# RTCP XR Block for Loss Concealment Metrics Reporting on Video Applications

## draft-ietf-xrblock-rtcp-xr-video-lc-01
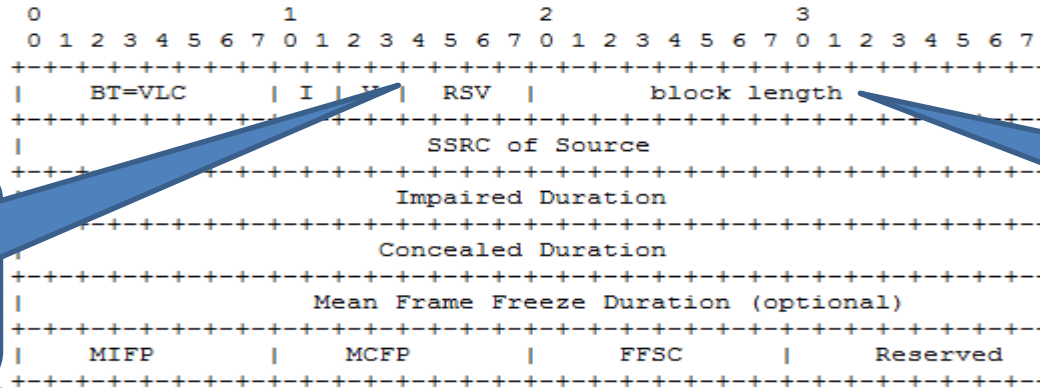
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# Document Status

- Adopted as WG item just before last meeting.
- Changes from version 00.
  - Explain the time period for the measurement in first paragraph of Section 4.
  - Changing the metrics
    - Modify the Mean Frame Freeze Duration metric to express in units of RTP timestamp. So now it has 32bits instead of 8 bits.
  - Complete Appendix A
  - Fixing some nits.
  - Editorial changes.

# Report Block Overview

```
 0                   1                   2                   3
 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7 0 1 2 3 4 5 6 7
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|    BT=VLC       | I | V |    RSV    |         block length        |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|                        SSRC of Source                           |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|                      Impaired Duration                          |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|                     Concealed Duration                          |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|               Mean Frame Freeze Duration (optional)             |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
|    MIFP        |     MCFP       |     FFSC       |   Reserved    |
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```

V=10 – Frame Freeze
V=11 – Other LOSS Concealment Method
V=00&01  Reserved

BL = 6 when V=10
BL = 5 when V=11

- **Impaired Duration**
  - Total time length, expressed in units of RTP timestamps, of video impaired by transmission loss before applying any loss concealment methods.
- **Concealed Duration**
  - Total time length, expressed in units of RTP timestamps, of concealed damaged video pictures on which loss concealment method corresponding to V is applied
- **Mean Frame Freeze Duration**
  - Optional
  - Mean duration, expressed in units of RTP timestamps, of the frame freeze events.

- **MIFP**
- Mean Impaired Frame Proportion
- Mean proportion of each video frame impaired by loss before applying any loss concealment  method.

- **MCFP**
  - Mean Concealed Frame Proportion
  - Mean fraction of each video frame to which loss concealment (v) was applied.

- **FFSC**
  - Fraction of Frames Subject to Concealment
  - Proportion of frames to which loss concealment (V) was applied

# Next Step

- Open issue?
- Comments and suggestions?
- Ready for WGLC?