



**Federal Agencies
Digital Guidelines Initiative**

**Guidelines for Embedding Metadata
in WebVTT Files**

April 15, 2024

The FADGI Audio-Visual Working Group
<http://www.digitizationguidelines.gov/audio-visual/>



Federal Agencies Digital Guidelines Initiative

Guidelines for Embedding Metadata in WebVTT Files

By the Federal Agencies Digital Guidelines Initiative (FADGI) Audio-Visual Working Group
<http://www.digitizationguidelines.gov/audio-visual/>

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Change Log

(To come with revisions)

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1. What is This Document?

This guideline outlines metadata fields and values that FADGI recommends embedding as a data block in WebVTT files. Plain ASCII text WebVTT files contain captions, subtitles, or other descriptive data for audiovisual content. They are derivative files that are intended to be paired with associated AV content during playback, either online or locally. FADGI members recognized that provenance, administrative history, connective, and contextual information was often missing or divorced from WebVTT files in their collections. These guidelines are intended to aid federal agencies in administering their WebVTT files and make data about those files more transparent to all users. The fields and values in the data block help patrons and collection administrators understand what kind of data a WebVTT contains, from where it came, and when, where, and how it was made.

The guidelines are inspired by FADGI's [Guidelines for Embedded Metadata in Broadcast WAVE Files](#) and [Guidelines for Embedding Metadata in DPX Files](#). FADGI encourages best practices for embedding metadata in digital cultural heritage objects.

For more about WebVTT files, see the [WebVTT W3C Candidate Recommendation](#) and the Library of Congress' [WebVTT Format Description Document](#).

1.1. Scope of Guidelines for WebVTT Files

Does this guideline supersede the WebVTT W3C recommendations?

No. FADGI's responsibility is first and foremost to federal agencies. This work was identified as a need by FADGI members who create and administer WebVTT files. This guideline is informed by the WebVTT W3C Candidate Recommendation, but is not associated with it nor an extension of it. This guideline is simply meeting a need identified by FADGI member institutions. Organizations outside of the federal cultural heritage sector employ other methods to track and retain data about WebVTT files. FADGI tested that WebVTT files featuring the data block worked as expected in various players and systems.

Does this project recommend best practices for encoding captions, subtitles, and other information as data tracks in AV container files?

No. FADGI broadly recommends encoding captions, subtitles, and other data into container files where possible and appropriate, but this document does not explore that topic in depth. WebVTT files are broadly used in federal agencies and these guidelines are intended to assist specifically when captions, subtitles, and other data are stored in sidecar WebVTT files. FADGI does not endorse using WebVTT files instead of encoding data into container files.

1.2. Inclusive Language and Terminology

According to the [FADGI glossary](#), "in alignment with terminology changes in the wider software, technology and the GLAM communities, FADGI states that the term primary is an acceptable

substitute for master and the two convey the same intentions and meanings.” This guideline uses the term “primary” instead of “master” to convey that the file presents the best copy produced by a digitizing organization, with best defined as meeting the objectives of a particular project or program.

1.3. FADGI Levels of Recommendation

FADGI develops guidelines and models of good practice but it is not a formal standards-making organization. Therefore, it does not have the authority to declare that conformance is required or mandatory. FADGI’s documents include a tiered approach to adherence.

1.3.1. **Strongly recommended**

If the Working Group had the authority to do so, these would be "required."

1.3.2. **Recommended**

Important information to capture and retain but not essential

1.3.3. **Optional**

Good to retain if there are tools and use cases to support

2. Metadata Guidelines

2.1. Syntax

WebVTT files are Plain ASCII text files. FADGI recommends recording metadata in the second line of the document, immediately following the required WEBVTT statement on the first line. Metadata should be recorded as element and value pairs separated by a colon. For example “File Creation Date: 2024-04-05”. Each element should be placed on a new line. Elements that are repeatable (can contain many values) should have values separated by a semicolon. For example: “Language: eng; fra”. Elements can be organized in any order according to preference within the metadata block, but see the example metadata block (Appendix A) for FADGI’s recommended order.

2.2. Strongly Recommended Elements

If the Working Group had the authority to do so, these would be "required."

Type	
FADGI Application	<p>This element describes the type of information contained in the WebVTT file.</p> <p>The values to choose from are: subtitle, caption, audio description, chapters, or metadata.</p> <p>A WebVTT can have only one type. These values are guided by WebVTT specifications for WebVTT types but are FADGI's variations on the HTML Kind attribute values WebVTT recommends.</p>
Mandatory/optional	Strongly recommended (if the Working Group had authority: "required")
Repeatable	No
Values	Controlled values: subtitle, caption, audio description, chapters, or metadata
Example LC	Type: caption
Example SI	Type: subtitle

Language	
FADGI Application	<p>This element specifies the language(s) used in the WebVTT content displayed to users. It does not define the language in the audio or video stream content, except in instances where the language of the audio or video stream are the same as the WebVTT content (ex, English WebVTT captions for an English language video).</p> <p>This element should complement, but not replace, data contained in WebVTT cue language spans: https://www.w3.org/TR/webvtt1/#webvtt-cue-language-span.</p> <p>This element does not document the language of the WebVTT metadata values.</p>
Mandatory/optional	Strongly recommended (if the Working Group had authority: "required")
Repeatable	Yes
Values	Use ISO 639-3 three letter language codes .
Example LC	Language: eng
Example SI	Language: eng; fra

