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Case Number: T 0756/06 - 3.5.01

Application Number: 00300681.4

Publication Number: 1026609

IPC: G06F 17/60, G06F 15/02

Language of the proceedings: EN

Title of invention:
Method of and apparatus for displaying a schedule on a computer display

Applicant:
FUJITSU LIMITED

Headword:
Displaying a schedule/FUJITSU

Relevant legal provisions:
EPC Art. 52(1)-(3)

Relevant legal provisions (EPC 1973):
EPC Art. 56

Keyword:
"Inventive step - all requests (no)"

Decisions cited:
T 0115/85, T 0362/90, T 0931/95, T 0641/00, T0643/00, T 0928/03, T 0125/04

Catchword:
See points 5 and 6 of the Reasons.

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0756/06 - 3.5.01

D E C I S I O N
of the Technical Board of Appeal 3.5.01
of 18 April 2008

Appellant: FUJITSU LIMITED
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 19 December 2005 refusing European application No. 00300681.4 pursuant to Article 97(1) EPC 1973.**

Composition of the Board:

Chairman: S. Steinbrener
Members: W. Chandler
P. Schmitz

Summary of Facts and Submissions

I. This appeal is against the decision of the examining division to refuse the application on the ground that the subject-matter of claim 1 of the sole request did not involve an inventive step (Article 56 EPC). The following document was cited but not used in the decision:

D2: US-A-5 838 889

II. In the statement setting out the grounds of appeal, the appellant requested that the decision be set aside and that the application be remitted to the first instance for further examination on the basis of an amended main request and an auxiliary request, filed with the grounds of appeal. The appellant also made an auxiliary request for oral proceedings.

III. In the communication accompanying the summons to oral proceedings, the Board summarised the issues to be discussed and *inter alia* expressed doubts about the inventive step of the requests. In a response, the appellant filed a further amended main and auxiliary request.

IV. At the oral proceedings, the appellant requested that the decision under appeal be set aside and the application be remitted to the first instance for further examination on the basis of the main request, or the auxiliary request, both filed with letter dated 14 March 2008. At the end of the oral proceedings, the Chairman announced the Board’s decision.

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

"A schedule display apparatus for displaying, within a limited display area, a schedule of a user containing schedule information accessed by the user, characterized by:

a display interval defining part (3) arranged for allowing the user to define a first time span (41) of said schedule and to select a first time scale determining a first display interval for display of schedule information within said first time span, and arranged for defining a second time span (42a, 42b) of said schedule and for automatically calculating, as a given ratio of said first time scale, a second time scale determining a second display interval for display of schedule information within said second time span, the first time span and the second time span being mutually exclusive; and

a display control part (1, 4) arranged for converting said first and second time scales into said first and second display intervals respectively, said display intervals having lengths inversely proportional to the respective time scales, and for generating whole display information including first display information in accordance with the first display interval during the first time span (41) and second display information in accordance with the second display interval during the second time span (42a, 42b);

whereby said first and second time scales are set for each of the defined time spans so that the frequently accessed time span has a large [sic] time scale to see information within the limited display area."

In claim 1 of the auxiliary request, the following feature is added before the last paragraph:

"wherein the schedule display apparatus is arranged to display areas (44,45) showing schedule information by using one of the first display interval and the second display interval based on a beginning time and an ending time for the schedule information and one of the first time span (41) and the second time span (42a, 42b);".

VI. The appellant argued essentially as follows:

The present invention related to a schedule display apparatus. The problem to be solved was how to make better use of a limited display area on a display screen of a PC, electronic notebook or the like. The existing solutions all had disadvantages; displaying less information was not so useful to the user, using smaller fonts was harder to read and using a scroll bar required additional user input. The invention allowed the user to have different time scales for different parts of the schedule (time spans).

The examining division regarded the problem solved to be a technical problem, but concluded that using different time spans with different time scales was of purely administrative nature and not a technical matter.

However, firstly, the feature of allowing a user to define a first time span, and to select a first time scale determining a first display interval within that time span, was itself a technical matter, since it improved the user interface of the schedule display

apparatus. Thus, by defining "active hours" which were frequently accessed and contained a relatively large amount of information, and a relatively fine time scale for displaying information within the active hours, the user could make better use of the display area.

Secondly, the present invention improved the user interface in another way, in the sense of how the display interval was determined. The user did not need to specify the display interval itself, such as a number of lines per unit time, since this was not a natural measure for the user. Rather, he only needed to select a first time scale, such as "30 min per division". A conversion means was provided for converting the first time scale into a form which could be used by the apparatus to set up the display, namely the first display interval. In this conversion process, an inversely proportional relationship was used, as now specified in the independent claims.

