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Datasheet for the decision of 13 September 2018

Case Number: T 0630/14 - 3.5.03

Application Number: 01105909.4

Publication Number: 1134634

IPC: G05B19/05

Language of the proceedings: EN

Title of invention:
Programmable controller

Patent Proprietor:
OMRON CORPORATION

Opponent:
WAGO Kontakttechnik GmbH & Co. KG

Headword:
Programmable controler/OMRON

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (no)

Decisions cited:

Catchword:

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Beschwerdekammern

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Case Number: T 0630/14 - 3.5.03

D E C I S I O N
of Technical Board of Appeal 3.5.03
of 13 September 2018

Appellant: (Opponent)	WAGO Kontakttechnik GmbH & Co. KG Hansastraße 27 32423 Minden (DE)
Representative:	Hess, Peter K. G. Bardehle Pagenberg Partnerschaft mbB Patentanwälte, Rechtsanwälte Postfach 86 06 20 81633 München (DE)
Respondent: (Patent Proprietor)	OMRON CORPORATION 801, Minamifudodo-cho, Horikawahigashiiru, Shiokoji-dori, Shimogyo-ku Kyoto-shi, Kyoto 600-8530 (JP)
Representative:	Kilian Kilian & Partner Aidenbachstraße 54 81379 München (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 3 January 2014 rejecting the opposition filed against European patent No. 1134634 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman	F. van der Voort
Members:	T. Snell
	P. Guntz

Summary of Facts and Submissions

I. This decision concerns an appeal filed by the opponent (henceforth, appellant) against the decision of the opposition division rejecting the opposition filed in respect of European patent No. EP 1 134 634. The opposition division decided, inter alia, that the ground for opposition pursuant to Article 100(a) EPC did not prejudice the maintenance of the patent. The opponent had argued, inter alia, that the subject-matter of claim 1 of the patent was not new, or at least did not involve an inventive step, with respect to the disclosure of document E1 (= EP 0 800 669 B1).

II. The appellant requested that the decision be set aside and that the patent be revoked in its entirety, inter alia on the basis that the subject-matter of claim 1 of the patent was either not new or at least did not involve an inventive step with respect to the disclosure of E1.

III. In a reply to the appeal, the patent proprietor (henceforth, respondent) requested "to reject the opposition and dismiss the appeal". No substantive arguments were provided. Conditionally, oral proceedings were requested.

IV. In a communication accompanying a summons to attend oral proceedings, the board gave a preliminary opinion that the subject-matter of claim 1 of the patent did not appear to involve an inventive step when starting out from E1.

V. In a letter dated 3 August 2018, the respondent declared that it did not intend to be present or be represented at the oral proceedings.

VI. Oral proceedings were held on 13 September 2018 in the absence of the respondent. The appellant maintained its request that the decision under appeal be set aside and that the patent be revoked. On the basis of the written proceedings, the respondent requested that the appeal be dismissed.

VII. Claim 1 of the patent reads as follows:

"A programmable controller which executes a user program process, an I/O refresh process and a peripheral service process, **characterized by** executing said user program process, said I/O refresh process and said peripheral service process by using a same microprocessor and comprising:

means for selecting a first mode and a second mode; the first mode being for cyclically executing the user program process, the I/O refresh process and the peripheral service process according to a normal procedure, and the second mode being for executing the peripheral service process for a prescribed time at a regular interval according to an interruption procedure to the user program process while executing the user program process and I/O refresh process according to the normal procedure."

Reasons for the Decision

1. Interpretation of claim 1

1.1 The board understands the expression "executing ... according to a normal procedure" to mean in this context that the various processes are executed one after the other as part of a normal scan cycle.

1.2 Consequently, "cyclically executing the user program process, the I/O refresh process and the peripheral service process according to a normal procedure" means that in the first mode the user program process, the I/O refresh process and the peripheral service process are cyclically executed one after the other, and the feature "while executing the user program process and the I/O refresh process according to the normal procedure" in the second mode means that the user program process and the I/O refresh process are cyclically executed one after the other.

1.3 It follows that the feature "the second mode being for executing the peripheral service process for a prescribed time at a regular interval according to an interruption procedure to the user program process while executing the user program process and the I/O refresh process according to the normal procedure" means that, in the second mode, the user program process and the I/O refresh process are cyclically executed one after the other, and an interruption process occurs during the time when the user program process is executed.

