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**Datasheet for the decision
of 23 September 2008**

Case Number: T 0982/04 - 3.5.04

Application Number: 99930127.8

Publication Number: 1082850

IPC: H04N 5/00

Language of the proceedings: EN

Title of invention:

Module manager for interactive television system

Patentee:

Open TV, Inc.

Opponent:

Interessengemeinschaft für Rundfunkschutzrechte e.V. (IGR e.V.)

Headword:

-

Relevant legal provisions:

RPBA Art. 13

Relevant legal provisions (EPC 1973):

EPC Art. 56

Keyword:

"Inventive step (yes - after amendment)"

"Late-filed request - admitted (yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 0982/04 - 3.5.04

DECISION
of the Technical Board of Appeal 3.5.04
of 23 September 2008

Appellant: Interessengemeinschaft
(Opponent) für Rundfunkschutzrechte e.V. (IGR e.V.)
Bahnstraße 62
D-40210 Düsseldorf (DE)

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Respondent: OpenTV, Inc.
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Representative: Freeman, Jacqueline Carol
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 14 June 2004
rejecting the opposition filed against European
patent No. 1082850 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: F. Edlinger
Members: M. Paci
C. Vallet

Summary of Facts and Submissions

- I. This is an appeal by the opponent against the decision of the opposition division rejecting the opposition.
- II. Opposition had been filed against the patent as a whole, based on Article 100(a) EPC 1973 on the ground of lack of inventive step.
- III. The following documents cited as prior art during the appeal proceedings are relevant to the present decision:
- D0: G. Hirtz, et al.: "OpenTV: Betriebssystem für interaktives Fernsehen", Fernseh- und Kino-Technik, March 1996, 84-89
- D1: U. Bach, et al.: "Multimediales TV-Gerät", Radio Fernsehen Elektronik, 9-10/1996, 28-31 (vol.9) and 38-40 (vol.10)
- D6: S. Hartwig, "Softwarearchitekturen für interaktive digitale Decoder", Fernseh- und Kino-Technik, March 1996, 92-102
- D7: US 5 717 452 A
- IV. In the decision under appeal the opposition division held that the claimed subject-matter was not rendered obvious by the state of the art disclosed in D0 and D1.
- V. In the statement of grounds of appeal the appellant (opponent) contested that the subject-matter of claims 1, 7 and 17 involved an inventive step in view of D0 or D6, each either on its own or in combination with D1 or D7. D6 and D7 were cited for the first time in the statement of grounds of appeal.

- VI. Oral proceedings were held on 23 September 2008, at the end of which the board announced its decision.
- VII. The appellant's final requests are that the decision under appeal be set aside and that the patent be revoked in its entirety.
- VIII. The respondent's (patent proprietor's) final requests are that the patent be maintained in amended form on the basis of claims 1 to 22 of the main request filed during the oral proceedings or, alternatively, on the basis of claims 1 to 22 of the auxiliary request also filed during the oral proceedings.
- IX. Claims 1, 7 and 17 according to the respondent's main request read as follows:

"1. An interactive television receiver (20) for retrieving a set of application modules (51) forming an interactive executable television application, the receiver comprising:

a first input port (31) configured to receive a broadcast interactive television signal, said broadcast signal containing audio-video information corresponding to a television program; a second input port configured to receive a second signal, said second signal containing information corresponding to said interactive television application;

a microprocessor (35) coupled to said first input port and said second input port, said microprocessor being configured to store one or more requests by said executing application for corresponding ones of said modules (51), to monitor both said broadcast signal received by said first input port and said second

signal received by said second input port for modules corresponding to said requests, to retrieve some of said modules from said broadcast signal and some of said modules from said second signal, and to store said corresponding modules; and

a data storage device (36, 37) coupled to said microprocessor and configured to store said requests and said corresponding ones of said modules."

"7. A method for managing a set of application modules forming an interactive executable television application, the method comprising the steps of:

storing one or more requests for application modules (51), each said request corresponding to an application module which is currently unavailable to said interactive television application;

monitoring both a first input port receiving a broadcast signal and a second input port for said corresponding application modules;

detecting said corresponding application modules;

retrieving some of said corresponding application modules from each of said first and second input ports;

storing said corresponding application modules;

providing said corresponding application modules to said interactive television application."

"17. An interactive television system configured to execute an interactive application having a plurality of application modules, the interactive television system comprising:

a broadcast station (10) configured to transmit a broadcast first signal of a first type containing a first portion of said plurality of application modules, said broadcast station further being configured to

transmit a plurality of signals of a second type containing a second portion of said plurality of application modules

a receiver (20) configured to receive said first signal at a first input port, said receiver being further configured to receive said signal of said second type at a second port, said receiver being configured to execute said application, said interactive application needing a set of said application modules, said receiver being configured to store requests for said needed application modules, to monitor both said first signal and said signal of said second type for said needed application modules, to store said needed modules and to execute said corresponding interactive application."