Thirdly, in addition to allowing the user to determine the first display interval, the present invention as now claimed determined a second display interval automatically, without requiring any further input from the user. Thus, the display interval defining part, having obtained the first time scale from the user, automatically calculated the second time scale as an integral multiple of the first time scale. This saved labour on the part of the user. Moreover, it clearly distinguished the claimed invention from mere "administrative" actions of a user.

The decision stated at page 3, first paragraph: "A technical solution to this technical problem may be for

example a feedback loop taking into account the real surface of a display and automatically adapting the time scales according to this input". The feature of automatically calculating the second time scale was just such a technical solution.

Thus, at least in the form as now claimed, the present invention involved more than mere "administrative" measures taken by a user. Rather, it provided specific technical features for improving the user interface of a schedule display apparatus and saving labour on the part of the user.

Although the decision under appeal did not mention any prior art, the measures taken in the present invention were in no way disclosed or suggested in the documents cited during examination.

D2 had a different object from the present invention – namely, to provide so-called "electronic paper" which could be flipped over – and the display of a schedule in D2 was merely an example of using the electronic paper. Figure 2A showed a schedule displayed with a single display interval, and it was disclosed that the user could change this display interval (see Figure 2C). However, there was no second timescale and only a *single value* could be set to cover the whole schedule. D2 also only showed a single item under the heading "Evening".

The problem with respect to D2 was increased flexibility. D2 did not disclose or suggest the feature of determining different display intervals for

different time spans within a schedule, or indeed any of the other distinguishing features.

Reasons for the Decision

1. The appeal complies with the requirements referred to in Rule 65(1) EPC 1973 and is therefore admissible.

2. As explained by the appellant (see point VI, above), the application concerns the general problem of improving the display of a time schedule. In particular, if the same number of lines is allocated for each time interval, the detail about some activities will not fit on the display (see Figure 1 and paragraphs [0007] to [0010] of the published application). The display of the invention solves this by allocating fewer lines to "non-active" hours, e.g. those outside the working day. As a result, more detail about the activities in the "active" hours can be displayed (see Figure 7 and paragraphs [0062] to [0069]).

3. The claims define the invention using the terms: "time span" (i.e. the duration of the active or non-active hours), "time scale" (i.e. the time per displayed line) and "display interval" (i.e. the number of lines on the display for a given hour), which is inversely proportional to the time scale (in the embodiment "display interval" = 60 / "time scale").

4. The claims relate to a display apparatus having a mixture of technical aspects, e.g. automatically calculating a second time scale, and non-technical aspects, e.g. presenting *schedule* information. It is established jurisprudence that such claims are

inventions in the sense of Article 52(1) and (2) EPC, but that the non-technical features cannot support the presence of inventive step (Article 56 EPC). Technical features are generally considered to be those that produce a technical effect.

5. In practice in such cases, one of two approaches is generally followed. In the first approach, e.g. apparent from T 931/95 - Pension benefit system/PBS PARTNERSHIP (OJ EPO 2001, 441), there is an initial analysis of the technical character of the features of the claim and then a consideration of the inventive step of only those features. This approach is typically used for inventions that are essentially business methods running on more or less notoriously known computer hardware. The second approach, e.g. used in T 641/00 - Two identities/COMVIK (OJ EPO 2003, 352), is a more conventional application of the problem and solution approach where the differences with respect to the closest prior art are determined and only those that contribute to the technical character are considered for inventive step. This approach may be more appropriate where the technical part is more substantial and/or relevant prior art exists. It has the advantage that any non-technical feature known from this prior art will not appear as a difference and does not need to be considered in the subsequent steps, thus sparing the step of judging whether it makes a technical contribution. Furthermore, this approach is less abstract since the claimed features can be analysed against concrete prior art.

6. Whichever approach is used, it goes without saying that a proper analysis of the claims must be performed. In

particular, a perfunctory analysis involving a loosely paraphrased wording of the claim should be avoided so as not to miss any features that might contribute to the technical character of the claimed subject-matter (see also T 928/03 - Video game/KONAMI, not published in OJ EPO, point 5.3.3 of the Reasons).

7. In the present case, the examining division apparently contemplated using the second approach when they stated in the summons to oral proceedings, "it might be possible to find differences between the system claimed in independent apparatus claim 1 and a system known from the prior art document D1 (figures 2 and 3a - 3c) or alternatively D2 (figures 2a - 2c)", but ultimately chose not to find these differences and not to use D1 or D2 in the final decision, thus effectively applying the first approach. However, the associated analysis of the claim was very brief, essentially consisting of asserting that making better use of a limited display area in order to optimise a user interface was a technical problem, but that the solution of using different time spans with different time scales was not a technical matter, but of a purely administrative nature, so that only the implementation could be seen as technical. Since the implementation was said not to be specified in the claim, the examining division concluded that it was obvious.

8. Although the Board essentially agrees with this finding, it prefers to use a more comprehensive analysis based on the second of the above mentioned approaches, not least because the prior art, especially D2, is very close to the invention.

