An Extension for Identification of Groups in the Session Description Protocol (SDP).
draft-roach-mmusic-groupid-00

Abstract

   RFC 5888 defines a mechanism for semantically grouping media sections
   in the Session Description Protocol (SDP). One difficulty that has
   arisen in several applications of SDP is the need to uniquely
   identify these groups either in other protocols or elsewhere in the
   SDP itself.

   This document proposes a simple, backwards-compatible mechanism that
   provides unambiguous identifiers for RFC 5888 groups.

   This document updates RFC 5888.

Status of This Memo

   This Internet-Draft is submitted in full conformance with the
   provisions of BCP 78 and BCP 79.

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1. Introduction

[RFC5888] defines a mechanism for semantically grouping media
sections in the Session Description Protocol (SDP) [RFC4566] for
purposes such as lip sync and flow identification. That mechanism,
however, defines anonymous groupings, which makes it impossible to
reliably and unambiguously refer to such groups at a later time (e.g.
elsewhere in the SDP, or in an application-layer protocol). This
document defines a new attribute, "group-id", that can be used to
attach identifiers to SDP groups.

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 [RFC2119].

3. Mechanism Description

The mechanism used to assign identifiers to group is very simple and
straightforward: implementations that wish to assign an identifier to
groups include a single "group-id" attribute immediately before each
"group" attribute in the session. Importantly, it retains backwards-
compatible with existing [RFC5888] implementations. This "group-id"
attribute contains a single token, unique within the session, that
unambiguously identifies the group defined on the following line.
Each media section included in that group additionally MUST contain
an "in-group" attribute that includes the [RFC5888] semantic
identifier and group-id. This "in-group" identifier is intended to

allow media sections to be self-describing when they appear outside
the context of a full session.

For clarity: if an implementation includes a group-id for any groups
in a session, that implementation MUST include a group-id for every
group in that session. Implementations MUST NOT include any
attributes between a "group-id" attribute and the "group" attribute
it identifies. Recipients of such SDP in which a "group-id" appears
followed by anything other than the "group" attribute MUST ignore the
errant "group-id" line.

A simple example of the new group-id syntax follows. This example
defines a single lip-sync group, and identifies it with the group
identifier "abc."

```
v=0
o=Laura 289083124 289083124 IN IP4 eight.example.com
c=IN IP4 192.0.2.1
t=0 0
a=group-id:abc
a=group:LS 1 2
m=audio 30000 RTP/AVP 0
a=mid:1
a=in-group:LS abc
m=audio 30000 RTP/AVP 8
a=mid:2
a=in-group:LS abc
```

4. Syntax

The new attributes introduced by this mechanism are defined by the
following ABNF [RFC5234]:

```
groupid-attribute = "a=group-id:" group-id

group-id          = token ; token is defined in RFC 4566

in-group-attr     = "a=in-group:" semantics SP group-id
                     ; semantics is defined in RFC 5888
```

5. Security Considerations

This mechanism does not introduce any security issues beyond those
discussed in [RFC5888].

6. IANA Considerations

This document defines two SDP attributes: "group-id" and "in-group".
They are to be registered by IANA in the "SDP Parameters" registry as
follows:

    SDP Attribute ("att-field"):

      Attribute name: group-id
      Long form: Group ID
      Type of name: att-field
      Type of attribute: session level
      Subject to charset: no
      Purpose: Identification of SDP groups
      Reference: this document
      Values: any token

    SDP Attribute ("att-field"):

      Attribute name: in-group
      Long form: Add media section to group
      Type of name: att-field
      Type of attribute: media level
      Subject to charset: no
      Purpose: Associating media sections with groups
      Reference: this document
      Values: semantic type followed by group identifier

7. Normative References

   [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate
              Requirement Levels", BCP 14, RFC 2119, March 1997.

   [RFC4566] Handley, M., Jacobson, V., and C. Perkins, "SDP: Session
              Description Protocol", RFC 4566, July 2006.

   [RFC5234] Crocker, D. and P. Overell, "Augmented BNF for Syntax
              Specifications: ABNF", STD 68, RFC 5234, January 2008.

   [RFC5888] Camarillo, G. and H. Schulzrinne, "The Session Description
              Protocol (SDP) Grouping Framework", RFC 5888, June 2010.

Authors' Addresses

   Adam Roach
   Mozilla
   Dallas, TX
   US

   Phone: +1 650 903 0800 x863
   Email: adam@nostrum.com

   Martin Thomson
   Mozilla
   650 Castro St. Suite 300
   Mountain View, CA 94041-2021
   US

   Phone: +1 650 903 0800
   Email: mt@moilla.com