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Datasheet for the decision of 10 February 2010

Case Number: T 2173/08 - 3.5.05

Application Number: 01122241.1

Publication Number: 1207452

IPC: G06F 3/16

Language of the proceedings: EN

Title of invention:
Apparatus and method for wireless communication

Applicant:
Symbol Technologies, Inc.

Headword:
Voice controlled system/SYMBOL TECHNOLOGIES

Relevant legal provisions:
-

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

Keyword:
"Inventive step - Main and auxiliary requests - no"

Decisions cited:
-

Catchword:
-

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Case Number: T 2173/08 - 3.5.05

D E C I S I O N
of the Technical Board of Appeal 3.5.05
of 10 February 2010

Appellant: Symbol Technologies, Inc.
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 23 May 2008 refusing European patent application No. 01122241.1 pursuant to Article 97(1) EPC 1973.**

Composition of the Board:

Chairman: D. H. Rees
Members: P. Cretaine
G. Weiss

Summary of Facts and Submissions

I. This appeal is against the decision of the examining division announced in oral proceedings held on 12 February 2008, with reasons dispatched 23 May 2008, refusing European patent application No. 01122241.1 for the reason that the subject-matter of the independent claims did not involve an inventive step according to Article 56 EPC 1973 having regard to the disclosure of

D1: WO 00/23985

The examining division appended to the decision under appeal its opinion that the dependent claims did also not involve an inventive step.

II. The notice of appeal was filed with letter received 1 August 2008. The appeal fee was paid on 1 August 2008. The statement setting out the grounds of appeal was received 2 October 2008. It was requested that the decision to refuse be set aside and that a patent be granted on the basis of the set of claims on which the appealed decision had been based:
- claims 1 to 17 filed on 11 February 2008 as a main request, or
- claims 1 to 16 submitted with the statement setting out the grounds of appeal. A precautionary request for oral proceedings was also made.

III. In a communication accompanying a summons to oral proceedings to be held on 10 February 2010, the board set out its preliminary opinion concerning the appeal and referred to the following further prior art document cited in examination:

D3: US 5 930 752.

IV. In said communication, the board expressed its preliminary opinion that the appellant's requests were not allowable. In particular, the board expressed the opinion that independent claims 1 and 8 of the main request, as amended in examination, and independent claims 1 and 7 of the auxiliary request, as filed with the statement setting out the grounds of appeal, did not meet the requirements of Article 123(2) EPC. Moreover, an inventive step objection based on D1 was raised against independent claims 1 and 8 of the main request, and an inventive step objection based on D1 in combination with D3 was raised against independent claims 1 and 7 of the auxiliary request.

The board further gave its reasons why the appellant's arguments in respect of inventive step were not convincing.

V. Oral proceedings were held on 10 February 2010 in the course of which the appellant suggested amendments to overcome the Article 123(2) EPC objection and presented arguments in favour of inventive step of the main request and the auxiliary requests, in particular in the light of D1 and D3.

VI. The appellant has requested that the decision under appeal be set aside and that a patent be granted on the basis of claims 1 to 17 filed with a letter of 11 February 2008 (main request) or in the alternative of claims 1 to 16 filed with the statement setting out the grounds of appeal received on 2 October 2008 (auxiliary request).

The further documents on which the appeal is based, i.e. the text of the description and the drawings, are taken to be as follows:

description pages 4, 5, 7, 8 10-14, 16, 19-30 as originally filed;
pages 2B, 3, 6, 9, 15, 17-18, 31 as filed with letter of 19 January 2007;
pages 1, 2, 2A as filed with letter of 25 June 2007;

drawings sheets 1/9-9/9 as originally filed.

VII. Claim 1 of the appellant's main request reads as follows:

"A method for operating a system by voice command, comprising:
providing a mobile unit (10) having a microphone (12), a digital signal processor (20) and a radio module (22, 24, 26) for providing wireless data communications to a computer (15);
selectively activating with a command button a voice recognition function of the digital signal processor (20);
receiving first voice commands having a limited vocabulary in said mobile unit (10), recognizing said first voice commands in said digital signal processor (20) and controlling said mobile unit (10) in response to said first voice commands;
receiving second voice commands in said mobile unit (10), converting said second voice commands to digital

data signals comprising a digital representation of said second voice commands in said mobile unit (10) and sending said digital data signals to said computer (15) using said radio module (22, 24, 26); and operating said computer (15) to recognize said second voice commands using said digital data signals and a large vocabulary voice recognition program to derive computer control signals therefrom, wherein said computer control signals provide instructions for operation of said computer (15) or at least one of its attached peripheral devices (19, 23, 44, 90)."

