

Standards for ID3 Tags

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1 Introduction

This document is intended to provide standards for the use of ID3 tags in MPEG 1 Layer III audio. This document is not a reference for ID3 or the MPEG format. This document heavily references “Standards for Music Information” [SMI] for purposes of data acquisition and formatting. Fields from [SMI] are referred to as “SMI fields”. Both ID3 version 1 and version 2 are covered in detail, and mappings between the fields defined in [SMI] and each ID3 standard are provided.

2 ID3v1

ID3v1 tags must be present in all MPEG 1 Layer III audio files. Specifically, ID3v1.1 must be used; later versions of the ID3v1 standard may be used as long as compatibility is retained.

2.1 Field Mappings

Table 1 is a list of ID3v1.1 fields and their source fields from [SMI]. In some cases, multiple SMI fields may be listed for a single ID3v1.1 field to indicate that the combined content of those SMI fields must be placed into the ID3v1.1 field; further explanation of such fields follows this section. Note that since there is no published standard for ID3v1.1 field names, the fields’ canonical names are used.

Table 1: ID3v1.1 to SMI Field Mappings

ID3v1.1 Field	SMI Field(s)
Artist	Artist name, extra artists
Album	Set title, set subtitle, collection title, collection subtitle
Song title	Track title, track subtitle, modified subtitle
Comment	Continuation of ID3v1.1 “Song title” ^a
Year	Release date
Genre	Genre

^aSee “Song title” in section 2.2.1.

2.1.1 Artist

When adding the SMI extra artists field onto the end of the ID3v1.1 artist field, the content of the extra artists field must be placed in parentheses within the ID3v1.1 artist field, and a single space must precede the opening parenthesis. For example, if the SMI artist name field contained “Some Artist” and the SMI extra artists field contained “Another Artist”, the ID3v1.1 artist field would be “Some Artist (Another Artist)”.

2.1.2 Album

Both the set subtitle and collection subtitle, if any, must each be surrounded by parentheses. If this new parenthetical clause follows a set (non-empty) SMI field, it must be separated from it by a single space. If the collection title and/or subtitle are present and follow the set title and/or subtitle, the collection title/subtitle must be separated from the set title/subtitle by a single hyphen surrounded by exactly one space on each side (“ - ”).

2.1.3 Song title

The track subtitle and modification subtitle, if one or both exist, must be placed in parentheses and placed after the track title. The opening parenthesis must be separated from the track title by exactly one space. If both the track subtitle and the modification subtitle exist, they must be placed in the same set of parentheses and should be separated from each other by a single hyphen surrounded by exactly one space on each side (“ - ”).

2.2 Truncating fields

ID3v1.1 fields are very small relative to the length of most fields for an average track. Because of this, when copying information into ID3v1.1 fields from SMI fields, many fields will have to be truncated. The following rules must be used to truncate ID3v1.1 fields unless specifically excepted elsewhere:

- If multiple SMI fields are listed for an ID3v1.1 field, but the content of the fields is long enough to force truncation of the ID3v1.1 field, all SMI fields added to the ID3v1.1 field after the first SMI field must be included in whole if at all. In other words, after the first SMI field has been added, you can only include the entire content of another SMI field if it will fit in its entirety. For example, if the SMI field set title fits into the ID3v1.1 album field, but only part of the SMI set subtitle field will fit, the set subtitle field cannot be placed into the album title field.
- For fields where multiple SMI fields are listed for an ID3v1.1 field, the SMI fields must be added in order. Appending of SMI fields ends when the first truncation occurs, or when the first SMI field is omitted. Skipping fields with data in them to append other fields is not permitted. For example, in the above example, after the set subtitle field was found not to fit and was subsequently dropped, addition of SMI content to the ID3v1.1 album field ends.
- If a single SMI field is listed, or if multiple SMI fields are listed but the first SMI field exceeds the size for the ID3v1.1 field, the field content must be truncated at the last word boundary (space) that fits into the ID3v1.1 field. For example, if the SMI field artist name contains “Title That Is Too Long For Napster”, it should be truncated as “Title That Is Too

Long For” (not “Title That Is Too Long For Nap”, which reflects the maximum size for the ID3v1.1 artist field).

- If a word boundary is not within the last 33% of an ID3v1.1 field (about 10 characters in most cases), the field must be truncated at the maximum field length. For example, if the SMI set title field holds “SomereallylongstringtoannoypeopleusingID3v1”, the ID3v1.1 album field must be set to “Somereallylongstringtoannoypeo”.

2.2.1 Song title

The ID3v1.1 comment field is treated as part of the ID3v1.1 song title field. To use the comment field, the song title field must be ended on a word boundary and remaining content put into the comment field. The normal rules for truncation apply to the combination of these two fields, not to either individually. The exception to this is the case where there is no word boundary in the ID3v1.1 song title field, in which case the song title must be truncated using normal rules and the ID3v1.1 comment field cannot be used.

