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Datasheet for the decision of 25 February 2014

Case Number: T 0176/11 - 3.5.03

Application Number: 01916149.6

Publication Number: 1200884

IPC: G05B19/05

Language of the proceedings: EN

Title of invention:
System for programming a programmable logic controller using a web browser

Patent Proprietor:
Schneider Automation Inc.

Opponent:
ABB Patent GmbH

Headword:
System for programming a PLC/SCHNEIDER AUTOMATION

Relevant legal provisions:
EPC Art. 54, 123(2)
RPBA Art. 13(1)

Keyword:
Novelty (no) - main and first auxiliary requests
Late-filed request not admissible (second auxiliary request)

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

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Case Number: T 0176/11 - 3.5.03

D E C I S I O N
of Technical Board of Appeal 3.5.03
of 25 February 2014

Appellant: (Opponent I)	ABB Patent GmbH Wallstadter Strasse 59 D-68526 Ladenburg (DE)
Representative:	Ginzel, Christian Zimmermann & Partner Postfach 330 920 80069 München (DE)
Respondent: (Patent Proprietor)	Schneider Automation Inc. One High Street North Andover, Massachusetts 01845 (US)
Representative:	Hayden, Nicholas Mark Murgitroyd & Company Scotland House 165-169 Scotland Street Glasgow G5 8PL (GB)

Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted on 23 November 2010 rejecting the opposition filed against European patent No. 1200884 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman:	F. van der Voort
Members:	T. Snell
	M.-B. Tardo-Dino

Summary of Facts and Submissions

I. This appeal was lodged by opponent I against the decision of the opposition division rejecting its opposition filed in respect of European patent No. EP 1200884 B1. The opposition division held, inter alia, that the subject-matter of claim 1 of the patent as granted was new in the light of the disclosure of the following document (Articles 52(1) and 54 EPC):

E11: Schneider Electric, "FactoryCast - User's Guide For Quantum and Premium", Version 2.0, June 1999.

II. In the statement of grounds of appeal, the appellant (opponent I) requested that the impugned decision be set aside and that the patent be revoked, inter alia on the ground that claim 1 lacked novelty in the light of the disclosure of document E11. The appellant conditionally requested oral proceedings.

III. In a response to the notice of appeal, the respondent (proprietor) requested that the appeal be dismissed. In the alternative, the board understood that maintenance of the patent in amended form was requested based on a first auxiliary request comprising a single independent claim based on the subject-matter of claim 1 in combination with claim 3, both as granted, or a second auxiliary request comprising a single independent claimed based on the subject-matter of claims 1, 3 and 4, all as granted.

IV. In a communication accompanying a summons to attend oral proceedings, the board noted that documents corresponding to the first and second auxiliary requests were not on file. That notwithstanding, the board gave a preliminary opinion that, inter alia,

document E11 was relevant to the issues of novelty and/or inventive step in respect of the main request and the first and second auxiliary requests.

V. In a response to the board's communication, the respondent filed claims of first and second auxiliary requests corresponding to the intention expressed in the reply to the statement of grounds of appeal.

VI. Oral proceedings took place on 25 February 2014.

In the course of the oral proceedings, the respondent filed a new second auxiliary request to replace the second auxiliary request on file.

The appellant requested that the decision under appeal be set aside and that the European patent No. 1200884 be revoked.

The respondent requested that the appeal be dismissed, or, in the alternative, that the patent be maintained on the basis of the first auxiliary request filed with the letter dated 20 February 2014 or of the second auxiliary request as submitted during the oral proceedings.

At the conclusion of the oral proceedings, after due deliberation, the board gave its decision.

VII. Claim 1 of the **main request** (ie claim 1 of the patent as granted) reads as follows:

"A system for programming application programs (36) controlling a programmable logic controller (32), comprising:

a. means (16) for coupling the programmable logic controller to a communication network (14);
b. at least one Web page (35) resident in the programmable logic controller and accessible through the coupling means to a user at a remote location using a web browser coupled to the communication network;
characterised in that there is provided:
c. means (33) resident in the programmable logic controller for creating and editing the application programs;

and wherein the Web page is linked to the creating and editing means and allows the user at the remote location to access the creating and editing means to edit the application programs controlling the programmable logic controller."

VIII. Claim 1 of the **first auxiliary request** is the same as claim 1 of the main request except that the following clause is added to the end of the claim:

", the creating and editing means including a programming package (33) whereby the application programs are converted by the programming package and viewed as either Java or HTML."

IX. Claim 1 of the **second auxiliary request** is the same as claim 1 of the main request except that the last part of the claim reads:

"and wherein the Web page is linked to the creating and editing means and allows the user at the remote location to access the creating and editing means to edit the application programs controlling the

programmable logic controller by providing a File Transfer Protocol based view of the application programs, the creating and editing means including a programming package (33) whereby the application programs are converted by the programming package and viewed as either Java or HTML,
whereby the application programs are stored as either a ladder logic or an IEC 1131 language program."

Reasons for the Decision

1. Main request - claim 1 - novelty

1.1 The present patent concerns "a system for programming application programs controlling a programmable logic controller".

