

Internet Engineering Task Force (IETF)
Request for Comments: 6466
Category: Standards Track
ISSN: 2070-1721

G. Salgueiro
Cisco Systems
December 2011

IANA Registration of the 'image' Media Type
for the Session Description Protocol (SDP)

Abstract

This document describes the usage of the 'image' media type and registers it with IANA as a top-level media type for the Session Description Protocol (SDP). This media type is primarily used by SDP to negotiate and establish T.38 media streams.

Status of This Memo

This is an Internet Standards Track document.

This document is a product of the Internet Engineering Task Force (IETF). It represents the consensus of the IETF community. It has received public review and has been approved for publication by the Internet Engineering Steering Group (IESG). Further information on Internet Standards is available in Section 2 of RFC 5741.

Information about the current status of this document, any errata, and how to provide feedback on it may be obtained at <http://www.rfc-editor.org/info/rfc6466>.

Copyright Notice

Copyright (c) 2011 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 (<http://trustee.ietf.org/license-info>) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must include Simplified BSD License text as described in Section 4.e of the Trust Legal Provisions and are provided without warranty as described in the Simplified BSD License.

Table of Contents

1. Overview	2
2. Conventions Used in This Document	3
3. IANA Considerations	3
4. Security Considerations	4
5. Acknowledgements	4
6. References	5
6.1. Normative References	5
6.2. Informative References	5

1. Overview

In an earlier version of the SDP specification [RFC2327] of packetized media types, such as those used with the Real-time Transport Protocol (RTP) [RFC3550], share the namespace with Multipurpose Internet Mail Extensions (MIME) media types registry [RFC4288] [RFC4289] (i.e., "MIME media types"). This is in contrast to the latest version of the SDP specification [RFC4566], which requested that an SDP-specific media type registry be created and maintained by IANA. The top-level SDP media content types registered by RFC 4566 [RFC4566] are 'audio', 'video', 'text', 'application', and 'message'. A glaring omission from this list is the 'image' media type.

The 'image' media type is an existing top-level MIME media type and is widely used in SDP implementations for setting up T.38 Real-Time Facsimile [T38] media streams. This media type is extensively referenced by examples in ITU-T T.38 [T38] and IETF Standards Track documents like RFC 4145 [RFC4145]. The following example shows the media description of a T.38 media stream as commonly found in a Session Initiation Protocol (SIP) [RFC3261] INVITE; it contains an SDP offer for T.38 over both UDP Transport Layer (UDPTL) and TCP. For the sake of brevity, only the SDP body of the SIP INVITE request is displayed in this example.

```
v=0
o=alice 53655765 2353687637 IN IP4 pc33.example.com
s=SDP image example
c=IN IP4 192.0.2.2
t=0 0
m=image 49170 udptl t38
a=T38FaxVersion:0
a=T38MaxBitRate:14400
a=T38FaxRateManagement:transferredTCF
a=T38FaxMaxBuffer:262
a=T38FaxMaxDatagram:90
a=T38FaxUdpEC:t38UDPRedundancy
a=sendrecv
m=image 49172 tcp t38
a=T38FaxRateManagement:localTCF
```

The purpose of this document is to register with IANA the 'image' media type as a top-level SDP media type. This ensures seamless continuity with documentation that uses the 'image' MIME media type and the previously registered MIME media sub-types like 'image/t38' [RFC3362] that are used as SDP media descriptors for T.38 [T38].

This document complies with the request of Section 8.2.1 of RFC 4566 [RFC4566] that indicates:

The same rules should apply for media names as for top-level media content types, and where possible the same name should be registered for SDP as for MIME. For media other than existing top-level media content types, a Standards Track RFC MUST be produced for a new top-level content type to be registered, and the registration MUST provide good justification why no existing media name is appropriate.

2. Conventions Used in This Document

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].

3. IANA Considerations

IANA has registered an 'image' token in the media sub-registry of the Session Description Protocols (SDP) Parameters registry. This registration contains the required information elements outlined in the SDP registration procedure defined in Section 8.2.8 of RFC 4566 [RFC4566].

