

# **RTCP XR Report Blocks for Real- time Video Quality Monitoring**

draft-wu-avt-rtcp-xr-quality-monitoring-04

Qin Wu (sunseawq@huawei.com)

Glen Zorn (gwz@net-zen.net )

Roland Schott (Roland.Schott@telekom.de )

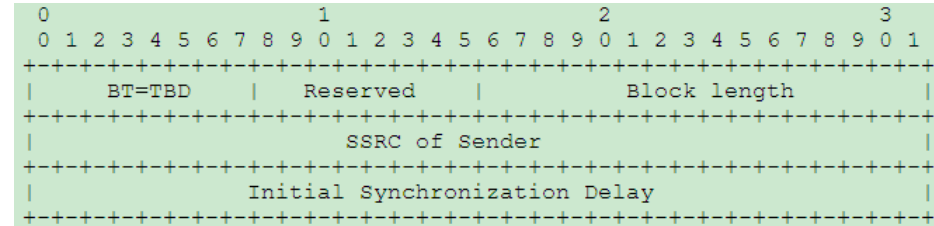
# Status

- Presented in the IETF 78, Masstricht, lots of interests on this work
- Changes since -00
  - Get alignment with monitoring architecture draft
    - Split MPEG Transport Stream specific metric out of this draft
      - The new draft-huang-avt-rtcp-xr-decodability-00 is newly submitted to cover such MPEG Transport Stream specific metric
    - break mixed metrics into reusable small metrics
    - categorize all the metrics into transport layer metrics and application layer metrics.
    - Distinguish Initial synchronization delay from General Synchronization Offset
    - Move Layered Streams Statistics Metric Block to transport layer metric

# Transport layer Metrics

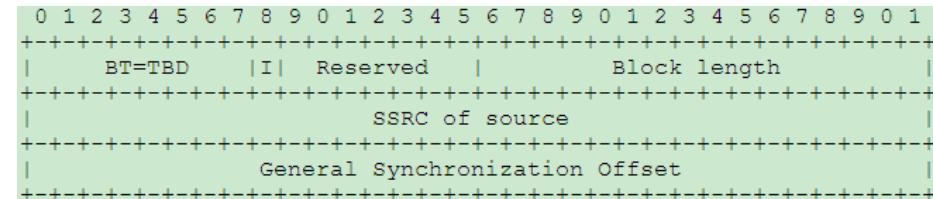
- RTP Flows Initial Synchronization Delay

- The synchronisation delay is firstly discussed in [[I-D.ietf-avt-rapid-rtp-sync](#)].
- Two class of synchronization delay
  - Initial synchronization delay between RTP sessions of the same media stream
  - Initial synchronization delay between RTP session of the different media types
- Applicable to layered and/or multi-description codecs [[I-D.ietf-avt-rtp-svc](#) ].



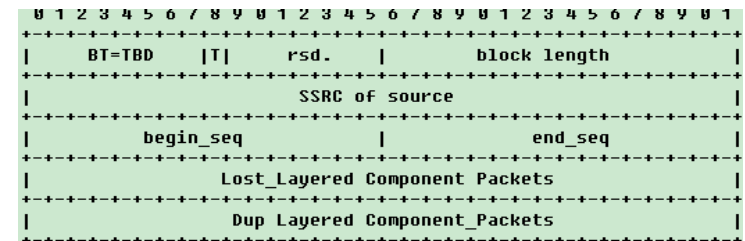
- RTP Flow General Synchronization Offset

- Relevant to synchronization delay discussed in [[I-D.ietf-avt-rapid-rtp-sync](#)].
- Defined as the synchronization offset time of each RTP stream relative to the reference RTP stream with the same CNAME and General Synchronization Offset of zero



- Layered Streams Statistics

- Applicable to layered and/or multi-description codecs [[I-D.ietf-avt-rtp-svc](#) ].
- Two kind of information is reported
  - Lost base layer packets, duplicated base layer packets
  - Lost Enhancement layer packets, duplicated enhancement layer packets



# Application Layer Metrics

- RTP Streams Statistics Summary
  - Information to be reported
    - Lost key frame packets, duplicate key frame packets
    - The proportion of key frame impaired by packet loss and discard
- Video Stream Loss and Discard Metrics
  - Information to be reported
    - Lost rate, discard rate of key frame packets
- Video Stream Burst
  - Information to be reported
    - Burst severity of key frame packets
  - Use one way loss pattern sample algorithm defined in [RFC3357] to measure this information
- Synthetical Multimedia Quality (Composite Metric)
  - parameters to be reported
    - MOS-AV
  - Use ITU specified methodologies to measure these parameters
    - [G.1082],[P.NAMS]

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																												
BT=TBD										T P		rsd.										block length																																					
SSRC of source																																																											
begin_seq																end_seq																																											
lost_frames																																																											
dup_frames																																																											
lost_partial frame packets																																																											
dup partial frame_packets																																																											

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
+-----																															

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
BT=TBD										Reserved										block length											
SSRC of source																															
Loss Distance																Loss Period															
Max Loss Duration																Reserved.															

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											
BT=TBD										I		Rsd.										block length																				
SSRC of source																																										
MOS-AU																																Rsvd.										

# Issues and Next Step

- Shall we wait for monitoring architecture completion and then progress this work?
  - Is it possible to progress monitoring architecture work and this work in parallel?
- Request to accept draft as WG item