1.2 Programmable logic controllers (PLCs) are widely used in industry and process control. They carry out an application program which responds to input signals, eg as provided by sensors, and delivers output signals for controlling a controlled process. In the description of the patent it is stated that "Programming the PLCs ... has many shortcomings. With many different PLCs possible in an integrated control system, making changes or updates may be difficult and expensive. The programming package is usually sold separate from the PLC."

1.3 In order to overcome these drawbacks, the programming system claimed in claim 1 comprises in essence a Web page resident in the PLC which can be accessed by a browser at a remote location. The Web page enables a user using a web browser to access "creating and

editing means" resident in the PLC in order to "edit the application programs".

1.4 Prior art document E11, which is a user manual entitled "FactoryCast User's Guide For Quantum and Premium", discloses a similar type of system. In the overview on page 12 it is stated that "FactoryCast is a software package that allows you to customize a Web site on the Embedded Web Server module. The site can be accessed via a browser to view and modify data from a Quantum or Premium programmable logic controller (PLC)."

FactoryCast consists of HTTP and FTP servers embedded in a Quantum or Premium Ethernet option module (cf. page 14, "Overview"). The embedded server resides in the PLC (cf. the figure on page 24). The custom Web pages can include applets either for monitoring PLC values or for sending values to the PLC (cf. page 161, third paragraph). One type of Java applet constitutes a Data Editor which enables the values of variables (symbols) and direct addresses to be viewed and modified (cf. page 172, "Purpose"). Another Java applet constitutes a Graphic Editor (cf. page 186, "Viewing a Graphic Display") via which a PLC application can be monitored and controlled, inter alia by writing new values to the PLC (cf. page 191).

1.5 It was not in dispute that E11 discloses a system enabling a user via a Web browser to change the behaviour of a PLC by accessing a Web page residing in the PLC. However, there was disagreement between the parties as to whether E11 discloses the editing of application programs.

1.6 In this respect, the respondent argued that claim 1 requires "programming", "creating" and "editing" of

application programs, which in accordance with the description (cf. paragraph [0022]) were ladder logic or IEC 1131 language programs. The skilled person would understand these activities to be of an entirely different nature to merely modifying variables or parameters in the PLC as in E11. The respondent compared E11 to a computer game in which the user may set the duration or difficulty of the game by inputting values read by the program. This alters the game behaviour although the program itself is not changed.

1.7 The board is however unconvinced by the respondent's arguments for the following reasons:

1.7.1 The claims shall define the matter for which protection is sought (Article 84 EPC). Terms in the claims should be given their normal technical meaning. The board has to consider what the skilled person would understand by the term "application program" of a PLC in the context of claim 1.

1.7.2 In the board's view, the "application program" of a PLC as claimed in claim 1 would be understood by the skilled person as embracing the combination of a core logic routine, eg written using ladder logic, and variables or parameters which are called up by the core logic routine, such as those modifiable via the system of E11. As claim 1 does not define which elements of an application program are to be edited, modifying variables using the Data Editor facility of E11 referred to above (cf. E11, page 172) is embraced by the wording "to edit the application programs controlling the programmable logic controller". Furthermore, the graphic editor facility of E11 referred to above (cf. E11, pages 186 and 191) allows graphic displays to be created and modified, whereby a

graphic display can communicate with the PLC to control the application by writing new values to the PLC. Hence, this is also a programming facility for editing an application program of the PLC.

1.7.3 The board further considers that interpreting the term "application program" broadly to include core logic and modifiable parameter or variable values is fully consistent with the description, since the description does not explicitly give the term "application program" a more restrictive meaning limiting it to a core logic program, eg ladder logic.

Although in paragraph [0022] it is stated that the application programs are stored as ladder logic or an IEC 1131 language program, this does not mean that the program consists only of ladder logic or an IEC 1131 language program. In this respect, in paragraph [0021] it is stated that "The application programs 36 include a ladder logic program .." (board's underlining). There is also no suggestion in the description that the "programming package" is not able to edit parameters or variables residing in the PLC. In fact this would be illogical since if it were only possible to edit the core logic routine, the user would be denied the possibility of complete control of the process.

1.7.4 The board also does not consider that the presence in claim 1 of "means ... for creating and editing an application programs" (board's underlining) either confers novelty or implies a more limited interpretation of the feature "... to edit the application programs". In the first place, the board notes that the presence of program creating means is somewhat incidental to the claimed solution in that, as claimed, the Web page allows the user to access the

creating and editing means to perform program editing alone. Secondly, the description does not describe details of any program creation means. Instead, the description refers to a "programming package" which "converts these application programs 36 to and from formats needed for editing with a browser" (cf. paragraph [0022], board's underlining). Claim 1 therefore neither requires, nor does the description disclose, that the user is able to create a program by accessing the Web page. Hence, this program creating feature is irrelevant to interpreting the meaning of the term "edit". Furthermore, as regards novelty, the claim embraces any form of program creation, including simply loading the program into the PLC of E11 (cf. eg E11, page 15, "Configuring a Site").

