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Title of invention:

Content providing apparatus and method, content receiving apparatus and method, program, and content downloading system

Applicant:

Sony Corporation

Headword:

Relevant legal provisions:

EPC Art. 56

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Catchword:



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Case Number: T 1356/11 - 3.5.04

DECISION
of Technical Board of Appeal 3.5.04
of 7 October 2014

Appellant: Sony Corporation (Applicant) 1-7-1 Konan

Minato-ku

Tokyo 108-0075 (JP)

Representative: Beder, Jens

Mitscherlich PartmbB Patent- und Rechtsanwälte

Sonnenstraße 33 80331 München (DE)

Decision under appeal: Decision of the Examining Division of the

European Patent Office posted on 9 February 2011

refusing European patent application

No. 09162359.5 pursuant to Article 97(2) EPC.

Composition of the Board:

Chairman C. Kunzelmann Members: R. Gerdes T. Karamanli

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Summary of Facts and Submissions

- I. The appeal is directed against the decision to refuse European patent application No. 09 162 359.5, published as EP 2 134 091 A1.
- II. The patent application was refused by the examining division on the grounds that the subject-matter of the independent claims of the main request then on file lacked novelty and that the subject-matter of claim 1 of the first to third auxiliary requests then on file lacked novelty or inventive step in view of the following document:

D6: US 2005/0160465 A1.

The examining division also cited *inter alia* the following documents in its decision:

D1: EP 1 691 552 A2 and D5: US 2003/0121047 A1.

- III. The applicant (appellant) appealed against this decision and with the statement of grounds of appeal submitted a main request and auxiliary requests I to VIII.
- IV. In a communication annexed to a summons to oral proceedings, the board indicated *inter alia* that it tended to share the examining division's opinion with respect to inventive step in view of D6. The board also referred to D5 and provided arguments as to why it considered this document to be very relevant for novelty and inventive step of the claimed subjectmatter.

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- V. In response the appellant submitted revised claims of a main request and auxiliary requests I to VIII with a letter dated 5 September 2014. The appellant provided further arguments inter alia regarding novelty and inventive step in view of D5. The appellant requested a decision according to the state of the file and announced that it would not be attending the oral proceedings.
- VI. Oral proceedings were held before the board on 7 October 2014. The chairman noted that the appellant had requested in writing that the decision under appeal be set aside and that a patent be granted on the basis of the main request or of one of the auxiliary requests I to VIII, all requests filed with letter dated 5 September 2014.
- VII. Claim 1 of the main request reads as follows:

"A content providing apparatus (20) for providing a content to a content receiving apparatus (10), the content providing apparatus (20) comprising: content-information providing means (21,24) for providing a downloadable content list (51) necessary for specifying the content to be downloaded to the content receiving apparatus (10), wherein the content is specified by a user of the content providing apparatus (20);

control-information providing means for providing download control information (83) necessary for downloading the content to the content receiving apparatus (10), and wherein the download control information (83) corresponds to the content which is specified on the basis of the downloadable content list (51);

content providing means (20A) for providing the specified content through a network (2) on the basis of the download control information (83) in response to a request from the content receiving apparatus (10) in case the specified content is communication-based content being content provided through the network; and further comprising

delivery means (20B) for delivering the specified content in addition to general television programs by broadcasting the content using a broadcasting signal, in case the specified content is broadcast-based content, being content to be broadcast, wherein the downloadable content list (51) includes information indicating whether the specified content is broadcast-based or communication-based content."

- VIII. Claim 1 of auxiliary request I corresponds to claim 1 of the main request except for its last part starting from "... being content provided through the network ..." which reads:
 - "... being content provided through the network (2); and delivery means (20B) for delivering the specified content by broadcasting the content using a broadcasting signal in case the specified content is broadcast-based content, being content to be broadcast; wherein the content is distinguished before the content is specified in communication-based content which is content to be provided through the network and broadcast-based content which is content to be broadcast;

the downloadable content list (51) comprises information necessary for specifying broadcast-based content and information necessary for specifying communication-based content;

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the download control information (83) includes information (94) indicating whether the specified content is the broadcast-based or the communication-based;

the content providing means (20A) is configured to provide, if the specified content is communication-based, the specified content through the network (2) in response to the request from the content receiving apparatus (10) on the basis of the download control information (83); and the delivery means (20B) is configured to deliver, if the specified content is broadcast-based, the specified content by broadcasting the specified content using a broadcasting signal in accordance with a broadcasting schedule (112, 113) predetermined before specifying the content."

