

Multicast Acquisition – RTCP XR

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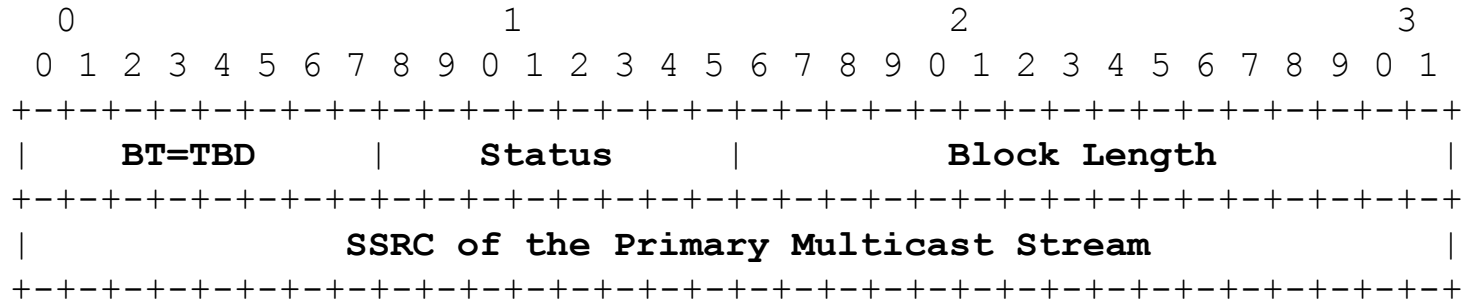
Ali C. Begen and Eric Friedrich

{abegen, efriedri}@cisco.com

Introduction

- RTP receivers joining a multicast session experience
 - Varying join delays
 - Pretty random acquisition delays
 - For quality reporting, monitoring and diagnostics purposes, it is useful to gather their “acquisition” experiences
 - This document
 - Defines a new RTCP XR block type for multicast acquisition
 - Defines SDP signaling and registers the new block type with IANA
- This report block can be used by all RTP receivers doing a simple multicast join, using RAMS or any other method

MA Report Block – Base Report (Mandatory)



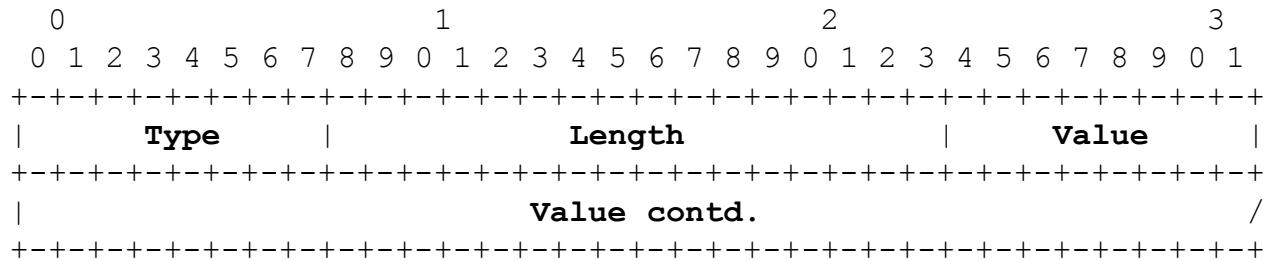
- Block type (BT): 8 bits (TBD)
- Status: 8 bits (Codes will be registered with IANA)
 - Editor's note: Should we use a TLV element to signal more status codes?
- Block length: 16 bits
- SSRC of the Primary Multicast Stream: 32 bits

MA Report Block – Extensions (Optional)

- Vendor-Neutral Extensions

These extend the report block in a vendor-neutral manner

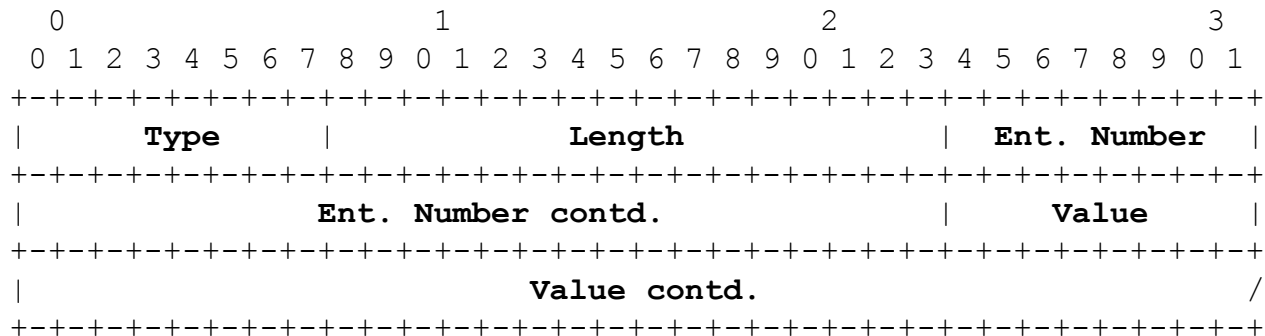
Registry will be maintained by IANA (Specification Required)



- Private Extensions

These MUST NOT collide with each other

A certain range of TLV Types ([128-254]) is reserved for private extensions



Vendor-Neutral Extensions

- These apply to any RTP-based multicast application:
 - Extended RTP Seqnum of First Multicast Packet
 - Source Filtering Group Management Protocol (SFGMP) Join Time
 - Application Request-to-Multicast Delta Time
 - Application Request-to-Presentation Delta Time
- These apply to RAMS:
 - Application Request-to-RAMS Request Delta Time
 - RAMS Request-to-RAMS-I Delta Time (to be added)
 - RAMS Request-to-Burst Delta Time
 - RAMS Request-to-Multicast Delta Time
 - RAMS Request-to-Burst-Completion Delta Time
 - Number of Duplicate Packets
 - Size of Burst-to-Multicast Gap

SDP Signaling

- The “rtcp-xr” attribute is defined in RFC 3611

```
rtcp-xr-attrib = "a=rtcp-xr:"  
                [xr-format *(SP xr-format)] CRLF
```

```
xr-format = "multicast-acq"
```

Discussion on the List

- A field to identify which acquisition method was used (e.g., simple join vs. RAMS vs. others?)

These values should be kept in a list maintained by IANA

- A field to specify success/failure cases

Success/failure interpretations are usually not objective, so, we will not have such a field

(Private) extensions can be used for this purpose if needed

- Extending the base report

If join was successful (at least one multicast packet was received), the following two fields **MUST** exist, ow they **SHALL NOT** exist at all

- Extended RTP Seqnum of First Multicast Packet
- SFGMP Join Time

Next Steps

- WG adoption?