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**Datasheet for the decision
of 18 September 2019**

Case Number: T 1518/16 - 3.5.07

Application Number: 06111605.9

Publication Number: 1708093

IPC: G06F17/24

Language of the proceedings: EN

Title of invention:

Scrollable and re-sizeable formula bar

Applicant:

Microsoft Technology Licensing, LLC

Headword:

Resizable formula bar I/MICROSOFT TECHNOLOGY LICENSING

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step - all requests (no)



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Case Number: T 1518/16 - 3.5.07

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 18 September 2019

Appellant: Microsoft Technology Licensing, LLC
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Redmond, WA 98052 (US)

Representative: Grünecker Patent- und Rechtsanwälte
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted on 3 February 2016
refusing European patent application No.
06111605.9 pursuant to Article 97(2) EPC

Composition of the Board:

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

Summary of Facts and Submissions

I. The applicant (appellant) appealed against the decision of the Examining Division refusing European patent application No. 06111605.9.

II. The decision cited the following documents:

D1: US 2004/0210822 A1, published on 21 October 2004;

D2: US 6 549 878 B1, published on 15 April 2003;

D3: D. Kusleika: "Ugly Formulas", 23 June 2004, retrieved from <http://dailydoseofexcel.com/archives/2004/06/23/ugly-formulas/>.

The Examining Division decided that the subject-matter of the independent claims of the main request and auxiliary requests 1 to 4 lacked inventive step in view of document D1. Auxiliary request 5 was not admitted into the proceedings.

III. In the statement of grounds of appeal, the appellant maintained the main request and auxiliary requests 1 to 5.

IV. In a communication accompanying the summons to oral proceedings, the Board introduced the following documents into the proceedings:

D4: US 6 057 837, published on 2 May 2000;

D5: US 6 239 799 B1, published on 29 May 2001.

It expressed, *inter alia*, the preliminary opinion that the subject-matter of claim 1 of all requests lacked inventive step over document D4 in combination with the common general knowledge as evidenced by document D5.

- V. In a letter dated 16 August 2019, the appellant commented on the Board's communication.
- VI. During oral proceedings held on 18 September 2019, the appellant filed the following post-published document:

D6: Two extracts from the "Daily Dose of Excel" website, retrieved on 17 September 2019 from <http://dailydoseofexcel.com/>.

At the end of the oral proceedings, the chairman pronounced the Board's decision.

- VII. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the main request or, in the alternative, one of the auxiliary requests 1 to 5.

- VIII. Claim 1 of the main request reads as follows:

"A method for displaying data within a spreadsheet application (402), in a computer system having a graphical user interface including a display device and one or more user interface selection devices, the method comprising the steps of:

displaying, on the display device, a formula bar comprising a text box (406) that displays spreadsheet data;

displaying, on the display device, a first portion of the spreadsheet data in the text box;

in response to a first user interface input, expanding the formula bar to display a second portion of the

spreadsheet data in the text box, wherein expanding the formula bar comprises:

determining a location of the top of the spreadsheet in relation to the expanded formula bar; and

automatically adjusting the spreadsheet based on the determined location to compensate for the increased size of the expanded formula bar by scrolling the spreadsheet to continue to display a portion of the spreadsheet prevented from display by the expanded formula bar; and

in response to a second user interface input, collapsing the formula bar to display only a single line of the data in the text box."

IX. Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that the text "displayed before the expansion of the formula bar" has been inserted after "determining a location of the top of the spreadsheet".

X. Claim 1 of auxiliary request 2 differs from claim 1 of auxiliary request 1 in that "displaying, on the display device, a formula bar comprising a text box (406) that displays spreadsheet data;" has been replaced with:

"displaying, on the display device, a formula bar comprising a text box (406) that displays spreadsheet data, a list box (404; 604), wherein a user selects, from the list box, a cell identifier for a cell to display in the text box (406; 606) the cell data contained within the selected cell, and a formula bar division (610) dividing the list box (404; 604) from the text box (406; 606);"

and in that "in response to a first user interface input, expanding the formula bar to display a second portion of the spreadsheet data in the text box" has been replaced with:

"in response to a first user interface input, expanding the formula bar, thereby increasing display space of the text box to display a second portion of the spreadsheet data in the text box".