- IX. Claim 1 of auxiliary request II corresponds to claim 1 of auxiliary request I with the last part starting from "... being content provided through the network ..." having been amended to read as follows:
 - "... being content provided through the network (2); and delivery means (20B) for delivering the specified content by broadcasting the content using a broadcasting signal in case the specified content is broadcast-based content, being content to be broadcast; wherein the content is distinguished before the content is specified in communication-based content which is content to be provided through the network and broadcast-based content which is content to be broadcast;

the downloadable content list (51) comprises information necessary for specifying broadcast-based content and information necessary for specifying communication-based content;

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the download control information (83) includes information (94) indicating whether the specified content is the broadcast-based or the communicationbased and the download control information (83) corresponding to the broadcast-based content further includes information (11) describing either a URL (Uniform Resource Locator) or an IP (Internet Protocol) multicast address in order to identify a broadcast stream delivering the content; the content providing means (20A) is configured to provide, if the specified content is communicationbased, the specified content through the network (2) in response to the request from the content receiving apparatus (10) on the basis of the download control information (83); and the delivery means (20B) is configured to deliver, if the specified content is broadcast-based, the specified content by broadcasting the specified content using a broadcasting signal in accordance with a broadcasting schedule (112, 113) predetermined before specifying the content via the broadcast stream identified in the download control information (83)."

- X. Claim 1 of auxiliary request III is also based on claim 1 of auxiliary request I with its last part having been amended as follows:
 - "... being content provided through the network (2); and delivery means (20B) for delivering the specified content by broadcasting the content using a broadcasting signal on the basis of the download control information (83) in case the specified content is broadcast-based content, being content to be broadcast;

wherein the content is distinguished before the content is specified in communication-based content which is

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content to be provided through a network and broadcastbased content which is content to be broadcast; the downloadable content list (51) comprises information necessary for specifying broadcast-based content and information necessary for specifying communication-based content;

the download control information (83) includes information (94) indicating whether the specified content is the broadcast-based or the communication-based and the download control information (83) corresponding to the broadcast-based content further includes alternative communication information (114) indicating the content providing means (20) providing the same communication-based content as the broadcast-based content;

the content providing means (20A) is configured to provide, if the specified content is communication-based, the specified content through the network (2) in response to the request from the content receiving apparatus (10) on the basis of the download control information (83); and the delivery means (20B) is configured to deliver, if the specified content is broadcast-based, the specified content by broadcasting the specified content using a broadcasting signal in accordance with a broadcasting schedule (112, 113) predetermined before specifying the content."

- XI. Claim 1 of auxiliary request IV corresponds to claim 1 of auxiliary request I, with its last part having been amended to read as follows:
 - "... being content provided through the network (2); and delivery means (20B) for delivering the specified content by broadcasting the content using a broadcasting signal in case the specified content is broadcast-based content, being content to be broadcast;

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wherein the content is distinguished before the content is specified in communication-based content [which] is content to be provided through the network and broadcast-based content which is content to be broadcast;

the downloadable content list (51) comprises information necessary for specifying broadcast-based content and information necessary for specifying communication-based content;

the download control information (83) includes information (94) indicating whether the specified content is the broadcast-based or the communication-based and the download control information (83) corresponding to the broadcast-based content further includes information indicating the broadcasting schedule of the content (112) for each broadcasting, wherein each broadcasting schedule (112, 113) includes the bit rate of a broadcasting signal and each broadcasting schedule (112, 113) is predetermined before specifying the content;

the content providing means (20A) is configured to provide, if the specified content is communication-based, the specified content through the network (2) in response to the request from the content receiving apparatus (10) on the basis of the download control information (83); and the delivery means (20B) is configured to deliver, if the specified content is broadcast-based, the specified content by broadcasting the specified content using the broadcasting signal in accordance with each broadcasting schedule (112, 113)."

