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D E C I S I O N
of 15 March 2002

Case Number: T 0117/00 - 3.5.1

Application Number: 93116076.6

Publication Number: 0592921

IPC: G05B 23/02, G06F 3/033

Language of the proceedings: EN

Title of invention:
Process control with grahical attribute interface

Patentee:
Fisher-Rosemount Systems, Inc.

Opponent:
Siemens AG

Headword:
Process control/FISHER-ROSEMOUNT

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

Keyword:
"Inventive step (no)"

Decisions cited:
T 0633/97

Catchword:
–

Case Number: T 0117/00 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 15 March 2002

Appellant: (Opponent)	Siemens AG Postfach 22 16 34 D-80506 München (DE)
Representative:	-
Respondent: (Proprietor of the patent)	Fisher-Rosemount Systems, Inc. 8301 Cameron Road Austin, Texas 78754 (US)
Representative:	Bohnenberger, Johannes, Dr. Meissner, Bolte & Partner Postfach 86 06 24 D-81633 München (DE)
Decision under appeal:	Decision of the Opposition Division of the European Patent Office posted 25 November 1999 rejecting the opposition filed against European patent No. 0 592 921 pursuant to Article 102(2) EPC.

Composition of the Board:

Chairman:	S. V. Steinbrener
Members:	R. Randes
	P. Muehlens

Summary of Facts and Submissions

I.   This is an appeal against the decision by the
        Opposition Division to reject the opposition against
        European patent 0 592 921 and to maintain the patent as
        granted. The patent was granted with two independent
        claims: claim 1, which sets out a method, and claim 5,
        which essentially sets out a corresponding apparatus.
        Claims 2 to 4 are dependent on claim 1.

II.   The Opponent cited *inter alia* the following document,
        the Board adopting the Opponent's nomenclature:

        OD2: U. Ottenburger, "Verbesserte Mensch-Maschine-
             Schnittstelle für die Prozessführung in der
             Kraftwerkswarte", Energie & Automation,
             Leittechnik im Kraftwerk, November 1990,
             pages 9 to 12.

III.   The opposition was based on Article 100(a) EPC, arguing
        that the subject-matter of claim 1 lacked novelty in
        view of OD2 and also inventive step in view of other
        documents.

IV.   In its decision the Opposition Division held that the
        subject-matter of claim 1 was new and inventive having
        regard to OD2 and other documents.

V.   The Opponent appealed, requesting that the decision be
        set aside and again arguing that the subject-matter of
        claim 1 lacked novelty in view of OD2. In a further
        submission the Appellant filed the following document:

OD6: EP-A-0 389 132,

arguing that the subject-matter of claim 1 lacked
inventive step in view of the combination of OD2 and
OD6.

VI.   The Respondent (Patentee) requested dismissal of the
        appeal and maintenance of the patent as granted.

VII.   In view of auxiliary requests by both parties for oral
        proceedings the Board issued a summons to oral
        proceedings. In an annex to the summons the Board
        expressed the preliminary opinion that the subject-
        matter of claim 1 appeared to lack novelty, or at least
        inventive step, in view of OD2.

VIII.   In a further submission dated 1 February 2002 the
        Respondent questioned the relevance of OD6.

IX.   Oral proceedings were held before the Board on
        15 March 2002 at which the Appellant requested that the
        decision under appeal be set aside and the patent
        revoked. The Respondent requested that the appeal be
        dismissed and that the patent be maintained in amended
        form with claim 1 as filed in the oral proceedings,
        claims 2 to 5 as granted and the description and
        drawings as granted. Amended claim 1 differs from
        claim 1 as granted in the inserted expression indicated
        in **bold** and reads as follows:

        "1. A method of generating graphical display of process
        attributes in a computer-based process controller,
        comprising:

        displaying a graphical representation (P&ID) of a

process being controlled;

storing in a historical data file (602) a history of underlying process attributes (203) for a plurality of points in time during the operation of a process being controlled;

storing in a mask data file (603) information relating said history of underlying process attributes (203) to corresponding process elements (112 to 118) in said graphical representation;

selecting a portion of the graphical representation (P&ID) **defined by said mask data file (603)** and a point in time for which underlying process attributes (203) from said history are to be displayed; and

displaying said underlying process attributes (203) of the selected portion of the graphical representation (P&ID) for the selected point in time substantially simultaneously with the display of said graphical representation."

X.   The parties' arguments in the oral proceedings can be summarized as follows.

The Appellant argued that the subject-matter of claim 1 lacked novelty, or at least inventive step, in view of OD2 alone or OD2 combined with OD6.

The Respondent questioned whether OD6 should be admitted to the proceedings, since it was late filed and was only relied upon for a definition of the term "masking". According to the Respondent, the subject-matter of claim 1 differed from the disclosure of OD2

in two respects:

i. a mask data file. The historical process attributes
shown in figure 5 of OD2 did not relate solely to one
portion of the process being controlled, since the list
of parameters in figure 5 contained parameters such as
"DRU. SGZ1" and "DRU. SGZ2" relating to two separate
process elements. Moreover, OD6 showed that at the
priority date the term "masking" referred to something
different to its use in the patent; it referred to the
simplification of prepared displays by deleting those
parts of a display which were unnecessary or would
confuse a particular operator.

ii. simultaneous display of historical attribute data
and a graphical representation of the process being
controlled. Although figure 5 showed graphs of
historical process attributes, there was no graphical
representation of the process being controlled. This
feature was also not unambiguously derivable from the
references to windows technology in OD2.

