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Datasheet for the decision of 28 April 2016

Case Number: T 2045/10 - 3.5.07

Application Number: 05112248.9

Publication Number: 1672522

IPC: G06F17/21, G06F17/24

Language of the proceedings: EN

Title of invention:
Filter and sort by format

Applicant:
Microsoft Technology Licensing, LLC

Headword:
Sorting cells by format/MICROSOFT TECHNOLOGY LICENSING

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - main request (no) - auxiliary request (no) - mixture of technical and non-technical features
Patentable invention - (no) - presentation of information

Decisions cited:
T 0115/85, T 0362/90, T 0643/00, T 1143/06, T 1670/07, T 1195/09, T 1214/09, T 0336/14

Catchword:

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Boards of Appeal
Chambres de recours

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 2045/10 - 3.5.07

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 28 April 2016

Appellant: (Applicant)	Microsoft Technology Licensing, LLC One Microsoft Way Redmond, WA 98052 (US)
Representative:	Grünecker Patent- und Rechtsanwälte PartG mbB Leopoldstraße 4 80802 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 30 April 2010 refusing European patent application No. 05112248.9 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	R. Moufang
Members:	P. San-Bento Furtado
	M. Rognoni

Summary of Facts and Submissions

I. The former applicant, Microsoft Corporation, appealed against the decision of the Examining Division, taken after conducting oral proceedings in the absence of the former applicant, to refuse European patent application No. 05112248.9. The decision "according to the state of the file", using EPO Form 2061, referred to a communication dated 11 November 2009.

II. In that communication the Examining Division had expressed the opinion that the subject-matter of independent claims 1, 10 and 11 of the then pending request lacked inventive step (Articles 52(1) and 56 EPC) over the following prior-art document:

D1: DIGDB, "Excel Sorting by Text Value, Text Length, Cell Color, Font Style", Internet publication, 9 November 2004, retrieved on 7 February 2008 from http://web.archive.org/web/20041109064316/http://www.digdb.com/excel_add_ins/sort_custom_text_length_color/.

The Examining Division also cited the following documents, as giving examples of features considered to be well known:

D4: Barton, M., "Custom Sort Order", Internet publication, 24 February 2004, retrieved on 5 October 2009 from http://www.keyongtech.com/196738-custom-sort-order;

D5: Schneider, D., "Sort Order Best Practice Request" Internet publication, 17 October 2003, retrieved on 5 October 2009 from http://www.mail-archive.com/cf-talk@houseoffusion.com/msg156700.html.

According to the Examining Division, the subject-matter of the dependent claims did not appear to be inventive either.

III. In the statement of grounds of appeal, the appellant requested that the decision be set aside and that a patent be granted on the basis of a sole request, namely the main request filed with the grounds of appeal. The claims were very similar to those considered in the communication cited in the decision. Only independent system claim 11 had been redrafted to explicitly refer to one of method claims 1 to 9, instead of reciting the features in detail.

IV. With effect from 2 February 2015 the EPO registered a transfer of the application to Microsoft Technology Licensing, LLC, which thereby obtained the status of appellant.

V. The appellant was invited to oral proceedings. In a first subsequent communication, the Board referred to the following documents:

D3: Microsoft, "Microsoft Excel 2000 Step-by-Step" - Lessons 7 and 18, Microsoft Press, published in 1999;

D6: Kraynak, J., "Absolute Beginner's Guide to Microsoft Office Excel 2003", published on 21 September 2003, pages flylib.com/books/en/1.550.1.108/1/ to flylib.com/books/en/1.550.1.110/1/.

Document D3 had been cited in the search report and in the first communication by the Examining Division.

Document D6 was introduced by the Board. In its first communication, the Board cited passages of the book as

available on-line. In a later communication sent in advance of the oral proceedings, the Board sent a copy of relevant pages of the paper version of document D6, cited important passages, and explained how the previously cited passages of the online version corresponded with those of the paper copy.

