

Network Working Group
Request for Comments: 3839
Category: Standards Track

R. Castagno
Nokia Mobile Phones
D. Singer
Apple Computer, Inc.
July 2004

MIME Type Registrations for
3rd Generation Partnership Project (3GPP) Multimedia files

Status of this Memo

This document specifies an Internet standards track protocol for the Internet community, and requests discussion and suggestions for improvements. Please refer to the current edition of the "Internet Official Protocol Standards" (STD 1) for the standardization state and status of this protocol. Distribution of this memo is unlimited.

Copyright Notice

Copyright (C) The Internet Society (2004).

Abstract

This document serves to register and document the standard MIME types associated with the 3GPP multimedia file format, which is part of the family based on the ISO Media File Format.

1. Introduction

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 BCP 14, RFC 2119 [RFC2119].

The third-generation partnership project (3GPP) for third-generation cellular telephony has defined a standard file format to contain audio/visual sequences which may be downloaded to cellular phones [3GPP]. At the time of writing, the 3GPP file format (3GP) can contain H.263 or MPEG-4 video, and AMR Narrow-band speech, AMR wide-band speech, or AAC audio, and 3GPP timed text.

Within the file, as with all files in the 'ISO' family, there is an intrinsic file-type box, which identifies those specifications to which the file complies, and which players (possibly compliant with only one specification) are permitted by the content author to play the file. This identification is through four-letter 'brands'.

Files identified by the MIME [MIME1] type defined here MUST contain a brand defined in a standard issued by 3GPP that can apply to 3GPP files, in their compatible brands list.

The MIME types defined here are needed to correctly identify such files when they are served over HTTP, included in multi-part documents, or used in other places where MIME types are used.

2. Security Considerations

The 3GPP file format may contain audio, video, and displayable text data. There is currently no provision for 'active' elements (such as scripts) of any kind.

Clearly it is possible to author malicious files which attempt to call for an excessively large picture size, high sampling-rate audio etc. However, clients can and usually do protect themselves against this kind of attack.

It should be noted that selected metadata fields may encompass information partly intended to protect the media against unauthorized use or distribution. In this case, the intention is that alteration or removal of the data in the field would be treated as an offense under national agreements based on World Intellectual Property Organization (WIPO) treaties.

3GPP files have an extensible structure, so that it is theoretically possible that metadata fields or media formats could be defined in the future which could be used to induce particular actions on the part of the recipient, thus presenting additional security risks. However, this type of capability is currently not supported in the referenced specification.

There is no current provision in the standards for encryption, signing, or authentication of these file formats.

3. MIME Types

This registration applies to all files defined as using the '3GP' file format and identified with a suitable brand in a 3GPP specification. The usual file suffix for all these files is ".3gp".

3.1. Files with audio but no video

The type "audio/3gpp" may be used for files containing audio but no visual presentation (neither video nor timed text, for example).

To: ietf-types@iana.org

Subject: Registration of Standard MIME media type audio/3gpp

MIME media type name: audio
MIME subtype name: 3gpp
Required parameters: none
Optional parameters: none

Ongoing work related to this registration may introduce new optional parameters. One example area of effort may introduce a parameter that would allow for codecs in use within the MIME type to be asserted and determined without examination of the file. Those with interests in the area should monitor registrations for updates.

Encoding considerations: files are binary and should be transmitted in a suitable encoding without CR/LF conversion, 7-bit stripping etc.; base64 is a suitable encoding. Note that this MIME type is used only for files; separate types are used for real-time transfer, such as for the RTP payload format for AMR audio [RFC3267].

Security considerations: see the security considerations section in RFC 3839

Interoperability considerations: The 3GPP organization has defined the specification, interoperability, and conformance, and conducts regular interoperability testing.

Published specification: 3GPP 26.234, Release 5; 3GPP 26.244, Release 6 or later. 3GPP specifications are publicly accessible at the 3GPP web site, www.3gpp.org.

Applications which use this media type: Multi-media

Additional information: The type "audio/3gpp" MAY be used for files containing audio but no visual presentation. Files served under this type MUST NOT contain any visual material. (Note that 3GPP timed text is visually presented and is considered to be visual material).

Magic number(s): None. However, the file-type box must occur first in the file, and MUST contain a 3GPP brand in its compatible brands list.

File extension(s): 3gp and 3gpp are both declared at <http://www.nist.gov/nics/>; 3gp is preferred

Macintosh File Type Code(s): '3gpp'

Person & email address to contact for further information: Nokia MIME manager, mime@nokia.com

Intended usage: COMMON

Change controller: 3GPP

3.2. Any files

The type "video/3gpp" is valid for all files. It is valid to serve an audio-only file as "video/3gpp".