- X. In the decision under appeal the opposition division's finding of lack of inventive step was essentially based on the following considerations.

The television receivers of D0 and D1 can receive data from a source other than the broadcast source, for instance, via a telephone line and a modem. However there is no indication in either D0 or D1 as to any reason why it might obviously be desirable to download supplementary modules designed for one and the same interactive TV application from any alternative source other than the system head-end which is itself providing the particular interactive TV application in question.

XI. The appellant essentially argued as follows.

Admissibility of the late-filed amended claims

Amended claims 1, 7 and 17 according to the main request were filed during the oral proceedings before the board, in other words at a very late stage of the procedure. In view of their lateness and as these amendments merely seek to improve the clarity of the claims they should not be admitted into the proceedings.

Inventive step

D0 discloses (see figure 2) an interactive television receiver having a first input port (broadcast channel) and a second input port (bidirectional channel via a modem) and a microprocessor coupled to the first and second input ports. The bidirectional channel allows interactive services such as teleshopping, home banking and interactive games (see page 84, right column, lines 3 to 19). The microprocessor must therefore monitor both input ports for incoming data needed by the interactive application programs (see page 86, left column, lines 24 to 29) in the form of application modules. It goes without saying that the downloaded modules must be stored in a memory associated with the microprocessor inside the receiver.

The receiver of claim 1 thus differs from that of D0 only in that one or more requests for corresponding application modules are stored in the receiver.

D0 however also states that the downloading of applications is performed by the operating system of

the receiver in an asynchronous manner (see page 88, right column, middle paragraph). Hence it would be obvious to have the operating system store a list of requests for corresponding required application modules to be downloaded.

For the above reasons, the subject-matter of claim 1 is obvious in view of the disclosure of D0 alone.

The subject-matter of claim 1 is also obvious in view of D0 in combination with the teaching of D1 (see page 31, right column, lines 25 to 31, and page 39) according to which a television receiver may also receive software from the Internet via a return channel.

Moreover the subject-matter of claim 1 also does not involve an inventive step in view of the disclosure of D6 alone, or of the combined teachings of D0 and D6, for the following reasons.

D6 describes an interactive television receiver having, like D0, a first input port for receiving a broadcast channel and a second input port for receiving an interactive bidirectional channel via a modem (see figures 1 and 2). The operating system of the receiver allows an asynchronous and almost simultaneous reception of MPEG packets and return channel data on these two ports (see page 92, right column, last ten lines, and page 96, left column, section 3, lines 19 to 24). Moreover interactive applications need not be completely loaded into the memory of the receiver before their execution; parts of the applications, application modules within the meaning of claim 1, can instead be requested from the server when necessary

(see from page 98, right column, penultimate line, to page 100, left column, line 6). It would thus have been obvious to store in the receiver one or more requests for application modules to be downloaded later, when needed.

Should the storing of requests not be regarded as obvious from D6 alone, then this feature is in any case disclosed in D7 (see column 5, lines 45 and 46). Hence the subject-matter of claim 1 would also be obvious in view of D6 and D7.

The above reasoning also generally applies to the subject-matter of independent claims 7 and 17 which therefore also lacks inventive step.

XII. The respondent's arguments can be summarised as follows.

Admissibility of the late-filed amended claims

Amended claims 1, 7 and 17 according to the main request were filed in reaction to observations by the board during the oral proceedings. The amendments made to the claims rule out an interpretation of the claims in which the modules received at the first input port and those received at the second port would belong to first and second applications, respectively.

Hence the request should be admitted into the proceedings.

Inventive step

None of the cited prior art documents discloses or suggests sending some modules of an interactive television application via a broadcast channel and some modules of the same application via a second channel. Thus there was no reason for the skilled person to arrive at an interactive television receiver which would monitor both the broadcast signal received by the first input port and the second signal received by the second input port.

The interactive television receiver of D0 has a first input port for the broadcast channel and a second input port for a return channel via a telephone line and a modem. However these two channels receive information from two separate servers (see figure 2). There was thus no reason for the person skilled in the art to consider using the return channel as a source for application modules of an application transmitted over the broadcast channel.

The parts of D1 (see page 31, right column, lines 25 to 31, and page 39) cited by the appellant do not provide any suggestion to send modules of the same application via two channels.

Similar considerations apply to D6 in which there is no indication as to any reason why it might obviously be desirable to download interactive TV application modules designed for one and the same interactive TV application from any port other than the port which itself provided the particular TV application in question.

D7 concerns a multiservice installation (such as a hospital) whereby multiple users (e.g. patients) have receiving units ("user modules") with minimal functionality. User requests are conveyed to a centralised PABX which may control both a central application program and connections to individual receiving devices. Users may interact with applications through the PABX system, for instance by making choices among various program offerings. However there is nothing in D7 concerning the retrieval of application modules for an interactive television application program. The only modules described are "user modules" which comprise a television and a telephone.

