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Datasheet for the decision of 23 April 2013

Case Number: T 1225/09 - 3.5.05

Application Number: 06026019.7

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Title of invention:
Touchscreen controlling medical equipment from multiple manufacturers

Applicant:
Storz Endoskop Produktions GmbH

Headword:
Touchscreen controlling medical equipment from multiple manufacturers/STORZ

Relevant legal provisions (EPC 1973):
EPC Art. 56

Keyword:
"Inventive step - main request (yes)"

Decisions cited:
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Catchword:
-

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Case Number: T 1225/09 - 3.5.05

D E C I S I O N
of the Technical Board of Appeal 3.5.05
of 23 April 2013

Appellant: (Applicant)
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Decision under appeal:
Decision of the Examining Division of the European Patent Office posted 20 January 2009 refusing European patent application No. 06026019.7 pursuant to Article 97(2) EPC.

Composition of the Board:

Chair: A. Ritzka
Members: M. Höhn
G. Weiss

Summary of Facts and Submissions

I. This appeal is against the decision of the examining division, dispatched on 20 January 2009, refusing European patent application No. 06026019.7 on the ground of lack of inventive step (Article 56 EPC) in the light of the prior-art document

D3: WO 00/72180 A2

when combined with the skilled person's common general knowledge.

Further prior art documents considered during the examination procedure were:

D1: US 5788688 A1,
D2: WO 97/49340 A1,
D4: US 5455766 A1 and
D5: US 2002/045887 A1.

II. The notice of appeal was received on 30 March 2009. The appeal fee was paid on the same day. The statement setting out the grounds of appeal was received on 2 June 2009. The appellant requested that the appealed decision be set aside and that a patent be granted on the basis of claims 1 to 22 according to the main request or on the basis of claims 1 to 22 according to the auxiliary request, both submitted with the statement setting out the grounds of appeal. Oral proceedings were requested on an auxiliary basis in case the board should not intend to grant either of the two requests.

III. In a communication dated 28 January 2013 the appellant was informed that a patent could be granted on the basis of the main request provided that a problem with regard to Article 84 EPC 1973 in claim 19 was overcome.

IV. With a letter dated 22 February 2013 the appellant submitted two sets of claims 1 to 22 replacing the main request and the auxiliary request in which each claim 19 was amended, thereby overcoming the aforementioned objection under Article 84 EPC. The appellant also submitted an adapted description and confirmed that the board's interpretation of the requests was correct.

V. In a communication dated 19 April 2013 the appellant was informed that the board was not yet in a position to grant a patent, since the description still comprised several incorrect formulations. The appellant was therefore invited to provide the board with a revised description which was in order for grant.

VI. With a letter dated 22 April 2013 the appellant submitted revised description pages 6 to 9.

VII. Independent claim 1 according to the main request reads as follows:

"1. Medical communication and control system (10) for controlling remotely controllable surgical devices (16, 18, 20, 22), said system (10) comprising:
a bus (12);
a touchscreen (24, 54) being provided with an interface device (23);

a controller (25, 55) for the touchscreen (24, 54), having a controller command protocol;
a first party device (20, 22), having a first command protocol, said first party device (20, 22) controllable by said touchscreen (24, 54);
characterized by
a third party device (16, 18), having a second command protocol different from said first command protocol, said third party device (16, 18) controllable by said touchscreen (24, 54);
the interface device (23), connected between the touchscreen controller (25, 55) and the bus (12), for converting the controller command protocol to the first and second command protocols, and for transforming inputs received by the touchscreen (24, 54) into commands for controlling the first and third party devices (16, 18, 20, 22); and
the first party device (20, 22) and the third party device (16, 18) each having an interface (15, 17, 19, 21) adapted to provide compatibility between the bus (12) and each device (16, 18, 20, 22)."

Reasons for the Decision

1. Admissibility

The appeal complies with Articles 106 to 108 EPC (see Facts and Submissions, point II above). It is therefore admissible.

Main request

2. Amendments

Independent claims 1 and 19 are based on originally filed claim 1 and claim 20, respectively, each in conjunction with figure 1 and paragraphs [0037] to [0039] of the description as originally filed. Dependent claims 2 to 18 are based on originally filed claims 2 and 4 to 19, respectively. Dependent claims 20 to 22 are based on originally filed claims 21 to 23, respectively. The requirements of Article 123(2) EPC are therefore fulfilled.

