

Options and Best Practices for Accessible Multimedia

Sheryl Ballenger, Ph.D.

Jesús Pulido

Center for Inclusive Design & Innovation

College of Design | Georgia Institute of Technology

Center for Inclusive Design and Innovation (CIDI) History

We were incubated out of the University System of Georgia in 2005 to help post-secondary disability services offices provide complete, timely, efficient accommodations to students with print disabilities so they can be more independent and productive in their academic environments. (Formerly AMAC Accessibility)

We understand higher education because we were born in and live in higher education.

CIDI Offers

- Accessible Textbooks and course materials
- Captioned & Described Media
- Remote Realtime Captioning
- Braille Services
- UX/ ICT Consulting and Training
- Student Accommodation Manager (SAM)
- Tools For Life services (All ages - Assistive Technology)
- Technical Support
- Assistive Technology for students
- Training and Educational courses
- Research in Accessibility

Captioning & Described Media Services

- Provide remote realtime captioning for classroom sessions, meetings, conferences, and events such as commencement ceremonies.
- Create accessible and high quality captions for post-production video media.
- Provide a complete Audio Description service, including initial researching of video content, writing scripts, recording audio with human voice actors, editing audio for clarity, and adding the final audio recordings to video content.
- Prepare trainings and presentations (just like this one).



Accessibility

Accessibility is the “extent to which products, systems, services, environments and facilities can be used by people from a population with the widest range of characteristics and capabilities to achieve a specified goal in a specified context of use.” (IOS TC 159, Ergonomics).



Guidelines to Assist Meeting Legal Requirements

The Web Accessibility Initiative (WAI) aims to make the web accessible for all to navigate, interact, and contribute to.

The Web Content Accessibility Guidelines (WCAG 2.0, 2.1) promotes universal web standards for all.

It provides guidelines, resources and information about designing, developing and writing for inclusiveness.



Laws Applied to Multimedia

- ✓ Americans with Disabilities Act (ADA) of 1990 (amended 2009 as ADAAA) aims to provide social inclusion for all persons with disabilities in schools, cities, and transportation.
- ✓ 1998 Rehabilitation Act added **Section 508** - Section 508 refers specifically to **electronic content**, it states all persons should have equal access to all electronic documentation
- ✓ 2010 21st Century Communications & Video Accessibility Act updates previous federal communication laws to include **digital, broadband and mobile**. (*VOIP, web browsers, search engines, texting, closed captioning for broadcast*)

Best Practices for Accessible Multimedia

Accessibility Policy and an Action Plan with clear goals, priorities and timelines, that includes mapping out all digital services, products, and systems to be addressed. List stakeholders with roles and responsibilities, on-going quality assurance, establish mandatory training.

Establish an Accessible Media Policy. Examples ranging from simple to complex:

1) George Brown College:

<http://researchguides.georgebrown.ca/captionedmedia>

2) Wisconsin Technical College System Captioned Media Guide:

<https://mywtcs.wtcsystem.edu/wtcsinternal/cmospages/getdocumentfile.aspx?nodeguid=838d199f-3a2b-447a-b286-3a7ed1d05441>

Internal Practices for Accessible Multimedia

Implement a Plan to Create Accessible Media. Begin by determining which media continues to be relevant and current:

- 1) Establish timelines in the plan (goal is moving forward)
- 2) Establish a method to prioritize media (begin with public facing media)
- 3) What are the needs of current users?
- 4) What will the user's needs be next year/semester/level?
- 5) What are needs of staff (ethics training videos, recorded training media).

Accessibility language in procurement is important – Beware, not everyone uses the word “accessible” in the same way we mean accessible!

Captioning- Best Practices

WCAG 2.0 & 2.1 Captions on recorded media must be accurate and synchronized.

Accurate - free from error

All caption frames should be precisely time-synched to the audio.

Described and Captioned Media Program – DCMP <https://dcmp.org>

Non-speech sounds like [LAUGHTER] should be added in square brackets.