XII. Claim 1 of auxiliary request V corresponds to claim 1 of auxiliary request I, with the last section worded as follows:

"... being content provided through the network (2); and further comprising delivery means (20B) for delivering the specified content in addition to general television programs by broadcasting the content using a broadcasting signal in case the specified content is broadcast-based content, being content to be broadcast; wherein the content is distinguished before the content is specified in communication-based content which is content to be provided through a network and broadcast-based content which is content to be broadcast; the downloadable content list (51) comprises information necessary for specifying broadcast-based content and information necessary for specifying communication-based content;

the download control information (83) includes information (94) indicating whether the specified content is the broadcast-based or the communication-based:

the content providing means (20A) is configured to provide, if the specified content is communication-based, the specified content through the network (2) in response to the request from the content receiving apparatus (10) on the basis of the download control information (83); and the delivery means (20B) is configured to deliver, if the specified content is broadcast-based, the specified content by broadcasting the specified content in addition to general television programs using a broadcasting signal in accordance with a broadcasting schedule (112, 113) predetermined before specifying the content.".

XIII. Claim 1 of auxiliary request VI is also based on claim 1 of auxiliary request I, with its last section reading as follows:

"... being content provided through the network (2); and further comprising delivery means (20B) for delivering the specified content in addition to general television programs by broadcasting the content using a broadcasting signal in case the specified content is broadcast-based content, being content to be broadcast; wherein the content is distinguished before the content is specified in communication-based content which is content to be provided through a network and broadcastbased content which is content to be broadcast; the downloadable content list (51) comprises information necessary for specifying broadcast-based content and information necessary for specifying communication-based content: the download control information (83) includes information (94) indicating whether the specified content is the broadcast-based or the communicationbased and the download control information (83) corresponding to the broadcast-based content further includes information (11) describing using either a URL (Uniform Resource Locator) or an IP (Internet Protocol) multicast address in order to identify a broadcast stream delivering the content; the content providing means (20A) is configured to provide, if the specified content is communicationbased, the specified content through the network (2) in response to the request from the content receiving apparatus (10) on the basis of the download control information (83); and the delivery means (20B) is configured to deliver, if the specified content is broadcast-based, the specified content by broadcasting the specified content in addition to general television programs using a broadcasting signal in accordance with a broadcasting schedule (112, 113) predetermined before

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specifying the content via the broadcast stream identified in the download control information (83)."

- XIV. Similarly, claim 1 of auxiliary request VII is based on claim 1 of auxiliary request I, with the following amendments to its last section:
 - "... being content provided through the network (2); and further comprising delivery means (20B) for delivering the specified content in addition to general television programs by broadcasting the content using a broadcasting signal in case the specified content is broadcast-based content, being content to be broadcast; wherein the content is distinguished before the content is specified in communication-based content which is content to be provided through a network and broadcast-based content which is content to be broadcast; the downloadable content list (51) comprises information necessary for specifying broadcast-based content and information necessary for specifying communication-based content;

the download control information (83) includes information (94) indicating whether the specified content is the broadcast-based or the communication-based and the download control information (83) corresponding to the broadcast-based content further includes alternative communication information (114) indicating the content providing means (20) providing the same communication-based content as the broadcast-based content;

the content providing means (20A) is configured to provide, if the specified content is communication-based, the specified content through the network (2) in response to the request from the content receiving apparatus (10) on the basis of the download control

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information (83); and the delivery means (20B) is configured to deliver, if the specified content is broadcast-based, the specified content by broadcasting the specified content in addition to general television programs using a broadcasting signal in accordance with a broadcasting schedule (112, 113) predetermined before specifying the content."

