

RTP Payload Format for HTTP Adaptive Streaming

draft-wei-payload-has-over-rtp-01

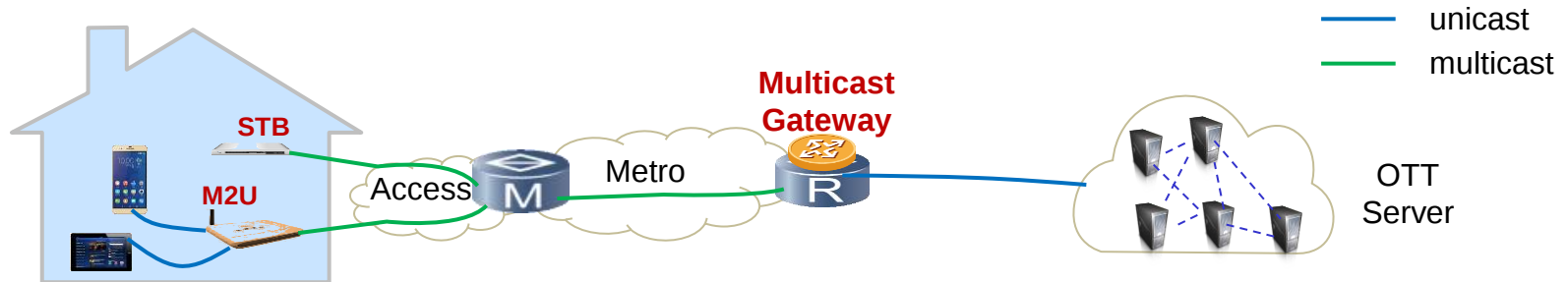
ietf97@Seoul

Progress since IETF96

- Architectural work has been initiated in the Broadband Form.
- Updates to the draft
 - Revised the architecture and use scenarios
 - Updated some fields in the payload format

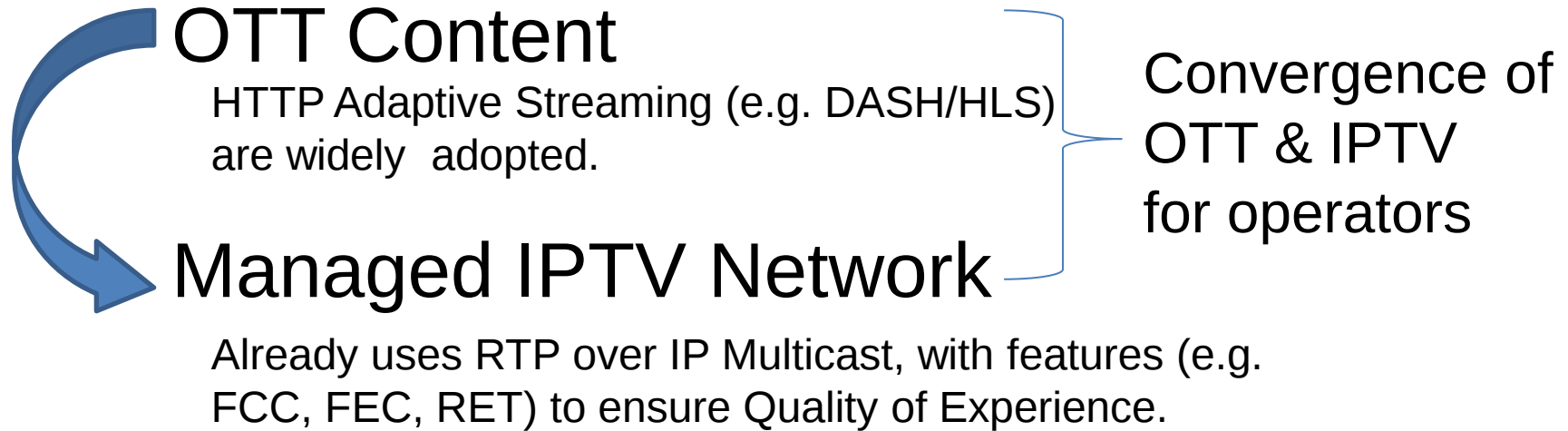
Proposed Architecture

- Pull adaptive streams from OTT Server
- Put each stream to a multicast group
- Cut media segments to fit into RTP packets



