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Case Number: T 1219/12 - 3.5.03

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Title of invention:
Field-based asset management device and architecture

Applicant:
Fisher-Rosemount Systems, Inc.

Headword:
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Case Number: T 1219/12 - 3.5.03

D E C I S I O N
of Technical Board of Appeal 3.5.03
of 25 November 2016

Appellant: (Applicant)	Fisher-Rosemount Systems, Inc. 12301 Research Blvd. Research Park Plaza Bldg. III Austin, Texas 78759 (US)
Representative:	Vossius & Partner Patentanwälte Rechtsanwälte mbB Siebertstrasse 3 81675 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 15 December 2011 refusing European patent application No. 06801008.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	F. van der Voort
Members:	A. Madenach
	S. Fernández de Córdoba

Summary of Facts and Submissions

I. The present appeal is against the decision of the examining division refusing European patent application No. 06801008.1, published as WO 2007/021712 A2, *inter alia* on the ground that the subject-matter of claim 1 of each of the requests did not involve an inventive step (Articles 52(1) and 56 EPC) having regard to

D1: ANONYMOUS: "Using the Rosemount 3420 for Bulk Inputs and Skid Mounted Monitoring Solutions", internet article, pages 1-2 (May 2004), URL: http://web.archive.org/web/20050307224753/http://www.rosemount.com/document/ads/3420_4_03.pdf (retrieved on 2007-03-30)

and taking into account the common general knowledge of the person skilled in the art.

Reference was also made to

D4: WO 2004/086160 A1.

II. In the statement of grounds of appeal, the appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the claims of a main request, an auxiliary request I or an auxiliary request II, the claims of the main request being identical to those of the main request considered by the examining division in its decision and the claims of auxiliary request I being identical to those of the second auxiliary request considered by the examining division. As an auxiliary measure, oral proceedings were requested.

III. In a communication pursuant to Article 15(1) RPBA accompanying the summons to oral proceedings, the board gave its preliminary opinion.

IV. With a letter dated 24 October 2016, the appellant submitted, by way of replacement, claims 1 to 16 of a new auxiliary request I and claims 1 to 11 of a new auxiliary request II. The main request was maintained.

V. Oral proceedings were held on 25 November 2016.

In the course of the oral proceedings the appellant submitted the following documents:

- US 2010/0290351 A1 (cover page and page 1); and

- "The History of HART", published on the internet at http://de.hartcomm.org/hfc/org_mbr/aboutorg/aboutorg_history.html

in support of its arguments.

The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the main request as filed with the statement of grounds of appeal or, in the alternative, on the basis of the claims of the first or second auxiliary request as filed with the letter dated 24 October 2016.

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

VI. Claim 1 of the main request reads as follows:

"An intelligent interface module (120, 302) comprising:

at least one data network connection port configured to couple to a data communication network (118, 122);

at least one process communication connection port (124, 126, 128, 130) configured to couple to a field device bus (132, 134);

a controller (320); and

memory (324) coupled to the controller (320);

characterized in that:

the at least one data network connection port comprises an Ethernet data connection port and a Modbus data connection port;

the at least one process communication connection port (124, 126, 128, 130) comprises:

a wireless process communication network port (126, 128) configured to couple to a wireless field device bus (307C) and provide bi-directional wireless communication of data between wireless field devices connected to the wireless field device bus (307C) and the field device interface module (120, 302); and

a wired process communication port (124, 130) is configured to deliver power to and communicate with a plurality of wired field devices (136A, 136B, 136C, 138A, 138B, 138C); and

the controller (320) is configured to monitor and store information related to each field device."

Claim 1 of auxiliary request I differs from claim 1 of the main request in that the characterising portion reads as follows:

"characterized by comprising

a wireless transceiver adapted to communicate via a wireless network (307C) with one or more field devices adapted to communicate wirelessly,

wherein the controller (320) is configured to monitor and store information related to each field device to which it is connected, and

wherein the interface module (120, 320) is further adapted to interact wirelessly with a transceiver of a documenting calibrator".