(1) Contact Information:

Name: Gonzalo Salgueiro
Email: gsalguei@cisco.com
Telephone Number: (919) 392-3266

(2) Name being registered (as it will appear in SDP): image

(3) Long-form name in English: image

(4) Type of name ('media', 'proto', 'fmt', 'bwtype', 'nettype', or 'addrtype'): media

(5) Purpose of the registered name:

The 'image' media type for the Session Description Protocol is used to describe a media stream whose content consists of one or more separate images that require appropriate hardware to display. The media subtype further describes the specific format of the image. Currently, the 'image' media type for SDP is used ubiquitously by the SIP control protocol to establish T.38 media streams.

(6) Specification for the registered name: RFC 6466

4. Security Considerations

The 'image' media type registered by this document in the SDP parameters registry maintained by IANA is primarily for use by the offer/answer model of the Session Description Protocol [RFC3264] for the negotiation and establishment of T.38 [T38] media streams using SIP [RFC3261]. This additional SDP media type does not introduce any security considerations beyond those detailed in Section 7 of RFC 4566 [RFC4566].

The security vulnerabilities in T.38 [T38] and its associated transport protocols (TCP [RFC0793], UDP [RFC0768], and RTP [RFC3550]) are well documented in each of their respective specifications. The ability to exchange images other than T.38 can expose the recipient to potentially malicious executable code.

5. Acknowledgements

Thanks go to the chairs of the IETF Multiparty Multimedia Session Control (MMUSIC) working group (Miguel A. Garcia and Flemming Andreassen) for their guidance, encouragement, and the creation of the

media type registry. Special thanks to Miguel A. Garcia for his thorough and insightful review of the many draft revisions of this document.

This document has benefited from the discussion and review of the MMUSIC working group, especially the detailed and thoughtful comments and corrections of Keith Drage, Yasubumi Chimura, Kevin P. Fleming, Bert Greevenbosch, and Gonzalo Camarillo.

The author would also like to acknowledge the considerable efforts of Kevin P. Fleming and the members of the Fax-over-IP (FoIP) TG in the SIP Forum that contributed to the new revision of the ITU-T T.38 Recommendation that prompted the need to register the 'image' media type for SDP.

6. References

6.1. 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.

6.2. Informative References

- [RFC0768] Postel, J., "User Datagram Protocol", STD 6, RFC 768, August 1980.
- [RFC0793] Postel, J., "Transmission Control Protocol", STD 7, RFC 793, September 1981.
- [RFC2327] Handley, M. and V. Jacobson, "SDP: Session Description Protocol", RFC 2327, April 1998.
- [RFC3261] Rosenberg, J., Schulzrinne, H., Camarillo, G., Johnston, A., Peterson, J., Sparks, R., Handley, M., and E. Schooler, "SIP: Session Initiation Protocol", RFC 3261, June 2002.
- [RFC3264] Rosenberg, J. and H. Schulzrinne, "An Offer/Answer Model with Session Description Protocol (SDP)", RFC 3264, June 2002.
- [RFC3362] Parsons, G., "Real-time Facsimile (T.38) - image/t38 MIME Sub-type Registration", RFC 3362, August 2002.

- [RFC3550] Schulzrinne, H., Casner, S., Frederick, R., and V. Jacobson, "RTP: A Transport Protocol for Real-Time Applications", STD 64, RFC 3550, July 2003.
- [RFC4145] Yon, D. and G. Camarillo, "TCP-Based Media Transport in the Session Description Protocol (SDP)", RFC 4145, September 2005.
- [RFC4288] Freed, N. and J. Klensin, "Media Type Specifications and Registration Procedures", BCP 13, RFC 4288, December 2005.
- [RFC4289] Freed, N. and J. Klensin, "Multipurpose Internet Mail Extensions (MIME) Part Four: Registration Procedures", BCP 13, RFC 4289, December 2005.
- [T38] International Telecommunication Union, "Procedures for real-time Group 3 facsimile communication over IP Networks", ITU-T Recommendation T.38 (Pre-Published), September 2010, <<http://www.itu.int/rec/T-REC-T.38-201009-P/en>>.

Author's Address

Gonzalo Salgueiro
Cisco Systems
7200-12 Kit Creek Road
Research Triangle Park, NC 27709
US

EMail: gsalguei@cisco.com