Main request

9. At the oral proceedings the features of claim 1 were analysed with respect to D2. Although D2 primarily deals with providing so-called "electronic paper", which could be flipped over, it was common ground that Figure 2A of D2 disclosed displaying a schedule having a (first) time span, i.e. Thursday 8 A.M. to 5 P.M., having an associated (first) time scale, apparently 30 minutes per division.

10. Furthermore, Figure 2C shows that the back of the page 40 contains radio buttons 62 labelled "15 min", "30 min" and "1 hour". These are described at column 4, lines 34 and 35 as being for modifying the notes and appointments on the front of the page, i.e. where the time schedule is displayed. In the Board's view, the only sensible interpretation of these buttons is that they enable the user to select the (first) time scale of the schedule, set as "30 min" in Figure 2C corresponding to the 30 minute resolution of the schedule in Figure 2A. This 30 minute resolution implies the claimed inversely proportional (first) "display interval", in this case two lines per hour.

11. Finally, in the Board’s view, the fact that in Figure 2A the hours after 5 P.M. are subsumed on a different time scale under the heading "Evening" implies that the display is "arranged for defining a second time span" as claimed. The second time span does not overlap with the first time span and is therefore "mutually exclusive" as also claimed. It is implicit that the "large" time scale (meaning in fact a larger resolution or display interval, stated as "fewer

minutes" in the description at column 6, lines 2 to 10) is in the frequently accessed time span (non-evening hours).

12. Thus in the Board's view, the subject-matter of claim 1 differs from D2 in that the display is arranged for allowing the user to define the first time span and for automatically calculating, as a given ratio of said first time scale, a second time scale determining a second display interval for display of schedule information within said second time span.

13. The indication of internal states of a technical system, in the form of visual feedback for human interaction with the system, has been acknowledged to be technical by the boards in the past (see e.g. T 115/85 - Computer-related invention/IBM (OJ EPO 1990, 30) and T 362/90 (not published in OJ EPO)). This finding has been confirmed by more recent cases, in particular in T 643/00 – Searching image data/CANON (not published in OJ EPO), where the design of a GUI was seen in the context of the technical process of fast and efficient image retrieval in an image processing apparatus. On the other hand, in cases where the GUI design aimed exclusively at the mental activities of a viewer, in particular at preparing the relevant data for a non-technical decision making process by the user as the final addressee, no technical contribution has been acknowledged beyond its mere implementation. For example, in T 125/04 – Assessment system/COMPARATIVE VISUAL ASSESSMENTS (not published in OJ EPO), the vectorial presentation of information on the screen informing the customer about the properties of a product was aimed exclusively at the non-technical

mental activity of selecting a desired product and making a purchasing decision.

14. In the present case, the Board considers that the layout of the schedule is for the user's mental use, i.e. according to the user's requirements and preferences, rather than for a technical purpose in a technical process. In particular, although the appellant mentioned the possibility of user input of the first time span, the Board considers that this only results in a subjective improvement of the appearance of the schedule and is not a part of any technical process.

15. The appellant argues, picking up on the examining division's comment at point B-2 of the decision, that in the present case the time scales take into account the nature (size) of the display and also essentially resolve the prior art display problems by technical means. However, the claimed solution does not explicitly relate the time scales to display dimensions and so it does not necessarily solve this problem and can thus still be seen as a purely intellectual formatting measure.

16. Hence, the Board sees no technical contribution from either the information concerning the schedule itself (cognitive data), or from the layout in which the schedule is displayed. Thus, the only technical part of the solution is the implementation of a means for defining the first time span and a means for automatically calculating a second time scale. No particular detail of the implementation has been disclosed in the application and in the Board’s

judgment, the provision of such means is indeed a matter of routine design that does not involve an inventive step.

17. Even if the layout including different time scales were to be considered to contribute to an overall technical effect, the Board cannot see that this could involve an inventive step because in most conventional paper diaries, the working and non-working hours are displayed on different scales. Moreover, this appears to be the case for the time schedule in Figure 2A of D2, where the hours after 5 appear to be subsumed on a different time scale under the heading "Evening". Automatically calculating these scales would be a matter of normal design procedure, again depending on the amount of information to be entered into the various parts of the diary.

18. Accordingly, the subject-matter of claim 1 of the main request lacks an inventive step (Article 56 EPC 1973).

Auxiliary request

19. Claim 1 of the first auxiliary request adds to claim 1 of the main request essentially that the schedule has display areas showing schedule information that have a display interval (or inverse time scale) of the time span where they are displayed. These are further details of the time span and time scales, i.e. the format of the displayed information. Following the above considerations, the Board does not consider that this adds anything inventive.

20. Accordingly, the subject-matter of claim 1 of the auxiliary request lacks an inventive step (Article 56 EPC 1973).

21. There being no further requests, it follows that the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

T. Buschek S. Steinbrener