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Datasheet for the decision of 5 July 2007

Case Number: T 1554/05 - 3.5.03

Application Number: 00945092.5

Publication Number: 1192512

IPC: G05B 19/409

Language of the proceedings: EN

Title of invention:
Process variable gauge interface and methods regarding same

Patentee:
Honeywell Inc.

Opponent:
Siemens AG

Headword:
-

Relevant legal provisions:
EPC Art. 100(a), 52(1), 56

Keyword:
"Inventive step - no"

Decisions cited:
T 0248/85, T 0654/92, T 0691/94, T 1449/05, T 0211/06

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1554/05 - 3.5.03

D E C I S I O N
of the Technical Board of Appeal 3.5.03
of 5 July 2007

Appellant: (Patent Proprietor)
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Decision under appeal:
Decision of the Opposition Division of the European Patent Office posted 4 November 2005 revoking European Patent No. 1192512 pursuant to Article 102(1) EPC.

Composition of the Board:

Chairman: R. Moufang
Members: D. H. Rees
F. van der Voort

Summary of Facts and Submissions

I. This is an appeal by the proprietor of European Patent No. 1192512 against the decision of the opposition division to revoke the patent.

II. The independent claims as granted read as follows:

"1. A graphical user interface (50) for providing real-time process information to a user with regard to a process that is operable under control of one or more process variables, the graphical user interface (50) comprising:
a scale (282) extending along a gauge axis (285);
one or more bars (284) extending along the gauge axis (285), each bar representative of a set of high and low process limit values for a process variable, wherein the one or more bards [sic] (284) extending along the gauge axis (285) comprises:
a first bar (281) extending along the gauge axis (285), wherein a first end (286) of the first bar (281) is representative of an engineering hard high limit for the process variable and a second end (288) of the first bar (281) is representative of an engineering hard low limit for the process variable; and
a second bar (283) extending along the gauge axis (285), wherein a first end (290) of the second bar (283) is representative of an operator set high limit for the process variable and a second end (291) of the second bar is representative of an operator set low limit for the process variable; and
a graphical shape (297) displayed along the gauge axis (285) representative of a current value of the process variable.

4. A computer implemented method for providing a graphical user interface (50) for providing real-time process information to a user for a process that is operable under control of one or more process variables, the method comprising:
displaying a scale (282) extending along a gauge axis (285);
displaying one or more bars (284) extending along the gauge axis (285), each bar representative of a set of high and low process limit values for a process variable, wherein the step of displaying one or more bars (284) extending along the gauge axis (285) comprises:
displaying a first bar (281) extending along the gauge axis (285), wherein a first end (286) of the first bar (281) is representative of an engineering hard high limit for the process variable and a second end (288) of the first bar (281) is representative of an engineering hard low limit for the process variable; and
displaying a second bar (283) extending along the gauge axis (285), wherein a first end (290) of the second bar (283) is representative of an operator set high limit for the process variable and a second end (291) of the second bar (283) is representative of an operator set low limit for the process variable;
providing data representative of at least the current value of the process variable; and
displaying a graphical shape (297) along the gauge axis (285) representative of the current value of the process variable relative to the set of high and low process limit values."

III. In oral proceedings held on 21 July 2005 the opposition division found that the subject-matter of claim 1 lacked an inventive step over document

E12: EP 0 411 869 A

in combination with common knowledge of the skilled person. The patent was accordingly revoked, the written decision being dispatched on 04 November 2005.

IV. Notice of appeal was filed with a letter dated 06 and received 07 December 2005 and the fee paid on 15 December 2005. A statement of grounds of appeal was filed in a letter dated 23 and received 24 February 2006. The main request was for maintenance of the patent as granted. A new set of claims 1 to 4 of an auxiliary request was annexed. The independent claims 1 and 3 of the new request corresponded to dependent claims 2 and 5 respectively of the main request, so that the following feature was added to claim 1,

"wherein the second bar (283) extending along the gauge axis (285) representative of operator set high and low limits for the process variable extends along the gauge axis (285) within the first bar (281) representative of the engineering hard high and low limits for the process variable,"

and an equivalent feature was added to method claim 3.

In addition, in claim 1 the phrase "with the scale (282)" was inserted between "the gauge axis (285)" and

", each bar" (lines 7 and 8 of claim 1 in point II above).

