

Appeal decision

Appeal No. 2016-19671

USA

Appellant

THOMSON RESEARCH FUNDING CORPORATION

Tokyo, Japan

Patent Attorney

ITO, Tadashige

Tokyo, Japan

Patent Attorney

ITO, Tadahiko

Tokyo, Japan

Patent Attorney

ONUKE, Shinsuke

The case of appeal against the examiner's decision of refusal of Japanese Patent Application No. 2013-1369730, entitled "METHOD AND APPARATUS FOR FAST CHANNEL CHANGE FOR DIGITAL VIDEO" (the application published on November 7, 2013, Japanese Unexamined Patent Application Publication No. 2013-229921) has resulted in the following appeal decision.

Conclusion

The appeal of the case was groundless.

Reason

1 History of the procedures and the Invention

The present application is a divisional application filed on July 3, 2013 from Patent Application No. 2009-521832 filed on July 25, 2007 as an international filing date (priority claim under the Paris Convention received by the foreign receiving office on July 28, 2006, USA). The history of the procedures is as follows.

| | |
|-------------------------|---------------------------------------------------------------|
| As of April 2, 2014: | Notice of reasons for refusal |
| October 7, 2014: | Submission of written opinion and written amendment |
| As of January 7, 2015: | Notice of reasons for refusal (the final reasons for refusal) |
| July 13, 2015: | Submission of written opinion and written amendment |
| As of February 4, 2016: | Notice of reasons for refusal |
| August 9, 2016: | Submission of written opinion and written amendment |
| As of August 25, 2016: | Examiner's decision of refusal |
| December 28, 2016: | Submission of request for appeal |
| As of January 12, 2017: | Directive of amendment |
| February 15, 2017: | Submission of written amendment (reasons for |

request)

The Inventions according to Claims 1 to 20 of the present application are inventions specified by the matters described in Claims 1 to 20 of the scope of claims amended by the amendment as of August 9, 2016. The invention according to Claim 3 (hereinafter referred to as "The Invention") is as follows. (The symbols were added by the body.)

"(A) A method for fast channel change for digital video including:
(B) receiving normal video data and channel change video data; and
(C) encoding the normal video data and the channel change video data into a normal video stream and a channel change video stream, respectively, using a common system clock to provide synchronization between the normal video stream and the channel change video stream,
(D) the normal video stream and the channel change video stream are encoded for transport separately at a transport level, and
(E) the channel change video stream including channel change stream coded pictures having at least one of a lower resolution, a lower frame rate, and a lower bitrate than normal stream coded pictures in the normal video stream."

2 Cited Document

In International Publication No. WO 2005/043784 (hereinafter, referred to as "Cited Document"), which is a publication distributed before the priority date of the application and cited for the reasons for refusal of the examiner's decision, the following matters are described with drawings.
(Underlines were added by the body.)

(A) "The present invention relates to reception technology for multiplexed broadcast signals carrying multiple services, and relates more particularly to a reception method and a receiving apparatus for digital data broadcasts transmitted to portable terminals." (paragraph 0001)

(B) "The present invention thus receives broadcast signals transmitted with high quality burst data (a first stream) multiplexed with low quality continuous data (a second stream) and reproduces the data. Power consumption during normal viewing can thus be reduced by intermittently receiving the firand when zapping viewing the waiting time during channel selection can be shortened by reproducing the continuous data (the second stream), which is constantly receivable." (paragraph 0022)

(C) "Figure 1 describes a method of generating the transmission signal output from the broadcasting station and received by a receiving apparatus according to the invention." (paragraph 0028)

(D) "Reference numeral 1 is a digital broadcasting head end, and 2, 3, 4, 5, 6 are the content sources for services S1, S2, S3, S4, S5. The content of each service is encoded in both high quality and low quality, resulting in a high quality IP (Internet Protocol) packet 7, and a low quality IP packet 7b. Each content source has a high quality

encoder for generating the IP packets 7, and a low quality encoder for generating the IP packets 7b, each encoder being a discrete real-time encoder. The high quality encoder has an internal clock CLa indicating real time, and the low quality encoder has an internal clock CLb indicating real time. That the time kept by the internal clock CLa and the time kept by the internal clock CLb match will be obvious." (paragraph 0029)

(E) "The high quality encoder is an MPEG-4 encoder that can compress content containing a video signal and/or audio signal at an average transfer rate of 350 kbps. The low quality encoder is an MPEG-4 encoder that can compress the same content at an average transfer rate of 64 kbps." (paragraph 0031)

(F) "As shown in Fig. 21, the processing unit PP1 converts the IP packets 7 to DSM-CC (digital storage media command and control) sections, and then to TS (transport stream) packets." (paragraph 0036)