Responsible Party	
FADGI Application	This element names the entity responsible for the maintenance and preservation of the WebVTT file. Entity designations should be as specific as possible including a two-character country code to avoid the potential for conflict in the responsible organization's name.
Mandatory/optional	Strongly recommended (if the Working Group had authority: "required")
Repeatable	Yes
Values	[Country code]comma space[Entity name]. Use ISO 3166 alpha 2 country codes .
Example LC	Responsible Party: US, LOC/AFC
Example SI	Responsible Party: US, Smithsonian National Museum of African American History and Culture

Media Identifier	
FADGI Application	This element contains a string that is a non ambiguous reference to associated content. The typical usage for this element is the identifier of the work with which the WebVTT is associated and/or from which the WebVTT is derived.
Mandatory/optional	Strongly recommended (if the Working Group had authority: "required")
Repeatable	Yes
Values	If labeled: Identifier [comma space] type [comma space] comment [semicolonspace if more than one identifier] If no labeling: Identifier
Example LC	Media Identifier: 9083934297, lccn
Example SI	Media Identifier: 2012.79.1.16.1a

Originating File	
FADGI Application	<p>Filename for the specific AV file from which the WebVTT was created or is derived. If a derivative access copy was used to create the WebVTT instead of a primary file, record the derivative's file name. This field is intended to help distinguish and surface any discrepancies introduced by versioning of the originating media.</p> <p>Organizations may or may not intend a WebVTT to be accessed together with the originating file.</p>
Mandatory/optional	Strongly recommended (if the Working Group had authority: "required")
Repeatable	No
Values	Free text

Example LC	Originating File: 180419plc1900_1280x720_2000.mp4
Example SI	Originating File: 2012_79_1_16_1a_DER_01.mp4

File Creator	
FADGI Application	Creator of the WebVTT file. The Creator can be different from the Responsible Party - for example, the creator may be a contractor or software employed by the responsible party.
Mandatory/optional	Strongly recommended if known (if the Working Group had authority: "required")
Repeatable	No
Values	If individual: last name [comma space] first name. If organization: free text.
Example LC	File Creator: LOC Multimedia Group
Example SI	File Creator: Farnsworth, Elio

File Creation Date	
FADGI Application	The day the WebVTT file was originally created.
Mandatory/optional	Strongly recommended (if the Working Group had authority: "required")
Repeatable	No
Values	Use ISO 8601 (typically yyyy-mm-dd or yyyy-mm - review the standard for other applications)
Example LC	File Creation Date: 2018-04-21
Example SI	File Creation Date: 2020-04

2.3. Optional Elements

Good to retain if there are tools and use cases to support

Title	
FADGI Application	The title of the work with which the WebVTT is associated and/or from which it is derived.
Mandatory/optional	Optional
Repeatable	No
Values	Free text
Example LC	Title: Staying Human: Poetry in the Age of Technology
Example SI	Title: Black Journal: 26; Alice Coltrane

Origin History	
FADGI Application	This element contains a brief description of the origin and history of the WebVTT file.
Mandatory/optional	Optional
Repeatable	No
Values	Free text
Example LC	Origin History: Created as part of LOC's routine web accessibility processes.
Example SI	Origin History: created with funding provided by the Smithsonian's National Collections Program

Local Usage Element	
FADGI Application	<p>Free text field used for adding local element and value pairs. Allows organizations to add fields to the data block to meet their needs.</p> <p>When an organization decides to utilize this element, they should determine their own metadata rules for the new local element(s) they're adopting.</p> <p>This field is essentially a free text container for additional metadata values not defined by FADGI.</p>
Mandatory/optional	Optional
Repeatable	Yes
Values	Include the local element's name in brackets before the value. Repeat the field with semicolons. <code>[[bracket]] element name [[bracket space]] value [semicolon]</code> .
Example LC	Local Usage Element: <code>[version history] v1.0; [quality control] true</code>
Example SI	Local Usage Element: <code>[version history] version 2.0</code>

2.4. File Naming

WebVTT files are usually named the same as the AV file with which they're paired. In situations where specific filenames are not dictated by presentation or preservation systems, and where reasonable and appropriate, FADGI recommends adding the type and language as subdivisions of the filename. For example:

- *Primary AV file*: "2021690767.mp4"
- *English captions*: "2021690767.caption.eng.vtt"
- *Spanish subtitles*: "2021690767.subtitle.spa.vtt"

This naming convention helps some AV players automatically load the WebVTT files and is a recommended accessibility practice.

Appendix A: Example FADGI WebVTT Data Block

(Data block colored and italicized for emphasis)

WebVTT

Type: caption

Language: eng

Responsible Party: US, Library of Congress

Media Identifier: 2021690767, Library of Congress Control Number

Originating File: 180419plc1900_1280x720_2000.mp4

Title: Staying Human: Poetry in the Age of Technology

File Creator: LOC Multimedia Group

File Creation Date: 2018-04-21

Origin History: Created as part of LOC's routine web accessibility processes.

Local Usage Element: [version history] v1.0; [quality control] true

00:00.680 --> 00:22.090

>> From the Library of
Congress in Washington, DC.

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