Content Splicing for RTP Sessions

draft-xia-avt-splicing-for-rtp-00

IETF#79, Nov 2010, Beijing

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2010-11-10

Major Changes since PS draft

- The RTP splicing is RTP-generic issue rather than MPEG TS-specific issue.

- Add requirements of RTP splicing

- List several alternatives for RTP splicing.
  - Mixer
  - MCU
  - Translator

2010-11-10

Requirements of Splicer

- Operate in either unicast or multicast environment
- Select only one stream at any specific time
- Content insertion is invisible to RTP receiver
  - Same payload type, SSRC and CSRC
  - Sequence number and timestamp must be continuous between primary stream and insertion stream
- Work compatibly with the basic characteristics of RTP protocol

2010-11-10

Mixer

- Mixer inserts the SSRC of original media sources into CSRC list in mixed RTP packet.

2010-11-10

MCU

- Video-Switching MCU only forwards RTCP Receiver Reports for the selected media sender, while other media senders receive a view of the session that indicates their media streams disappear somewhere en route.

- RTCP-Terminating MCU is only used in unicast environment.

- RTCP-Terminating MCU does not indicate available CSRC information, which disables loop detection on RTP level.

Translator

- Translator can insert the content from multiple sources (local file storage and another RTP stream, etc).

- Translator can make content insertion proceeding be invisible to receiver.

- Translator can show the real performance of different segments of the path to sender.
  - modify RTCP RRs received from receiver according to RTP protocol.
  - Initiate its own RTCP RRs to sender.

2010-11-10

Next Steps

- Whether people think a translator can completely perform RTP splicing?

- Will adopt this work as informational one to direct actual implementation of RTP splicing?

2010-11-10