V. No response was received from the respondent (opponent).

VI. At the oral proceedings held in accordance with the appellant's conditional request,

the appellant requested that the decision under appeal be set aside and that the patent be maintained as granted (main request) or, in the alternative, that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of claims 1 to 4 filed with the grounds of appeal and on the basis of the description and the figures as in the published patent, with the exception of pages 4 and 5 of the description which are to be replaced by new pages 4 and 5 as filed with the letter of 2 May 2007 (auxiliary request).

The respondent requested that the appeal be dismissed.

VII. The decision of the board was announced at the end of the oral proceedings.

Reasons for the Decision

1. A number of issues which could be relevant for the assessment of novelty and inventive step arose in the course of the procedure. The extent to which a claim directed to "a graphical user interface" or "a computer implemented method for providing a graphical user interface" could be limited by specifying the nature of

the data displayed was questioned. The respondent argued further that the difference between a bar and a pair of lines as display elements was not technical or did not contribute to the solution of a technical problem, and that the claimed subject-matter was therefore not novel, in particular with respect to the disclosure of document E12. However, while circumstances could undoubtedly arise where it would be necessary to resolve these questions in order to come to a decision in a case, the present appeal can be decided without doing so. Thus for the following arguments the board will without prejudice treat the nature of the data represented as part of the claimed subject-matter and all the claimed features as technical.

2. *The closest prior art*

2.1 The board considers that the closest prior art is that mentioned in the patent in suit. It is aware of one decision of a board of appeal (T 0248/85, Official Journal EPO 8/1986, 261) that suggests that, without further investigation and independent establishment of the facts such a starting point is not appropriate (Reasons 9). However the situation in that case was quite different from that in the present appeal. In that case the board was declining to endorse the view of the examining division that the claimed invention did satisfy the requirement of inventive step. Thus the board was expressing doubt that the applicant had fully or properly indicated the background art known to it. It remitted the case for further examination, presumably with the idea that the examining division would ask the applicant to supply documentary or other

evidence of the prior art it had indicated as background art. In the light of the further disclosure of such evidence beyond how it had been represented in the application, the claimed subject-matter might turn out not to involve an inventive step. The board in that case therefore did not pronounce upon whether a board or examining division might rely on the applicant's indication of background art as indeed being prior art for the purposes of Article 54 EPC in the situation where it comes to the conclusion on that basis that the claimed subject-matter does not involve an inventive step. The other relevant cases of which the board is aware, dealing mainly with the question of whether an applicant or patent proprietor is allowed to resile from its indication of background art, either implicitly or explicitly take the view that, if not resiled from or clearly not prior art for other reasons, it may be relied upon as prior art (see T 0654/92, T 0691/94, T 1449/05 and T 0211/06, all not published). In the present case the appellant did not resile from the indications of background art in the description (see also point 2.3 below).

2.2 The patent in suit discloses various features of prior art systems. Thus (paragraph [0008]),

"A user of the model-based predictive controller (e.g., an engineer, an operator, etc.) has conventionally been provided with various types of information regarding the various process variables including information concerning the controlled variables, manipulated variables, and disturbance variables. ... the user can ... change various types of limits placed on process variables contained in the controller (e.g.,

change low or high limits for individual process variables), ..."

Further (paragraph [0012]),

"For example, in a model-based predictive controller, engineering hard limits, operator set limits, engineering physical limits, and/or various other limits may be specified for a number of different process variables. A user is generally required to monitor the relationships of a large number of process variables. Traditionally, information to carry out such monitoring is by presentation of such information in textual form. For example, a user is presented with tabular values representative of engineering high and low hard limits in addition to the current value for a process variable."

Paragraph [0013],

"In addition, for example, a user may be required to effectively monitor and manipulate parameters for a process variable, e.g., the setting of operator high and low limits for a process variable. ... However, in one particular case, some graphical elements have been used to show one or more subsets of information, such as limits and current values, with supporting text, for use in monitoring and manipulating a process variable. ... For example, a graph including a separate pair of lines indicating limits for a process variable, a separate bar representing operator set high and low limits for the process variable, a separate line representing a present value of the process variable, and clamping limits within the other limits have been

used to display characteristics of the particular process variable."

2.3 The passages cited do not necessarily relate to one single prior art system. The board considers that the actual closest prior art is the disclosure in paragraph [0013] of a graph including a separate pair of lines indicating limits for a process variable, a separate bar representing operator set high and low limits for the process variable and a separate line representing a present value of the process variable. In the oral proceedings the appellant acknowledged that this disclosure did indeed reflect prior art.