Reasons for the Decision

1. The present decision was taken after the revised European Patent Convention ("EPC 2000") entered into force on 13 December 2007. Since the European patent in suit was already granted at that time, the board has to apply the transitional provisions in accordance with Article 7(1) of the Act revising the EPC of 29 November 2000 and the Decisions of the Administrative Council of 28 June 2001 (Special edition No. 1, OJ EPO 2007, 197) and 7 December 2006 (Special edition No. 1, OJ EPO 2007, 89). In this decision the board follows the citation practice set out in page 4 of the 13th edition of the European Patent Convention.
2. The appeal is admissible.

Admissibility of the amended claims filed during the oral proceedings

3. According to Article 13(1) RPBA (see OJ EPO 2007, 536), any amendment to a party's case after it has filed its grounds of appeal or reply may be admitted and 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. Article 13(3) RPBA further specifies that amendments sought to be made after oral proceedings have been arranged shall not be admitted if they raise issues which the board or the other party cannot reasonably be expected to deal with without adjournment of the oral proceedings.

In the present case the board expressed during the oral proceedings the provisional view that the subject-matter of claims 1, 7 and 17 according to the main request then on file (i.e. claims 1, 7 and 17 of the patent specification) did not involve an inventive step because it was possible to construe the claims as referring to more than one interactive application, wherein all the modules of a first application are sent over a broadcast channel and all the modules of a second application are sent over a second channel.

The respondent reacted by filing a set of amended claims according to a new main request in which the wording of claims 1, 7 and 17 had been amended to make clear that all the modules belong to one and the same interactive application.

The respondent's filing of amended claims was therefore in reaction to the board's construction of claim 1 which was broader than that of the opposition division. The amendments made to claims 1, 7 and 17 clarify that the interactive television application is an executable application comprising a set of application modules, some of which are retrieved from the broadcast signal and some of which are retrieved from the second signal received at the second input port. These amendments, by excluding an alternative construction of the claims, added no complexity to the subject-matter but rather simplified it, since most of the arguments about inventive step in the decision under appeal and before the board had been based on the assumption that there was only one interactive television application. These arguments remained entirely relevant to the amended subject-matter. The appellant was thus in a position to deal with these amendments without adjournment of the oral proceedings, a point which the appellant has not disputed.

In view of the above considerations the amendments are admitted.

Amendments (Article 123 EPC)

4. Editorial amendments aside, claims 1, 7 and 17 were amended as set out in point 3 above. The appellant did not raise objections to these amendments under Article 123 EPC. These amendments have a basis in the application as filed (see for example the passages corresponding to paragraphs [0012], [0020] and [0044] of the patent specification) and limit the scope of the granted claims. The board is satisfied that the

amendments are allowable under Article 123(2) and (3) EPC.

Inventive step (Article 100(a) EPC 1973)

5. Obviousness in view of D0 alone

5.1 D0 discloses an interactive television receiver, called a Digital-Interactive-Decoder (DID), equipped with an *OpenTV* operating system enabling it to deal with interactive applications. The DID receives television signals and interactive *OpenTV* applications via a television broadcast channel and can communicate with a remote transaction server via a separate bidirectional channel which in its simplest form consists of a telephone line and a modem (see figures 2 and 6). Interactive applications may include several modules which are downloaded together with the television programs, and some interactive applications such as online ordering of tickets require that a connection be established between the DID and the transaction server via the bidirectional channel (see section 5.1.1). The DID comprises *inter alia* a CPU and a RAM (see page 89, left column, paragraphs 1 and 2).

The interactive television receiver of claim 1 thus differs from the receiver of D0 by the following features:

- said microprocessor being configured to store one or more requests by said executing application for corresponding ones of said modules;
- said microprocessor being configured to monitor both said broadcast signal received by said first input port and said second signal received by said

second input port for modules corresponding to said requests;

- said microprocessor being configured to retrieve some of said modules from said broadcast signal and some of said modules from said second signal, and to store said corresponding modules; and
- a data storage device coupled to said microprocessor and configured to store said requests and said corresponding ones of said modules.

These features solve the objective technical problem of improving the management of application modules in that, firstly, they allow the receiver to handle modules which have not yet been received and which may have to be extracted from the interactive television signal. Secondly, modules of one application which are in greater demand among subscribers may be transmitted to all subscribers via the broadcast channel while the modules of the same application which are in less demand are transmitted to individual subscribers via the interactive channel (see column 2, lines 45 to 55, and column 3, lines 39 to 47, of the patent specification).

