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Datasheet for the decision of 21 October 2016

Case Number: T 1809/12 - 3.5.03

Application Number: 03025567.3

Publication Number: 1420308

IPC: G05B19/048

Language of the proceedings: EN

Title of invention:
Industrial control and monitoring method and system

Patent Proprietor:
Rockwell Automation Technologies, Inc.

Opponent:
WAGO Kontakttechnik GmbH & Co. KG

Headword:
Industrial control and monitoring method/ROCKWELL

Relevant legal provisions:
EPC Art. 56, 113(1)
EPC R. 103(1)(a)

Keyword:
Inventive step (all requests) - (no)
Reimbursement of the appeal fee - (no)

Decisions cited:

Catchword:

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Case Number: T 1809/12 - 3.5.03

D E C I S I O N
of Technical Board of Appeal 3.5.03
of 21 October 2016

Appellant: (Patent Proprietor)	Rockwell Automation Technologies, Inc. 1 Allen-Bradley Drive Mayfield Heights, OH 44124 (US)
Representative:	Grünecker Patent- und Rechtsanwälte PartG mbB Leopoldstraße 4 80802 München (DE)
Appellant: (Opponent)	WAGO Kontakttechnik GmbH & Co. KG Hansastr. 27 32423 Minden (DE)
Representative:	Hess, Peter K. G. Bardehle Pagenberg Partnerschaft mbB Patentanwälte, Rechtsanwälte Prinzregentenplatz 7 81675 München (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 4 June 2012 concerning maintenance of the European Patent No. 1420308 in amended form.**

Composition of the Board:

Chairman	F. van der Voort
Members:	T. Snell
	S. Fernández de Córdoba

Summary of Facts and Submissions

I. This case concerns appeals filed by both the opponent and the proprietor against the interlocutory decision of the opposition division in opposition proceedings concerning European patent No. EP 1 420 308. The opposition division held *inter alia* that the ground for opposition according to Article 100(c) EPC prejudiced the maintenance of the patent as granted, but that, account having been taken of the amendments made by the proprietor in accordance with a fourth auxiliary request, the patent and the invention to which it relates according to this request met the requirements of the EPC. In particular, the opposition division held that the subject-matter of claim 1 of the fourth auxiliary request was disclosed in the application as originally filed and that its subject-matter was both new and involved an inventive step having regard to the disclosure of document:

D1 : US 5631825 A.

II. The parties initially made the following requests in their respective statement of grounds of appeal:

The opponent (Appellant I) requested that the decision under appeal be set aside and that the patent be revoked in its entirety. The opponent also requested reimbursement of the appeal fee due to an alleged violation of the right to be heard (Article 113(1) EPC).

The proprietor (Appellant II) requested that the decision under appeal be set aside and that the patent be maintained as granted.

III. In a communication accompanying a summons to oral proceedings, the board gave a preliminary opinion that claims 1 and 13 of the patent as granted complied with Article 123(2) EPC, so that the ground for opposition pursuant to Article 100(c) EPC apparently did not prejudice the maintenance of the patent. However, the board was of the preliminary view that the respective subject-matters of claims 1 and 13 was not new with respect to the disclosure of document D1. With respect to claim 1 of the fourth auxiliary request as decided on by the opposition division, the board considered that it appeared to neither comply with Article 123(2) EPC, nor with the requirement for novelty having regard to the disclosure of D1 (Articles 52(1) and 54 EPC).

With respect to the request for reimbursement of the appeal fee, the board gave a preliminary opinion that it would not be equitable to reimburse the appeal fee.

IV. In a letter of reply dated 21 September 2016, the proprietor contested the board's preliminary view with respect to novelty. It also filed first, second and fifth to eleventh auxiliary requests.

V. Oral proceedings were held on 21 October 2016.

Appellant I (opponent) requested that the decision under appeal be set aside and that the patent be revoked. Further, appellant I requested a reimbursement of the appeal fee.

Appellant II (patent proprietor) requested by way of a main request that the decision under appeal be set aside and that the opposition be rejected 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 a first or a second auxiliary request, both as filed with the letter dated 21 September 2016, or by way of a fourth auxiliary request that the appeal by appellant I be rejected (i.e. that the patent be maintained on the basis of the fourth auxiliary request as decided on by the opposition division), or on the basis of one of fifth to eleventh auxiliary requests as filed with the letter dated 21 September 2016.

At the end of the oral proceedings, the chairman announced the board's decision.

VI. Claim 1 of the **main request** (i.e. claim 1 as granted) reads as follows:

"A method for monitoring or controlling operation of an electrical industrial equipment system, the method comprising:
displaying a representation of programmable physical components of the system in a computer workstation for a human operator based upon display data received from a program embedded in a separate human machine interface;
detecting an operator selection of one of the physical components from the representation on the computer workstation;
executing a software component of the program embedded in the human machine interface to acquire data representative of real time operation of the selected physical component; and
displaying a monitoring or control window in the computer workstation based upon the acquired data."

