

Audio/Video Transport Working  
Group  
Internet-Draft  
Intended status: Standards Track  
Expires: November 16, 2009

G. Hunt  
BT  
A. Clark  
Telchemy  
May 15, 2009

RTCP XR Report Block for Measurement Identity  
draft-ietf-avt-rtcp-xr-meas-identity-02.txt

Status of this Memo

This Internet-Draft is submitted to IETF in full conformance with the provisions of [BCP 78](#) and [BCP 79](#).

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF), its areas, and its working groups. Note that other groups may also distribute working documents as Internet-Drafts.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

The list of current Internet-Drafts can be accessed at <http://www.ietf.org/ietf/lid-abstracts.txt>.

The list of Internet-Draft Shadow Directories can be accessed at <http://www.ietf.org/shadow.html>.

This Internet-Draft will expire on November 16, 2009.

Copyright Notice

Copyright (c) 2009 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to [BCP 78](#) and the IETF Trust's Legal Provisions Relating to IETF Documents in effect on the date of publication of this document (<http://trustee.ietf.org/license-info>). Please review these documents carefully, as they describe your rights and restrictions with respect to this document.

Abstract

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

Table of Contents

- [1. Introduction . . . . .](#) [3](#)
- [1.1. Measurement Identity Report Block . . . . .](#) [3](#)
- [1.2. RTCP and RTCP XR Reports . . . . .](#) [4](#)
- [1.3. Performance Metrics Framework . . . . .](#) [4](#)
- [1.4. Applicability . . . . .](#) [4](#)
- [2. Measurement Identity Block . . . . .](#) [5](#)
- [2.1. Report Block Structure . . . . .](#) [5](#)
- 2.2. Definition of Fields in Measurement Identity Report  
    Block . . . . . [5](#)
- [3. SDP Signaling . . . . .](#) [8](#)
- [4. IANA Considerations . . . . .](#) [9](#)
- [4.1. New RTCP XR Block Type value . . . . .](#) [9](#)
- [4.2. Contact information for registration . . . . .](#) [9](#)
- [5. Security Considerations . . . . .](#) [10](#)
- [6. Changes since last version . . . . .](#) [11](#)
- [7. References . . . . .](#) [12](#)
- [7.1. Normative References . . . . .](#) [12](#)
- [7.2. Informative References . . . . .](#) [12](#)
- Authors' Addresses . . . . . [13](#)

## 1. Introduction

### 1.1. Measurement Identity Report Block

This draft defines a new block type to augment those defined in [\[RFC3611\]](#) for use in a range of RTP applications. This block type does not itself contain any measurement results (metrics). However, this new block type provides information relevant to a measurement reported in one or more other block types, including

- o a tag or key by which other blocks (containing metrics information) may refer to this block
- o the SSRC of the measured stream,
- 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 [\[RFC3550\]](#).

This block is intended to provide a single copy of the information necessary to relate measurement data in other blocks to the stream, and measurement period, to which they refer. Commonly, multiple other small blocks contain measurement data for the same stream and

period, and it would be a large overhead if all of these blocks carried duplicated data for measurement identification. Other blocks make a reference to this block (by tag).

A Measurement Identity block is associated with the set of RTCP XR metrics blocks which share its tag 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.

## [1.2.](#) RTCP and RTCP XR Reports

The use of RTCP for reporting is defined in [\[RFC3550\]](#). [\[RFC3611\]](#) defined an extensible structure for reporting using an RTCP Extended Report (XR). This draft defines a new Extended Report block that MUST be used as defined in [\[RFC3550\]](#) and [\[RFC3611\]](#).

## [1.3.](#) Performance Metrics Framework

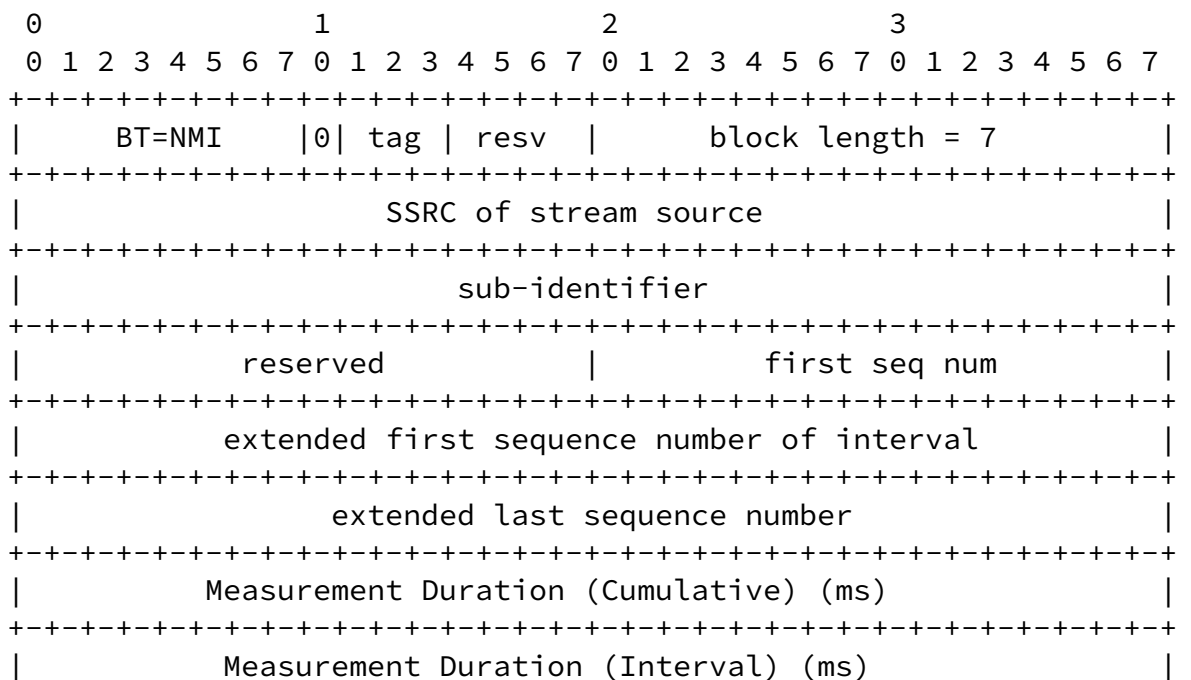
The Performance Metrics Framework [\[PMOLFRAME\]](#) provides guidance on the definition and specification of performance metrics. Metrics described in this draft either reference external definitions or define metrics generally in accordance with the guidelines in [\[PMOLFRAME\]](#).