1.7.5 The board also does not see any parallel with a computer game in which the user sets the duration or difficulty level. When interacting with a game program, the board assumes that the user is prompted to select the duration or difficulty level by the application program itself. The user action is therefore not a "programming" activity but part of the normal running of the application. In contrast, in document E11, the nature of the user intervention is that of a technician who is (re-)configuring the PLC application. In this case, the user's activity can be justifiably regarded as a programming activity.

1.8 The respondent further argued that both the examining division and the opposition division had interpreted "editing the application program" to exclude merely modifying parameters. The board should therefore adopt the same interpretation unless it had "robust" evidence to do otherwise.

1.9 However, the board points out that the purpose of the appeal procedure is to have the correctness of the first instance decision examined by the board of appeal. The board is not bound by the interpretation of the claims adopted by either the opposition division or the examining division if the board finds this interpretation to be not correct.

1.10 The board concludes that the subject-matter of claim 1 of the main request is not new having regard to the disclosure of document E11 (Articles 52(1) and 54 EPC).

2. First auxiliary request - claim 1 - novelty

2.1 Claim 1 of the first auxiliary request differs from claim 1 of the main request in that it additionally includes the feature:

"the creating and editing means including a programming package (33) whereby the application programs are converted by the programming package and viewed as either Java or HTML".

2.2 In accordance with document E11, the user is able to view a Web page via HTML (cf. page 161, fourth paragraph ff.), which provides a programming option associated with a PLC application (ie sending values to a PLC). Considering the example on page 161, an applet, ie a programming package, presents the user via the browser with a view of the PLC application in a format which enables the user to send values to the PLC and hence program the application.

Consequently, E11 discloses "creating and editing means including a programming package whereby the application

programs are converted by the programming package and viewed as either Java or HTML".

2.3 The respondent argued that E11 did not disclose the feature that the application programs are converted for viewing, which in the respondent's view meant that the whole program could be viewed and edited.

2.4 However, there is no requirement in claim 1 for the whole program to be viewed and edited. Neither claim 1, nor the description, eg in paragraph [0022], specifies the format in which the program is viewed or the extent of the editing facilities. In this respect, the appellant remarked that it would be unlikely that the user would be given a view of the whole program via HTML since such programs were often very long. The board considers that credence to this argument is given by the patent's offering another possibility, namely a File Transfer Protocol(FTP) based view, which plausibly includes a view of the whole program (cf. paragraph [0024]). However, as is discussed in more detail in connection with the second auxiliary request, this is a facility "[i]n addition to providing the ability to edit the application programs", ie a feature not comprised in claim 1.

The board therefore finds the respondent's argument unconvincing.

2.5 The board concludes that the subject-matter of claim 1 of the first auxiliary request is not new with respect to the disclosure of E11 either (Articles 52(1) and 54 EPC).

3. Second auxiliary request - admissibility

3.1 In accordance with Article 13(1) RPBA, "Any amendment to a party's case after it has filed its grounds of appeal or reply may be considered at the Board's discretion. The discretion shall be exercised in view of inter alia the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy.".

3.2 A well-established criterion used by the boards of appeal for deciding whether to admit late-filed requests under Article 13(1) RPBA is whether the new claims are prima facie allowable.

3.3 In the present case, claim 1 of the second auxiliary request prima facie does not comply with Article 123(2) EPC for the reasons set out below.

3.3.1 The last clause of claim 1 includes the wording "allows the user at the remote location to access the creating and editing means to edit the application programs controlling the programmable logic controller by providing a File Transfer Protocol based view of the application programs, the creating and editing means including a programming package (33) whereby the application programs are converted by the programming package and viewed as either Java or HTML" (board's underlining).

3.3.2 The respondent argued that this amendment was based on paragraph [0024] of the patent, the relevant part of which reads:

"In addition to providing the ability to edit the application programs 36, by providing a File Transfer Protocol (FTP) based view of the application programs 36, file backup and restore can be handled through

standard programming tools, allowing the user to manage the application programs 36 directly and efficiently and to also use standard revision control software to manage the application programs 36."

3.3.3 The respondent argued that the clause "by providing a File Transfer Protocol (FTP) based view of the application programs 36" was associated grammatically with the clause "In addition to providing the ability to edit the application programs 36", ie that the comma between these phrases was without meaning. The board disagrees, and considers that the clause "by providing a File Transfer Protocol (FTP) based view of the application programs 36" is intended to be read in conjunction with the text that follows it, ie meaning that "by providing an FTP based view, file backup and restore can be handled through standard programming tools". This interpretation in the board's view makes far more technical sense than an FTP based view as part of the HTML based editing described in paragraph [0022]. It follows that the application documents as originally filed do not directly and unambiguously disclose accessing the creating and editing means to edit application programs by providing an FTP based view of the application programs, contrary to what is defined in claim 1. Claim 1 therefore does not prima facie comply with Article 123(2) EPC.

3.4 Exercising its discretion pursuant to Article 13(1) RPBA, the board therefore did not admit the second auxiliary request to the appeal proceedings.

4. Conclusion

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

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:

G. Rauh F. van der Voort

Decision electronically authenticated