Punctuation should be used for maximum clarity in the text, not necessarily for textbook style.

Speaker identification should be included.

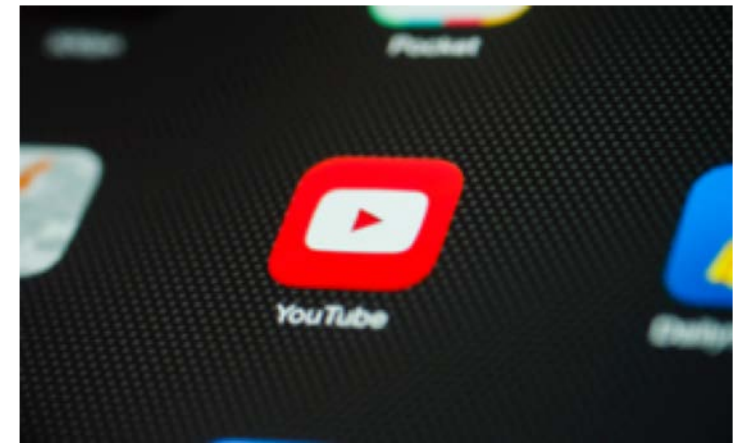
Technical Aspects - Captions

Structure and timing

- Each caption frame should hold 1 to 3 lines of text onscreen at a time, viewable for anywhere from 3 to 7 seconds.
- Each frame should not exceed 32 characters.

User interface accessibility (Accessible Media Player) must be considered.

YouTube considerations



Awareness of Plain Language

<http://www.plainlanguage.gov/plLaw/index.cfm>

Common Language

When the process of freeing a vehicle that has been stuck results in ruts or holes, the operator will fill the rut or hole created by such activity before removing the vehicle from the immediate area.

Plain Language

If you make a hole while freeing a stuck vehicle, you must fill the hole before you drive away.

Plain Writing

<http://www.plainlanguage.gov>

- Use common words. If you must use unfamiliar words, define them for the reader.
- Avoid confusing words and phrases.
- Avoid or explain acronyms, jargon, and idioms.
- Write sentences with no more than 15 words.
- Convey one idea per sentence
- Be specific and comprehensive. Do not assume people's knowledge or that they know what to do.
- Speak directly to the reader, using "you" and "your."
- Use active voice.
- Avoid "if/then" sentences.

Right Thing to Do

Approximately one in five people in the United States, or 64 million, have a disability.