## [1.4.](#) Applicability

This block provides 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 Measurement Identity block and must refer to the Measurement Identity block via the 3-bit tag field defined below.

2. Measurement Identity Block

2.1. Report Block Structure





The SSRC [[RFC3550](#)] of the source of the stream being reported. Note that the SSRC of the reporting RTP system (the originator of the report block) is present in the RTCP XR header defined in [Section 2 of \[RFC3611\]](#).

sub-identifier: 32 bits

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.

reserved: 16 bits

These bits are reserved. They MUST be ignored by receivers. They MUST be set to zero by senders.

first seq num: 16 bits

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

extended first sequence number of interval: 32 bits

The extended RTP sequence number of the first received RTP packet of the current measurement interval.

extended last sequence number: 32 bits

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

Measurement Duration (Cumulative) (ms): 32 bits

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

Measurement Duration (Interval) (ms): 32 bits

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



[RFC3611] defines the use of SDP (Session Description Protocol) [RFC4566] for signaling the use of XR blocks. XR blocks MAY be used without prior signaling.

No additional SDP signaling is defined for this block. Instead, the need for this block SHOULD be inferred from a request in SDP signalling for a block type (such as [DISCARD]) which depends on it.

#### [4.](#) IANA Considerations

New block types for RTCP XR are subject to IANA registration. For general guidelines on IANA considerations for RTCP XR, refer to [\[RFC3611\]](#).

##### [4.1.](#) New RTCP XR Block Type value

This document assigns the block type value NMI in the IANA "RTCP XR Block Type Registry" to the "Measurement Identity Block".

[Note to RFC Editor: please replace NMI with the IANA provided RTCP XR block type for this block.]

##### [4.2.](#) Contact information for registration

The contact information for the registration is:

Geoff Hunt (geoff.hunt@bt.com)

Orion 2 PP3, Adastral Park, Martlesham Heath, Ipswich IP5 3RE, United Kingdom

## [5.](#) 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.

[6.](#) Changes since last version

Updated references.

## [7.](#) References

### [7.1.](#) Normative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [RFC 2119](#), [BCP 14](#), March 1997.
- [RFC3550] Schulzrinne, H., "RTP: A Transport Protocol for Real-Time Applications", [RFC 3550](#), July 2003.
- [RFC3611] Friedman, T., "RTP Control Protocol Extended Reports (RTCP XR)", [RFC 3611](#), November 2003.
- [RFC4566] Handley, M., "SDP: Session Description Protocol", [RFC 4566](#), July 2006.

### [7.2.](#) Informative References

- [DISCARD] Hunt, G., "RTCP XR Report Block for Discard metric Reporting", ID [draft-ietf-avt-rtcp-xr-discard-02](#), May 2009.
- [MONARCH] Hunt, G., "Monitoring Architectures for RTP", ID [draft-hunt-avt-monarch-01](#), August 2008.

[MPEG2] ISO/IEC, "Standard 13818-1", December 2000.

[PMOLFRAME]

Clark, A., "Framework for Performance Metric Development",  
ID [draft-ietf-pmol-metrics-framework-02](#), March 2009.

Hunt & Clark

Expires November 16, 2009

[Page 12]

---

Internet-Draft

RTCP XR Measurement Identity

May 2009

#### Authors' Addresses

Geoff Hunt  
BT  
Orion 2 PP3  
Adastral Park  
Martlesham Heath  
Ipswich, Suffolk IP5 3RE  
United Kingdom

Phone: +44 1473 651704  
Email: [geoff.hunt@bt.com](mailto:geoff.hunt@bt.com)

Alan Clark  
Telchemy Incorporated  
2905 Premiere Parkway, Suite 280  
Duluth, GA 30097

USA

Email: alan.d.clark@telchemy.com