Supporting the CVAA with Captioning for Video and Live Meetings
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21st Century Communications and Video Accessibility Act

21st Century Communications and Video Accessibility Act = CVAA
What’s in the CVAA?

- The CVAA addresses multiple topics pertaining to internet media, broadcast media, and more.
- Not solely focused on any group of users.
- Key points:
  - Closed-captioning decoder device scope is improved so that all video devices that receive or display video programming transmitted simultaneously with sound, including those that can receive or display programming carried over the Internet, must support closed captioning.
  - Tasks the FCC with identifying formats and software needed to transmit, receive and display closed captioning and video programming provided via Internet-enabled services and digital wireless services.
  - Tasks the FCC with creating captioning rules for programming on the Internet, including pre-produced and live video.
How does Adobe support deaf and hard-of-hearing users?

**Standards:** Adobe participates on the FCC Video Programming Accessibility Advisory Committee (VPAAC)

**Tooling:** Adobe provides several tools which enable authors to create and offer accessible content.

- **Adobe Premiere** – Professional video editor
- **Adobe Encore** – Professional DVD authoring tool
- **Adobe Connect** - Live online meetings
- **Adobe Flash** – Interactive content and application authoring
- **Open Source Media Framework (OSMF)** – Video/media player toolkit
- **Adobe TV** – Product support videos
- **Adobe Captivate** – Interactive educational content authoring tool
- **Adobe Acrobat** – Provide interactive documents including captioned video
Adobe Premiere Pro

- Adobe Premiere Pro 5.5 offers video editors the ability to import closed captioning data and review results for accurate integration into video.
- Premiere Pro supports speech analysis and script alignment to help video production teams more easily support closed captioning in their workflows.
  - Import CEA-608 and CEA-708 caption data
- Premiere Pro supports caption data export for traditional or HD video, via 3rd party plugins.
• Play back and display 608 and 708 closed captions, synced to your video sequence and viewable in the Program Monitor.
- Importing caption data is a simple menu item.

- Enabling display of captions for the Program Monitor can be enabled and disabled.
Adobe Encore

- Adobe Encore 5.5 is part of Adobe Premiere Pro.
- Encore DVD authors are able to import .SCC caption files for integration into DVD projects.
Adobe Connect

- Adobe® Connect™ is an enterprise web conferencing solution for online meetings, eLearning, and webinars.
- Current version is 8
Adobe Connect offers support for real-time closed captioning.

Vendors that support captioning in Connect include:

- Caption Colorado (http://www.captioncolorado.com)
- WGBH Media Access Group (http://access.wgbh.org)
- Caption First (http://www.captionfirst.com)
- Streamtext (http://www.streamtext.net)
Captions from recorded sessions are also recorded.
The Connect 8 caption pod can record a transcript of captions, offers exports in HTML and text.
Captions can be turned off by any user.
Adobe Connect

- Users have control over display – multiple font sizes and five color and contrast display options
- Users also have playback controls to enable review of missed content
Adobe Flash Professional CS 5.5 supports closed captioning using an open standard.

- W3C TTML 1.0 caption format.

Adobe Flash provides the ability for authors to provide video overlays, for example to allow for the addition of a sign language version for video.

Adobe Flash has provided captioning support for TTML since April 2007.
Flash captioning and sign language at CreatureDiscomforts.org

That's not true though.
Caption support is provided via a standard development component (FLVPlaybackCaptioning).

A variety of player skins are included with a closed captioning toggle provided.
How Does Captioning Work in Flash?

- The FLVPlaybackCaptioning component supports two methods
  - Caption data embedded within video
  - Caption data delivered via an external TTML caption data file
    - TTML has a simple structure based on HTML for easy authoring.
  - In both cases captions are triggered at specific times and displayed

```xml
<?xml version="1.0" encoding="UTF-8"?>
<tt xmlns="http://www.w3.org/2006/04/ttaf1"
    xmlns:tts="http://www.w3.org/2006/04/ttaf1#styling" xml:lang="en">
  <head>
    <styling>
      <style id="defaultSpeaker" tts:fontSize="12" tts:fontFamily="SansSerif" tts:fontWeight="">
      <style id="defaultCaption" tts:fontSize="18" tts:fontFamily="Verdana" tts:fontWeight="">
    </styling>
  </head>

  <body id="thebody" style="defaultCaption">
    <div xml:lang="en">
      <p begin="00:03.89" end="00:07.41">Over 3000 years ago</p>
      <p begin="00:07.41" end="00:12.73">ancient Egypt, one of the <br/>most powerful Emp</p>
      <p begin="00:12.73" end="00:16.09">During its 18th dynasty a young boy</p>
      <p begin="00:16.09" end="00:19.20">just nine years old ascended the throne</p>
    </div>
</tt>
```
Demonstration of Flash Captioning process

His name was Tutankhamon.
Open Source Media Framework

- OSMF supports captioning via TTML presently and a plugin for SMPTE-TT will be released soon.
- Demonstration of SMPTE-TT captioning in an OSMF media player.
Open Source Media Framework

Remember Paladin, the mind and the heart
Adobe TV offers videos to support use of Adobe tools.

Adobe TV supports TTML captions in the media player.
- Videos with closed captions are clearly indicated.
Adobe Captivate supports closed captioning for eLearning presentations and demonstrations.

Authors utilize the built-in closed captioning tool in Adobe Captivate to author captions.
Adobe Captivate

- Adobe Captivate authors are provided with options to control the display appearance of the captioning.
- End users are provided with a caption toggle, but are not currently able to modify the caption appearance.

![CC Project Settings dialog](image)

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This is only a test
Adobe Acrobat

- Adobe Acrobat allows authors of PDF documents to include video, including closed captioning.
User control of captions

- Adobe Flash gives authors the ability to provide extensive control over caption appearance to users.
User control of captions

- Authors can provide support for
  - Switching languages
  - Font and style selection
  - Font color and background
  - Position of captioning
  - Demo (capabilities and example)

- Adobe supports user’s right to view captions in a manner best suited to their preferences.

- More work is needed to standardize preferences and integrate across the Adobe product line.
Consumer role in CVAA process

- Opportunity to demand an ongoing voice – require caption standards developed in a “voluntary consensus” process such as W3C TTML and SMPTE-TT.

- Not all caption standards are developed in an open fashion that allows participation by all interested groups.

- Captions are not just “words on a screen” – consumers need a voice, and a vote.

- Specifying a voluntary consensus standard provides an avenue for innovation and removes dependence on one group to make the right decisions on the behalf of the consumer.

- Talk with your representatives on the FCC VPAAC committees.

- Talk with Adobe to help us understand your concerns and requirements.
Challenges in CVAA process

- Defining too much, defining too little
  - How many colors is enough for caption display?
  - What types of positioning customization are needed?
  - How many font choices are needed?
- Risk of proprietary caption standards being mandated, severely limiting opportunities for consumer input into decisions.
- Short timeline.
Resources

Adobe Links

- Adobe Accessibility Resource Center
  adobe.com/accessibility
- Adobe Accessibility Blog
  blogs.adobe.com/accessibility
- Flash Captioning information
  adobe.com/accessibility/products/flash/captions.html

SMPTE-TT

- smpte.org/standards/st2052-1-2010.pdf

DFXP

- W3C TTML 1.0
  w3.org/TR/ttad1-dfxp/