

Audio/Video Transport Working Group
Internet-Draft
Intended status: Standards Track
Expires: March 29, 2012

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September 26, 2011

RTCP Source Description (SDES) items for Measurement Identity
draft-ietf-xrblock-rtcp-xr-meas-identity-00.txt

Abstract

This document defines RTCP SDES items carrying parameters which identify a measurement, to which one or more other RTCP XR Report Blocks may refer.

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1. Introduction

This draft defines new RTCP SDES items to carry parameters which identify a measurement for use in a range of RTP applications. These SDES items do not itself contain any measurement results (metrics). However, they provide information relevant to a measurement reported in one or more other block types, including

- o a field for incorporation of an application-specific auxiliary identifier,
- o the sequence number of the first packet of the RTP session,
- o the extended sequence numbers of the first packet of the current measurement interval, and the last packet included in the measurement,
- o the duration of the most recent measurement interval and
- o the duration of the interval applicable to cumulative measurements (which may be the duration of the RTP session to date).

The method for calculation of the extended RTP sequence number is provide in [[RFC3550](#)].

The RTCP SDES packet containing these item is intended to provide a single copy of the information necessary to relate measurement data in the RTCP XR blocks to the stream, and measurement period, to which they refer. Commonly, multiple other small metric blocks contain measurement data for the same stream and period, and it would be a large overhead if all of these metric blocks carried duplicated data for measurement identification. Other blocks make a reference to this block (by SSRC). A Measurement Identity SDES packet is associated with the set of RTCP XR metrics blocks which share the same SSRC value. There MAY be several such sets in an RTCP packet, up to a limit of 8 arising from the use of 3-bit tags. There MAY

also be RTCP XR blocks in the packet which are not associated with a Measurement Identity block, for example blocks which were defined before the Measurement Identity mechanism was introduced by this document.

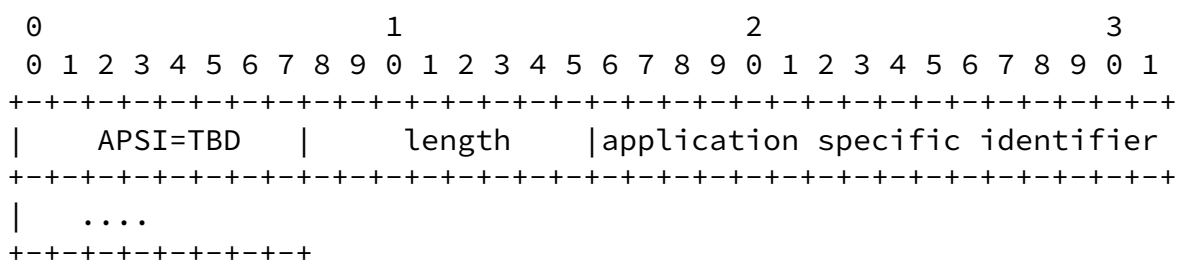
1.1. Applicability

The RTPC SDES items provide identification information for members of a family of RTCP XR metrics blocks which are designed to use it. To use the mechanism defined here, a metrics block must be in the same RTCP packet as the SDES packet for Measurement Identity.

2. Measurement Identity SDES Items

This section defines the format of Measurement Identity SDES items. These SDES items are carried in the RTCP SDES packet. The packet format for the RTCP SDES is defined in [Section 6.5 of \[RFC3550\]](#). Each SDES packet has a fixed-length field for version, source count, packet type (PT), length as well as a variable-length field for SDES items. In the SDES packets, the PT field is set to SDES (202).

2.1. APSI: Application Specific Identifier SDES Item



Application specific identifier is an additional identifier which is useful in the context of a specific application, e.g. an MPEG-2 transport identifier [\[MPEG2\]](#). Where the identifier is less than 32 bits, the identifier SHOULD be mapped into the most significant bits of the field. If no additional identifier is provided, all bits of the field MUST be set to zero. This field MUST be ignored by applications which are not configured to make use of it.

2.2. EXFS: extended first sequence number SDES Item

```

      0                1                2                3
    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
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|   APSI=TBD   |   length   | extended first sequence number
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
| of interval ....
+---+---+---+---+---+---+---+

```

The RTP sequence number of the first received RTP packet of the session, used to determine the number of packets contributing to cumulative measurements.