The receiver of D0 receives interactive applications only via the broadcast channel. The information received via the interactive channel is of a different nature, for instance a confirmation that an item such as a ticket for a concert has been ordered (see section 3.3, middle column). This kind of information cannot be regarded as a module of an interactive executable application. Moreover the interactive channel is connected to a transaction server, not to the OpenTV application server (see figure 2). D0 provides no

indication that some of the modules belonging to an application sent by the OpenTV application server could arrive via the interactive channel. Nor is there any suggestion or incentive in D0 for the skilled person to modify both the emitter, the transaction server and the receiver to allow for transmission of modules of the same interactive application to be dispatched in part over the broadcast channel and in part of the interactive channel.

For the above reasons the board is not convinced that the subject-matter of claim 1 was obvious in view of D0 alone.

5.2 Obviousness in view of D0 in combination with D1

D1 discloses a multimedia terminal consisting of a television screen, a personal computer (PC) and a television receiver/decoder (see figure 1). The PC and the television receiver/decoder can communicate with a remote server via a bidirectional interactive channel thanks to either an ISDN card or a modem. Interactive applications can be downloaded from an external network, for instance the Internet, via this interactive channel, be executed in the PC and be displayed on the television screen.

D1 however does not disclose or suggest the download of modules of one interactive application, partly over the broadcast channel and partly over the interactive channel, and the necessary configurations of the microprocessor and the data storage device of the receiver specified in claim 1. Interactive applications in D1 are either fully downloaded via the broadcast

channel or via the interactive channel (see, for instance, Table 2 on page 40).

The skilled person would thus not have been incited by the teaching of D1 to modify the receiver of D0 in such a way as to arrive at the subject-matter of claim 1.

5.3 Obviousness in view of D6 alone

D6 discloses an interactive television receiver having a microprocessor, a data storage device, a first input port for receiving a broadcast channel and a second input port for receiving an interactive bidirectional channel via a modem (see figures 1 and 2). The operating system of the receiver allows an asynchronous and almost simultaneous reception of MPEG packets and return channel data on these two ports (see page 92, right column, last ten lines, and page 96, left column, section 3, lines 19 to 24). Moreover interactive applications need not be completely loaded into the memory of the receiver before their execution. Parts of the applications, in other words application modules within the meaning of claim 1, can instead be requested from the server when necessary (see from page 98, right column, penultimate line, to page 100, left column, line 6).

The interactive television receiver of claim 1 thus differs from the receiver of D6 by the same features which distinguish it from the receiver of D0 (see section 5.1 *supra*).

The objective technical problem is also the same as when starting from D0 (see section 5.1 *supra*).

Since the interactive applications in D6 can be downloaded module per module the microprocessor would likely have to be configured to store in a data storage device a list of requests for corresponding modules to be downloaded, as well as the modules themselves once downloaded. However there is no suggestion in D6 to send some modules of one application over the broadcast channel and some modules of the same application over the interactive channel and to adapt the receiver correspondingly. There would thus have been no reason for the skilled person to configure the microprocessor to retrieve some of said modules from said broadcast signal and some of said modules from said second signal.

The appellant argued that this feature was derivable from the passage on page 96, left column, lines 19 to 24, of D6. However this passage only discloses that data packets of variable sizes can arrive via the MPEG signal path (i.e. the broadcast channel), the interactive channel or the computer interface. It does not mean that modules of one and the same application arrive through several of these paths.

Accordingly the subject-matter of claim 1 is not rendered obvious by D6 alone.

5.4 Obviousness in view of the combined teachings of D6 and D0

Since neither D0 nor D6 discloses or suggests the dispatch of modules of the same application over the broadcast channel and the interactive channel, their combined teachings also fail to suggest this feature.

5.5 Obviousness in view of D6 in combination with D7

D7 was only cited by the appellant as further evidence that it was obvious to store requests and corresponding modules if this feature was not regarded as obvious by the board from D6 alone. Since the board's judgment on obviousness is not determined by the disclosure of this feature in D6 (see section 5.3 *supra*), D7 does not further advance the appellant's case. Moreover D7 is of little relevance for the reasons given by the respondent under section XII *supra*.

5.6 Conclusions on inventive step

For the above reasons, none of the appellant's arguments based on D0, D1, D6 and D7 have convinced the board that the skilled person would have arrived at the subject-matter of claim 1 without exercising an inventive step.

The same conclusion applies to the method of claim 7 and the system of claim 17 which comprise steps or features substantially corresponding to the features of claim 1, and to claims 2 to 6, 8 to 16 and 18 to 22 which are each dependent on one of claims 1, 7 and 17.

6. Since the board reached a positive conclusion regarding the claims according to the respondent's main request, the claims according to his auxiliary request need not be considered.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the first instance with the order to maintain the patent with the following claims and a description to be adapted:
Claims 1 to 22 according to the main request filed during the oral proceedings.

The Registrar:

The Chairman:

D. Sauter

F. Edlinger