

MIME Type Registrations for 3GPP2 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 (2006).

Abstract

This document serves to register and document the standard MIME types associated with the 3GPP2 multimedia file format, which is part of the family based on the ISO Media File Format.

Table of Contents

1. Introduction	1
1.1. Conventions Used in This Document	2
2. Security Considerations	2
3. MIME Types	3
3.1. Files with Audio but No Video	3
3.2. Any Files	4
4. IANA Considerations	5
5. Acknowledgements	6
6. References	6
6.1. Normative References	6
6.2. Informative References	6

1. Introduction

The third-generation partnership project 2 (3GPP2) for 3rd generation cellular telephony has defined a standard file format to contain audio/visual sequences that may be downloaded to cellular phones [3gpp2]. At the time of writing, the 3GPP2 file format (3G2) can contain H.263, H.264, or MPEG-4 video; and 13K Vocoder, EVRC or AMR Narrow-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 in this document MUST contain, in their compatible brands list, a brand defined in a standard (issued by 3GPP2) that can apply to 3GPP2 files.

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

1.1. Conventions Used in This Document

In this document, the key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" are to be interpreted as described in RFC 2119 [RFC2119].

2. Security Considerations

The 3GPP2 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 that 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 agreement-based World Intellectual Property Organization (WIPO) treaties.

3GPP2 files have an extensible structure, so it is theoretically possible that metadata fields or media formats could be defined in the future that could be used to induce particular actions on the part of the recipient, thus presenting additional security risks; but this type of capability is currently not supported in the referenced specification.

Encryption, signing, or authentication of these file formats can be done using any media-independent transformations of the file or media data.

3. MIME Types

This registration applies to all files defined as using the '3G2' file format and identified with a suitable brand in a 3GPP2 specification. The usual file suffix for all these files is ".3g2".

3.1. Files with Audio but No Video

The type "audio/3gpp2" 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/3gpp2

MIME media type name:

audio

MIME subtype name:

3gpp2

Required parameters:

None.

Optional parameters:

Codecs. See [Bucket]. If the audio/3gpp2 body part contains another container format, the Codecs parameter MUST list all codecs indicated by all formats, including any contained formats.

Optional parameter values:

[3gpp2]

Encoding considerations:

This data is 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 13K vocoder speech [RFC2658].

Security considerations:

See the security considerations section in RFC 4393 (this document).

Interoperability considerations:

The 3GPP2 organization has defined the specification of the media format [3gpp2]. Interoperability and conformance testing is done in cooperation with other bodies, including the Open Mobile Alliance (OMA) <<http://www.openmobilealliance.org>> and the International Multimedia Telecommunications Consortium (IMTC) <<http://www.imtc.org/>>.

Published specification:

3GPP2 C.S0045, 3GPP2 C.S0050 [3gpp2]

3GPP2 specifications are publicly accessible at the 3GPP2 web site, <<http://www.3gpp2.org>>.

Applications that use this media type:

Multi-media

Additional information:

The type "audio/3gpp2" 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 visual material).

Magic number(s):

None. However, the file-type box must occur first in the file, and MUST contain a 3GPP2 brand in its compatible brands list.

File extension(s):

3g2 and 3gpp2 are both declared at <<http://www.nist.gov/nics/>>; 3g2 is preferred.

Macintosh file type code(s):

'3gp2'

Person & email address to contact for further information:

H. Garudadri, hgarudadri@qualcomm.com

Intended usage:

COMMON

Change controller:

3GPP2

3.2. Any Files

The type "video/3gpp2" is valid for all files. It is valid to serve an audio-only file as "video/3gpp2".

To: ietf-types@iana.org

Subject: Registration of Standard MIME media type video/3gpp2

MIME media type name:

video

MIME subtype name:

3gpp2

Required parameters:

None

Optional parameters:

Codecs. See [Bucket]. If the video/3gpp2 body part contains another container format, the Codecs parameter MUST list all codecs indicated by all formats, including any contained formats.

Optional parameter values:

[3gpp2]

Encoding considerations:

This data is 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 13K vocoder speech [RFC2658].

Security considerations:

See the security considerations section in RFC 4393 (this document).

Interoperability considerations:

The 3GPP2 organization has defined the specification of the media format [3gpp2]. Interoperability and conformance testing is done in cooperation with other bodies, including the Open Mobile Alliance (OMA) <<http://www.openmobilealliance.org>> and the International Multimedia Telecommunications Consortium (IMTC) <<http://www.imtc.org/>>.

Published specification:

3GPP2 C.S0045, 3GPP2 C.S0050 [3gpp2]

3GPP2 specifications are publicly accessible at the 3GPP2 web site, <<http://www.3gpp2.org>>.

Applications that 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 3GPP2 brand in its compatible brands list.

File extension(s):

3g2 and 3gpp2 are both declared at <<http://www.nist.gov/nics/>>; 3g2 is preferred.

Macintosh file type code(s):

'3gp2'

Person & email address to contact for further information:

H.Garudadri, hgarudadri@qualcomm.com

Intended usage:

COMMON

Change controller:

3GPP2

4. IANA Considerations

This document registers the MIME media types audio/3gpp2 and video/3gpp2, defined above.

5. Acknowledgements

This document used RFC 3839 as a template. The authors of RFC 3839, R. Castagno, and D. Singer, are gratefully acknowledged.

6. References

6.1. Normative References

- [3gpp2] Published specifications: C.S0050: 3GPP2 File Formats for Multimedia Services. C.S0045: Multimedia Messaging Service (MMS) Media Format and Codecs for cdma2000 Spread Spectrum Systems.
- [Bucket] Gellens, R., Singer, D., and P. Frojdh, "The Codecs Parameter for "Bucket" Media Types", RFC 4281, November 2005.
- [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.
- [RFC2658] McKay, K., "RTP Payload Format for PureVoice(tm) Audio", RFC 2658, August 1999.

Author's Address

Harinath Garudadri
Qualcomm Inc
5775 Morehouse Dr.
San Diego, CA 92121

Phone: +1 858 651 6383
EMail: hgarudadri@qualcomm.com

Full Copyright Statement

Copyright (C) The Internet Society (2006).

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 provided by the IETF Administrative Support Activity (IASA).