3. Novelty and inventive step

3.1 In the decision under appeal the examining division refused the application because the subject-matter of claim 1 was considered to lack an inventive step with regard to the disclosure of D3, being the closest prior art, when combined with the skilled person's common general knowledge (Article 56 EPC 1973).

3.2 The board agrees with the decision under appeal that D3 constitutes the closest prior art on file, since it discloses a networked medical control system which provides the functionality of remotely controlling a plurality of interconnected medical devices (see e.g. figures 1, 4 and 5 of D3) using a touchscreen (see figure 2 and page 9, lines 5 to 11). Each of the plurality of devices in the networking infrastructure contains a corresponding network interface, an embedded controller for communicating bidirectionally, and is

connected to a corresponding local display and user interface.

Therefore, in comparison to the other prior art documents on file, D3 has the most structural features in common with the subject-matter of claim 1.

3.3 However, the board does not agree with the analysis in the decision under appeal of D3 with regard to the features of claim 1.

In particular, each of the plurality of devices with its embedded controller uses a particular protocol. In the most concrete embodiment in D3, each networked device in the operating room has an embedded controller that is Jini-compliant and capable of communication using standard Jini communication protocols (see e.g. figure 1 and page 8, line 6 onwards, or page 13, line 25 onwards).
D3 explicitly discloses that "any new technology can be incorporated easily into the system by making the new technology Jini compliant" (see page 16, lines 8 and 9).
The board therefore agrees with the appellant (see penultimate and ultimate paragraphs on page 3 of the statement setting out the grounds of appeal) that the teaching of D3 is that all connected devices must have embedded controllers using the same command protocol in order to ensure a proper functionality. For this reason, D3 does not disclose the use of "third party devices" as defined in the present application and as claimed in claim 1, since those are specified to have a different command protocol. The board agrees with the appellant's argument that D3 teaches how to design new

first party devices by making them JINI-protocol compliant rather than to integrate existing third party devices with a different command protocol.

Furthermore, D3 does not disclose the specific distributed concept of the protocol conversion with the interface device and separate interfaces of the first and third party devices according to claim 1 with their respective tasks of converting the commands between the controller command protocol and the two different command protocols of the first and third party devices and of providing compatibility between the bus and each device. According to D3 the embedded controller is integrated into each medical device of the plurality of devices (see e.g. figure 1). This controller, however, is not provided for compatibility between a bus and each device as according to claim 1, but serves the purpose of making the particular medical device Jini-protocol compliant.

3.4 Thus, the last two features of claim 1, i.e.

- a third party device (16, 18), having a second command protocol different from said first command protocol, said third party device (16, 18) controllable by said touchscreen (24, 54); and
- the interface device (23), connected between the touchscreen controller (25, 55) and the bus (12), for converting the controller command protocol to the first and second command protocols, and for transforming inputs received by the touchscreen (24, 54) into commands for controlling the first and third party devices (16, 18, 20, 22); and the first party device (20, 22) and the third party device (16, 18) each

having an interface (15, 17, 19, 21) adapted to provide compatibility between the bus (12) and each device (16, 18, 20, 22);

as identified in point 1.2 of the decision under appeal are not considered by the board to be disclosed in D3.

3.5 The technical effect achieved by these claimed features is considered to be, as the appellant has correctly argued (see page 6, second and third paragraphs of the statement setting out the grounds of appeal), that the conversion of the command protocols ("logical" conversion according to the appellant's arguments) is performed separately from establishing bus compatibility ("physical" compatibility according to the appellant's arguments) of each medical device. This results in the advantage that the centralized configuration of protocol conversion is more flexible and can be better modified in the event that new devices involving a new command protocol are to be integrated for touchscreen control.

The underlying objective technical problem is therefore considered to be to provide for a flexible integration of devices that have different command protocols.

3.6 In the board's judgement, D3 does not suggest or give a hint in the direction of the solution according to claim 1.

Instead of integrating existing third party devices with a different command protocol, D3 leads away from the claimed solution by teaching the use of a particular, i.e. single, command protocol for all

devices and by making each device compliant with this command protocol. Accordingly, D3 teaches integrating the embedded controller into each medical device of the plurality of devices. In contrast to the claimed solution, this controller is not adapted to provide compatibility between a bus and each device according to claim 1, but serves the purpose of making the particular medical device compliant with the single command protocol.

D3 therefore does not render the claimed solution obvious.