Claim 1 of the **first auxiliary request** differs from claim 1 as granted in that the wording "in response to the detected selection of said one of the physical

components," is inserted directly ahead of the feature "executing ....".

Claim 1 of the **second auxiliary request** differs from claim 1 of the first auxiliary request in that the wording "which is remote from the computer workstation" is inserted directly after the wording "displaying ... based on display data received from a program embedded in a separate human machine interface".

VII. Claim 1 of the **fourth auxiliary request** (i.e. the request held by the opposition division to comply with the EPC) reads as follows:

"A computer system for monitoring or controlling operation of an electrical industrial equipment system, the system comprising:

an *[sic]* human machine interface (250) having an embedded human machine interlace program configured to display a representation of programmable physical components of the system in a computer workstation (258) for a human operator and to detect an operator selection of one of the physical components from the representation on the computer workstation by detecting a click on said one of the physical components from the representation on the computer workstation; and

an executable software component (260) embedded in the human machine interface program and configured to acquire data representative of real time operation of the selected physical component, and to generate and display a monitoring or control window in the computer workstation based upon the acquired data."

Claim 1 of the **fifth auxiliary request** differs from claim 1 of the fourth auxiliary request in that, in the second paragraph, the wording "a virtual object included in the displayed representation, the virtual object corresponding to" is inserted directly after the wording "detecting a click on".

Claim 1 of the **sixth auxiliary request** differs from claim 1 of the fourth auxiliary request in that, in the second paragraph, the wording ", the computer workstation (254) and the human machine interface (250) being separate from each other" is inserted directly after the wording "by detecting a click on said one of the physical components from the representation on the computer workstation".

Claim 1 of the **seventh auxiliary request** is a combination of claims 1 of the fifth and sixth auxiliary requests.

Claim 1 of the **eighth auxiliary request** differs from claim 1 of the sixth auxiliary request in that, in the third paragraph, the wording ", in response to the detected selection of said one of the physical components," is inserted directly after the wording "an executable software component (260) embedded in the human machine interface program and configured to".

Claim 1 of the **ninth auxiliary request** is a combination of claims 1 of the seventh and eighth auxiliary requests.

Claim 1 of the **tenth auxiliary request** differs from claim 1 of the eighth auxiliary request in that, in the second paragraph, the wording "and remote" is inserted directly after "separate".

VIII. Claim 1 of the **eleventh auxiliary request** reads as follows:

"A computer system for monitoring or controlling operation of an electrical industrial equipment system, the system comprising:

an *[sic]* human machine interface (250) having an embedded human machine interface program configured to display a representation of programmable physical components of the system in a computer workstation (258) for a human operator and to detect an operator selection of one of the physical components from the representation on the computer workstation by detecting a click on a virtual object included in the displayed representation, the virtual object corresponding to said one of the physical components from the representation on the computer workstation, the computer workstation (254) and the human machine interface (250) being separate and remote from each other; and

an executable software component (260) embedded in the human machine interface program and configured to, in response to the detected selection of said one of the physical components, acquire data representative of real time operation of the selected physical component, and to generate and display a monitoring or control window in the computer workstation based upon the acquired data."

Reasons for the Decision

1. Main request - claim 1 - inventive step

1.1 The present patent relates to a method for monitoring and controlling operation of an "electrical industrial equipment system". In essence, a human operator at a computer workstation is provided with a display of objects (e.g. icons) representing programmable physical components of the controlled system. The displayed objects are selectable (e.g. by clicking on them) in order to acquire data representative of real-time operation of the selected component. In accordance with claim 1, display data are "received [at the computer workstation] from a program embedded in a separate human machine interface" (board's underlining). For the purpose of this decision, this feature is interpreted, in agreement with the proprietor, as meaning that the "human machine interface" is a component physically separate from the computer workstation. This interpretation is apparently supported by several passages of the description and Fig. 15 as filed, cf. e.g. col. 20, lines 30-32 and 44-50 of the application as published (EP 1 420 308 A). The opponent in fact disputed that this interpretation was supported by the application as filed. However, as the board's decision is based on lack of inventive step, the issue of support need not be considered further.