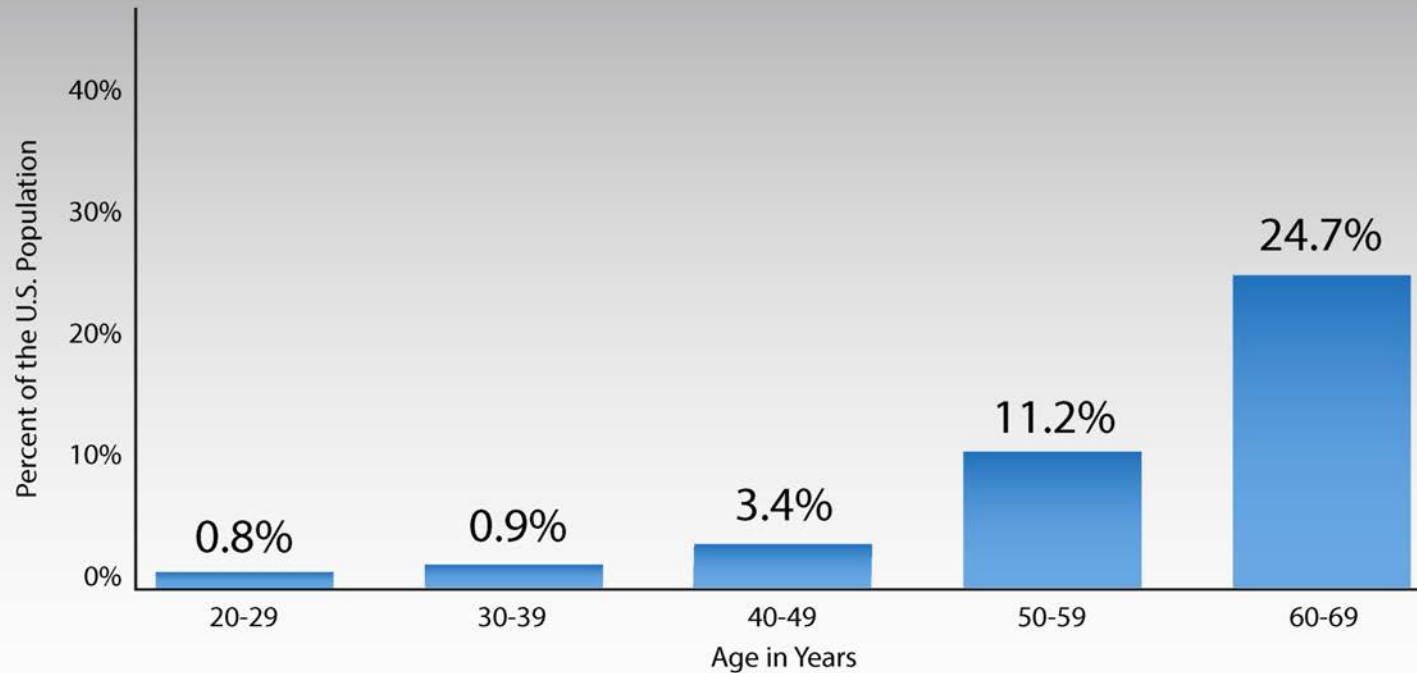
Of that number, 22 million, or 35%, are of prime working age (ages 16 to 64) and have at least one disability.

About **3.6%** of the **U.S. population**, or about 11 million individuals, consider themselves deaf or have serious difficulty hearing.



Do it for You!

Hearing Loss* Increases With Age



* Speech-frequency hearing loss in both ears (bilateral). The figure shows the percent of the U.S. population aged 20 to 69 with speech-frequency hearing loss in both ears. Hearing loss is defined as when the average threshold across four speech frequencies (0.5–1–2–4 kHz) is greater than 25 decibels hearing level. A loss of 25 decibels in the speech frequency range is equal to very soft speech in a quiet room.

Source: National Health and Nutrition Examination Survey, 2011-2012. Analysis reported in *JAMA Otolaryngology – Head & Neck Surgery*, December 2016. <https://www.nidcd.nih.gov/>

Press release: <https://www.nidcd.nih.gov/news/2016/hearing-loss-prevalence-declining-us-adults-aged-20-69>

Benefits Everybody

- Accessible multimedia; such as combined sound, video, and text, enables users in a variety of situations.
- Video viewable in noise sensitive environments (hospitals, trains, work, etc.)
- People who need dual input benefit from seeing and hearing.
- ESL people benefit from captions.
- Metadata in SEO- searches find the text, not the video.
- Audio description describes the visual content.



Your Audience's Needs

According to Facebook, 85% of videos are viewed with the volume off.

Silent auto-play is the default setting for mobile audio. All mobile devices have the capability of displaying captions, if you add them.

Captions needed.

Explainer video is the latest fad (video with music and on-screen text),

Audio description needed.

Why?

By 2021, a million minutes (17,000 hours) of video content will cross global IP networks every, single second. You want EVERYONE to know about your content!



Current Status

- More than 500 million hours of videos are watched on YouTube each day.
- More video content is uploaded in 30 days than the major US television networks have created in 30 years.
- The average user spends 88% more time on a website with video.
- Viewers retain 95% of a message when they watch it in a video compared to 10% when reading it in text.

-Forbes (2018)

Less than Positive Publicity

UC Berkeley– withdrew 20,000 public videos rather than caption.