- XV. Claim 1 of auxiliary request VIII corresponds to claim 1 of auxiliary request I. Its last section has been amended to read as follows:
 - "... being content provided through the network (2) and further comprising delivery means (20B) for delivering the specified content in addition to general television programs by broadcasting the content using a broadcasting signal in case the specified content is broadcast-based content, being content to be broadcast; wherein the content is distinguished before the content is specified in communication-based content [which] is content to be provided through [a] network and broadcast-based content which is content to be broadcast before [sic]; the downloadable content list (51) comprises information necessary for specifying broadcast-based content and information necessary for specifying communication-based content; the download control information (83) includes information (94) indicating whether the specified content is the broadcast-based or the communicationbased and the download control information (83) corresponding to the broadcast-based content further includes information indicating the broadcasting schedule of the content (112) for each broadcasting, wherein each broadcasting schedule (112, 113) includes

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the bit rate of a broadcasting signal and each broadcasting schedule (112, 113) is predetermined before specifying the content; the content providing means (20A) is configured to provide, if the specified content is communication-based, the specified content through the network (2) in response to the request from the content receiving apparatus (10) on the basis of the download control information (83); and the delivery means (20B) is configured to deliver, if the specified content is broadcast-based, the specified content by broadcasting the specified content in addition to general television programs using the broadcasting signal in accordance with each broadcasting schedule (112, 113)."

- In the decision under appeal the examining division XVI. held that the subject-matter of claim 1 of the then main request was not new in view of D6. With respect to the additional feature that there was a URL or an IP multicast address in the control information to identify a broadcast stream delivery (see present auxiliary request II) the examining division stated that it was well known for the skilled person to use URL or IP multicast for WebTV and thus, the respective addresses had to be in the control information. The examining division held that the additional feature of providing a "link" between broadcast-based and the same communication-based content (see present auxiliary request III) was implicitly disclosed in D6 (see decision under appeal, Reasons 3 and 4).
- XVII. The appellant's arguments with respect to novelty and inventive step in view of D5 may be summarised as follows:

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D5 disclosed a system in which the selection between a broadcast network or a broadband network was performed by evaluating the requests from viewers for specific content items. The selection decision was based on characteristics of the contents, information provided with the requests and information on the broadband and broadcast networks. Hence, D5 did not disclose two kinds of content, broadcast-based content and communication-based content, distinguished a priori before selecting the content to be downloaded. D5 also did not disclose a downloadable content list comprising information for specifying/selecting either a broadcast-based content or a communication-based content. There was no content list in D5 showing a mixture of broadcast-based and communication-based content. As a consequence, D5 did not disclose any of the features relating to the content list.

The content providing apparatus of the present invention had the huge advantage that the providing side did not need to coordinate the amount of requested content via satellite broadcasting with the amount of free broadcasting capacities but could plan, long before the requests of the content were needed, broadcast capabilities for delivering the broadcastbased content at a broadcasting schedule determined a priori. The determination between communication-based content and broadcast-based content could be decided based on predicted or experienced values of popularity of the content.

Paragraph [0004] of D5 only disclosed that either a broadcast system or a broadband system could be used by a specific user. Similarly, paragraph [0005] of D5 merely disclosed that after making a specific input by a user a specific choice either of a broadcast system

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or a broadband system could be made. D5 also did not disclose download control information including a broadcasting schedule indicating, for example, a time when a specified content was broadcast (see appellant's letter dated 5 September 2014, pages 9 to 12).

With respect to auxiliary request II the appellant argued that the downloadable content was different from television broadcast and thus, the specification of the URL or IP multicast address for individually downloadable content had not been disclosed in D6.

Regarding auxiliary request III the appellant stated that D5 only disclosed in paragraph [0021] that a price the viewer was willing to pay was taken into account when deciding which transmission system should be used. This did not anticipate any alternative transmission of the same content. The additional feature of claim 1 according to that request had the advantage that a receiving side could decide to download content which was normally broadcast as communication-based content when the time until broadcast took too long for the user.

The additional feature of claim 1 according to auxiliary request IV was crucial and had the advantage that a provider could plan the predetermined broadcasting schedules such that they had different bit rates. For example, the bit rate could be increased overnight, when a normal television programme was not broadcast anymore. By transferring this information to the receiving side, the receiving side could decide which broadcast should be used for receiving the content based on the transmitted bit rate (see appellant's letter dated 5 September 2014, pages 12 to 13).