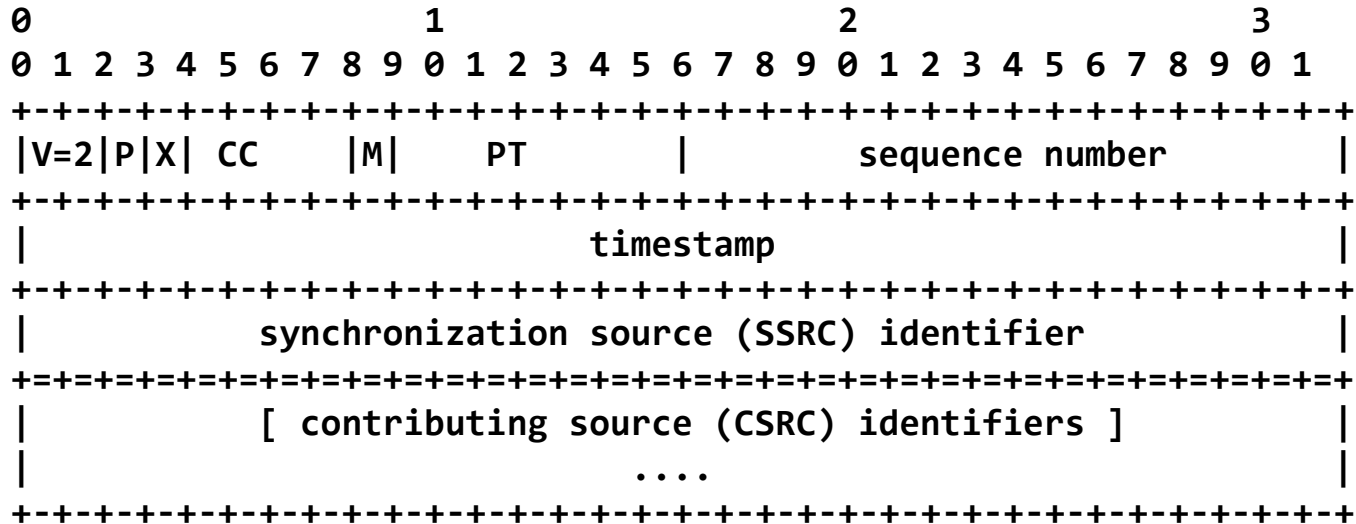
- Multicast to STB (multicast receiver)
- Multicast to M2U (RTP translator), then convert multicast to RTP unicast to end devices (unicast receivers).

HAS Over RTP, why?



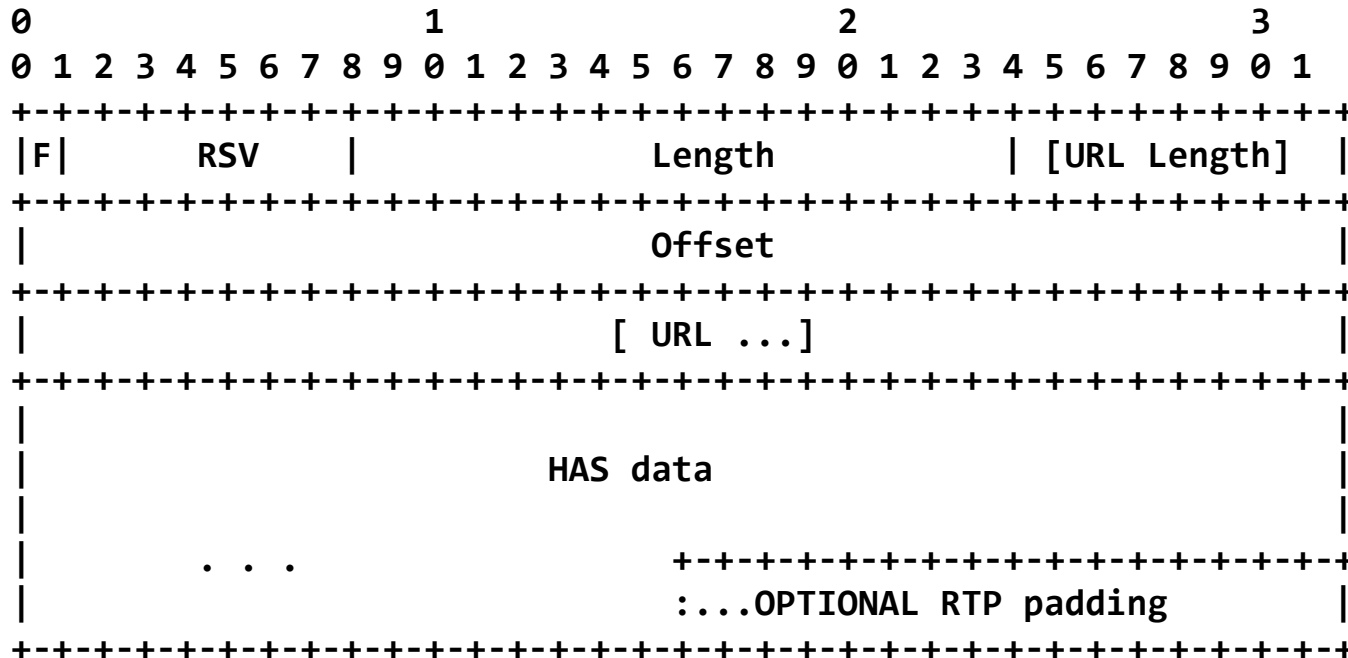
- Simplified operations of the multicast gateway:
 - Only needs to parse manifest files (e.g. DASH .mpd , HLS .m3u8)
 - Not required to inspect media segments of certain packaging formats (e.g. ISOBMFF, MPEG2-TS)

RTP Header



- Marker (M): set to 1 to indicate the last fragment of a media segment
- Payload Type (PT): set accordingly to the type used

HAS Payload



- Fragmentation (F): set to 1 to indicate it is a fragment of a decodable media segment.
- URL: to help client correlate a media segment to its URL
- (added) Offset: to help locate the fragment in the media segment
- (removed) Type: 0=Manifest, 1=Initial Information, 2=Media Seg.

Fragmentation Considerations

- The principle is not to incur too much overhead on the multicast gateway for fragmentation, here are several possible ways:
 - Straightforward. Blindly cut the media segments to fit into the MTU
 - With hints. If provided, multicast server can take hints from manifest files and cut in a way that each fragment is as decodable as possible
 - With inspection. For some media formats, it won't cause much effort to find boundaries in the media segment.

Next Step

- Comments & suggestions?
- WG Adoption?