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**Datasheet for the decision  
of 14 October 2020**

**Case Number:** T 1029/15 - 3.5.04

**Application Number:** 06812274.6

**Publication Number:** 1952633

**IPC:** H04N7/173

**Language of the proceedings:** EN

**Title of invention:**

METHOD OF CONNECTING TO INTERNET VIA BROADCAST RECEIVING  
DEVICE AND APPARATUS FOR THE SAME

**Applicant:**

Samsung Electronics Co., Ltd.

**Headword:**

**Relevant legal provisions:**

EPC Art. 56, 84

**Keyword:**

Inventive step - main and auxiliary request (no)  
Claims - clarity - auxiliary request (no)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
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Case Number: T 1029/15 - 3.5.04

**D E C I S I O N**  
**of Technical Board of Appeal 3.5.04**  
**of 14 October 2020**

**Appellant:** Samsung Electronics Co., Ltd.  
(Applicant) 129, Samsung-ro  
Yeongtong-gu  
Suwon-si, Gyeonggi-do, 443-742 (KR)

**Representative:** Appleyard Lees IP LLP  
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**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted on 5 January 2015  
refusing European patent application  
No. 06812274.6 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chairwoman** T. Karamanli  
**Members:** B. Willems  
M. Paci

## **Summary of Facts and Submissions**

- I. The appeal is against the decision of the examining division dated 5 January 2015 refusing European patent application No. 06 812 274.6, which was published as international application WO 2007/052923 A1 and entered the regional phase before the EPO on 28 May 2008.
- II. The documents cited in the decision under appeal included the following:
- D1: WO 99/63759 A2;
- D5: WO 2004/038538 A2.
- III. The application was refused on the ground that the subject-matter of claims 1 to 30 of the sole request then on file did not meet the requirements of Article 56 EPC.
- IV. The applicant (hereinafter: appellant) filed notice of appeal. With the statement of grounds of appeal, the appellant submitted amended claims according to a main request and an auxiliary request. It requested that the decision under appeal be set aside and that a European patent be granted on the basis of the claims according to the main request or the auxiliary request filed with the statement of grounds of appeal. The appellant indicated a basis for the claims in the application as filed and provided arguments as to why the claims met the requirements of Article 56 EPC.

As a precautionary measure, the appellant requested oral proceedings.

V. On 13 December 2019, the board issued a summons to oral proceedings. In a communication under Article 15(1) of the revised version of the Rules of Procedure of the Boards of Appeal (RPBA 2020, OJ EPO 2019, A63), dated 9 April 2020, the board introduced the following document into the appeal proceedings:

D7: US 2003/0051246 A1.

The board gave the following provisional opinion.

- Claim 1 of the auxiliary request did not meet the requirements of Article 84 EPC.
- The subject-matter of claims 1, 10, 16 and 25 of neither the main nor the auxiliary request met the requirements of Article 56 EPC because it lacked inventive step over the combined disclosures of D1 and D5 and the common general knowledge of the person skilled in the art.
- The subject-matter of claim 1 of neither request met the requirements of Article 56 EPC because it lacked inventive step over the combined disclosures of D7 and D1 and the common general knowledge of the person skilled in the art.
- The subject-matter of dependent claims 2 to 9, 11 to 15, 17 to 24, 26, 27 and 30 of neither request met the requirements of Article 56 EPC because it lacked inventive step over the combined disclosures of D1 and D5 and the common general knowledge of the person skilled in the art.

VI. By a communication of the Registry dated 23 July 2020, the appellant was asked whether, considering the

current precautionary measures against the spread of the coronavirus (COVID-19), in particular the existing travel restrictions in Europe, it expected to be affected by these travel restrictions and would therefore be unable to come to the premises of the Boards of Appeal to attend the oral proceedings scheduled for 3 September 2020.

VII. By letter dated 3 August 2020, the appellant withdrew its request for oral proceedings and requested that the appeal proceedings be continued in writing.