Harvard and MIT - failing to provide closed captioning in their online lectures, courses, podcasts and other educational materials

Real estate companies - Visually impaired and Deaf clients claim websites do not offer features making it possible to use websites to shop for homes (100 clients in 40 states).

Beyonce's company Parkwood Entertainment – Website is an exclusively visual interface without any alt text.



Challenge for Georgia



Focus on

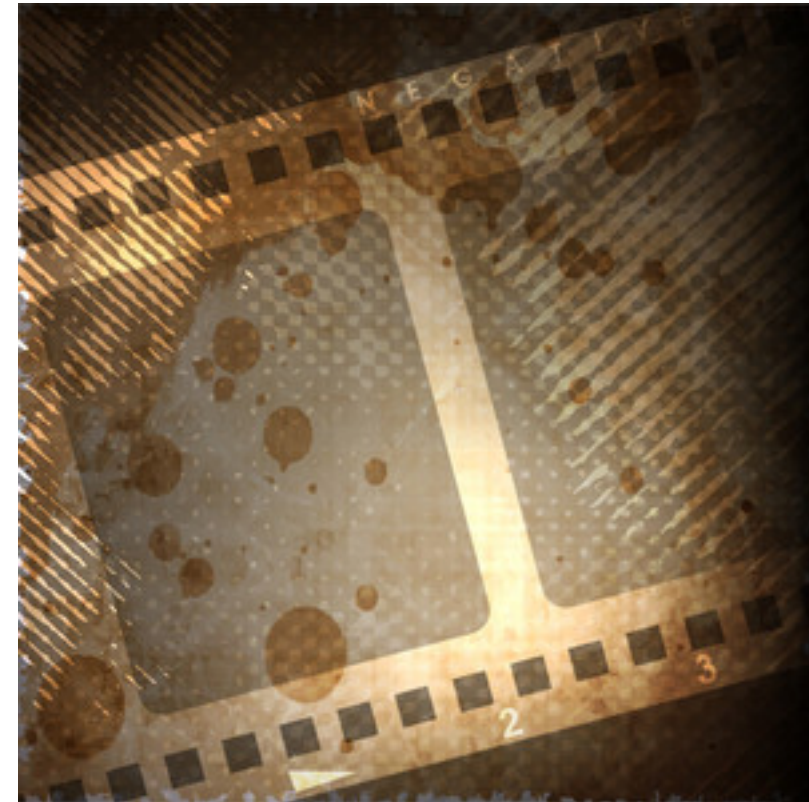
Digital Promotional Materials Video-clips, videos, and pod-casts

Training Videos Employees and consumers

Orientation Videos

Website Videos

Testimonial Videos



Access Specific to the Classroom

Course designer must consider course accessibility in advance of creating the course.

Videos selected to be included as course content, do they match learning outcomes?

Accessibility to audio for people who are deaf or hard of hearing.

Accessibility for visual content should be built into the original course design.



Classroom & Work Access

Providing educational and employment access for students or clients with hearing loss is one of the more expensive and complicated services....until now.

Options:

Ubi Duo



Accurate* Remote Services (Interpreting & Captioning)

Power Point (Live Captions and Subtitles)

Google Slides (YouTube)

iOS & Android Q Live Caption app

iOS

Board meetings, public address events

Realtime Captioning

- CART- near verbatim – best for large audiences
- Meaning for Meaning – similar to interpreting



Audio Description



Audio Description narrates and describes the visual components in multimedia to accommodate persons who are blind or low-vision.

Sample



Audio Description- Do I Need it?

Information presented visually must be presented aurally.

- Describe graphs, diagrams, maps, charts, telephone numbers, addresses, links, email addresses, etc.
- Describe through narration what action is occurring.

- Tip: Listen to your video without watching the screen. Can you comprehend all of the information being presented?

Script writing- build in description!

Coming Soon

Sponsored by Access GA



FREE, hands-on, half-day training
at the GTA office.

DIY captions & tips for DIY
description for videos



Questions