For example, if the SMI track title were “Some Title Long Enough To Warrant a Comment That Is Truncated”, the ID3v1.1 song title field would be “Some Title Long Enough To” and the comment field would be “Warrant a Comment That Is”.

2.2.2 Year

The ID3v1.1 field year can only hold four characters. Thus only the YYYY (year) field from the SMI release date field is stored in the ID3v1.1 year field.

2.3 Coalescing tags

When an SMI field is set but contains only tags, this field is considered to be a *tag-only SMI field*. When filling an ID3v1.1 field and one or more tag-only SMI fields immediately follow a set (non-empty) SMI field, the tags from the tag-only SMI fields must be added as new tags to the first preceding non-tag-only SMI field. (See [SMI] for what it means to “add a tag.”) After this merging, the tag-only SMI fields must be considered unset. This process is called *coalescing tags*.

For example, take a track where the SMI set title is “Exploding Sheep”, the SMI set subtitle is “[GB]”, and the SMI collection subtitle is “[CD 1]”. Without coalescing tags, the ID3v1.1 album field would be “Exploding Sheep ([GB]) – ([CD 1])”. After coalescing tags, the title becomes “Exploding Sheep [GB; CD1]”. Note that, since the tag-only fields are considered unset, the various punctuation that was previously added to accommodate them (such as the parentheses and the hyphen) is removed.

3 ID3v2

ID3v2 tags must be present in all MPEG 1 Layer III audio files. Specifically, ID3v2.4.0 must be used; later versions of the ID3v2 standard may be used as long as compatibility is retained.

3.1 Field Mappings

Table 2 is a list of ID3v2.4.0 fields and their source fields from [SMI]. In some cases, multiple SMI fields may be listed for a single ID3v2.4.0 field to indicate that the combined content of those SMI fields must be placed into the ID3v2.4.0 field; further explanation of such fields follows this section. The ID3v2.4.0 field names are taken from [ID3v2NF].

Table 2: ID3v2.4.0 to SMI Field Mappings

ID3v2.4.0 Field	SMI Field(s)
TPE1	Artist name
TPE2	Extra artists
TPE4	Modifying artists
TIPL	Compilation producer
TALB	Set title, set subtitle
TMED	Media type
TDRL	Release date
TSST	Collection title, collection subtitle
TPOS	Collection position, collection total
TCON	Genre
TIT2	Track title
TIT3	Track subtitle, modification subtitle
TRCK	Track position, tracks total

3.1.1 TIPL

The ID3v2.4.0 “involved people” list is a mapping of names to roles. The name for the role used must be “Compilation producer”, with the name being the value of the SMI field compilation producer.

3.1.2 TALB and TSST

The set or collection subtitle, if any, must be surrounded by parentheses. If the parenthetical clause follows any other text, the clause should be preceded by exactly one space.

3.1.3 TPOS and TRCK

The collection position or track position must be separated from the collection total or track total, if any, by a single forward slash (“/”).

3.1.4 TIT3

The track subtitle, if any, must be separated from the modification subtitle, if any, by a single hyphen surrounded by exactly one space on each side (“ - ”).

3.2 Truncating fields

Due to the extremely large sizes afforded to fields by ID3v2.4.0, there should be no situation in which fields would need to be truncated. In the extreme possibility, the same rules for field truncation as in ID3v1 must be used (section 2.2).

3.3 Coalescing tags

When filling in ID3v2.4.0 fields from SMI fields, tags must be coalesced as in section 2.3.

4 Revision history

Version 0.1:

- Initial release.

Version 0.2:

- Fixed a grammar/spelling error or two.

Version 0.3:

- Corrected the ID3v2 field mappings for the SMI field genre: was TIT1, corrected to TCON.
- Added mapping for compilation producer to TIPL.

Version 0.4:

- Described how the two SMI subtitle fields in the ID3v1.1 song title field should be delimited.
- Rewrote some of the general rules for truncating fields. Hopefully the meaning is unchanged.
- Removed the last general rule for field truncation, which said that parentheses-delimited content could end without the closing parenthesis. This should be impossible, given the first rule that no content after the first field can be added unless it fits entirely, and that no first fields are enclosed in parentheses.
- Rewrote truncation of song title section somewhat.

Version 0.5:

- Reworded some sections to make formatting requirements more clear (for example, when talking about adding space before a parenthesis that follows a non-empty field).
- Added section on coalescing tags.
- Fixed bibliography URLs to point to new site.

Version 0.5.1:

- Andy corrected my grammar: parenthesis->parentheses in many places.

\$Revision: 1.5 \$

References

[SMI] "Standards for Music Information." Vers. 0.3. 22 May 2002. 22 May 2002 <<http://www.codefu.org/tagging/smi/smi.pdf>>.

[ID3v2NF] "ID3 tag version 2.4.0 - Native Frames." 1st Nov. 2000. 22 May 2002 <<http://www.id3.org/id3v2.4.0-frames.txt>>.