface to allow refinement of search results in an efficient manner based on the response of the user to the data. It would not have been obvious to refine the query result because the skilled person would rather have paginated the list of data items if too many items had to be displayed in the limited display area.

The Board does not agree with the appellant's formulation of the technical problem. The method of claim 1 is not related to the refinement of search results by the system. The browsing options could take the form of "previous" and "next" buttons that allow the user to browse through sub-sets of results of a single search.

In general, the implementation of a user interface includes non-technical aspects of the GUI layout, e.g. the graphical design of menus or the positioning of a control button according to user preferences, but also technical aspects regarding the user-computer interaction (see T 505/13 of 6 June 2018, reasons 8.3). In the present case, the layout of the areas in the display and the emphasising of specific areas are non-technical aspects of the invention. However, since the technical and non-technical features are tightly intermingled in claim 1, which makes it difficult to initially separate them, the following deals with the distinguishing technical and non-technical features in combination.

The combined distinguishing features solve over the acknowledged prior art the problem of presenting an arbitrary number of data items to the user in a limited area of the client's display.

At the priority date of the present application, it was well known to display the results of a query in more than one web page and to display user-selectable browsing options (e.g. next, previous) on each web page to let the user browse through the result pages to identify data items.

It would therefore have been obvious for the skilled person facing the above mentioned problem to have added the steps of counting the number of data items, comparing this count with a threshold representing the maximum number of data items to be displayed on a page and adding a second display area for the browsing options according to features (a) to (c1).

The remaining features relate to presentation of information as such and are, in any case, obvious options. If the results fit on one page, the browsing options for changing to the other pages of results are not necessary. In this case, it is obvious to reduce the size of the area occupied by the browsing options and leave more space for the area displaying the data items, thereby emphasising the data items found rather than the browsing options. Since the display area is limited, the second area for displaying browsing options should then be complementary in size to the first area.

In its letter and at the oral proceedings, the appellant argued that the threshold was not an arbitrary value and had a technical character. It could be set on the basis of parameters such as display size, resolution, data-item display size or font size. However, the claim is not limited to any particular threshold. For instance, the maximum number of items to be listed simultaneously according to user preferences is also a threshold within the meaning of the claim. In any case, the Board's inventive-step reasoning is not limited to any type of threshold.

- 3.5 From the above, the subject-matter of claim 1 of the main request does not involve an inventive step (Articles 52(1) and 56 EPC).

First and second auxiliary requests

4. Claim 1 of the first auxiliary request differs from that of the main request essentially in that it specifies that
- (d) if the number of data items is equal to or greater than the threshold, the displayed browsing options

are browsing-set buttons and associated browsing sets of user-selectable browsing values that allow the user to identify data items,

- (e) if the number of data items is less than the predetermined threshold, the displayed browsing options are browsing-set buttons, each browsing-set button being selectable by the user for displaying an associated browsing set.

Examples of browsing-set buttons and associated browsing sets of user-selectable browsing values are illustrated in Figures 36 and 37 of the application. Figure 36, described in paragraph [00181], shows a user interface created by the method of the invention after a search is run that returns 58.420 shoe items. It displays browsing-set buttons (e.g. "Condition", "Shoe Sub-Style", "Buying Options") and lists of values for some browsing sets (reference sign 303 in Figure 36). For example, for the browsing set "Shoe Size", a corresponding list of browsing values "7", "8" and "9" are also displayed. Figure 37 shows a user interface similar to that of Figure 36 but in which 20 shoe items were found and the browsing options are minimised. It shows the browsing-set buttons "Condition", "Shoe Size", "Shoe Style" and "Price Range", but no browsing values. The browsing-set buttons may be selected by the user to display the corresponding browsing sets (paragraph [00177]).

- 5. Claim 1 of the second auxiliary request further specifies that the query is a keyword query entered by the user of the client machine and that the browsing options selected for display in the second area are based on the keyword query.