VIII. The board notified the appellant that the oral proceedings to be held on 3 September 2020 had been cancelled.

IX. It appears from the file that the appellant's final requests are that the decision under appeal be set aside and that a European patent be granted on the basis of the claims of the main request or the auxiliary request filed with the statement of grounds of appeal.

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

"A method of connecting to the Internet via a broadcast receiving device (200), comprising:

extracting a transport stream (TS) from a received broadcast signal, wherein the transport stream includes encoded video and audio data of broadcast programs;

obtaining mapping information between channel numbers and web addresses; and

connecting to the Internet via a web address mapped to a channel number selected by a user if the selected channel number is included in the mapping information;

characterised by:

in the obtaining step, obtaining the mapping information between channel numbers and web addresses from the transport stream (TS), wherein the mapping information is provided as additional information within the transport stream with the encoded video and audio data of the broadcast programs; and

in the connecting step, connecting to the Internet via a web address mapped to a channel number selected by a user if the selected channel number is included in the mapping information obtained from the transport stream (TS)."

XI. Claim 1 of the auxiliary request reads as follows:

"A method of connecting to the Internet via a broadcast receiving device (200), comprising:

extracting a transport stream (TS) from a received broadcast signal, wherein the transport stream includes encoded video and audio data of broadcast programs;

obtaining mapping information between channel numbers and web addresses; and

connecting to the Internet via a web address mapped to a channel number selected by a user if the selected channel number is included in the mapping information;

characterised by:

in the obtaining step, obtaining the mapping information between channel numbers and web addresses from the transport stream (TS), wherein the mapping information is provided as additional information within the transport stream with the encoded video and audio data of the broadcast programs; and

in the connecting step, connecting to the Internet via a web address mapped to a channel number selected by a user if the selected channel number is included in the mapping information obtained from the transport stream (TS),

wherein channels assigned to the broadcast receiving device (200) comprise a first channel for receiving the mapping information, and a second channel for connecting the Internet without receiving the mapping information, and

wherein a broadcast program and the mapping information are received when the first channel is selected, and the connecting to the Internet is executed when the second channel is selected."

XII. The examining division's arguments relevant to the present decision may be summarised as follows.

(a) Document D1 was the closest prior art for the assessment of inventive step (see decision under appeal, point 5.1).

(b) The subject-matter of claim 1 of the main request differed from the disclosure of document D1 in that the mapping information was provided as additional



information within the transport stream (see decision under appeal, point 5.2).

- (c) The objective technical problem to be solved could be identified as how to transmit additional information for generating the interactive program guide (see decision under appeal, points 5.2, 6.1.1 and 6.1.2).
- (d) The person skilled in the art trying to solve the problem would consult document D5. Transmitting program guides in transport streams was well known in digital broadcasting and D5 merely illustrated this (see decision under appeal, page 4, first full paragraph).
- (e) The issue of whether or not D5 disclosed a mapping relationship was irrelevant for the assessment of inventive step (see decision under appeal, point 6.2.2.2).

XIII. The appellant's arguments relevant to the present decision may be summarised as follows.

- (a) The examining division's conclusion that the ordinary skilled person would modify the teaching of D5 to provide the claimed "*mapping information*" within the transport stream was based on hindsight (see statement of grounds of appeal, page 4, penultimate paragraph).
- (b) Document D5, paragraphs [0038], [0042], [0052] and [0053], only considered providing URLs in parallel with channel numbers (see statement of grounds of appeal, page 3, second full paragraph). This did not correspond to the claimed mapping

information (see statement of grounds of appeal, page 4, paragraphs 4 and 5).