In its preliminary opinion, the Board drew attention to possible deficiencies of claim 1 of the then pending request with regard to added subject-matter and lack of clarity. It also explained that the subject-matter of that claim did not appear to be inventive over the disclosure of document D1 in combination with the common general knowledge of the skilled person, and that some of the claimed features were not technical. Either of documents D3 or D6 also appeared to be an appropriate starting point for assessing inventive step.

VI. With its letter of reply of 23 March 2016 the appellant filed two sets of claims as a new main request and an auxiliary request replacing the previous request on file.

VII. Oral proceedings were held on 28 April 2016. At the end of the oral proceedings, the chairman pronounced the Board's decision.

VIII. 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 main request or, if this was not possible, of the auxiliary request, both requests filed with letter dated 23 March 2016.

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

"A method executable on a computer system for sorting data cells in a cell table, the computer system having a graphical user interface including a display device and one or more user interface selection devices, and the method comprising:

receiving a selection of data cells via a user interface selection device, wherein the selected data cells include at least one data cell having a first associated format and at least one data cell having a second associated format that is different from the first associated format;

displaying on the display device a first menu (408), wherein the first menu displays one or more options for sorting the selected data cells according to one or more format types, wherein the one or more format types comprise at least one of: a cell fill color (410); a cell font type, a cell font size, a cell font color (412), and a cell icon type (414);

receiving a selection of a format type by which to sort the selected data cells;

scanning the selected data cells for one or more formats of the selected format type that are associated with the selected data cells;

displaying on the display device a second menu (702), wherein the second menu displays options for sorting the selected data cells, and wherein the options comprise only the one or more formats associated with the selected data cells;

receiving a selection of the first associated format by which to sort the selected data cells;

displaying on the display device a third menu (502), wherein the third menu displays one or more options for sorting the selected data cells according to one or more cell arrangements, and wherein the one or more cell arrangements comprise at least one of: displaying

selected data cells having the first associated format above selected data cells not having the first associated format and displaying selected data cells having the first associated format below selected data cells not having the first associated format;

receiving a selection of one of the one or more cell arrangements;

scanning the selected data cells to determine data cells having the first associated format and selected data cells not having the first associated format;

in response to the determination, rewriting data in the cell table such that the data is ordered according to the selected cell arrangement based on the first format;

displaying the selected data cells according to the rewritten data in the cell table including displaying the at least one data cell having the first associated format and the at least one data cell not having the first associated format."

X. Claim 1 of the auxiliary request differs from claim 1 of the main request in that the feature "in response to the determination ... based on the first format;" reads as follows

"in response to the determination, rewriting data in the cell table such that the data in the data cells having the first associated format is ordered according to the selected cell arrangement based on the first format;".

XI. The appellant's arguments 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 application relates to the rearrangement of displayed data in a data application, for example a spreadsheet application. The invention as described in the application lets the user select data cells and a format and then organises the selection of data cells according to the format chosen by the user. The organisation may be sorting or filtering. The formats comprise any type of visual characteristics of the data cells, for example cell fill colour, cell font colour, or the type of icon placed on the cell. The cells are then rearranged to display only the cells with the chosen format (filtering) or to display them at the top of the list (sorting) (see paragraphs [0005] and [0006] of the original description). Other embodiments are described in the application. The present claims are directed to an embodiment for sorting data cells in a cell table.

Contested Decision

3. The decision under appeal was issued after conducting oral proceedings (in the absence of the former applicant), at the end of which the Examining Division announced that the proceedings would be continued in writing with the intention to issue "the requested decision according to the state of the file". In principle, the Board has no objection to the chosen course of action. However, it is very unfortunate that

the decision does not mention at all that oral proceedings took place, even though these constitute an essential part of the examination proceedings (see also decision T 1195/09 of 21 April 2015, reasons 3.3).

