【CLAIMS】

1. A method of switching channels by an IPTV reception apparatus, the method comprising:

when a request signal for switching to a switching target channel is received, transmitting a service request signal for access to the switching target channel to an IPTV service device;

receiving broadcast data of the switching target channel from the IPTV service device in response to the service request signal;

transmitting, to a caching server, a caching information request signal containing packet information on the broadcast data of the switching target channel, the packet information on the broadcast data includes initial packet information on initial data of the

switching target channel and channel information about the switching target channel immediately upon receiving the broadcast data of the switching target channel; and

receiving caching stream data corresponding to the packet information and the channel information from the caching server in response to the caching information request signal; and

completing channel switching to the switching target channel based on the broadcast data received from the IPTV service device and the caching stream data, wherein the caching stream data has an end position being a packet identical to the initial

packet information and a start position being a nearest I frame in a time before the determined end position.

2. The method of claim 1, wherein, in the transmitting to the caching server, the caching information request signal is transmitted to the caching server when the broadcast data of the switching target channel from the IPTV service device starts to be received.

3. The method of claim 1, wherein the packet information about the broadcast data comprises a part or all of initial N bytes information of the broadcast data received from the IPTV service device, feature information about initially received packet data, and packet connection number information.

4. The method of claim 1, wherein the receiving of the caching stream data comprises:

receiving, from the caching server, the caching stream data whose end position is an identical packet identical to the packet information among the stream data corresponding to the channel information.

5. The method of claim 4, wherein the receiving of the caching stream data comprises:

receiving, from the caching server, the caching stream data whose start position is an I frame immediately preceding the identical packet or an I frame preceding N (N≥1) frames from the immediately preceding I frame.

6. The method of claim 1, further comprising:

generating corrected caching stream data by correcting reference time information in the caching stream data based on reference time information in the broadcast data.

7. The method of claim 6, wherein the generating corrected caching stream data comprises:

generating the corrected caching stream data by correcting the reference time information in the caching stream data based on a reception time and a data value of the reference time information in the broadcast data.

8. The method of claim 7, wherein the generating corrected caching stream data comprises:

correcting the data value of the reference time information initially calculated in the caching stream data received after the reception time to a value equal to the data value of the reference time information in the broadcast data.

9. The method of claim 7, wherein the generating corrected caching stream data comprises:

disabling the reference time information in the broadcast data used in correcting the reference time information in the caching stream data.

10. The method of claim 8, wherein the generating corrected caching stream data comprises:

after receiving all the caching stream data, disabling uncorrected reference time information in the reference time information in the caching stream data, the uncorrected reference time information not being corrected based on the reference time information in the broadcast data.

11. An IPTV reception apparatus comprising:

a service requester configured to transmit a service request signal for access to a switching target channel to an IPTV service device and to receive broadcast data of the switching target channel from the IPTV service device in response to the service request signal; and

a data processor configured to transmit, to a caching server, a caching information

request signal containing packet information on the broadcast data of the switching target channel, the packet information on the broadcast data includes initial packet information on data of the switching target channel and channel information about the switching target channel immediately upon receiving the broadcast data of the switched channel and to receive caching stream data corresponding to the packet information and the channel information from the caching server; and

an image processor configured to complete channel switching to the switched channel based on the broadcast data received from the IPTV service device and the caching stream data,

wherein the caching stream data has an end position being a packet identical to the initial packet information and a start position being a nearest I frame in a time before the determined end position.

12. The IPTV reception apparatus of claim 11, further comprising:

a data corrector configured to generate corrected caching stream data by correcting reference time information in the caching stream data based on reference time information in the broadcast data.

13. A computer program stored in a computer-readable recording medium for execution, in combination with hardware, of operations of:

when a request signal for switching to a switching target channel is received, transmitting a service request signal for access to the switching target channel to an IPTV service device;

receiving broadcast data of the switching target channel from the IPTV service device in response to the service request signal;

transmitting, to a caching server, a caching information request signal containing

packet information on the broadcast data of the switching target channel, the packet information on the broadcast data includes initial packet information on initial data of the switching target channel and channel information about the switching target channel immediately upon receiving the broadcast data of the switching target channel;

receiving caching stream data corresponding to the packet information and the channel information from the caching server in response to the caching information request signal; and

completing channel switching to the switching target channel based on the broadcast data received from the IPTV service device and the caching stream data,

wherein the caching stream data has an end position being a packet identical to the initial packet information and a start position being a nearest I frame in a time before the determined end position.

14. The computer program of claim 13, the operations further comprise:

generating corrected caching stream data by correcting reference time information in the caching stream data based on reference time information in the broadcast data.