1.2 Document D1, which is considered to represent the closest prior art, discloses a computer workstation (Fig. 1, reference numeral 20) which displays three windows representing part or all of a manufacturing process. Referring to Fig. 3 and the abstract, windows 36, 38 and 40 respectively display the process as a collection of "sections" (cf. Fig. 5), as a collection of "sequences" representing one section (cf. Fig. 12), and as a "flowsheet" representing a sequence in more

detail (cf. Fig. 17 and col. 32, lines 32-36). A sequence is an "infological" (meaning "human interface oriented", cf. col. 1, 48-50) construct (or object) which has associated with it a set of physical components (cf. col. 2, lines 4-7). Consequently, a sequence itself represents a physical (group) component. A user can navigate to a particular flowsheet by clicking on the sequence name (Fig. 13, reference numeral 148) on a sequence indicator, i.e. directly on the displayed object representing the sequence (Figs. 12 and 13, reference numeral 146 and col. 31, lines 58-65). The selected flowsheet may display current values of input and output variables (cf. col. 32, lines 40-45).

1.3 Therefore, in accordance with D1, an operator can click on an object representing a physical component (a sequence), resulting in a display (on a flowsheet) of data representing real-time operation of the component.

1.4 In view of the above, using the wording of claim 1, D1 discloses a method for monitoring or controlling operation of an electrical industrial equipment system, the method comprising:
displaying a representation (Fig. 12) of programmable physical components of the system in a computer workstation 20 (cf. col. 17, line 59 ff. and Fig. 1) for a human operator based upon display data received from a program embedded in a human machine interface (Fig. 1; central processor 22 and logic 34);
detecting an operator selection of one of the physical components (sequences) from the representation on the computer workstation (cf. col. 31, lines 58-65);
executing a software component of the program embedded in the human machine interface to acquire data

representative of real time operation of the selected physical component (cf. col. 32, lines 40-45); and displaying a monitoring or control window in the computer workstation based upon the acquired data (idem and Fig. 17).

1.5 Based upon the interpretation of a "separate human machine interface" as a physically separate component from the workstation, the subject-matter of claim 1 thus differs from the method disclosed in D1 in that, in D1, the workstation including processor 22 and logic 34 incorporates the function of the separate "human machine interface" of claim 1.

1.6 It is further to be noted that in D1, there are several workstations 20 each implicitly equipped with the same logic 34 required for monitoring and controlling the manufacturing process (cf. Fig. 2). They are connected to the controlled system via a plant area network PAN. In addition, via the PAN, the workstations are in communication with other support systems, inter alia control room data manager (CDRM) 94, process information (PI) systems 96 and history server 98. In this respect, in column 19, line 61 ff., the following is stated:

"The manufacturing process control system 60 might also include separate support systems connected to the network via a bridge 92 such as a control room data manager (CDRM) 94 which insures *[sic]* that the other systems on the PAN (including the operator station 20) have the correct and up-to-date copies of all required program and/or data files associated with the manufacturing process, process information (PI) systems 96 which perform a number of functions, including retrieval of process data and updating a process data

history database. A large PAN might also include a separate history server 98 as part of the PI system which provides historical process data to the operator station 20."

1.7 The proprietor argued that the technical problem to be solved starting out from D1 was how to enable monitoring and controlling of industrial machinery from a workstation without requiring specialised programs [in the workstation] and using less computer resources. However, the board notes that the claimed solution does not imply that the workstation has no specialised programs. In the board's view, the technical problem can be formulated rather as how to more efficiently provide access to real-time data for display on several workstations at once.

1.8 It was not in dispute that client-server technology, e.g. as used on the Internet, was well-known at the priority date of the patent. It was common knowledge that by the use of such client-server technology, several standard computers, each equipped with a browser, could receive display data from a server at the same time (e.g. html pages). In such a case, the display data was created by running an embedded program on the server.

1.9 As already noted above, in D1 a server 98 is accessible from a plurality of workstations 20 for accessing historical process data. In the board's view, the skilled person would have regarded it as obvious, based on common general knowledge of client-server systems, to use a client application in each workstation to view this data, whereby at least part of the embedded program for generating display data would then be run on the server. As real-time data is also available at

the PI system 96, in the board's view the skilled person would also have quite naturally considered obtaining this data from this or another server, rather than directly from the controlled system, in order to solve the aforementioned problem. In the board's view, a server carrying out this function would fall within the scope of the feature referred in the claim as a "human-machine interface".

1.10 The proprietor argued that the "human machine interface" would have itself a display and keyboard, not shown in Fig. 15 of the patent. However, that appears to be mere speculation not supported in any way by the patent. The board instead understands "human machine interface" rather in the sense of a means for providing an interface between the controlled system and the operator's workstation. A server which acquires real-time data and presents it to a remote client computer would thus perform the same function.

1.11 The board concludes that the skilled person would, when faced with the above-mentioned technical problem, modify the system of D1 by using client-server technology to obtain real-time data at the workstations from a server supplied with the real-time data. In so doing, the skilled person would arrive, without exercising inventive skill, at the subject-matter of claim 1. The subject-matter of claim 1 therefore does not involve an inventive step (Articles 52(1) and 56 EPC) and, hence, the main request is not allowable.