Claim 1 of auxiliary request II includes, compared to claim 1 of auxiliary request I, the following additional features:

"wherein the controller (320) is further configured to provide calibration support which includes:

i) allowing a user to define a test scheme (404) with respect to at least one field device (136A, 136B, 136C, 138A, 138B, 138C);

ii) allowing a user to define a route (406) with respect to a plurality of field devices (136A, 136B, 136C, 138A, 138B, 138C);

iii) allowing a user to download information (410) from a documenting calibrator for storage upon the intelligent interface module (120, 302); and

iv) allowing a user to upload information (410) to the documenting calibrator; and

wherein said calibration support further includes providing a display of calibration history (412) via a user interface (400)".

Reasons for the Decision

1. *Claim 1 of the main request: inventive step (Articles 52(1) and 56 EPC)*

1.1 The examining division considered that D1 was the closest prior art and that the subject-matter of claim 1 differed from the intelligent interface module disclosed in D1 by the feature that

"the intelligent interface module further comprises a wireless process communication network port configured to couple to a wireless field device bus and provide bi-directional wireless communication of data between wireless field devices connected to the wireless field device bus and the field device interface module".

1.2 As already indicated in the communication pursuant to Article 15(1) RPBA accompanying the summons to oral proceedings, the board agrees with this finding. The appellant did not object.

1.3 The above-cited feature solves the problem of providing a communication link which does not entail the

mechanical constraints of a wired link. This problem is generally known in the art.

1.4 In the board's judgement, the skilled person would, on the basis of his common general knowledge, have considered including a wireless communication port in the intelligent interface module known from D1 without having to exercise inventive skill: it was common general knowledge at the priority date that wired connections may routinely be replaced by wireless connections (*e.g.* connections to an internet router for a home network or to headphones or loudspeakers) whenever wired connections were found to be awkward to install or otherwise inconvenient. The board also notes that wireless connections to field devices were known in the field of process control, *cf.* for example D4 filed by the present applicant, which discloses wireless connections between a maintenance computer 18 and a field device 15 (D4, paragraph [0044]). The skilled person would thus use wireless connections between field devices (or the field bus) and the field device interface module for the same reasons. The skilled person would also weigh up the advantage of powering field devices by the interface module if they were connected by wire against the above-mentioned advantages of a wireless connection, in the same way as he would do, for example, in the case of wireless headphones or loudspeakers. A wireless connection between the intelligent interface module and field devices implies the provision of a wireless process communication network port at the interface module.

1.5 The appellant argued that in view of the disclosure of D1, which related only to wired connections, the skilled person would not, in the absence of any hints or suggestions in this document, include a wireless

communication port, even if he could do so. This was further underlined by the fact that the intelligent interface module of D1 provided power to the field devices connected to it, an advantage which was obviously not possible with wireless devices.

The board does not accept these arguments, since they do not take into account the common technical knowledge of the skilled person, *i.e.* that wireless communications were known in the art. The latter was, in fact, not disputed by the appellant.

1.6 The appellant further argued that, although wireless communications were known at the relevant priority date, the skilled person would not have considered using them in an industrial environment as envisaged by the present invention, since at the time wireless technology was not considered capable of fulfilling the security and safety requirements of industrial control. In support of its argument, the appellant referred to documents US 2010/0290351 A1 (cover page and page 1) and the internet article "The History of HART" (see point V above) from which it followed that a wireless standard for industrial control (known as the Wireless HART standard) was published only in 2007.

Whilst acknowledging the latter fact, the board does not accept the appellant's argument, since in claim 1 the field devices and the wireless field device bus, to which the wireless process communication network port is to be coupled, do not specify that the wireless connection must fulfil specific safety and security standards. There is also no hint in the description; wireless communication between the interface module and one or more field devices is referred to only generally on page 9, lines 9-12. Considering that field devices

can comprise any kind of sensor and/or actuator in any working environment, including devices whose connection to the interface module does not necessarily have to comply with specific safety and security standards, the skilled person would have considered using a wireless connection whenever this appeared useful in the circumstances.

