



**Guide For Making Video and Multi-Media Products  
Accessible**

**Section 508  
Accessibility of Electronic and Information Technology  
for People with Disabilities**

## Section 508 Reference Guide

### 1194.24 Video and Multimedia Products

#### Overview

These technical specifications define the requirements for accessible video and multimedia presentations, ensuring that equivalent alternatives to sensory information (including captions and audio descriptions) shall be included, received, decoded, and presented in a useable format.

The 1194.24 standards apply to A/V equipment such as digital and analog TVs, VCRs, HDTV set-top boxes, DVD equipment, and in certain circumstances, PCs equipped with TV tuners, receiver cards, or displays used in presentations. The standards also apply to streaming media such as broadcast and cable signals, as well as online presentations.

#### Remember that...

- Intermediary products must comply with these requirements. Alternative presentation of information may be altered in the transmission between two compliant products (e.g., from the cable operator to your agency).
- You usually must convert computer video signals that use standards such as RGB to television standards such as NTSC or PAL by using special conversion adapters, which are readily available on the consumer market.
- Accessibility issues and solutions to traditional video and multimedia products (e.g., analog tape and network broadcasts) are well known, documented, and can be found on the WGBH Media Access Group Web Site.
- For emerging technologies such as web multimedia products, the WAI and the ITTATC provide valuable information.
- There are various free tools that developers may use to add audio descriptions and captions.

#### References

- Guide to the Section 508 Standards for Electronic and Information Technology, Video and Multimedia Products (1194.24) <http://www.access-board.gov/sec508/guide/1194.24.htm>
- MAG at WGBH <http://main.wgbh.org/wgbh/access/access.html>
- NCAM at WGBH <http://ncam.wgbh.org>
- WAI of the W3C <http://www.w3c.org/wai/>
- SMIL Recommendation of the W3C <http://www.w3.org/audiovideo>
- ITTAC <http://www.ittatc.org>
- Television Decoder Circuitry Act of 1990 <http://www.ncicap.org/docs/dcb.htm>

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**1194.24(a) "All analog television displays 13 inches and larger, and computer equipment that includes analog television receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals. As soon as practicable, but not later than July 1, 2002, widescreen digital television (DTV) displays measuring at least 7.8 inches vertically, DTV sets with conventional displays measuring at least 13 inches vertically, and stand-alone DTV tuners, whether or not they are marketed with display screens, and computer equipment that includes DTV receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals."**

***In other words...***

Any analog TV or DTV display or receiver must correctly receive and display closed captions that are transmitted by broadcast television, cable, videotape (e.g., VHS), or DVDs.

***Determining Compliance***

Television displays include a variety of display technologies, including but not limited to CRT, plasma, LCD, and rear/front projection technologies. Review product documentation or consult the manufacturer to ensure compliance for each check point.

For analog and digital computer equipment, televisions, and tuners:

- The product should accurately receive captions (turn on captions and play media known to have captions; verify the captions are available).
- Open or closed caption decoding capabilities should be included in the product.
- The product should display captions correctly.

***Note***

- This section of the law only applies to analog products with displays whose diagonal screen size is equal to or larger than 13 inches. For digital video and multimedia products the law applies to screen sizes that are 7.8 inches vertically for widescreen displays, or 13 inches for conventional displays.

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**1194.24(b) "Television tuners, including tuner cards for use in computers, shall be equipped with secondary audio program playback circuitry."**

***In other words...***

All TV tuners must have the ability to play secondary audio.

***Term***

- **Secondary Audio Program (SAP).**

***Determining Compliance***

To test TV tuners:

- Turn on secondary audio features and tune into a TV channel with known SAP content. Verify that the SAP content is available.

### **Notes**

- The intent of this law is to enhance multimedia experiences for those who are visually impaired. Often secondary audio includes an audio description of the visual content of a presentation that is synchronized with the existing soundtrack.
- Although this portion of the law does not include TVs or displays without tuner circuitry, **Functional Performance Criteria 1194.31(C)** requires agencies to provide "at least one mode of operation and information retrieval that does not require user vision". Therefore it is a good practice to purchase displays with SAP receiving capabilities.
- It is a good practice to ensure that TVs and displays offer SAP capabilities if they support an agency's mission. Attaching stand-alone SAP circuitry can do this.
- The Media Access Group at WGBH publishes a series of consumer guides to issues related to media access. MAG Guide Volume 4 provides information on activating audio descriptions through the SAP channel on stereo TVs and VCRs.

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**1194.24(c) "All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain speech or other audio information necessary for the comprehension of the content, shall be open or closed captioned."**

### ***In other words...***

A video or multimedia presentation must include captions if it satisfies these four conditions:

1. It supports the agency's mission.
2. It is for training or information purposes.
3. It is a production (e.g., it is not simply raw video footage).
4. It includes audio that is essential for understanding the presentation.

### ***Terms***

- **Multimedia presentation.**
- **Open captions.**
- **Closed captions.**

### ***Determining Compliance***

Review training and informational videos and multimedia productions used in the agency.

- Activate captions and ensure that they provide equivalent alternative text.

- If applicable, ensure that there are textual descriptions provided in the captions such that critical auditory information (e.g., an audience clapping, music playing) is conveyed to all users.

#### **Notes**

- Multimedia productions in this section of the law include software presentations such as PowerPoint.
- The **Media Access Group** (MAG) at WGBH publishes a series of consumer guides to issues related to media access. MAG Guide Volume 3 offers guidance to the somewhat complex mandates governing the provision and availability of closed captions and audio descriptions on television.

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**1194.24(d) "All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain visual information necessary for the comprehension of the content, shall be audio described."**

#### ***In other words...***

A video or multimedia presentation must include audio descriptions if it satisfies these four conditions:

1. It supports the agency's mission.
2. It is for training or information purposes.
3. It is a production (e.g., it is not simply raw video footage).
4. It includes images that are essential for understanding the presentation.

#### **Terms**

- **Multimedia presentation.**
- **Audio descriptions.**

#### ***Determining Compliance***

Review training and informational videos and multimedia productions used in the agency.

- Turn on sound features and ensure that there are equivalent alternative audio descriptions of visual content.

#### **Notes**

- Multimedia productions in this section of the law include software presentations such as PowerPoint.
- In addition to this standard, **Functional Performance Criterion 1194.31(a)** of Subpart C requires that, "At least one mode of operation and information retrieval that does not require user vision shall be provided..."

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**1194.24(e) "Display or presentation of alternate text presentation or audio**

**descriptions shall be user-selectable unless permanent."**

*In other words...*

A user of a video or multimedia production should be able to select whether captions and/or audio descriptions are presented, unless they are a permanent part of the production (e.g., open captions).

**Terms**

- **Open captions.**
- **Closed captions.**
- **Audio descriptions.**

**Determining Compliance**

Review training and informational videos and multimedia productions used in the agency.

- Ensure that closed captions may be turned on and off.
- If audio descriptions are not a permanent part of the production, ensure that they may be turned on and off.
- The means of selecting captions or audio descriptions should be accessible, although there is no requirement for interoperability with AT or for text-based selection processes. Selections should be presented using both visual and audible cues. E.g., many DVD menus are primarily visual, so users with vision impairments may have difficulty activating audio descriptions. DVD menus should be designed with visual and audible cues.