(G) "The received IP packets 7b are sent to processing unit PP2, which converts the IP packets to TS packets in the same way as the processing unit PP1." (paragraph 0042)

(H) "The multiplexer 12 receives three types of input; that is, high quality TS packets from the processor 8, low quality TS packets from the processor 9, and PSI TS packets from the PSI generator 18, and combines these into a single stream." (paragraph 0047)

(I) "The multiplexed stream is passed as transmission channel 14 to the transmitter 13 and output to the transmission path by the transmitter 13." (paragraph 0047)

(J) FIG. 1 describes, as outputs from the content sources 2 to 6, a stream of high quality TS packets 7 and a stream of low quality IP packets 7b.

On the basis of the above descriptions, it can be recognized that the following technical matters are described.

(1) According to the above descriptions (A) to (C),

(a) it can be recognized that the following matter is described:

a method of generating a transmission signal output from a broadcasting station and received by a receiving apparatus of digital data broadcasts, since receiving apparatus receives high quality data (a first stream) during normal viewing and reproducing low quality data (a seconde stream) during zapping viewing, the waiting time during channel selection can be shortened.

(2) According to the above descriptions (D) and (J),

(b) it can be recognized that the following matter is described:

the content source of each service has a high quality encoder for generating a stream of high quality IP packets, and a low quality encoder for generating a stream of low quality IP packets, each encoder being a discrete real-time encoder, the high quality encoder and the low quality encoder having internal clocks CLa and CLb indicating real time respectively, the time kept by internal clocks CLa and CLb match.

(3) According to the above description (E),
(c) it can be recognized that the following matter is described:
the high quality encoder is an MPEG-4 encoder that can compress content containing a video signal or the like at an average transfer rate of 350 kbps, and the low quality encoder is an MPEG-4 encoder that can compress the same content at an average transfer rate of 64 kbps.

(4) According to the above descriptions (F) to (I), since the high quality IP packets and low quality IP packets are converted to TS packets, and the high quality TS packets and the low quality TS packets are combined into a single stream, which is passed to a transmitter and output to a transmission path by the transmitter,

(d) it can be recognized that the following matter is described:
the high quality IP packets and the low quality IP packets are converted to TS packets, and output to a transmission path by a transmitter.

On the basis of the above (1) to (4), it can be recognized that the Cited document describes the following invention (hereinafter referred to as "Cited invention").

"(a) A method of generating a transmission signal output from a broadcasting station and received by a receiving apparatus of digital data broadcasts, since receiving apparatus receives high quality data (a first stream) during normal viewing and reproducing low quality data (a seconde stream) during zapping viewing, the waiting time during channel selection can be shortened,

(b) the content source of each service has a high quality encoder for generating a stream of high quality IP packets, and a low quality encoder for generating a stream of low quality IP packets, each encoder being a discrete real-time encoder, the high quality encoder and the low quality encoder having internal clocks CLa and CLb indicating real time respectively, the time kept by internal clocks CLa and CLb match,

(c) the high quality encoder is an MPEG-4 encoder that can compress content containing a video signal or the like at an average transfer rate of 350 kbps, and the low quality encoder is an MPEG-4 encoder that can compress the same content at an average transfer rate of 64 kbps, and

(d) the high quality IP packets and the low quality IP packets are converted to TS packets, and output to a transmission path by a transmitter."

3 Comparison

The Invention and the Cited Invention are compared.

(1) Regarding the configuration (A) of the Invention

The "method of generating a transmission signal output from a broadcasting station and received by a receiving apparatus of digital data broadcasts", "during zapping viewing", "the waiting time during channel selection can be shortened" in the configuration (a) of the Cited invention corresponds to the "method for fast channel change for digital video" in the configuration (A) of the Invention, since zapping viewing means flipping through channels.

(2) Regarding the "normal video stream" and "channel change video stream" in the

Invention

In the configuration (a) of the Cited invention, the "high quality data (a first stream)" are to be received during normal viewing, and the "low quality data (a second stream)" are to be reproduced during zapping viewing. Accordingly, "high quality" and "low quality" in the Cited invention correspond to "normal" and "channel change" modes in the Invention, respectively. The "stream of high quality IP packets" and "stream of low quality IP packets" in the configuration (b) of the Cited invention correspond to the "normal video stream" and "channel change video stream" in the configuration (C) of the Invention, respectively.

(3) Regarding the configuration (C) of the Invention

Since "the content source of each service has a high quality encoder for generating a stream of high quality IP packets, and a low quality encoder for generating a stream of low quality IP packets, each encoder being a discrete real-time encoder", the configuration (b) of the Cited invention includes a step corresponding to the "encoding the normal video data and the channel change video data into a normal video stream and a channel change video stream, respectively" in the configuration (C) of the Invention.