Independent claim 8 of the appellant's main request reads as follows:

"A mobile device (10), comprising:
a microphone (12) for receiving sound signals;
an interface, connected to said microphone (12) for converting received sound signals from said microphone (12) to data signals;
a radio module (22, 24, 26) for sending wireless data communication signals; and
a digital signal processor (20), said processor (20) including a program for
(1) recognizing a limited number of digital data signals from said interface and operating in response thereto to control said radio module (22, 24, 26), the program for recognizing a limited number of digital data signals being selectively activated by a user with a command button of said mobile device (10),
(2) operating said radio module (22, 24, 26) to send digital data signals, and

(3) providing digital data signals corresponding to sounds from said microphone (12) as data packets to said radio module (22, 24, 26), wherein said digital data signals provide instructions for a remote computer (15) and its peripheral devices (19, 23, 44, 90)."

VIII. Claim 1 of the appellant's auxiliary request reads as follows:

"A method for operating a system by voice command, comprising:
providing a mobile unit (10) having a microphone (12), a digital signal processor (20), a speaker (14) and a radio module (22, 24, 26) for providing wireless data communications to a computer (15);
selectively activating with a command button a voice recognition function of the digital signal processor (20) and said computer (15);
receiving first voice commands having a limited vocabulary in said mobile unit (10), recognizing said first voice commands in said digital signal processor (20) and controlling said mobile unit (10) in response to said first voice commands;
receiving second voice commands in said mobile unit (10), converting said second voice commands to digital data signals comprising a digital representation of said second voice commands in said mobile unit (10) and sending said digital data signals to said computer (15) using said radio module (22, 24, 26);
operating said computer (15) to recognize said second voice commands using said digital data signals and a large vocabulary voice recognition program to derive computer control signals therefrom, wherein said computer control signals provide instructions for

operation of said computer (15) or at least one of its attached peripheral devices (19, 23, 44, 90), and operating said computer (15) or one of its peripheral devices (19, 23, 44, 90) in response to said computer control signals;
wherein said computer control signals are arranged to establish a voice communications channel between said mobile unit (10) and at least one other voice communicating device, and wherein said computer (15)is operated to establish said voice communications channel to transfer voice communication data between said mobile unit (10) and said other voice communications device."

Independent claim 7 of the appellant's auxiliary request reads as follows:

"A mobile device (10), comprising:
a microphone (12) for receiving sound signals;
a speaker(14);
an interface, connected to said microphone (12) for converting received sound signals from said microphone (12) to data signals, wherein said interface is connected to said microphone (12) for converting received sound signals from said microphone (12) to data signals and for converting digital data signals into sound signals and providing said sound signals to said speaker (14);
a radio module (22, 24, 26) for sending wireless data communication signals; and
a digital signal processor (20), said processor (20) including a program for

(1) recognizing a limited number of digital data signals from said interface and operating in response thereto to control said radio module (22, 24, 26), the program for recognizing a limited number of digital data signals being selectively activated by a user with a command button of said mobile device (10),
(2) operating said radio module (22, 24, 26) to send digital data signals, and
(3) providing digital data signals corresponding to sounds from said microphone (12) as data packets to said radio module (22, 24, 26), wherein said digital data signals provide instructions for a remote computer (15) and its peripheral devices (19, 23, 44, 90), wherein said instructions are arranged to establish a voice communications channel between said mobile unit (10) and at least one other voice communications device, and wherein said computer (15) is operated to establish said voice communication channel between said mobile unit (10) and said other voice communications device, said command button selectively interrupting said voice communications channel."

IX. After deliberation the board announced its decision.

Reasons for the Decision

1. *Admissibility*

The appeal complies with provisions of Articles 106 to 108 EPC 1973. Therefore it is admissible (see Facts and Submissions, point II).

2. *Inventive step*

2.1 Effect of added subject-matter

In the summons to the oral proceedings, the board pointed out that the feature of the independent claims of the main request and of the auxiliary request that the **voice recognition function of the digital signal processor (20)** is selectively activated by a command button did not appear to be unambiguously disclosed in the application as field.

However, it is an objection which could easily be overcome and is not central to the issue of inventive step, which seems to the board to be more decisive in the present case. In fact the skilled person would deduce from the application as filed that a **voice recognition mode of the mobile device** may be activated by the command button and that in said mode voice messages received by the mobile device are not sent as part of a communication but recognized as voice commands by the system. By replacing in the independent method claims the wording "selectively activating with a command button a **voice recognition function of the digital signal processor**" by the wording "selectively activating with a command button a **voice recognition mode of the mobile device**", the objection under Article 123(2) could thus, in the judgement of the board be overcome. The claimed subject-matter will be treated in the following as if these were the specified feature, the appellant having indicated, in the oral proceedings, willingness to amend the claims to overcome this objection.