[2.3.](#) EXLS: extended last sequence number SDES Item

```

      0                1                2                3
    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
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|   APSI=TBD   |   length   | extended last sequence number
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|   ....
+---+---+---+---+---+---+---+

```

The extended RTP sequence number of the last received RTP packet which contributed to this measurement.

[2.4.](#) CUMD: Cumulative Measurement Duration SDES Item

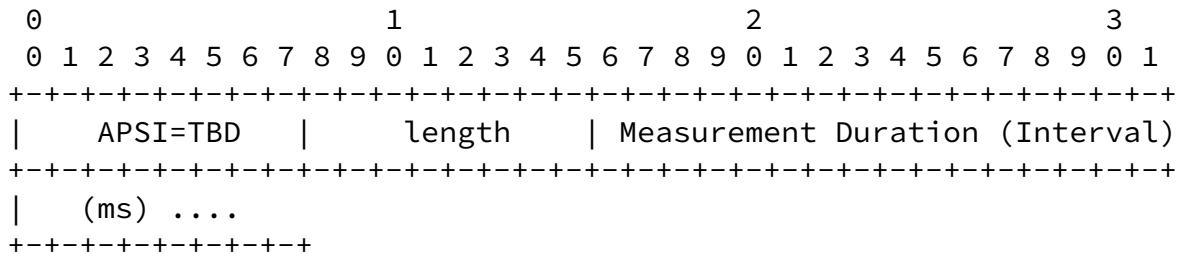
```

      0                1                2                3
    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
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
|   APSI=TBD   |   length   | Measurement Duration (Cumulative)
+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
| (ms) ....
+---+---+---+---+---+---+---+

```

The duration in ms of the reporting interval applicable to Cumulative reports which use this Measurement Identity block.

2.5. INMD: Interval Measurement Duration SDES Item



The duration in ms of the reporting interval applicable to Interval reports which use this Measurement Identity block.

3. IANA Considerations

New SDES types for RTCP SDES are subject to IANA registration. For general guidelines on IANA considerations for RTCP SDES, refer to [\[RFC3550\]](#).

3.1. New RTCP SDES Type value

This document assigns additional five SDES types in the IANA "RTCP XR Block Type Registry" to the Measurement Identity SDES items as follow:

abbrev.	name	value
APSI:	Application Specific Identifier	TBD
EXFS:	extended first sequence number	TBD

EXLS: extended last sequence number TBD
CUMD: Cumulative Measurement Duration TBD
INMD: Interval Measurement Duration TBD

[Note to RFC Editor: please replace APSI,EXF,EXLS,CUMD,INMD with the IANA provided RTCP SDES type for these SDES items.]

[3.2.](#) New RTCP XR SDP Parameter

This document also registers a new parameter "jitter-bfr" in the "RTCP XR SDP Parameters Registry".

[3.3.](#) Contact information for registrations

The contact information for the registrations is:

Qin Wu (sunseawq@huawei.com)

101 Software Avenue, Yuhua District
Nanjing, Jiangsu 210012
China

[4.](#) Security Considerations

RTCP reports can contain sensitive information since they can provide information about the nature and duration of a session established between two or more endpoints. Therefore, the use of security mechanisms with RTP documented in [Section 9 of \[RFC3550\]](#) should apply.

[5.](#) References

5.1. Normative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", March 1997.
- [RFC3550] Schulzrinne, H., "RTP: A Transport Protocol for Real-Time Applications", [RFC 3550](#), July 2003.

5.2. Informative References

- [MONARCH] Wu, Q., "Monitoring Architectures for RTP", ID [draft-ietf-avtcore-monarch-04](#), August 2011.
- [MPEG2] "ISO/IEC, "Standard 13818-1"", December 2000.
- [PMOLFRAME] Clark, A. and B. Claise, "Framework for Performance Metric Development", ID [draft-ietf-pmol-metrics-framework-12](#), July 2011.

[Appendix A](#). Change Log

Note to the RFC-Editor: please remove this section prior to publication as an RFC.

[A.1](#). [draft-ietf-xrblock-rtcp-sdes-meas-identity-00](#)

The following are the major changes to [draft-ietf-avt-rtcp-xr-meas-identity-02](#):

- o Change the use of SDES item to convey measurement identity instead of XR Block in [section 2](#).
- o Update references.
- o Update security section and remove SDP signaling section.

Internet-Draft

RTCP SDES Measurement Identity

September 2011

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Expires March 29, 2012

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