1.7 For the above reasons, the subject-matter of claim 1 of the main request does not involve an inventive step (Articles 52(1) and 56 EPC). The main request is therefore not allowable.

2. *Claim 1 of auxiliary request I: inventive step (Articles 52(1) and 56 EPC)*

2.1 Independent claim 1 of auxiliary request I was amended in response to objections under Article 123(2) EPC raised by the board in the communication annexed to the summons to oral proceedings. Relevant to the question of inventive step, compared to claim 1 of the main request, is only the following additional feature:

"wherein the interface module (120, 320) is further adapted to interact wirelessly with a transceiver of a documenting calibrator".

The appellant did not object to this interpretation of the claim.

2.2 According to the present application, a documenting calibrator is a device which may be used by a field device maintenance technician in order to apply known conditions to a field device, to adjust the field device in accordance with the known conditions, and to document the adjustment (*cf.* page 12, lines 14-18). A

similar function (*i.e.* access to device set-up and diagnostic information) is achieved in D1 by a PC which accesses via Ethernet the web browser built into the intelligent interface module (D1, page 2, first two paragraphs).

2.3 For the same reasons as set out in point 1.4 above, applied *mutatis mutandis*, it would have been obvious to the skilled person starting out from D1 to use a wireless transceiver so that the interface module was adapted to interact wirelessly with the PC which provided the functions of a documenting calibrator.

2.4 The appellant essentially argued that the skilled person would understand a documenting calibrator as a device, separate from a PC, with a direct connection to the intelligent interface module (*cf.* page 12, line 12, to page 13, line 16, of the application as published), usually in the form of a portable device. This argument is, however, irrelevant to the claimed subject-matter since the capability of the interface module to connect wirelessly to a PC, which was obvious to the skilled person as set out above, would automatically provide for a direct wireless connection to an independent documenting calibrator provided the documenting calibrator's transceiver allowed for wireless communications.

2.5 For the above reasons, the subject-matter of claim 1 of auxiliary request I does not involve an inventive step (Articles 52(1) and 56 EPC). Auxiliary request I is therefore not allowable.

3. *Claim 1 of auxiliary request II: inventive step (Article 56 EPC)*

3.1 The five additional features of claim 1 of auxiliary request II as compared to claim 1 of auxiliary request I (see point VI above) relate to what is called in the present application "asset management", which comprises "diagnostics and monitoring of field devices and/or other process control assets; configuration management of such devices; calibration of field devices; documentation of field devices; as well as enterprise integration" (page 2, line 20, to page 3, line 7).

3.2 "Asset management" was known in the art, as acknowledged in the above-cited paragraph with reference to the AMS™ Suite. Further, it was not disputed that the acknowledged "asset management" comprised the five additional features of claim 1 of auxiliary request II.

3.3 In D1, the interface module provides device set-up and diagnostic information in order to provide a single point of connection for a number of field devices (page 2, lines 1-3). Hence, the interface module of D1 provides basic elements of asset management. The above five features solve the problem of putting those basic elements into effect. Considering that the claimed details of "asset management" were known, it would have been obvious to the skilled person to use them in the interface module of D1.

3.4 The appellant essentially argued that the features relating to "asset management" underlined the fact that a direct wireless connection to the documenting

calibrator was necessary to realise these features, something which was not suggested by D1.

The board does not accept this argument. The board notes that of the five additional features only features iii) and iv) relate to the documenting calibrator, the remaining features relating exclusively to the controller of the interface module and the calibration support provided by it. Features iii) and iv) relate to downloading information from a documenting calibrator to the intelligent interface and to uploading information to the documenting calibrator respectively. The board does not agree that the upload and download actions imply a direct wireless link between the intelligent interface and the documenting calibrator. Even this assuming to be the case, the same considerations as given in point 2.4 above would apply.

3.5 For the above reasons, the subject-matter of claim 1 of auxiliary request II does not involve an inventive step (Articles 52(1) and 56 EPC). Auxiliary request II is therefore not allowable.

4. Since none of the appellant's requests is allowable, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

G. Rauh F. van der Voort

Decision electronically authenticated