2.2 Prior art

D1 discloses a system wherein voice control of a service application provided to a mobile terminal from a remote server is distributed between the terminal and the remote application server by using a low power automatic speech recognition system in the mobile terminal and a more powerful automatic speech recognition system in the remote server. It is described on page 17, lines 28-31, that in order to activate the VCSA [Voice Controlled Service Application], the user has to speak a predefined voice command, such as the word "services". This implies that a kind of sleeping mode of the voice recognition system is provided in which only one single word may be recognized (comparable to the "magic words" defined in paragraph 61 of the application as published with respect to a further, not claimed, embodiment of the invention) and that all other functions of the voice recognition system are not active in this mode.

2.3 Main request

2.3.1 It was common ground during the oral proceedings that the only difference between the subject-matter of claim 1 and the disclosure of D1 was that the voice recognition mode of the mobile device is activated by a command button pressed by the user of the mobile device, instead of being activated by a predefined word uttered by the user of the mobile device as in the system of D1.

The technical effects of this difference are that undesired activation of the voice recognition mode by the user uttering the predefined voice command during a

conversation is not possible and that no power is consumed by the digital signal processor of the mobile device when the voice recognition mode is not activated.

The objective technical problem may thus be defined as how to prevent interruption of a conversation by the undesired activation of the voice recognition mode whilst saving power when the voice recognition mode is not needed. This was also common ground during the oral proceedings.

The skilled person would first notice that D1 teaches to use a mobile phone as the mobile unit (see page 23, lines 14-16). At the priority date of the present application (17 November 2000), it was common knowledge that mobile phones had several operating modes, such as a voice communication mode, a standby mode, a telephone directory mode, etc..., each mode being activated by using one or more keys of the keyboards, i.e. command buttons.

Starting from D1 and trying to solve the above-mentioned problem, the skilled person would therefore consider the activation of the voice recognition mode of the mobile phone with a command button as a normal option, in the same way as it is designed and implemented for other operating modes of the mobile phone. Furthermore the advantages and disadvantages of such an activation are readily foreseeable for the skilled person who will immediately recognize that activating the voice recognition mode with a command button firstly saves power since no circuit of the digital signal processor has to remain activated in a sleeping state of the voice recognition system and

secondly avoids any misinterpretation of the "magic word" during a telephone conversation, thereby solving the above-mentioned objective technical problem. The skilled person would also recognize the disadvantage that the solution is not entirely "handsfree". The skilled person would thus implement the activation of the voice recognition mode with a command button in the system of D1 without the exercise of any inventive skills but rather as a consequence of its common knowledge and of normal design choices in the field.

Claim 1 therefore does not meet the requirements of Article 56 EPC 1973.

Independent claim 8 substantially relates to a mobile device adapted to perform steps of the method according to claim 1 and, as such, also does not meet the requirements of Article 56 EPC 1973.

2.3.2 The appellant argued that no prior art citations discloses activation of a voice recognition mode with a command button. As stated above in paragraph 2.3.1, the board however judges that the skilled person, starting from D1 and trying to solve the objective technical problem, would implement the step that leads to the subject-matter of claim 1 based only on its common technical knowledge in the field, without needing to combine the teaching of D1 with any additional piece of prior art.

The appellant further argued that the skilled person could conceive other approaches to solve the problem and while he possibly could use a solution as suggested

by the present alleged invention, the prior art provides no compelling reason why he would do so. The board however judges that the skilled person would consider to use a command button for selective activation of the voice recognition mode as a matter of normal design procedure and routine experimentation, based on his common knowledge that other operating modes of a mobile phone are generally activated with the keyboard, i.e. with command buttons. While this may be one of a plurality of obvious solutions, it is still obvious.

2.4 Auxiliary request:

2.4.1 The feature added by independent claims 1 and 7 according to the auxiliary request relate to the establishment by the computer of a voice communications channel between the mobile unit and at least one other voice communication device. This feature solves the problem of enabling a voice communication between the mobile unit and other voice communicating devices, which has been already addressed and solved in a similar way in D3 (see the abstract) by using a computer connecting the devices. The establishment of the voice communications channel by the computer does not appear to combine with the selective activation of the voice recognition system to provide a surprising effect and represents therefore a feature, with no inventive merit in itself, which is "juxtaposed" to the selective activation.

Independent claims 1 and 7 according to the auxiliary request therefore do not also involve an inventive step (Article 56 EPC 1973).

2.4.2 The appellant argued that D3 discloses the establishment of voice channels between devices **through** a server/computer collecting and distributing the voice signals from and to the devices whereas the present application relates to the establishment of voice channels between devices by a computer but not through said computer. The wording of the claims however merely states that the computer establishes voice communication channels to transfer voice communication data between the devices. In the board's judgement this wording does not preclude the voice channels to be established through the computer, so that the above-mentioned alleged difference is not reflected by the wording of the claims.

3. There being no further requests, the appeal has to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

K. Götz D. H. Rees