### **Reasons for the Decision**

1. The appeal is admissible.
2. *Claim 1 of the auxiliary request - clarity (Article 84 EPC)*
  - 2.1 Claim 1 of the auxiliary request specifies that *"channels assigned to the broadcast receiving device (200) comprise a first channel for receiving the mapping information, and a second channel for connecting the Internet without receiving the mapping information, and wherein a broadcast program and the mapping information are received when the first channel is selected, and the connecting to the Internet is executed when the second channel is selected"* (emphasis added).
  - 2.2 It is not clear whether the wording *"without receiving mapping information"* is meant to specify that in general an Internet channel can be connected without receiving mapping information, that no mapping information is received via the Internet or that despite the availability of mapping information (see the preceding part of the claim: *"obtaining mapping information between channel numbers and web addresses"*) the second channel is connected without using this information. Therefore, claim 1 of the auxiliary request does not meet the requirements of Article 84 EPC.
  - 2.3 The board's assessment of inventive step is based on an interpretation of claim 1 of the auxiliary request

according to paragraphs [0057], [0059] and [0064], i.e. mapping information is extracted from the transport stream, decoded and stored. When the user requests a channel, the control module checks in the stored information whether the channel number is connected to a website and, if so, connects to the web address mapped to the channel.

3. *Independent claims of the main request and the auxiliary request - inventive step starting from D1 (Article 56 EPC)*
- 3.1 The board agrees with the examining division that D1 is the closest prior art for the assessment of inventive step (see point XII(a) above).
- 3.2 Document D1 discloses a method of connecting to the Internet via a broadcast receiving device (page 6, lines 22 to 26: "*The subscriber can access the TV broadcast with [...] a television 32 with a set top box 22. The set top box 22 in this implementation includes decoding circuitry for decoding MPEG-1 and/or MPEG-2 as well as IP Multicast*"), the method comprising the following steps:

extracting a transport stream from a received broadcast signal, wherein the transport stream includes encoded video and audio data of broadcast programs (page 6, lines 24 to 26: "*The set top box 22 in this implementation includes decoding circuitry for decoding MPEG-1 and/or MPEG-2 as well as IP Multicast*"; page 10, lines 22 to 26: "*The live MPEG encoder 62 is a component which provides real time MPEG-1 or MPEG-2 encoding. It encodes analog video and audio inputs to produce MPEG-1 system at MPEG-2 Transport Streams for delivery via an IP multicast network*");

obtaining mapping information between channel numbers and web addresses (page 15, lines 9 to 17: "*It is also within the scope of the invention for a service provider to assign a URL to a channel number [...] Using this feature a subscriber could view a URL channel on the IPG similar to a video channel. Customers would be able to scan through URL channels and select a desired URL by entering the associated numbers from the remote device in the same way as video channels are selected*"); and

connecting to the Internet via a web address mapped to a channel number selected by a user if the selected channel number is included in the mapping information (page 10, lines 6 to 12: "*the IPG is client software that [...] provides a link to the client MPEG-1/MPEG-2 decoder and [...] access to all broadcast content on the broadband multicast IP network*"; page 15, lines 17 to 19: "*Going through a URL channel would switch the client device (STB, for example) to a web browser and thereby access a selected web page*").

3.3 According to D1, page 8, lines 4 to 8, and the sentence bridging pages 8 and 9, the digital TV manager (DTV) provides IPG functionality. According to D1, page 9, lines 13 to 16, the subscriber accesses the IPG through the set-top box, which stores IPG information. Thus, the set-top box receives and stores IPG information transmitted by the DTV. The DTV is connected to the broadband network via a transport router (see D1, page 7, lines 9 and 10), i.e. it transmits the IPG information via the transport router.

Therefore, the board agrees with the examining division that the subject-matter of claim 1 of the main request differs from the disclosure of D1 in that the mapping

information is provided as additional information within the transport stream (see point XII(b) above).

3.4 Thus, the objective technical problem to be solved may be identified as how to transmit additional information for generating the interactive program guide (see point XII(c) above).

3.5 The board concurs with the examining division that the person skilled in the art trying to solve the problem identified in point 3.4 above would consult document D5. The board is not convinced that the examining division's objection is based on hindsight (see point XIII(a) above). Rather, the board shares the examining division's opinion that transmitting program guides in transport streams was well known in digital broadcasting at the relevant time and D5 merely illustrates this (see point XII(d) above). This opinion is corroborated by the disclosure of D7.

