
Annex A (normative): MIME Type Registrations for 3GP files

A.1 MIME Types

A.1.1 General

This registration is an update and replacement of RFC 3839. It 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". The difference between the current registration and RFC 3839 is the inclusion of two optional parameters.

A.1.2 Files with audio but no visual content

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

Type name: audio

Subtype name: 3gpp

Required parameters: none

Optional parameters:

codecs: is a single value or a comma-separated list that identifies the codec(s) needed for rendering the content contained (in tracks) of a file. The codecs parameter is defined in RFC 4281 [32]. The ISO file format name space and ISO syntax in clauses 3.2 and 3.3 of RFC 4281, respectively, shall be used together with additions defined in clause A.2.2 of the present document.

types: is a single value or a comma-separated list that identifies the MIME media types of the content contained (in items) in a file. It is defined in clause A.2.3 of the present document.

Note that if either the codecs or the types parameter is used, and both content in tracks and items are needed for rendering the content of a file, then both the codecs and the types parameter shall be used.

Encoding considerations: files are binary and should be transmitted in a suitable encoding without CR/LF conversion, 7-bit stripping etc.; base64 (RFC 4648 [33]) is a suitable encoding.

Security considerations: see the security considerations section in A.3 of the present document.

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

Published specification: 3GPP TS 26.234, Release 5; 3GPP TS 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 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:

Per Fröjdh
Per.Frojdh@ericsson.com

Intended usage: COMMON

Restrictions on usage: 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 (RFC 3267 [15]).

Authors:

Roberto Castagno
Roberto.Castagno@nokia.com

Per Fröjdh
Per.Frojdh@ericsson.com

David Singer
singer@apple.com

Change controller: 3GPP TSG SA

A.1.3 Any files

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

MIME media type name: video

MIME subtype name: 3gpp

Required parameters: none

Optional parameters:

codecs: is a single value or a comma-separated list that identifies the codec(s) needed for rendering the content contained (in tracks) of a file. The codecs parameter is defined in RFC 4281 [32]. The ISO file format name space and ISO syntax in clauses 3.2 and 3.3 of RFC 4281, respectively, shall be used together with additions defined in clause A.2.2 of the present document.

types: is a single value or a comma-separated list that identifies the MIME media types of the content contained (in items) in a file. It is defined in clause A.2.3 of the present document.

Note that if either the codecs or the types parameter is used, and both content in tracks and items are needed for rendering the content of a file, then both the codecs and the types parameter shall be used.

Encoding considerations: files are binary and should be transmitted in a suitable encoding without CR/LF conversion, 7-bit stripping etc.; base64 (RFC 4648 [33]) is a suitable encoding.

Security considerations: see the security considerations section in A.3 of the present document.

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

Published specification: 3GPP TS 26.234, Release 5; 3GPP TS 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:

Per Fröjdh
Per.Frojdh@ericsson.com

Intended usage: COMMON

Restrictions on usage: 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 (RFC 3267 [15]).

Authors:

Roberto Castagno
Roberto.Castagno@nokia.com

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David Singer
singer@apple.com

Change controller: 3GPP TSG SA

A.2 Optional parameters

A.2.1 General

Two optional parameters are defined here for the "audio/3gpp" and "video/3gpp" media types. Additional parameters may be specified by updating the media type registrations. Any unknown parameter shall be ignored.

A.2.2 Codecs parameter

The codecs parameter is defined in RFC 4281. The ISO file format name space and ISO syntax in clauses 3.2 and 3.3 of RFC 4281 [32] shall be used together with extensions to the ISO syntax specified here.

The syntax in clause 3.3 of RFC 4281 defines the usage of the codecs parameter for files based on the ISO base media file format and specifies that the first element of a parameter value is a sample description entry four-character code. It also includes specific definitions for MPEG audio ('mp4a') and MPEG video ('mp4v') where each value in addition to the four-character code includes two elements signalling Object Type Indications and Profile Level Indications (video only). These definitions apply to the MPEG codecs used by the 3GP file format, such as MPEG-4 Visual [10], MPEG-4 AAC [13] and Enhanced aacPlus [23, 24, 25]. Values for other codecs used by the 3GP file format are specified below.

When the first element of a value is 's263', indicating H.263 video [9], the second element is the decimal representation of the profile, e.g., 0 or 3, and the third element is the decimal representation of the level, e.g. 10 or 45.

When the first element of a value is 'avc1', indicating H.264 (AVC) video [29], the second element is the hexadecimal representation of the following three bytes in the sequence parameter set NAL unit specified in [29]: 1) profile_idc, 2) a byte composed of the values of constraint_set0_flag, constraint_set1_flag, constraint_set2_flag, constraint_set3_flag, and reserved_zero_4bits in bit-significance order, starting from the most significant bit, and 3) level_idc. Note that reserved_zero_4bits is required to be equal to 0 in [29], but other values for it may be specified in the future by ITU-T or ISO/IEC.

When the first element of a value is one of the following elements, no other elements are defined for that value:

- 'samr', indicating AMR narrow-band speech [11];
- 'sawb', indicating AMR wide-band speech [12];

- 'sawp', indicating Extended AMR wide-band audio [21];
- 'tx3g', indicating timed text [4].

The following syntax defines all values above in ABNF (RFC 4234 [31]) by extending the definition in clause 3.3 of RFC 4281:

```

id-iso          = iso-gen / iso-mpega / iso-mpegv / iso-amr / iso-amr-wb / iso-amr-wbp / iso-tt / iso-h263 /
                  iso-h264
                  ; iso-gen, iso-mepga, iso-mpegv as defined in RFC 4281
iso-amr         = %x73.61.6d.72 ; 'samr'
iso-amr-wb     = %x73.61.77.62 ; 'sawb'
iso-amr-wbp    = %x73.61.6d.74 ; 'sawp'
iso-tt         = %x74.78.33.67 ; 'tx3g'
iso-h263       = s263 "." h263-profile "." h263-level
iso-h264       = avc1 "." h264-plid
s263           = %x73.32.36.33 ; 's263'
avc1           = %x61.76.63.31 ; 'avc1'
h263-profile   = 1*DIGIT
h263-level    = 1*DIGIT
h264-plid     = 6(DIGIT / "a" / "b" / "c" / "d" / "e" / "f" / "A" / "B" / "C" / "D" / "E" / "F")
                  ; leading "0x" omitted

```

A.2.3 Types parameter

The types parameter is a single value or a comma-separated list that identifies the MIME media types of the content contained (in items) of a 3GP file. Each value consists of a type-subtype pair and corresponds to a value of the content_type field provided for an item in the item information box.

If the types parameter is present, then it shall include all MIME types needed for rendering the content contained (in items) of a file.

The types parameter is defined in ABNF (RFC 4234 [31]) below:

```

types          = "types" "=" type-entries
type-entries   = type-entry / type-list
type-entry     = type "/" subtype *( ";" parameter )
type           = token
subtype        = token
parameter     = attribute "=" value
attribute      = token
value         = token / quoted-string
token         = 1*(%x21 / %x23-27 / %x2A-2B / %x2D-2E / %x30-39
                  / %x41-5A / %x5E-7A / %x7C / %x7E)

```