XI. Claim 1 of auxiliary request 3 differs from claim 1 of auxiliary request 2 in that the following text has been added at the end of the claim:

", wherein the first user interface input is one of a selection of a user control, a double click of a mouse in a portion of the formula bar (404), and a drag and drop of the formula bar (404)."

XII. Claim 1 of auxiliary request 4 differs from claim 1 of auxiliary request 3 in that the following text has been added at the end of the claim:

", and

wherein a property of the formula bar software object provides whether the formula bar is in an expanded state or an unexpanded state and contains a value for the maximum number of lines displayed in the expanded state, the value being a default value or set by user input, and wherein the value persists until changed by user input."

XIII. Claim 1 of auxiliary request 5 reads as follows:

"A method for displaying data within a spreadsheet application (402), in a computer system having a graphical user interface including a display device and one or more user interface selection devices, the method comprising the steps of:

displaying, on the display device, a formula bar comprising a text box (406) that displays spreadsheet data;

displaying, on the display device, a first portion of the spreadsheet data associated with a cell in the text box;

in response to a first user interface input, expanding the formula bar, thereby increasing display space of the text box to display a second portion of the spreadsheet data associated with the cell in the text box, the second portion being greater than the first portion and including the first portion, wherein expanding the formula bar comprises:

determining a location of the top of the spreadsheet in relation to the expanded formula bar; and

automatically adjusting the spreadsheet based on the determined location to compensate for the increased size of the expanded formula bar by scrolling the spreadsheet to continue to display the top of the spreadsheet prevented from display by the expanded formula bar;

wherein the first user interface input is one of a selection of a user control, a double click of a mouse in a portion of the formula bar (404), and a drag and drop of the formula bar (404), and

wherein a property of the formula bar software object provides whether the formula bar is in an expanded state or an unexpanded state and contains a value for the maximum number of lines displayed in the expanded state, the value being a default value or set by user input, and wherein the value persists until changed by user input."

XIV. The appellant's arguments, where relevant to the 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.

2. *Late-filed document*

At the oral proceedings before the Board, the appellant filed document D6 as evidence in support of its arguments with respect to document D3. Since the present decision does not rely on document D3, there is no need to decide whether to admit document D6 into the appeal proceedings under Article 13(1) and (3) RPBA.

3. *The invention*

3.1 The background section of the application explains that the formula bar of a conventional spreadsheet application generally is a text box that displays the content of the currently selected ("active") cell as a single line. When editing a formula or a collection of text that does not fit in the text box, the user must

continually scroll back and forth to ensure that the formula or text is entered correctly.

- 3.2 The invention essentially proposes a formula bar that can be expanded in response to user input to display multiple lines of text.

Main request

4. *Interpretation of claim 1*

- 4.1 The Board first notes that the application uses the term "spreadsheet" to refer both to the spreadsheet grid and to the area of a spreadsheet application's user interface that displays the visible part of the grid (see, in particular, "spreadsheet 116" in paragraph [0024] and Figure 1).

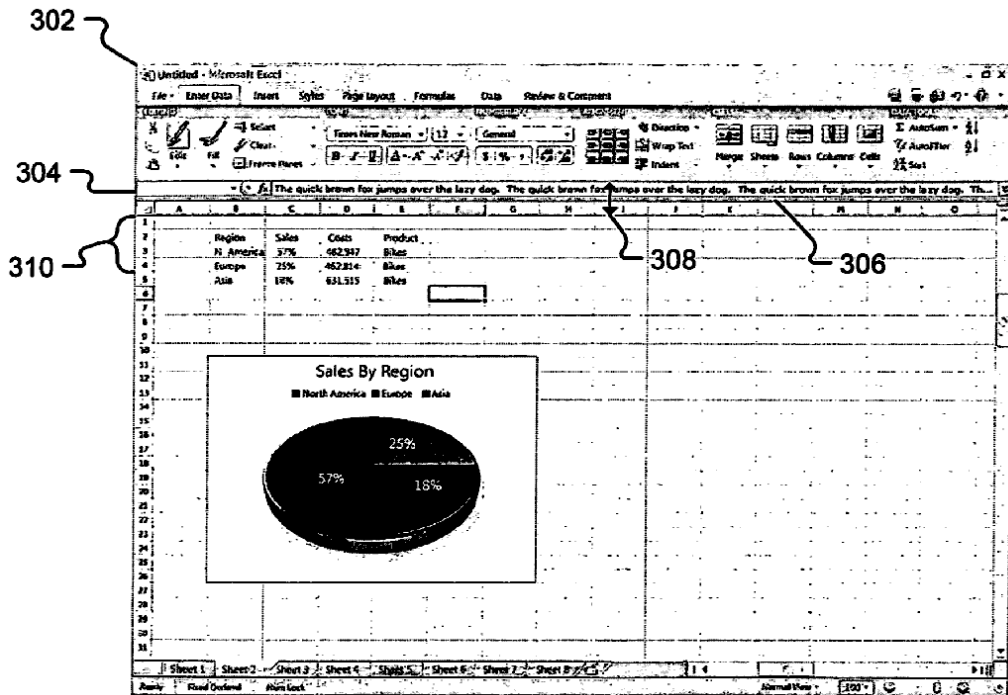
- 4.2 According to claim 1, expanding the formula bar comprises:

- determining a location of the top of the spreadsheet in relation to the expanded formula bar; and
- automatically adjusting the spreadsheet based on the determined location to compensate for the increased size of the expanded formula bar by scrolling the spreadsheet to continue to display a portion of the spreadsheet prevented from display by the expanded formula bar.

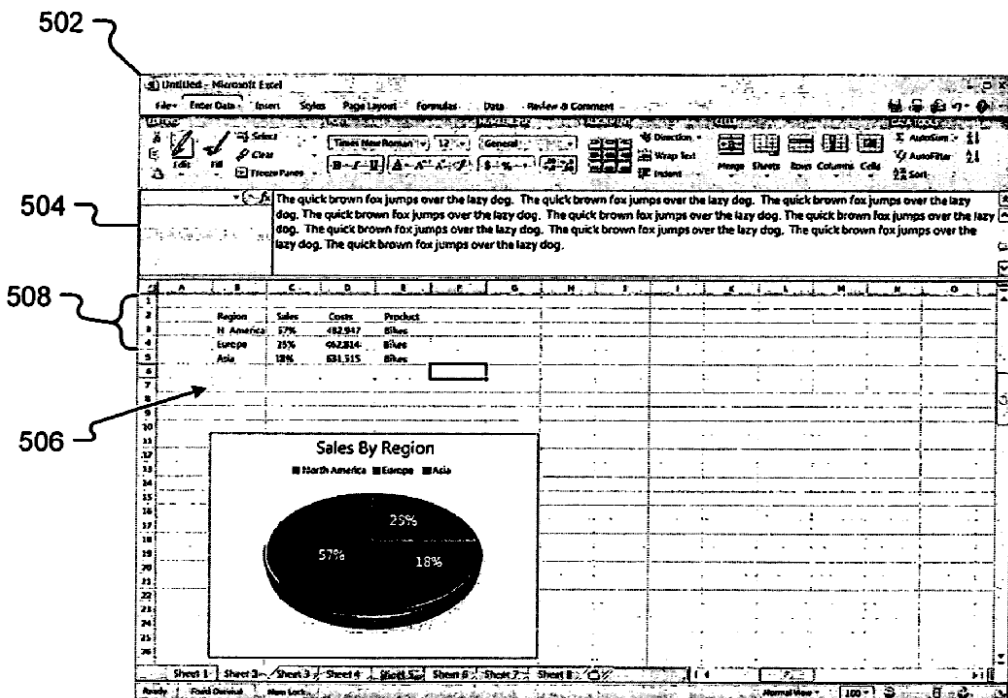
These features are based on paragraphs [0037] and [0038] of the application's description.

- 4.3 To better understand what is intended by these features, it is useful to start with Figure 3, which

depicts the user interface of a spreadsheet application with the formula bar in an unexpanded state:



In the embodiment described in paragraphs [0037] and [0038], the corresponding user interface with the formula bar in an expanded state is illustrated by Figure 5:



By comparing these two figures, it becomes clear that expanding the formula bar involves a corresponding shrinking of the screen area available for displaying the spreadsheet grid to make room for ("to compensate for") the expanded formula bar. This is done in such a way that the top rows 310 of the visible spreadsheet grid when the formula bar is in the unexpanded state remain the top rows 508 when the formula bar is in the expanded state.