Main request

4. *Claim 1*

4.1 Claim 1 recites a method for sorting data cells in a cell table, essentially comprising

(i) receiving a selection of data cells, displaying menus, and receiving, through those menus, selections of a format type, a first associated format and a cell arrangement, wherein the cell arrangement options comprise displaying the selected data cells having the first associated format above or below the other selected data cells;

(ii) scanning the selected data cells and rewriting data in the cell table such that the data is ordered according to the selected cell arrangement based on the first associated format, and

(iii) displaying the selected data cells according to the ordered rewritten data.

5. *Inventive step*

5.1 In its decision the Examining Division used document D1, an Internet disclosure, as the starting point for assessing inventive step of the claimed invention. Since the Examining Division provided a dated version of document D1 from the Internet Archive, the Board recognises document D1 as valid prior art for

the present case, noting further that this was not disputed by the appellant.

5.2 Document D1 discloses a method for sorting data cells in a cell table (see section "Sort by Cell Color", lines 1 and 2) comparable to the method of claim 1. It is therefore a suitable starting point.

5.3 The method of document D1 lets the user sort a selection of cells by selecting a format type in a first menu, e.g. cell colour, and by choosing whether the cells should be ordered in ascending or descending order in a further menu corresponding to the third menu of present claim 1 (see "Sort by Cell Color", point 1 and associated figure).

Moreover, document D1 sorts and displays the sorted selected data (section "Sort by Cell Color", point 1 and figure associated with point 3). It thus discloses rewriting the data in the cell table according to the selected options, and displaying the cells with different formats.

It is also clear that document D1's sorting by format type, e.g. cell colour, of selected data cells only makes sense if there are at least two cells with different associated formats, e.g. red and blue. The feature is anyway clearly disclosed in document D1, e.g in the first and third figures of the sections "Sort by Cell Color" in which the selected cells of column "Col3" have different colours, or "cell formats" in the language of present claim 1 (see also e.g. the section "Sort by font style" where the data cells in "Col4" to be sorted have different font styles, e.g. italic and regular).

In line with the analysis by the Examining Division, the Board notes that the passages indicated below state that the method of document D1 comprises the claimed steps related to

- receiving a selection of data cells (section "Sort by Cell Color", point 1),
- displaying a first menu with options for sorting according to format types, and receiving a selection of a format type (section "Sort by Cell Color", point 1 and associated figure),
- displaying a menu, corresponding to the third menu of present claim 1, with options for sorting the selected data cells according to a cell arrangement, and receiving a selection of a cell arrangement (section "Sort by Cell Color", point 1 and associated figure),
- rewriting data in the cell table such that the data is ordered according to the selected options, and displaying the reordered cells (section "Sort by Cell Color", point 1 and figure associated with point 3).

5.4 The claimed invention therefore differs from the method of document D1 in that it includes features essentially corresponding to:

(a) scanning the selected data cells for one or more formats of the selected format type that are associated with the selected data cells;
(b) displaying on the display device a second menu with options comprising only the one or more formats associated with the selected data cells;
(c) receiving a selection of the first associated format by which to sort the selected data cells;
(d) third menu options comprising displaying selected data cells having the first associated format above

or below selected data cells not having that format;

(e) scanning the selected data cells to determine data cells having the first associated format and those not having the first associated format;

(f) rewriting based on the first format (instead of format type).

This analysis of document D1 was in general not contested by the appellant.

5.5 Compared to the method of D1, steps (a) to (f) of the present invention additionally display a second menu showing the cell formats of the format type occurring in the selected data cells and receive a selection of a cell format (steps (a) to (c)), which is further used for sorting the selected cells (steps (d) to (f)).

5.6 Whereas in the method of document D1 the user may only order the cells in ascending or descending order of format type, for example colour or text length, features (c) to (f) of the claimed method let the user select a specific format, for example the red colour or a particular text length, and display the cells with that specific format at the top or bottom of the list.

