

Network Working Group  
Internet-Draft  
Intended status: Informational  
Expires: August 17, 2013

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February 13, 2013

**Requirements from various WG for MMUSIC  
draft-jennings-mmusic-media-req-00**

**Abstract**

This document outlines some of the requirements driving various consideration related to multiplexing in the MMUSIC working group to meet the needs of WebRTC, CLUE, and other working groups.

This document is only meant to be used to help drive the discussion of solutions and is not intended to become an RFC.

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## **1. Introduction**

For the past several meetings, there has been discussions around various mechanism to reduce the number of UDP ports needed by applications for RTP. This document attempts to capture some of the requirements that are important in selecting the solution for how to represent the SDP to negotiate the RTP media that is using reduced ports.

## **2. Terminology**

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC 2119](#) [[RFC2119](#)]. This document generically uses RTP to mean RTP and SRTP.

## **3. Requirements**

This section covers the requirements from various WG for setting up media. Obviously it does not try and cover all the requirements but it tries to cover a set that seem relevant to decisions around multiplexing onto few UDP ports.

High Priority Requirements:

1. Support many media flows but minimize the number of transport flows. For instance, all media flows--or perhaps all media flows of a given type--might be multiplexed over a single transport flow.
2. Be able to successfully negotiate media with both legacy SIP devices and new devices (whether SIP or RTCWEB) with a single offer/answer exchange. If both endpoints support multiplexed media, then multiplexing should be negotiated. Otherwise, non-multiplexed media should be used. In many cases, each endpoints will have no prior knowledge of capabilities of the other endpoint.

Other Requirements:

1. Need a uniform way to allow specifications of new SDP parameters to easily explain any implications that multiplexing has on the new parameters in that specification.
2. Allow different sources (E.g. cameras) to use different codecs. For example, if one camera had hardware encoders for VP8 while



another had encoders for H.264, the device may wish to negotiate different codecs.

3. Be able to to independently set parameters such as resolution bandwidth, independently for each RTCWeb Track, preferably even when they are all multiplexed over the same transport flow.
4. Be able to identify the RTCWeb tracks with an identifier that is stable over the duration of the session. More information can be found in [[I-D.alvestrand-mmusic-msid](#)].

#### **4. Non-Requirements**

Some items are not a major goal. If methods are found that work for these as well, that is great, but they are not a priority item.

1. Working with SIP proxies or B2BUA that are not compliant with the standards. The reason for this is it is just not possible to design for every possible thing that does not do what the standards require.

#### **5. IANA Considerations**

This document makes no request of IANA.

#### **6. Security Considerations**

These requirements have no additional security considerations other than those captured in [[I-D.ietf-rtcweb-security-arch](#)].

#### **7. Acknowledgements**

Thanks to ...

#### **8. References**

##### **8.1. Normative References**

[[I-D.ietf-rtcweb-security-arch](#)]  
Rescorla, E., "RTCWEB Security Architecture",  
[draft-ietf-rtcweb-security-arch-06](#) (work in progress),  
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[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.

## **8.2. Informative References**

[I-D.alvestrand-mmusic-msid]  
Alvestrand, H., "Cross Session Stream Identification in the Session Description Protocol",  
[draft-alvestrand-mmusic-msid-02](#) (work in progress),  
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