

Splicing for MPEG2-TS Problem Statement in RTP Sessions

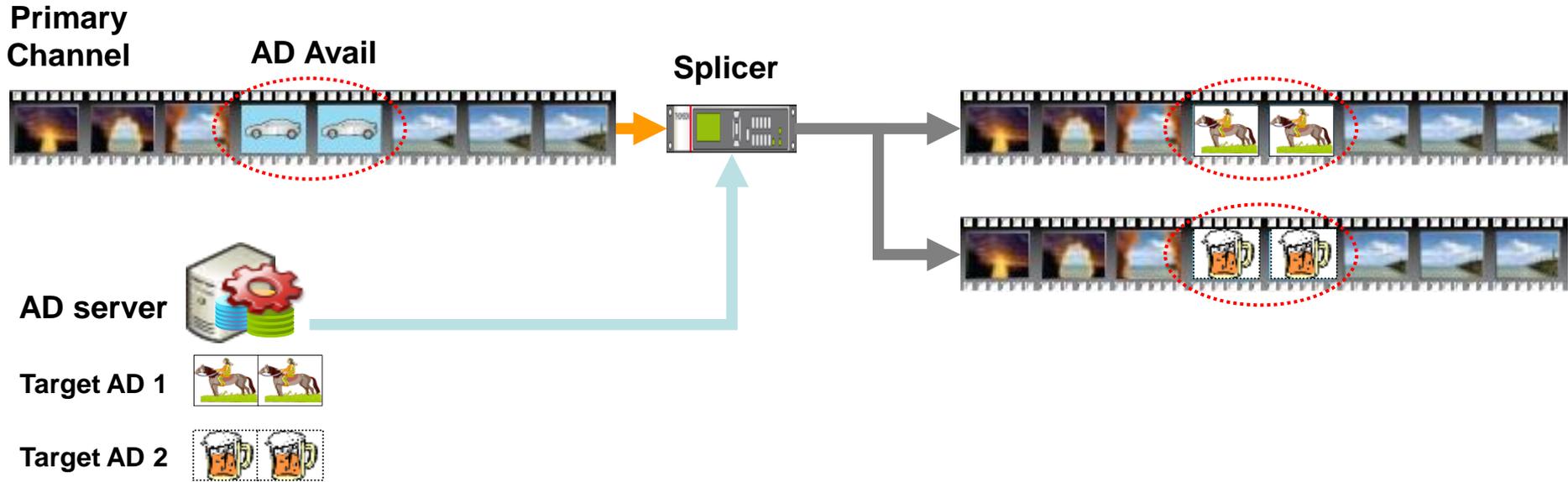
draft-xia-avt-splicing-for-mpeg2ts-ps-01

IETF#78, July 2010, Maastricht

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Background

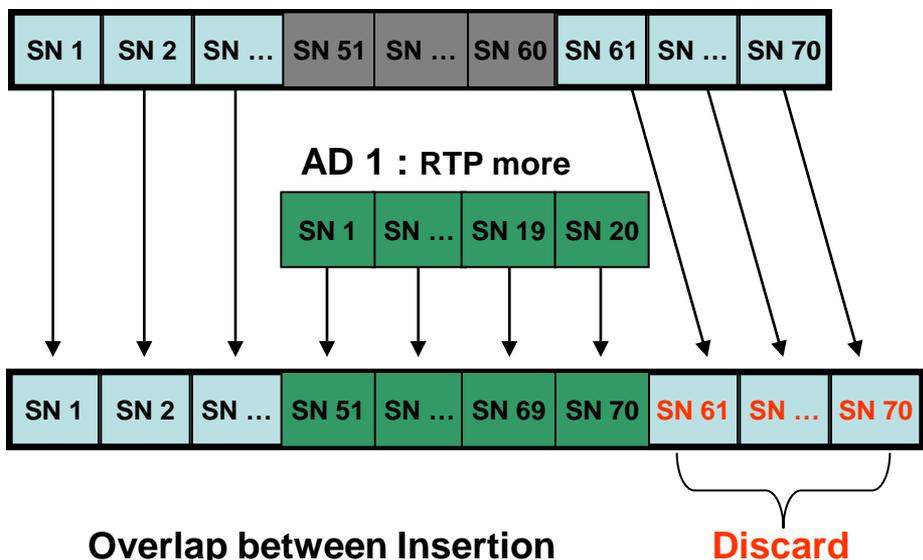


- Splicing of MPEG2-TS
 - AD Server and Splicer negotiate how to insert AD content into MPEG2-TS multiplexed stream prior to outputting it
 - Splicing increases revenues for operators
- This document analyses the problem when performing MPEG2-TS splicing over RTP.

Problem

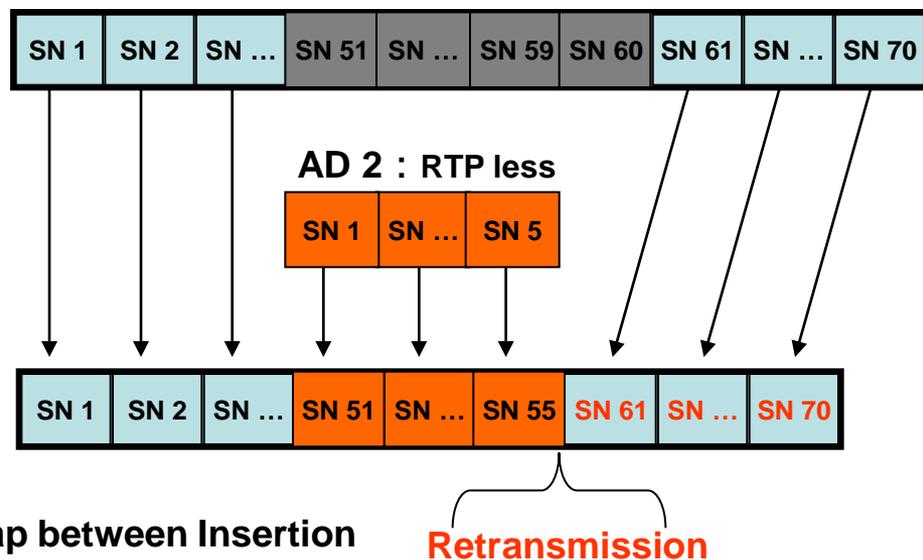
- The amount of Insertion packets is variable during certain Avail time due to different entropy coding.
- If splicing between Insertion channel and Primary channel is inappropriately operated by Splicer
 - **Overlap** may render RTP receiver to discard the useful packets due to the reduplicate sequence numbers
 - **Gap** may render RTP receiver to request unnecessary retransmission for inexistent packet missing

Avail Time



Overlap between Insertion Channel and Primary Channel
2010-7-27

Avail Time



Gap between Insertion Channel and Primary Channel
Retransmission

Potential Solution

- Splicer is a specific RTP Translator
 - re-encode AD data packets into primary program
 - assigns new sequence numbers to the outgoing data packets
- Shortcoming
 - Additional overhead on Splicer to continuously decoding and re-encoding even if splicing never occurs again
 - Modify RTCP SR message to be consistent with RTP packets modification

Next Steps

- Does this problem exist?
- Is the value in documenting how specific RTP translator should work as splicer in this scenario?
- Worth looking for more efficient solution?