To: ietf-types@iana.org

Subject: Registration of Standard MIME media type video/3gpp

MIME media type name: video

MIME subtype name: 3gpp

Required parameters: none

Optional parameters: none

Encoding considerations: files are binary and should be transmitted in a suitable encoding without CR/LF conversion, 7-bit stripping etc.; base64 is a suitable encoding. Note that this MIME type is used only for files; separate types are used for real-time transfer, such as for the RTP payload formats for H.263 [RFC2429] and AMR audio [RFC3267].

Security considerations: see the security considerations section in RFC 3839

Interoperability considerations: The 3GPP organization has defined the specification, interoperability, and conformance, and conducts regular interoperability testing.

Published specification: 3GPP 26.234, Release 5; 3GPP 26.244, Release 6 or later. 3GPP specifications are publicly accessible at the 3GPP web site, www.3gpp.org.

Applications which use this media type: Multi-media

Additional information:

Magic number(s): None. However, the file-type box must occur first in the file, and MUST contain a 3GPP brand in its compatible brands list.

File extension(s): 3gp and 3gpp are both declared at <http://www.nist.gov/nics/>; 3gp is preferred

Macintosh File Type Code(s): '3gpp'

Person & email address to contact for further information: Nokia MIME manager, mime@nokia.com

Intended usage: COMMON

Change controller: 3GPP

4. IANA Considerations

This document registers the MIME types audio/3gpp and video/3gpp, defined above.

5. Acknowledgments

The review of the 3GPP SA4 committee is gratefully acknowledged, in particular Per Frojdh. The chairs of the AVT working group, in particular Colin Perkins, have provided both excellent guidance and feedback, for which the authors are grateful.

6. References

6.1. Normative References

- [3GPP] Published specifications in releases 5 and 6: Release 5: 3GPP TS 26.234: Transparent end-to-end packet switched streaming service (PSS); Protocols and codecs. Release 6: 3GPP TS 26.244: Transparent end-to-end packet switched streaming service (PSS); 3GPP file format (3GP)
- [MIME1] Freed, N. and N. Borenstein, "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies", RFC 2045, November 1996.
- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997.

6.2. Informative References

- [RFC2429] Bormann, C., Cline, L., Deisher, G., Gardos, T., Maciocco, C., Newell, D., Ott, J., Sullivan, G., Wenger, S. and C. Zhu, "RTP Payload Format for the 1998 Version of ITU-T Rec. H.263 Video (H.263+)", RFC 2429, October 1998.
- [RFC3267] Sjoberg, J., Westerlund, M., Lakanien, A. and Q. Xie, "Real-Time Transport Protocol (RTP) Payload Format and File Storage Format for the Adaptive Multi-Rate (AMR) and Adaptive Multi-Rate WideBand (AMR-WB) Audio Codecs", RFC 3267, June 2002.

7. Authors' Contact Information

Roberto Castagno
Nokia Mobile Phones
PO Box 88, FIN-33721 Tampere
(Tieteenkatu 1, FIN-33720 Tampere)
Finland

Phone: +358 7180 35796
EMail: roberto.castagno@nokia.com

David Singer
Apple Computer, Inc.
One Infinite Loop, MS:302-3MT
Cupertino CA 95014
USA

Phone: +1 408 974 3162
EMail: singer@apple.com

8. Full Copyright Statement

Copyright (C) The Internet Society (2004). This document is subject to the rights, licenses and restrictions contained in BCP 78, and except as set forth therein, the authors retain all their rights.

This document and the information contained herein are provided on an "AS IS" basis and THE CONTRIBUTOR, THE ORGANIZATION HE/SHE REPRESENTS OR IS SPONSORED BY (IF ANY), THE INTERNET SOCIETY AND THE INTERNET ENGINEERING TASK FORCE DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE INFORMATION HEREIN WILL NOT INFRINGE ANY RIGHTS OR ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Intellectual Property

The IETF takes no position regarding the validity or scope of any Intellectual Property Rights or other rights that might be claimed to pertain to the implementation or use of the technology described in this document or the extent to which any license under such rights might or might not be available; nor does it represent that it has made any independent effort to identify any such rights. Information on the procedures with respect to rights in RFC documents can be found in BCP 78 and BCP 79.

Copies of IPR disclosures made to the IETF Secretariat and any assurances of licenses to be made available, or the result of an attempt made to obtain a general license or permission for the use of such proprietary rights by implementers or users of this specification can be obtained from the IETF on-line IPR repository at <http://www.ietf.org/ipr>.

The IETF invites any interested party to bring to its attention any copyrights, patents or patent applications, or other proprietary rights that may cover technology that may be required to implement this standard. Please address the information to the IETF at ietf-ipr@ietf.org.

Acknowledgement

Funding for the RFC Editor function is currently provided by the Internet Society.