2. Auxiliary requests

2.1 Eleventh auxiliary request - claim 1 - inventive step

2.1.1 It is expedient to deal first with claim 1 of the eleventh auxiliary request as this comprises the largest number of features.

2.1.2 Claim 1 of the eleventh auxiliary request (see point VIII above) is a claim for a computer system which has features corresponding to those of method claim 1 of the fourth auxiliary request and additionally includes the following features:

(i) The human machine interface program is configured to detect a click on a virtual object included in the displayed representation, the virtual object corresponding to said one of the physical components from the representation on the computer workstation.

(ii) The computer workstation and the human machine interface are separate and remote from each other.

(iii) The software component is configured to generate and display (instead of merely display) a monitoring and control window, in response to the detected selection of said one of the physical components.

2.1.3 Re (i): As discussed above, in D1 a sequence indicator, which is a virtual object corresponding to a physical component, is clicked on. Therefore, this feature is disclosed in D1.

Re (ii): A server which holds real-time data as discussed above in connection with claim 1 would be separate and may evidently be remote from the client workstation. Consequently, this feature does not contribute to inventive step.

Re (iii): A server which provides real-time data as an html page would have embedded software in order to generate and display a monitoring and control window such as disclosed in D1, Fig. 3. Consequently, this feature does not contribute to inventive step either.

2.1.4 The proprietor argued that the claimed subject-matter resulted in synergistic effects by combining the features of a separate and remote human machine interface, clicking on an object representing a physical component, and direct interaction with the machine (which is understood to mean that interaction with the machine does not require further menu steps after clicking).

2.1.5 However, the board sees no particular synergy resulting from this combination. In any case, any putative effects would also be achieved by modifying D1 in the way discussed above. In particular, in D1, no further menu steps are required in order to display real-time data after clicking on a sequence indication, which is an object representing a physical component. Therefore, the board finds this argument unconvincing.

2.1.6 The board concludes that the subject-matter of claim 1 of the eleventh auxiliary request does not involve an inventive step (Articles 52(1) and 56 EPC).

2.2 *First and second auxiliary requests - claim 1 - inventive step*

Claim 1 of each of these requests is formally directed to a method. Both claims are more general than a putative method claim corresponding to system claim 11 of the eleventh auxiliary request. As, in the present case, the change of category has no impact on the

assessment of inventive step and the subject-matter of claim 1 of the eleventh auxiliary request does not involve an inventive step, cf. points 2.1.2 to 2.1.6 above, it follows that the subject-matter of claim 1 of these requests does not involve an inventive step either (Articles 52(1) and 56 EPC). This was not contested by the proprietor.

2.3 Fourth to tenth auxiliary requests - claim 1 - inventive step

Claim 1 of each of these requests is more general than claim 1 of the eleventh auxiliary request. In the present case, as the subject-matter of claim 1 of the eleventh auxiliary request does not involve an inventive step, the subject-matter of claim 1 of each of these auxiliary requests does not involve an inventive step either (Articles 52(1) and 56 EPC). This was also not contested by the proprietor.

2.4 In view of the above, the board concludes that none of the pending auxiliary requests is allowable.

3. The opponent's request for reimbursement of the appeal fee

3.1 The opponent argued in its statement of grounds of appeal essentially that the filing of the fourth auxiliary request during the oral proceedings before the opposition division infringed its right to be heard under Article 113(1) EPC. In this respect, a feature had been added from the description, whereby the opponent had no reason and chance to search for this specific feature until this stage of the procedure.

3.2 The board notes that, in accordance with the minutes of the oral proceedings, the opponent did not avail itself of the possibility to take more time to search for this feature at least in D1 (cf. point 7.8 of the minutes), this being the closest prior art document. Given that the opponent is assumed to have been very familiar with D1, the board does not consider it unreasonable to expect that the passages of D1 cited by the opponent in its statement of grounds of appeal could have been found during the oral proceedings.

3.3 The appeal fee shall be reimbursed where the appeal is deemed to be allowable, if such reimbursement is equitable by reason of a substantial procedural violation (Rule 103(1)(a) EPC). In the board's view, even assuming the opposition division had committed a substantial procedural violation as regards the right to be heard under Article 113(1) EPC, reimbursement is held not to be equitable in this case, since by taking the time offered at the oral proceedings to further study D1, the need for the opponent to file an appeal could have easily been avoided.

3.4 The opponent did not provide counter-arguments to the above view which had been set out in the communication accompanying the summons to oral proceedings.

3.5 The request for reimbursement of the appeal fee is therefore rejected.

4. Conclusion

As there is no allowable request, the patent must be revoked.

Order

For these reasons it is decided that:

The decision under appeal is set aside.

The patent is revoked.

The request for reimbursement of the appeal fee is rejected.

The Registrar: The Chairman:

G. Rauh F. van der Voort

Decision electronically authenticated