4.4 The Board interprets the "determining a location" and "automatically adjusting" features in accordance with their intention as illustrated by Figures 3 and 5.

5. *Inventive step*

5.1 Document D4 contains, in column 1, line 28, to column 4, line 59, with reference to Figures 1a to 1g, a description of conventional spreadsheet applications such as "EXCEL 95" and "EXCEL 97".

Figures 1a to 1g depict the graphical user interface of such a conventional spreadsheet application. The user interface includes a single-line formula bar that is displayed just above the spreadsheet grid. It is apparent from Figures 1a to 1f that the formula bar displays the content of the selected/active cell.

Hence, this prior art discloses a method for displaying data within a spreadsheet application comprising a step of displaying a formula bar comprising a text box that displays spreadsheet data and a step of displaying a first portion of the spreadsheet data in the text box.

As noted in the background section of the application, conventional spreadsheet applications have the disadvantage that long formulas cannot be displayed in full in the formula bar, which renders their editing cumbersome for the user.

- 5.2 The appellant argued that the skilled person, starting from a conventional spreadsheet with a horizontally scrolling single-line formula bar, would have had various options to choose from. For example, he could have implemented a vertically scrolling formula bar that would still have shown only a single line at a time, or a separate window containing a larger formula bar, or a resizable formula edit box overlaying the active cell as disclosed in document D1. The skilled person would not have considered providing a multiline text entry box as he was strongly attached to single-line formula bars.

However, the existence of alternative solutions does not mean that the claimed solution is non-obvious. And since multiline text entry boxes had been in common use in graphical user interfaces, the Board cannot agree that the skilled person would not have contemplated their use for their normal purpose.

- 5.3 In the Board's view, the skilled person, starting from a conventional spreadsheet application and faced with the problem of improving the editing of long formulas, would have realised that the limited screen area of the formula bar is what renders editing long formulas cumbersome and that they would be easier to edit if the formula bar extended over multiple lines. At the same time, it would have been apparent that enlarging the formula bar would leave less screen space for displaying the spreadsheet grid.

The skilled person would have been aware of "splitter bar" user interface controls. As evidenced by the background section of document D5, splitter bars had been well known at the priority date of the application. A conventional splitter bar separates two panes of a user interface either vertically or horizontally and allows the user to control the relative proportions of the two panes by dragging the bar right-left or up-down (see D5, column 1, lines 35 to 48).

Hence, the skilled person would have provided a horizontal splitter bar between the formula bar and the spreadsheet grid to serve its normal purpose, which is to allow the user to control the size of the formula bar relative to the size of the spreadsheet grid.

The skilled person would thereby have arrived at a method in which, in response to a first user interface input in the form of the user dragging down the splitter bar, the formula bar expands to display a second portion of the spreadsheet data and, in response to a second user interface input in the form of the user dragging the splitter bar back up, the formula bar collapses to display only a single line of data. Moreover, when the formula bar expands, the screen area available for the spreadsheet grid shrinks to make room for the formula bar.

- 5.4 Providing a horizontal splitter bar between the formula bar and the spreadsheet grid does not inherently result in the spreadsheet row which is displayed at the top of the visible spreadsheet grid remaining there when the formula bar is expanded. Conceivably, it could be the bottom row that remains in place, or some other rule

could be used to decide which rows remain visible after the expansion of the formula bar.

Nevertheless, leaving the top row of the visible spreadsheet grid in place as the splitter bar is dragged down is at least one of the obvious choices. Moreover, in the absence of an unexpected technical effect, any choice regarding which rows are to remain visible is to be regarded as obvious.

- 5.5 In sum, the subject-matter of claim 1 lacks inventive step over a conventional spreadsheet application as shown in Figures 1a to 1g of document D4 (Article 56 EPC).

Auxiliary request 1

6. The amendment made to claim 1 in auxiliary request 1 attempts to clarify the features discussed in point 4 above without changing their meaning. The subject-matter of this claim therefore likewise lacks inventive step (Article 56 EPC).

Auxiliary request 2

7. *Inventive step*

- 7.1 Claim 1 of auxiliary request 2 adds features specifying that the formula bar contains, in addition to a text box for displaying and editing a formula, a "list box" from which the user can select "a cell identifier for a cell to display in the text box the cell data contained within the selected cell". The list box and text box are divided by a "formula bar division".

