RTP Splicing Notificaiton

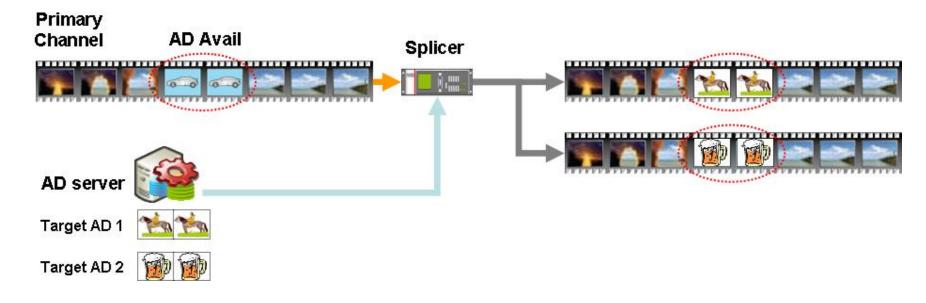
draft-xia-avtext-rtp-notification-03

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RTP Splicing

- RTP splicing is a process that allows an RTP intermediary system like an RTP mixer to insert new content from a different RTP source to a currently distributed RTP stream.
 - Similar to MPEG2 but done in the RTP level providing flexibility for IP delivery.
 - The insertion point is specified by the content provider.
 - Used for AD insertion
 - May be used for inserting any other content like presentation from a different source directly by the RTP mixer.

RTP Splicing



 [RFC6828] defines how to use an RTP Mixer as an RTP splicer, but doesn't define any standard mechanisms to convey Splicing Interval(when to start and end the splicing) from Main RTP content provider to the RTP Mixer.

Proposed RTP Splicing Notification

- Required information for specifying RTP splicing.
 - Splicing In NTP timestamps
 - Splicing Out NTP timestamps
- Two extensions are proposed for provding the Splicing information:
 - RTP header extension
 - RTCP Splicing Notification Message
- Both extensions can be sent to provide robustness

RTP Header extension

The format of RTP Header Extension is

Figure 1: Sample hybrid NTP Encoding Using the One-Byte Header Format

This format allows full resolution for splicing-in NTP timestamp while keeping 4 octets alignment.

RTCP Extension Message

```
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

| V=2|P|reserved | PT=211 | length |
| SSRC |
| Here | IN NTP Timestamp (most significant word) |
| IN NTP Timestamp (least significant word) |
| OUT NTP Timestamp (most significant word) |
| OUT NTP Timestamp (least significant word) |
| OUT NTP Timestamp (least significant word) |
| OUT NTP Timestamp (least significant word) |
```

- RTCP Extension message is kept intact
- RTCP SNM could be sent in compound RTCP packets and follow the regular RTCP timing rules, or non-compound RTCP if RFC5506 is supported

Next Step

- Are there any open issues?
- Adopted as a new work item?