At the oral proceedings the appellant argued that the invention provided enhanced techniques to sort and group cells, supporting types of sorting which were not possible with document D1 or with the conventional sorting schemes. The appellant discussed the example also given in its letter of 23 March 2016. Using the invention for displaying data cells having a specific colour, for example blue, at the top of a column, the other cells still remained in their previous order, instead of being rearranged according to some pre-set

ordering scheme, as in document D1. This allowed successive sorting of the cells in accordance with user needs and made it less cumbersome for the user to get the required information. This was particularly advantageous in long lists of data. According to the appellant, this was a technical effect since it was about the system doing something better for the user, or facilitating the user's understanding of the data.

5.6.1 In reply to the Board's comment at the oral proceedings that the appellant's reasoning would not be valid for other format types, the appellant expressed its willingness to restrict format types in the claims, e.g. to colours. Taking that into account, the Board recognises that in conventional sorting, e.g. that of document D1, there is no guarantee that some cells still remain in their previous order. Furthermore, successive conventional sorting is possible but usually has to be performed in a different manner in order to yield the same result. As the Board mentioned at the oral proceedings, the sorting scheme of the invention is a mixture of filtering and sorting, both known from the prior art, or filtering without hiding the filtered-out cells.

5.6.2 Independently of those considerations, sorting or grouping data in a particular manner on the display is a matter of presentation of information, which as such is non-technical. Especially where the data to be sorted lacks technical character and the way the data is presented does not convey any technical information, the process of deciding which sorting schemes are required to let the user "get the required information" from the presented data or "facilitating the user's understanding of the data" depend on non-technical considerations, such as considerations regarding the

semantic content of the data in the cells, the meaning attributed to the way the data is presented in the cells (corresponding to "cell formats" in the present claim), or which information the user wants to extract from the data cells. For instance, if the cells corresponded to a list of administrative tasks shown in different colours according to task priority, the user might want to order the cells so that tasks shown in a specific colour would appear above the others. If the cells contained sales data, the user might consider it more important to sort according to descending order of the values in the cells.

In the grounds of appeal, the appellant referred to decisions T 362/90 of 13 October 1992 and T 643/00 of 16 October 2003. Decision T 643/00 considered that an arrangement of menu items on a screen could be determined by technical considerations, which could be intended to enable the user to manage a technical task more efficiently or faster. In the case of T 643/00 the technical task was searching and retrieving images stored in an image apparatus. Even though the appellant cited that case law with regard to a feature which is no longer in present claim 1, the Board finds it appropriate to discuss it for distinguishing features (c) to (f).

5.6.3 The Board agrees that features (c) to (f) may help the user, under some circumstances, to faster assess information presented in the data cells.

However, in the present case, the claim does not relate to any specific type of data. The application describes the invention as generally suitable for any "data application", for example database or spreadsheet applications (see paragraph [0029]), and does not refer

to concrete types of data. No technical meaning can thus be attributed to the information displayed on the cells or to the way that information is presented. In other words, the information displayed on the cells and the arrangement of the cells on the display do not constitute information about the technical system, and cannot be seen as "visual indications ... about conditions prevailing in an apparatus or system" in the sense of T 115/85 (OJ EPO 1990, 30), point 7, on which T 362/90 relies.

Moreover, the user tasks mentioned in the application, e.g. organising data (paragraphs [0002] and [0032]) on the display, and by the appellant, e.g. analysing data, are in principle non-technical tasks. It cannot be derived from the claim or application that the arrangement of data cells helps the user to perform a technical task. In the absence of such an indication, it has to be assumed that the arrangement of data cells is instead used in the context of a non-technical activity, e.g. analysing sales data.

In the present case, the user is analysing non-technical data previously retrieved by the system and displayed on the screen. This is not comparable to the task of searching and retrieving images stored in an image processing apparatus, which was considered technical in the context of the case in decision T 643/00 (reasons 16 and 17).