XI.   At the end of the oral proceedings the Board announced
       its decision.

Reasons for the Decision

1.   *Admissibility of the appeal*

       The appeal meets the requirements set out in Rule 65(1)
       EPC and is therefore admissible.

2.   *Admissibility of OD6*

       OD6 was filed by the Appellant almost a year before the

oral proceedings. The Respondent thus had sufficient
time to study and comment on OD6 and indeed made
detailed comments on it in the submission dated
1 February 2002. Since the admission of OD6 would not
prevent the Appeal proceedings from being conducted in
an effective manner, the Board exercises its discretion
under Article 114(2) EPC to admit OD6 to these
proceedings (see T 0633/97, reasons, point 2.2, not
published in OJ EPO).

In the Board's view however OD6 is less relevant than
the documents already in the proceedings, in particular
OD2.

3.   *Allowability of the amendment in claim 1*

The restriction of the expression in claim 1 "selecting
a portion of the graphical representation" to read
"selecting a portion of the graphical representation
defined by said mask data file" is based on column 5,
lines 26 to 29 and column 8, lines 44 to 52 of the
published application. The Board consequently finds
that the amendment satisfies Articles 123(2) and (3)
EPC.

4.   *Novelty*

Document OD2 forms the closest prior art. OD2 discloses
a method of generating a graphical display of process
attributes in a computer-based process controller,
comprising: displaying a graphical representation of a
process being controlled (Figures 1 and 2); storing in
a historical data file a history of underlying process
attributes for a plurality of points in time during the
operation of a process being controlled (sentence

bridging pages 11 and 12); selecting a portion of the graphical representation and a point in time for which underlying process attributes from said history are to be displayed (page 11, left column, lines 53 to 55 and page 12, left column, lines 2 to 5) and displaying said underlying process attributes of the selected portion of the graphical representation for the selected point in time (Figure 5).

The subject-matter of claim 1 consequently differs from the disclosure of OD2 in:

i. storing in a mask data file information relating the history of underlying process attributes to corresponding process elements in said graphical representation, and

ii. displaying the underlying process attributes of the selected portion of the graphical representation for the selected point in time substantially simultaneously with the display of the graphical representation.

The subject-matter of claim 1 is consequently novel, Articles 52(1) and 54(1 to 2) EPC.

The first difference feature solves the problem of relating the process attribute histories to the corresponding elements of the controlled process. The second difference feature solves the problem of giving the user a more complete overview of the system. The Board is unable to discern a technical relationship between these two problems; no evidence having been presented concerning a surprising synergy between the two difference features. Hence the inventive step of each difference feature has to be considered

separately.

5.   *Inventive step*

5.1   The first difference feature

        In the Board's view the problem solved by this feature
        is already hinted at in OD2, since by selecting a
        process element in Figures 1 and 2 a **corresponding**
        display window of historical attribute graphs opens
        (emphasis by the Board); see Figure 5 and page 11, left
        column, lines 53 to 55. OD2 does not however mention
        how the historical attribute data is related to
        corresponding process elements, thus leaving a "gap"
        which the skilled person carrying out the method
        according to OD2 would inevitably have to fill. The
        Board regards the solution of storing information on
        these relationships in a mask data file as a usual
        matter of design when "filling the gap" in the
        disclosure of OD2.

        The Respondent's argument that the historical process
        attributes shown in OD2 (Figure 5) do not relate solely
        to one portion of the process (so that difference
        feature "i" involves an inventive step) is not accepted
        by the Board. According to claim 1, the mask data file
        stores information relating the history of underlying
        process attribute<u>s</u> to corresponding process element<u>s</u>.
        Hence claim 1 is not limited to a single attribute or a
        single process element. The question of whether claim 1
        is sufficiently broad to cover not one process element
        but two is therefore merely a matter of degree.

5.2   The second difference feature

The problem solved by this feature is also hinted at in OD2 which shows the current values of process attributes, such as temperature and pressure, being displayed simultaneously with the process elements they relate to in Figures 1 and 2. These figures also show control windows ("Bedienfelder") superimposed on the process diagram. OD2 states that optimal operation of a power station is aided by having graphs of process attribute histories plotted against time, shown in Figure 5 (see page 11, lines 56 to 59). It is self-evident that it would be more convenient for the system-operator to see such graphs together with the process diagram, or at least to see historical attribute values for a point in time (such as those shown at the top of the screen in Figure 5) together with the process diagram, rather than having to change to another screen presentation (Figure 5). The question therefore arises as to why in OD2 the control windows and current values of process attributes are displayed simultaneously with the process diagram, whilst another display has to be selected to inspect the historical attribute data. In the Board's view this difference springs from the additional screen area required to show historical attribute data. What is overlaid on a process diagram is however a matter of compromise depending on the amount of necessary information, the size of the screen and the need not to overfill the screen. The Board therefore finds that the simultaneous display of selected historical attribute data and the process diagram amounts to a usual design compromise.

5.3   Conclusion on inventive step

Taken alone, the two difference features mentioned above do not involve an inventive step. The Board

consequently finds that the subject-matter of claim 1 lacks inventive step over OD2, Articles 52(1) and 56 EPC. The Respondent's remaining request is consequently not allowable.

Order

For these reasons it is decided that:

1.   The decision under appeal is set aside.

2.   The patent is revoked.

The Registrar: The Chairman:

M. Kiehl   S. V. Steinbrener