6. *Admission into the appeal proceedings*

6.1 The claims filed upon entry into the European phase and the claims considered in the decision under appeal did not mention browsing sets nor buttons. The auxiliary requests therefore introduce features into the claims which were not specified in the original claims. The additional features were taken from the description. They were not dealt with in the decision under appeal and represent a significant change to the case. They potentially raise the question, at a very late stage of the proceedings, of whether displaying "browsing set buttons" and "associated browsing sets" for allowing users to refine their search results was known in the art.

6.2 At the oral proceedings, the Board stated that providing refinement options to further limit the search results was well known before the present application from systems similar to the acknowledged network commerce system. The appellant did not concede that this was the case but did not dispute the Board's opinion either.

6.3 Given this, the Board can deal with the merits of the auxiliary requests without remitting the case to the Examining Division for performing an additional search. The Board therefore admits the auxiliary requests into the appeal proceedings.

7. *Inventive step - claim 1 of the first auxiliary request*

7.1 In interpreting the claim in light of the description (see point 4 above), the user-selectable browsing values are used for further refining the search on the basis of characteristics of the items found in the

search. The browsing-set buttons can be used to access the respective browsing sets for search refinement. In accordance with this interpretation of claim 1 of the first auxiliary request, the Board agrees with the appellant that the claimed subject-matter is related to the refinement of search results.

The browsing sets and values reflect characteristics of the items being searched, in terms of attribute types such as "Shoe Size", and corresponding values, e.g. "7", "8" and "9". Refinement of search results and the specific criteria for refinement meet the user's need to further search the data according to particular characteristics of the items found. These are non-technical aspects of the invention which can be mentioned in the formulation of the technical problem to be solved.

As explained under point 6.2 above, displaying options for further refining search queries, for instance, on the basis of attributes such as item price, was well known from online shops before the priority date of the present application.

Claim 1 of the first auxiliary request, if interpreted in light of the description, can be seen as solving the problem of supporting, in a limited area of the client's display, the presentation of search results with refinement on the basis of characteristics of the items found in the search.

7.2 A button is a standard element of a user interface which supports a function when selected by the user. As it is a matter of routine user-interface design, the skilled person would hence have considered using buttons to support the refinement options.

It would have been obvious for the skilled person faced with the problem formulated above to provide user-interface buttons for further limiting the search results on the basis of attribute types of the items found in the search. The skilled person would therefore have considered displaying, along with the search results, buttons for refinement according to the types of attributes, corresponding to the "browsing-set buttons" of the claim.

It would also have been an obvious consideration, if at all a technical one, that the user was more likely to further refine a large result set than a small one. For such large result sets the skilled person would thus have considered also displaying buttons for refinement on the basis of values for each attribute type, i.e. "user selectable browsing values" in the language of the claim. Distinguishing large from small sets on the basis of a threshold is notoriously known.

The remaining features relate to presentation of information as such and are in any case obvious options. If less refinement buttons were to be displayed for result sets with a number of data items lower than the threshold, it would have been obvious to reduce the size of the area occupied by the refinement buttons and thereby leave more space for the area for displaying the data items. In this case, the data items found rather than the refinement options are emphasised.

- 7.3 The subject-matter of claim 1 of the first auxiliary request therefore lacks inventive step (Articles 52(1) and 56 EPC).

8. *Inventive step - claim 1 of the second auxiliary request*

8.1 The additional features of claim 1 do not change the inventive-step reasoning given above for the first auxiliary request.

Receiving a search query in the form of a keyword query was known from the acknowledged prior-art network commerce system, as explained in paragraphs [0004] and [0005] of the description of the present application.

Claim 1 further adds that the browsing options are based on the search query. However, that feature has already been considered in the inventive-step assessment of claim 1 of the first auxiliary request given above. The Board interpreted the browsing options as being based on the characteristics of the items found in the search (see point 7.1 above), i.e. on the search query leading to the search result.

8.2 Consequently, for the same reasons as given for the first auxiliary request, the subject-matter of claim 1 of the second auxiliary request does not involve an inventive step (Articles 52(1) and 56 EPC).

Conclusion

9. Since none of the requests on file is allowable the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



I. Aperribay

R. Moufang

Decision electronically authenticated