3.5.1 D5 relates to the transmission of additional data compliant with the ATSC standard. The paragraph bridging pages 14 and 15 discloses that the interactive program information used to generate a program grid-guide is multiplexed into the transport stream. Therefore, the board is of the opinion that the person skilled in the art would consider transmitting IPG information that assigns a URL to a channel number in a transport stream.

3.5.2 The appellant argued that document D5, paragraphs [0038], [0042], [0052] and [0053], only considered providing URLs in parallel with channel numbers, which did not correspond to the claimed mapping information (see point XIII(b) above).

Since D1 discloses mapping URLs to channel numbers, the board shares the examining division's view that the issue of whether or not D5 discloses a mapping relationship is irrelevant for the assessment of inventive step (see point XII(e) above). Moreover, the board is not convinced that D5 only considers providing URLs in parallel with channel numbers. Rather, the board agrees with the examining division that the data format shown in D5, paragraph [0042] implies a mapping between the channel numbers and the web address.

3.5.3 D7, paragraph [0004] discloses that program guide information can be transmitted in DVB service information (DVB-SI) or in accordance with the program and system information protocol (PSIP) used by ATSC digital broadcasting. Hence, the program guide information is carried in the transport stream multiplex. According to D7, paragraph [0025], the program guide may include program listings for television programs, webcasts broadcast over the Internet or radio programs which may be broadcast via the Internet. Internet broadcasts are identified by a URL. Thus, D7 confirms that it was well known before the priority date of the application in this case to use transport streams to broadcast IPGs including channels identified by URLs.

3.6 In summary, documents D5 and D7 illustrate that broadcasting IPG information together with programs in transport streams was well known before the priority date. Applying this principle to D1, the person skilled in the art would provide IPG information that includes information mapping channel numbers to web addresses in the MPEG transport streams, extract the IPG, store the IPG and use the mapping information to connect to the Internet via the stored web address.

- 3.7 Claim 1 of the auxiliary request specifies that mapping information is extracted from the transport stream, decoded and stored. When the user requests a channel, the control module checks in the stored information whether the channel number is connected to a website and, if so, connects to the web address mapped to the channel (see also point 2.3 above). In view of the board's analysis set out in points 3.1 to 3.6 above, the board's assessment of inventive step for claim 1 of the main request is equally valid for claim 1 of the auxiliary request.
- 3.8 In view of the above, the subject-matter of claim 1 of neither the main request nor the auxiliary request meets the requirements of Article 56 EPC because it lacks inventive step over the combined disclosures of D1 and D5 and the common general knowledge of the person skilled in the art.
4. *Independent claims of the main request and the auxiliary request - inventive step starting from D7 (Article 56 EPC)*
- 4.1 D7 is another appropriate starting point for the assessment of inventive step.
- 4.2 D7 discloses transmitting program guide information including URLs in a transport stream multiplex (see also point 3.5.3 above).
- 4.3 The subject-matter of claim 1 of the main request and the auxiliary request differs from the disclosure of D7 in that the claim explicitly specifies the mapping between channel numbers and web addresses whereas D7 does not disclose any implementation details of

listings with webcasts and radio programs broadcast via the Internet.

- 4.4 Thus, the objective technical problem to be solved may be identified as how to implement program guides including contents provided via the Internet.
- 4.5 D1, page 15, lines 9 to 17, discloses that URLs are assigned to channel numbers in the same manner as video channels (*"It is also within the scope of the invention for a service provider to assign a URL to a channel number [...] Using this feature a subscriber could view a URL channel on the IPG similar to a video channel. Customers would be able to scan through URL channels and select a desired URL by entering the associated numbers from the remote device in the same way as video channels are selected"*).
- 4.6 Therefore, the person skilled in the art would allocate channel numbers to the URLs associated with the webcasts and Internet radio channels included in the EPGs known from D7.
- 4.7 In view of the above, the subject-matter of claim 1 of neither request meets the requirements of Article 56 EPC because it lacks inventive step over the combined disclosures of D7 and D1 and the common general knowledge of the person skilled in the art.
5. Since neither 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 Chairwoman:



K. Boelicke

T. Karamanli

Decision electronically authenticated