2. Claim 1 - inventive step (Articles 56 and 100(a) EPC)

2.1 The closest prior art document E1 discloses, using the wording of claim 1, a programmable controller (Fig. 4; "CPU" 22) which executes a user program process (cf. Fig. 9; "Execute Program"), an I/O refresh process (cf. Fig. 9; "Read Inputs", "Write Outputs") and a peripheral service process (cf. paragraph [0069]; "analog inputs" - see comment (i) below), comprising executing said user program process, said I/O refresh process and said peripheral service process by using a

same microprocessor (cf. paragraph [0056]) and comprising:
means for selecting a first mode and a second mode (see comment (ii) below);
the first mode being for cyclically executing the user program process and the I/O refresh process according to a normal procedure (cf. Fig. 9, paragraph [0056], and page 11, lines 9-13 - see comment (ii) below), and the second mode being for executing the peripheral service process for a prescribed time at a regular interval according to an interruption procedure to the user program process while executing the user program process and I/O refresh process according to the normal procedure (cf. paragraph [0069]).

2.2 Re (i): The process of sampling analog inputs in E1 is regarded as a "peripheral service process" within the meaning of the patent for the following reasons. In accordance with the description of the patent, the peripheral service process may include "communication with special I/O or remote I/O" (cf. paragraph [0015]). E1 discloses that an interrupt routine according to a "timed interrupt function" is useful for sampling analog inputs at regular intervals (cf. paragraph [0069]). In the board's view, analog inputs can thus be regarded as "special I/O", since they are processed in a special way using the timed interrupt function. They are thus to be regarded as a "peripheral service process" within the meaning of the present patent. As the interrupt occurs at regular intervals (cf. paragraph [0069]: "each time the timer expires") and will therefore inherently sometimes interrupt the user program process, E1 discloses fully the "second mode" defined in claim 1.

2.3 Re (ii): E1 states that "it is possible to enable or disable on a global basis all interrupts depending upon the user's specifications" (cf. page 11, lines 9-11). The "first mode" can therefore be regarded as occurring and selected when the interrupt-based sampling of the analog inputs is disabled.

2.4 The subject-matter of claim 1 therefore differs from the disclosure of E1 in the feature "cyclically executing ... the peripheral service process according to a normal procedure" in the first mode. In this respect, if, when operating in the second mode, the interrupt function were disabled, this would not necessarily mean that the analog inputs would be sampled as part of a "normal" scan cycle in accordance with the first mode of claim 1. Consequently, the board concludes that this feature is not disclosed in E1.

2.5 However, in the board's view, in order to provide the user with the maximum flexibility to operate the PLC as desired, the skilled person would be led without inventive step to configure the first mode such that the analog inputs are sampled as part of the normal scan cycle for the following reasons.

Firstly, E1 states: "Further, should the user decide to use interrupts the routine associated with each interrupt event are *[sic]* stored as part of the program" (board's underlining), which in the board's view is a clear hint that the PLC may be configured without any interrupts, meaning that the analog inputs and outputs would have to be serviced as part of the normal scan cycle (cf. Fig. 9 of E1). This is further corroborated by the statement on page 10, line 22, that "these values [i.e. analog input and output] can be accessed directly from the user program", i.e.,

implicitly, as part of the normal scan cycle.

Secondly, on page 10, lines 38-42, the following is stated:

"... the PLC base unit 22 of the present invention allows for the dynamic assignment of interrupt/event routines by facilitating the speedy handling of such interrupts by tailoring the assigned routine task to take advantage of system information known at the time of the interrupt/event, without waiting for a specific part of a scan cycle. Additionally, the PLC system of the present invention also allows for the de-assignment of user program sections in order to allow the user program to transfer control upon the occurrence of an event of interest." (board's underlining).

The board considers this passage to strongly hint at either carrying out program sections as part of the normal user program, i.e. during the normal scan cycle, or to de-assign these program sections from the normal scan cycle in order to transfer control to an interrupt routine (cf. page 11, lines 36-37). It follows that the skilled person would regard it as obvious that the sampling of analog inputs can either be assigned to be part of the normal scan cycle or assigned to an interrupt routine, in accordance with the user's specification.

2.6 As noted above, the respondent has not provided any substantive arguments.

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

3. Conclusion

As the ground for opposition pursuant to Article 100(a) EPC prejudices the maintenance of the patent as granted, in the absence of any other requests, 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