However, the Invention is configured to "using a common system clock to provide synchronization between the normal video stream and the channel change video stream", while the Cited invention is configured so that "the high quality encoder and the low quality encoder having internal clocks CLa and CLb indicating real time respectively, the time kept by the internal clocks CLa and CLb match." Thus, they are different from each other.

(4) Regarding the configuration (B) of the Invention

Since it is obvious that each of the high quality encoder and the low quality encoder in the configuration (b) of the Cited invention receives data signals of contents to be encoded, it can be said that the Cited invention includes a step corresponding to the "receiving normal video data and channel change video data", which is the configuration (B) of the Invention.

(5) Regarding the configuration (E) of the Invention

Since "the high quality encoder is an MPEG-4 encoder that can compress content containing a video signal or the like at an average transfer rate of 350 kbps, and the low quality encoder is an MPEG-4 encoder that can compress the same content at an average transfer rate of 64 kbps" (configuration (c)), the Cited invention includes a configuration corresponding to "the channel change video stream" in the configuration (E) of the Invention "including channel change stream coded pictures having" "a lower bitrate than normal stream coded pictures in the normal video stream" (hereinafter referred to as "Constituent component (α)").

As for the "a lower resolution" "than normal stream coded pictures in the normal video stream" and "a lower frame rate" "than normal stream coded pictures in the normal video stream", which are constituent components of the configuration (E) other than the constituent component (α), "at least one" of the three, including the constituent component (α), is included in the configuration (E). Thus, it can be said that the configuration (c) corresponds to the description, "the channel change video stream including channel change stream coded pictures having at least one of a lower

resolution, a lower frame rate, and a lower bitrate than normal stream coded pictures in the normal video stream", which is the configuration (E) of the Invention.

(6) Regarding the configuration (D) of the Invention

Since the Cited invention is configured so that "the high quality IP packets and the low quality IP packets are converted to TS packets, and output to a transmission path by a transmitter" (configuration (d)) and the high quality IP packets and low quality IP packets are encoded separately (configuration (b)), the Cited invention includes the configuration corresponding to the configuration (D) of the Invention, "the normal video stream and the channel change video stream are encoded for transport separately at a transport level".

Therefore, the Invention and the Cited invention are in correspondence in the following points.

"(A) A method for fast channel change for digital video including:
(B) receiving normal video data and channel change video data; and
(C') encoding the normal video data and the channel change video data into a normal video stream and a channel change video stream, respectively,
(D) the normal video stream and the channel change video stream are encoded for transport separately at a transport level, and
(E) the channel change video stream including channel change stream coded pictures having at least one of a lower resolution, a lower frame rate, and a lower bitrate than normal stream coded pictures in the normal video stream."

Meanwhile, the Cited invention is different from the Invention in the following point (hereinafter referred to as "Different feature").

In the "step of encoding the normal video data and the channel change video data into a normal video stream and a channel change video stream, respectively" (configuration (C')), the Invention is configured to "using a common system clock to provide synchronization between the normal video stream and the channel change video stream", while the Cited invention is configured so that "the high quality encoder and the low quality encoder having internal clocks CLa and CLb indicating real time respectively, the time kept by the internal clock CLa and CLb match".

4 Judgment

Thus, the above-mentioned different feature is examined.

It would be generally well-known that a system clock is generated by an internal clock in a device or the like.

It is natural that the encoders in the Cited invention use the time-matched internal clocks for synchronization of the encoding processing thereof.

It can be recognized as a well-known technology, regardless of technical field, that common configuration is used in using the same information. Thus, a person skilled in the art could easily conceive of using a common system clock, without difficulty, in the configuration of the Cited invention in which the high quality encoder

and low quality encoder encode contents from the same source, on the basis of a system clock generated by time-matched internal clocks.

The effect of the Invention could be sufficiently predicted by a person skilled in the art from the Cited document and well-known prior arts, and cannot be remarkable.

Thus, the Invention could be easily invented by a person skilled in the art, on the basis of the invention described in the Cited document which is a publication distributed before the priority date of the application, and well-known prior arts.

5 Closing

As described above, the Invention could be easily made by a person skilled in the art according to the invention described in the Cited document and well-known prior arts, and the appellant should not be granted a patent for it under the provisions of Article 29(2) of the Patent Act.

The present application should be rejected without mentioning other claims.

Therefore, the appeal decision shall be made as described in the conclusion.

December 19, 2017

Chief administrative judge: SHIMIZU, Masakazu
Administrative judge: KASHIMOTO, Tsuyoshi
Administrative judge: KOIKE, Masahiko