The above assessment of features (c) to (f) and the interpretation of the case law cited by the appellant is also in line with more recent decisions discussing similar features of user interfaces, for example T 1143/06 of 1 April 2009 (reasons 3.8 and 5.4), T 1670/07 of 11 July 2013 (reasons 12), T 1214/09 of

18 July 2014 (reasons 4.8.8), and T 336/14 of 2 September 2015 (reasons 1.2.5).

5.6.4 In the light of the above findings, the Board cannot recognise in the present case any technical considerations leading to the decision of sorting according to cell format and to the below/above type of arrangement. That sorting scheme is hence considered to relate to presentation of information as such. It follows that the distinguishing features, in particular features (c) to (f), are directed to the non-technical aim of additionally allowing, compared to the method of document D1, re-arrangement of cells so that cells of a particular cell format are arranged below or above the remaining cells.

5.7 With regard to features (a) and (b) the Board notes that in its letter and at the oral proceedings the appellant argued, with reference to an illustrative example, that the invention avoided the difficulties a user was faced with "when presented with an entire array of colors and color shades for data cells". For example, if the cells had a colour gradient varying from blue to red, it was difficult for the user to distinguish among the numerous available colours when presented with the entire array of colours to select from. The present invention provided only those colours represented within a selected range of cells, so that a user could quickly decide by which range to sort the cells, thus enhancing the sorting process.

The Board agrees with the appellant in that, as explained in the preliminary opinion, step (a) in combination with step (b) avoids listing formats, e.g. colour shades, not occurring in the selected data cell,

for a more efficient choice of the colour format by the user.

5.8 From the above reasoning, and taking into account that in line with the established case law the non-technical aim may legitimately appear in the formulation of the technical problem, the Board concludes that the distinguishing features solve the technical problem of enhancing the method of D1 to additionally support an efficient interface for re-arranging cells with a specific format above or below cells not having that format.

5.9 The Board remarks that document D1 already provides the first and third menus for sorting, and that features described in document D1 regarding those menus (see point 5.3 above) are equivalent to features (c) to (f). In the opinion of the Board it would therefore be straightforward for the skilled person faced with the problem stated above to provide an additional menu similar to the first menu known from document D1 for supporting the selection of the cell format, instead of the format type, and to change the ascending/descending arrangement options of the third menu of D1 to the above/below arrangement option given to the skilled person as part of the problem to be solved.

Furthermore, the Board agrees with the Examining Division that, before the date of priority of the present application, it was standard practice to facilitate the user selection of an option by limiting the options of a menu to those available in the particular context, corresponding to features (a) and (b). Such features are disclosed in document D6, page 217 ("A drop-down list appears, as shown in Figure 11.11. This list contains all the entries in the

column."). In the Board's view, it would immediately occur to the skilled person, when trying to implement an efficient menu for selecting the format for sorting, to adopt that well-known solution in order to facilitate the choice by the user of a format for cell sorting.

The skilled person would therefore, without exercising inventive skill, consider adding steps (a) to (f) to the method of document D1 in order to solve the technical problem posed. It follows that the subject-matter of claim 1 of the main request does not involve an inventive step (Articles 52(1) and 56 EPC).

Auxiliary request

6. Claim 1 of the auxiliary request differs from claim 1 of the main request in that the feature reciting the step performed "in response to the determination" now clarifies that the data which is ordered is the data "in the data cells having the first associated format".

7. *Interpretation of the claim*

7.1 The Board interprets the added text to the effect that only those cells which have the first associated format, i.e. the format selected by the user in the second menu as the format by which to sort the data cells, are re-ordered, while the ordering of the remaining cells is left unchanged. In its interpretation of claim 1 of the main request, the Board already assumed that sorting the cells according to the arrangement above/below implied that the order of the remaining cells did not change. This additional feature therefore does not change the interpretation of the claim by the Board.

8. *Inventive step*

8.1 At the oral proceedings, the appellant said that its submissions for the main request equally applied to the auxiliary request. The appellant did not provide any further arguments for the auxiliary request.

Since, furthermore, the Board interprets claim 1 of the auxiliary request in the same way as claim 1 of the main request, the reasoning given under point 5 above with respect to inventive step of claim 1 of the main request equally applies to claim 1 of the auxiliary request.

8.2 It follows that claim 1 of the 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