2.4 The appellant however argued that in comparing this disclosure to the claimed invention a *post hoc* interpretation of the description of the prior art was being applied. Specifically it was argued that the elements mentioned might be separated in different parts of the screen. The board is not convinced. The patent discusses ways of presenting limits related to, and the current value of, process variables in such a way that the limits and the value can be visually compared. In this context the discussion of the display in paragraph [0013] clearly relates to an optical unity, a conclusion reinforced by the patent calling it "a graph including" the various elements.

3. *Inventive step - the main request*

3.1 The description of the closest prior art refers to "a separate pair of lines indicating limits for a process variable," which are not the operator set high and low

limits, but does not specify what these other limits represent. However, the description of the prior art also states that in a model-based predictive controller, engineering hard limits, operator set limits, engineering physical limits, and/or various other limits may be specified for a number of different process variables (see paragraph [0012], cited above at point 2.2). Presented with the problem of which limits to present in the known display, the board considers that it would be obvious to choose the engineering hard limits, since these represent the boundaries within which the operator may set the "operator set limits".

3.2 Whether to display a numerical scale would be a simple design choice depending on the needs of the operator. If he or she might need to know actual values of the process variable, it would be obvious to display such a scale on the axis defined by the bar and lines.

3.3 Thus obvious application of the known prior art to a known model-based predictive controller would lead without involving an inventive step to a user interface corresponding to the subject-matter of present claim 1 in all features except that in the claim the range between the high and low engineering hard limits is represented by a bar rather than a pair of lines.

3.4 From the prior art documents in the case as a whole it is clear that for the designer of graphical user interfaces both pairs of lines and bars were well known ways of indicating ranges. The board considers that it would be obvious for the skilled person to consider representing both the engineering hard limits range and the operator set limits range by bars. It would be part

of normal development to try both bars and pairs of lines for the various limits and to choose the combination which on balance appeared to convey the required information most effectively. The final choice would depend on the exact circumstances such as the other information to be displayed in the same display context (both in the prior art and in the present preferred embodiment there are in fact three sets of limits displayed for the process variable, see paragraph [0013], cited at point 2.2 above, and paragraphs [0087] and [0088]), the available ways of distinguishing between elements, for example colours, hatching, highlighting, and so on.

3.5 The appellant put forward the following arguments for the choice of two bars involving an inventive step:

the appellant had discovered that the use of two bars was an especially effective way of representing this particular set of information;

the use of bars was particularly efficient in its use of screen space; and

despite there being a large number of cited documents none of the prior art documents in the case showed this way of representing this information.

3.6 The board does not find any of these arguments convincing. As to the first the fact (if it is a fact) that the best choice has been made says nothing about whether it would be obvious to make that choice. As to the second argument the board does not see that a bar is more screen-space efficient than a pair of lines.

The third argument is also not convincing; in the board's view (as stated in point 3.4) the precise layout chosen would depend on various extraneous factors. Thus for example in E12 Fig. 3 the outer limits are more appropriately displayed as lines since it is desired also to show the history of the values which are being tracked (146; 148) and their relationship to the high and low level trip values. The appellant's argument, taken to its logical conclusion, confuses novelty and obviousness. It is equivalent to arguing that everything which is obvious must already have been done, which is clearly not tenable.

3.7 The board concludes that the subject-matter of claim 1 of the main request does not involve an inventive step in the light of the prior art described in the patent in suit and the common general knowledge of the person skilled in the art. Moreover it would be obvious to implement the graphical user interface using a computer so that the subject-matter of independent claim 4 also does not involve an inventive step. The main request is therefore not allowable.

4. *The auxiliary request*

4.1 The independent claims of the auxiliary request add the feature that the bar representing the operator set limits is displayed within the bar representing the engineering hard limits. The board takes the view that the most natural choice of representation is for the two ranges to be on the same axis, which inevitably means that one bar is "within" the other. Only if difficulties arose in distinguishing between the bars

would the skilled person consider an alternative such as depicting them side by side.

4.2 The board therefore concludes that the subject-matter of these claims also does not involve an inventive step and that the auxiliary request is thus also not allowable.

5. There being no allowable request the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

D. Magliano R. Moufang