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Reasons for the Decision

1. The appeal is admissible.

The present application

2. The present application relates to a content receiving apparatus such as a receiver built into or externally connected to a television and a corresponding content providing apparatus as well as corresponding content receiving and providing methods. The content receiving apparatus is able to receive content such as television programmes via the Internet or, alternatively, via television broadcasting. If a content is very popular and a large number of downloads are expected, the content is transmitted via television broadcasting according to a predetermined broadcasting schedule. On the other hand, if a content is directed for a niche market, with only few downloads to be expected, the Internet is typically used as a transmission path for the content (see page 1, line 15 to page 3, line 6).

In order to allow the user to select content, a content list is downloaded to the receiver, which may be displayed via a browser. Content which is predetermined to be broadcast, i.e. broadcast-based content, and content, which is to be transmitted via the Internet, i.e. communication-based content, may be displayed in a mixed list either without being distinguished according to their transmission paths or such that the transmission path is identifiable (see page 16, line 19 to page 18, line 27; page 25, lines 5 to 23).

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In response to a user selection, the television receiver receives download control information containing data necessary for downloading the content from the content providing apparatus. The download control information includes identification information corresponding to the downloaded content, a data size of the content and a flag indicating whether the content is broadcast-based or communication-based content. Download control information for broadcast-based content additionally includes a broadcasting time and may also indicate a bit rate of the broadcast transmission. Furthermore, the download control information for broadcast-based content may contain a broadcast stream reference destination for identifying a broadcast stream. The reference destination may be described using a URL (uniform resource locator) or an IP multicast address (see page 30, line 21 to page 35, line 27 together with figures 10 and 11).

Main request

- 3. The board considers D5 to represent the closest prior art with respect to the subject-matter of claim 1.
- 3.1 D5 discloses a content providing apparatus (see D5, figure 1: 120, 122) for providing a content to a content receiving apparatus (100), the content providing apparatus comprising:

 content-information providing means for providing a downloadable content list necessary for specifying the content to be downloaded to the content receiving apparatus wherein the content is specified by a user of the content providing apparatus (see paragraphs [0019], [0020] and figure 2: 212); control-information providing means (120b) for providing download control information necessary for downloading

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the content to the content receiving apparatus (paragraph [0022] and figure 2: 222), and wherein the download control information corresponds to the content which is specified on the basis of the downloadable content list;

content providing means (120c) for providing the specified content through a network (121) on the basis of the download control information in response to a request from the content receiving apparatus in case the specified content is communication-based content being content provided through the network; and further comprising

delivery means (120c) for delivering the specified content in addition to general television programmes by broadcasting the content using a broadcasting signal, in case the specified content is broadcast-based content, being content to be broadcast (see paragraphs [0019] and [0023] to [0026]).

- 3.2 D5 does not disclose the feature of claim 1 that the downloadable content list includes information indicating whether the specified content is broadcast-based or communication-based content. This feature implies that the content is assigned a priori in a predetermined manner to a transmission path, prior to the selection of the content to be downloaded. Hence, the essential difference between the subject-matter of claim 1 and D5 is that according to D5 the determination of the transmission path is effected after user selection of content, whereas according to the invention the choice of the transmission path is predetermined for a specified content.
- 3.3 This distinguishing feature has the technical effect that the determination of the transmission path can be effected before individual users select the desired

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content. Hence, the determination of the transmission path can be simplified. This determination is effected at the foreseeable expense of a loss in efficiency in the utilisation of network resources, since the actual number of users requesting specific content can only be estimated, whereas it can be based on the number of actual user requests for specific content according to D5. Hence, the technical problem starting from D5 can be regarded as how to simplify the determination of the transmission path for providing content to a content receiving apparatus.

