

TEMI/StreamEvent TA Generator

A short introduction to real-world
Targeted Advertising Synchronization.

About MIT-xperts

Company facts:

- Founded in 2001
- In interactive TV since 2001
- Supporting HbbTV since 2009

Products for broadcasters:

- HbbTV Playout
- SI/PSI Management System
- Analysis tools
- Compliance recording tools

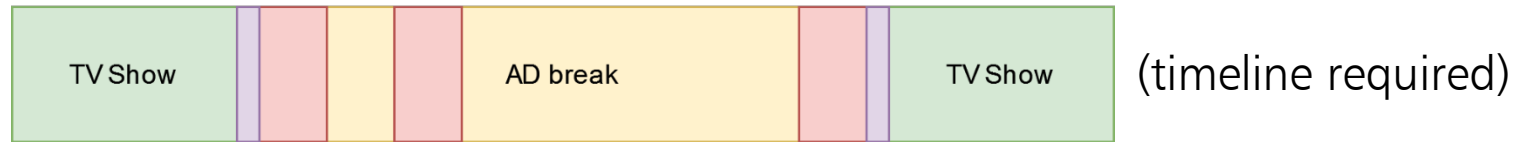
The problem

When to start playing the replacement ad?

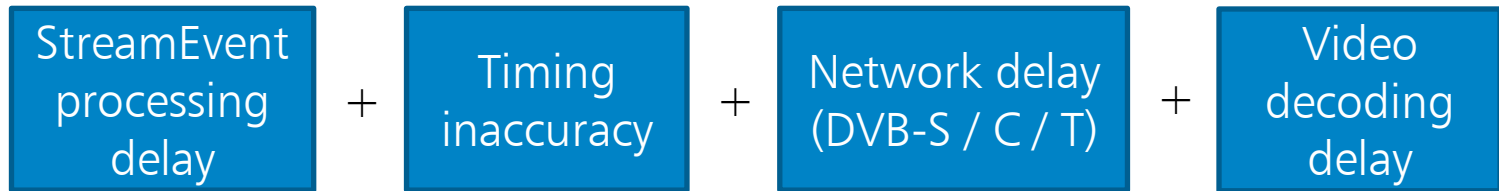
Before:
(inaccurate)



With TA API:
(frame accurate)



Simple timing:



The problem

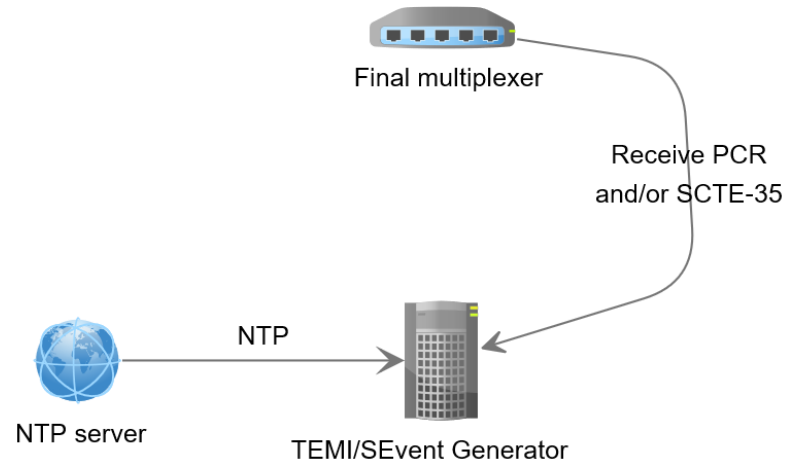
- We need a timeline to synchronize events (like TA events) with the video:
 - PCR and TEMI are possible
 - PCR won't survive re-muxing
- Events usually originate from SCTE-35, which needs to get converted to HbbTV-compatible StreamEvents

Our TEMI / StreamEvent Generator

- Generates a TEMI Timeline
(TEMI contains a NTP timestamp for easy reference)
- Generates StreamEvents from SCTE-35
(according ETSI TR 103 752)
- Both TEMI & StreamEvents are optional