3.7 The claimed solution according to the distinguishing features of claim 1 is neither considered to have been notorious knowledge of the skilled person before the priority date of the present application, nor has the examining division provided any support for the assumption that it would have to be regarded as common general knowledge in the field of controlling medical devices.

D3 therefore does not render the claimed solution obvious when combined with the skilled person's common general knowledge.

3.8 Further prior art document D2 discloses an interface that allows multiple surgical devices to be controlled from a central input device. The system has a switching interface which couples the input device to the surgical devices (see figure 1). Because each device may require specifically configured control signals for proper operation, adapters or a controller may be placed intermediate and in electrical communication

with a specific output channel and a specific surgical device (see page 5, last paragraph of D2). Thus, for the skilled person, when looking for a solution to the objective technical problem, D2 would suggest that each device has its own specific adapter/controller for command conversion. D2 would hence lead the skilled person away from providing a central command protocol conversion for logical compatibility according to the distinguishing features of claim 1.

D3, when combined with D2, therefore does not render the claimed solution obvious either.

3.9 Prior art document D1 discloses a personal computer based control unit for controlling multiple medical equipment devices.

An IEEE-488 general purpose interface bus card (HPIB interface standard providing an eight bit parallel bus with handshaking control) is connected to the personal computer for connection to the medical equipment. Thus, the equipment control unit can address or select communications with one of many connected medical devices, each of which includes its own IEEE-488 HPIB controller (see 100 and 102 in figure 3). These units have hardware set addresses used by the equipment control unit for communication with each particular device (see D1, column 8, lines 18 to 38) and are microprocessor controlled to service an HPIB controller. The HPIB controller on each device is set for a specific address and when the equipment control unit sends a command to a particular address, the addressed HPIB controller passes the command to its associated processor. The associated processor then

decodes the command and responds by controlling components within the device. In case of a manual input at the device, the processor responds by controlling the associated components and encoding a command and sending it to the HPIB controller, which sends it out for the equipment control unit to receive and process (see D1, column 10, lines 17 to 32).

While the HPIB controller in D1 can be considered to correspond to the local interface for establishing physical compatibility of a device with the bus according to the last part of the distinguishing features of claim 1, the teaching of D1 to decode/encode commands by a specific processor within each device again leads away from the claimed solution of a central conversion of command protocols according to claim 1.

D3 therefore does not render the claimed solution obvious either when combined with D1.

3.10 Neither of the further prior art documents D4 and D5 discloses or renders obvious the specific distributed structure according to claim 1 with centrally converting different command protocols and decentrally, i.e. for each device, providing a separate interface for bus compatibility in order to solve the problem posed. The claimed subject-matter is therefore not rendered obvious by the closest prior art D3 when combined with one of these prior art documents.

3.11 Corresponding independent method claim 19 at least implicitly specifies the same specific distributed concept for command protocol conversion, because

inputting and converting of commands takes place before transmitting the converted commands to the third party device, i.e. conversion takes place outside the third party device and outside its dedicated interface for providing bus compatibility and therefore before converted commands are received over the bus.

3.12 For these reasons the board judges that the subject-matter of independent claims 1 and 19 is novel (Article 54(2) EPC 1973) and involves an inventive step (Article 56 EPC 1973) over the prior art on file. The requirements of Article 52(1) EPC are therefore fulfilled.

Dependent claims 2 to 18 and 20 to 22 are dependent claims, directed to further embodiments of the subject-matter of claims 1 and 19 respectively and, as such, also meet the requirements of Article 52(1) EPC.

Auxiliary request

4. Since the main request fulfils the requirements of the EPC, the board does not have to deal with the auxiliary request.

Other considerations

5. The present application is a divisional application of the parent application EP 03017795.0, for which a patent has been granted. Since that patent was granted for the aspect of stored replica of control interfaces which can be automatically downloaded over a network connection, whereas the present set of claims according to the main request is directed to the aspect of

command protocol conversion for third party devices, there is no problem with double patenting of the same subject-matter.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance with the order to grant a patent on the basis of claims 1 to 22 submitted as the main request with letter dated 22 February 2013, of description pages 1 to 4, 4a, 5 and 10 to 19 submitted with letter dated 22 February 2013, description pages 6 to 9 submitted with letter dated 22 April 2013 and drawings 1/10 to 10/10 as originally filed.

The Registrar: The Chair:

K. Götz A. Ritzka