- 3.4 According to D5 the determination of the transmission path "that can most efficiently transfer a content item at a given time" is an improvement over prior art systems, which did not provide this flexibility (see paragraphs [0004] and [0005]). It can therefore be concluded that the skilled person was well aware of two options for transmission path determination, one of them being to assign content fixedly to a specific transmission path based on predetermined criteria at the foreseeable expense of decreased efficiency of the transmission, and the other being the flexible determination of the invention described in D5. Hence, it would have been obvious to predetermine whether user-selectable content was scheduled for communication via a network or to be broadcast in addition to general television programmes using a broadcasting signal. Given that the choice of the transmission path in advance of user selection of content was obvious, it was also obvious to provide this information as an attribute of the content items in the list of userselectable content.
- 3.5 The appellant argued that there was no content list in D5 showing a mixture of broadcast-based and

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communication-based content. As a consequence, D5 did not disclose any of the features of claim 1 relating to the content list. The board does not find this argument convincing. It is true that the content list of D5 does not distinguish between broadcast-based and communication-based content (see also point 3.2 above). However, this difference only implies that the transmission path for the content is predetermined. Any other technical consequence of the specification of the transmission path in the content list is not apparent from claim 1. A technical consequence of this difference, in particular for the user, is also not apparent from the application as filed, which refers to two alternatives for presentation of the content list to the user (see also page 25, lines 10 to 23). According to the first option the content list items are not distinguishable according to their transmission path. According to the other option "it may be possible to display a communication-based content and a broadcast-based content in an identifiable way." Hence, the application refers to the specification of the transmission path in the content list as one of two options without indicating any particular advantage.

The appellant also argued that according to the invention it could be decided in advance of the user selection based on predicted or experienced values of popularity of the content whether content should be broadcast-based or communication-based content.

However, this argument is also not convincing. The board notes that there are no features of claim 1 which relate to such decision criteria. In addition, it was well known at the effective filing date of the application to transmit content targeted at a large public via broadcast and less popular content via the Internet.

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3.6 In view of the above, the subject-matter of claim 1 lacks an inventive step in view of D5 (Article 56 EPC).

Auxiliary request I

- 4. Apart from some rephrased features, claim 1 according to auxiliary request I contains the following additional features compared with claim 1 according to the main request:
 - (a) the download control information (83) includes information (94) indicating whether the specified content is broadcast-based or communication-based content, and
 - (b) the delivery means (20B) is configured to deliver broadcast-based content using a broadcasting signal in accordance with a broadcasting schedule predetermined before specifying the content.
- 4.1 D5 discloses that transmission characteristics of the content, corresponding to the download control information of claim 1, are transmitted to the user device. According to paragraph [0022] of D5 the transmission characteristics include, for example, "the time of transmission, the selected transmission network, network specific information such as DTH transponder frequency and polarity, stream ID's and encryption/decryption codes, or any other information helpful or necessary for transmission." Hence, according to D5 the transmission characteristics necessarily include information indicating whether the specified content is broadcast, i.e. whether it is broadcast-based, or transmitted via a network, i.e. communication-based.

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- 4.2 Feature (b) additionally specifies that broadcast-based content is delivered using a broadcasting signal in accordance with a broadcasting schedule predetermined before specifying the content. It is usual practice to specify broadcasting schedules for content that is to be broadcast well in advance of the actual broadcast. Hence, the fact that content is broadcast in accordance with a predetermined broadcasting schedule is an obvious consequence of the choice of a transmission path before specifying the content.
- 4.3 It follows that none of the additional features adds anything inventive to the subject-matter of claim 1. As a result, the board finds that the subject-matter of claim 1 according to auxiliary request I lacks an inventive step (Article 56 EPC).

Auxiliary request II

- 5. Claim 1 according to auxiliary request II contains the following additional features compared with claim 1 of auxiliary request I.
 - (c) The download control information corresponding to the broadcast-based content includes information describing either a URL or an IP multicast address in order to identify a broadcast stream delivering the content.
 - (d) Specified broadcast-based content is delivered via the broadcast stream identified in the download control information.
- 5.1 It was well known and, for example, disclosed in D1, that streaming via the Internet might include multicast delivery methods and that either a URL or an IP

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multicast address might be used to identify a broadcast stream (see D1, paragraphs [0035] and [0093]).

Furthermore, D5 discloses that the stream ID may be included in the transmission characteristics (see D5, paragraph [0022]), which implies that the specified broadcast-based content is delivered via the broadcast stream identified in the download control information.

5.2 Hence, the additional features (c) and (d) do not change the finding of lack of inventive step of the claimed subject-matter as set out above with regard to auxiliary request I (Article 56 EPC).