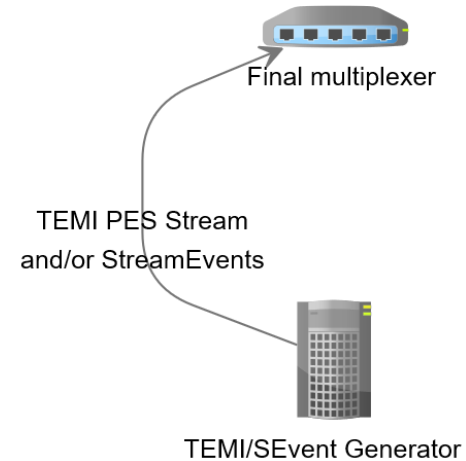
System input

- Input to get PCR reference and SCTE-35:
 - either final multiplexer output
 - or encoder output
- Current NTP time from time server

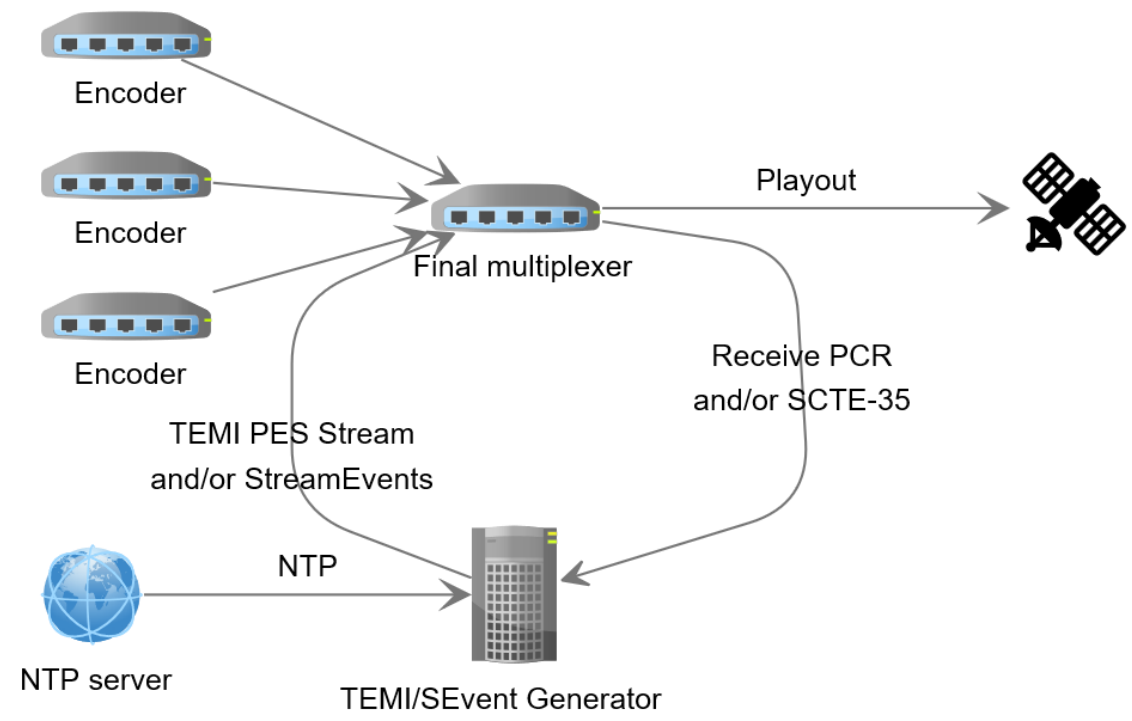


System output

- Transport stream containing 2 PIDs:
 - TEMI PES Stream
 - StreamEvents



System architecture



Benefits

- Allows easy plug & play integration
- Easy time stamp reference using NTP time
- Integrated StreamEvent generation
- Made for ATVI



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THANK YOU FOR YOUR INTEREST.

We are happy to support you with your TA playout.