Claim 1 further clarifies that expanding the formula bar results in "increasing display space of the text box", which is how the Board already interpreted claim 1 of the main request.

7.2 The claimed "list box" for selecting a cell identifier is already present in Figures 1a to 1g of document D4 to the left of formula bar 106.

7.3 Although this is not expressed in the claim, paragraph [0041] explains that the user can resize the list box and the formula bar's text box by dragging and dropping the "division" separating the two boxes. The claimed "formula division" is hence a well-known vertical "splitter bar" as already discussed in point 5.3 above, which again is used for its normal purpose. It can therefore not support an inventive step.

7.4 Thus, the subject-matter of claim 1 of auxiliary request 2 lacks inventive step (Article 56 EPC).

Auxiliary request 3

8. *Inventive step*

8.1 Claim 1 of auxiliary request 3 specifies that the "first user interface input" by which the formula bar is expanded is one of "a selection of a user control", "a double click of a mouse in a portion of the formula bar" and "a drag and drop of the formula bar".

8.2 The "drag and drop of the formula bar" alternative is based on paragraph [0044] of the description, which explains that the user can select "a portion of the formula bar to change the mouse cursor to an expand cursor" and can then "grab" and "drag" the formula bar

until it is expanded. Paragraph [0050] refers, more specifically, to the user dragging "the bottom of the formula bar".

- 8.3 This alternative hence corresponds to the obvious use of a horizontal "splitter bar" between the formula bar and the spreadsheet grid (see point 5.3 above). The subject-matter of claim 1 of auxiliary request 3 therefore lacks inventive step (Article 56 EPC).

Auxiliary request 4

9. *Inventive step*

- 9.1 Claim 1 of auxiliary request 4 adds that "a property of the formula bar software object provides whether the formula bar is in an expanded state or an unexpanded state and contains a value for the maximum number of lines displayed in the expanded state, the value being a default value or set by user input, and wherein the value persists until changed by user input".

- 9.2 In its statement of grounds of appeal, the appellant argued that providing a value for the maximum number of lines displayed in the expanded state protected against potentially unnoticed scrolling of the spreadsheet caused by the user moving between cells with different formula lengths.

At the oral proceedings, the appellant clarified that the "value for the maximum number of lines displayed in the expanded state" was to be understood as fixing the size (in number of lines) of the expanded formula bar. Hence, the feature ensured that if the user selected a cell containing a formula that fit in fewer lines or

required more lines, the expanded formula bar would keep its size and not shrink or expand further.

- 9.3 As claim 1 refers to the "maximum" number of lines displayed in the expanded state and not to the actual number of lines, the text of the claim does not support the appellant's argument. In the Board's view, setting a (user-configurable) upper limit to the size of the formula bar (expressed in lines of text) would have been an obvious possibility, not having any unexpected effects.

For the sake of completeness, the Board adds that, when the user has expanded the formula bar to a particular number of lines by dragging down a splitter bar, the formula bar is expected to remain at the size set by the user even if the user subsequently selects a cell containing a smaller or longer formula. Hence, even if the appellant's interpretation of "the maximum number of lines" were accepted, this feature would not support an inventive step.

- 9.4 The remaining features added to claim 1 are straightforward programming features, essentially expressing that (a "formula bar" software module of) the spreadsheet application keeps track of the current expansion state of the formula bar.
- 9.5 The subject-matter of claim 1 of auxiliary request 4 therefore lacks inventive step (Article 56 EPC).

Auxiliary request 5

10. *Admission*

As auxiliary request 5 was not admitted into the proceedings by the Examining Division, its admission into the appeal proceedings is at the Board's discretion under Article 12(4) RPBA. Since the request presents it with no difficulties, the Board decides to exercise its discretion in the appellant's favour and to admit auxiliary request 5 into the proceedings.

11. *Inventive step*

The features added to claim 1 clarify that expanding the formula bar results in an increase in the display space of the formula bar's text box and in the display of a larger portion of cell data than before the expansion. Since the same would happen when the formula bar of the conventional spreadsheet described in document D4 is expanded by means of the obvious splitter bar discussed above (as long as the active cell contains an amount of data that does not fit on a single line), the subject-matter of claim 1 of auxiliary request 5 still lacks inventive step (Article 56 EPC).

Conclusion

12. 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