Auxiliary request III

- 6. Claim 1 of auxiliary request III is essentially distinguished by the following features from claim 1 of auxiliary request I:
 - (e) the specified content is broadcast using a broadcasting signal "on the basis of the download control information (83)" and
 - (f) the download control information (83) corresponding to the broadcast-based content further includes alternative communication information (114) indicating the content providing means (20) providing the same communication-based content as the broadcast-based content.
- As set out above, the transmission characteristics of D5 correspond to the download control information of the present application (see point 4.1 above).

 According to D5 any broadcast of selected content is effected on the basis of the transmission

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characteristics (see paragraph [0022]). Hence, feature (e) is disclosed in D5.

6.2 According to feature (f) alternative communication information such as a URL allowing acquisition of the same communication-based download content are included in the download control information for broadcast-based content. As argued by the appellant the invention therefore provides the option to download communication-based content being identical to broadcast-based content (see also page 35, lines 1 to 5 of the application).

The advantages of providing "links" between descriptive information for broadcast-based content and the same communication-based content were well known to the skilled person. For example, D6 relates to seamless switching between the same broadcast-based and communication-based content (see abstract and paragraphs [0156], [0165], [0166]). It therefore implicitly requires a link between broadcast-based and the same communication-based content. Hence, in the context of claim 1 the additional features do not result in an inventive step of the claimed subject-matter.

6.3 It follows from the foregoing that the subject-matter of claim 1 of auxiliary request III lacks an inventive step.

Auxiliary request IV

7. Claim 1 according to auxiliary request IV is essentially distinguished by the following additional feature from claim 1 of auxiliary request I:

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- (g) the download control information (83) corresponding to the broadcast-based content further includes information indicating the broadcasting schedule of the content (112) for each broadcasting, wherein each broadcasting schedule (112, 113) includes the bit rate of a broadcasting signal and each broadcasting schedule (112, 113) is predetermined before specifying the content.
- 7.1 D5 discloses that the transmission characteristics corresponding to the download control information include "the time of transmission" which is considered to constitute a broadcasting schedule for the content (see paragraph [0022]).
- 7.2 In addition, D5 discloses that the bit rate of the transmission may vary depending on several parameters such as the time that content is desired to be viewed. D5 also discloses that "any other information helpful or necessary for transmission", may be included in the transmission characteristics (see paragraphs [0022] and [0026] of D5). It was well known that a bit rate was one of the essential parameters of each digital transmission. It was therefore obvious to include the bit rate of the broadcasting signal into the download control information. Hence, in the context of claim 1, feature (g) cannot change the above assessment of inventive step (see section 4).
- 7.3 As a result the subject-matter of claim 1 of auxiliary request IV lacks an inventive step.

Auxiliary requests V to VIII

8. The independent claims of the further auxiliary requests V to VIII comprise the features of the

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independent claims of the main request and of the independent claims of auxiliary requests I to IV in different permutations.

- 8.1 In particular, claim 1 of auxiliary request V and claim 1 of auxiliary request VI essentially differ from claim 1 of auxiliary request I and claim 1 of auxiliary request II, respectively, by specifying that the delivery means (20B) broadcast the specified broadcast-based content "in addition to general television programs". The transmission of content over a "traditional broadcast network" as specified in paragraph [0019] of D5 is considered to imply a transmission in addition to general television programmes. Hence, these amendments do not change the above assessment of inventive step.
- 8.2 Similarly, claim 1 of auxiliary request VII is essentially distinguished from claim 1 of auxiliary request I by specifying that the delivery means (20B) broadcast the specified broadcast-based content "in addition to general television programs" and by the inclusion of additional feature (f). Claim 1 of auxiliary request VIII essentially corresponds to claim 1 of auxiliary request VII with feature (f) being replaced by feature (g). The appellant did not provide any detailed arguments as to why the permutations of the features of these claims should change the assessment of inventive step in view of D5. The board has found no indications to that effect either.
- 8.3 Hence, the subject-matter of claim 1 of each of auxiliary requests V to VIII lacks an inventive step.

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Conclusion

9. It follows from the above that none of the appellant's requests is allowable.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



D. Magliano

C. Kunzelmann

Decision electronically authenticated