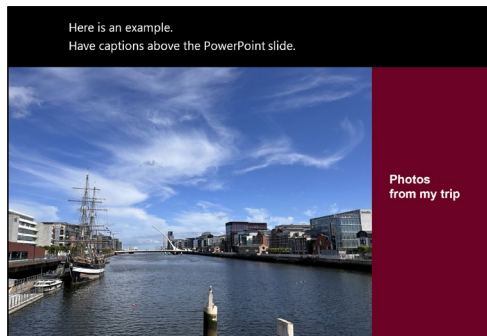




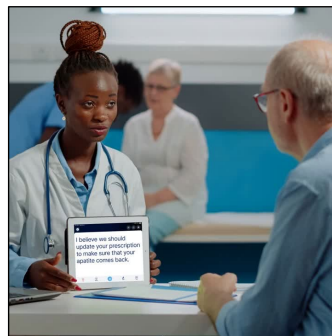
Remote CART displayed on main screens at a national conference



In-person CART on portable "Vibe" board on wheels



Automatic captions from PowerPoint



Automatic captions at medical appointment. Photo credit: Ava captioning

Intent

Purpose: To compare the differences between human-generated and computer-generated captions.

Audience: Staff, healthcare providers, and consumers.

Overview

Captions are invaluable to people with hearing loss because they provide visual accommodations to supplement spoken words. Captions provide equal access. There are three ways captions can be provided:

1. **By the organizer for everyone.** Organizers make arrangements as part of their meeting or event plans. They promote their availability before and during the event.
2. **Requested by an individual** with hearing loss. A person can request captions under the Americans with Disabilities Act (ADA), Effective Communication. Institutions on their accessibility webpage should provide information about how to request.
3. **Provided by the individual** in one-on-one settings. In the healthcare environment, HIPAA doesn't prohibit patients from using their personal devices and apps.

Microphones

Appropriate microphones need to be used, and as a rule of thumb, placed no further than one foot away from the speaker's voice.

Caption Comparison: Human- and Computer-Generated

Comparison

	Human-Generated Captions Commonly called CART (Communication Access Realtime Translation)	Computer-Generated Captions Also called “automatic captions,” “AI captions,” “speech-to-text apps,” or “ASR” (Automatic Speech Recognition)
Description	<p>An accurate, verbatim, near-instantaneous conversion of the spoken language into text by a stenographer using a stenotype machine, a laptop, and software to produce the text.</p> <p>In addition to capturing the presenter’s words, CART providers also include environmental cues and are sensitive to the consumer’s needs.</p>	<p>Computerized text transcriptions of spoken language, generated by software without human intervention.</p>
Responsibility	<ul style="list-style-type: none"> • Institution provided, as an auxiliary aid and service under the Americans with Disabilities Act (ADA), Effective Communication 	<ul style="list-style-type: none"> • Institution provided, as an auxiliary aid and service under the Americans with Disabilities Act (ADA), Effective Communication • The consumer may choose to bring their own device, but they cannot be required to do so.
Best Use	<ul style="list-style-type: none"> • When there is high-stakes information, technical information, or a need for professional captioning. Examples: <ul style="list-style-type: none"> ○ Conferences (local, regional, national) ○ Education classes (middle school, high school, higher ed, job training) ○ Government appointments, meetings, or events ○ Healthcare interactions (in-person and telehealth) ○ Legal (court proceedings, depositions, courtroom, jury duty, law enforcement, police interviews, attorney-client meetings) ○ Meetings ○ Performing arts ○ Places of worship concerts and funerals ○ School board meetings, parent meetings, and school events ○ Considerations <ul style="list-style-type: none"> ▪ Poor audio environments ▪ Speakers with soft voices, accents, speech disabilities ▪ Meetings with individuals with many disabilities 	<ul style="list-style-type: none"> • Shorter dialogues, where accuracy isn’t as important. Examples: <ul style="list-style-type: none"> ○ Healthcare patient check-ins ○ Meetings: lower-stakes, in-person ○ Meetings: virtual (Zoom, WebEx) ○ Transportation departures and changes ○ One-on-one conversations

Caption Comparison: Human- and Computer-Generated

HIPAA	<ul style="list-style-type: none"> For medical settings. CART providers need to sign a business associate agreement (BAA) with the covered entities for which they provide services. 	<ul style="list-style-type: none"> Depends on the app or product. See the Center for Hearing Access ASR webpage for a list of compliant products.
Versatility	<ul style="list-style-type: none"> Captioned text can be displayed on <ul style="list-style-type: none"> Projector screen (2nd screen) Projector screen (above or below PowerPoint) Embedded in virtual meetings (Zoom, WebEx, medical telehealth platforms) Walls Web browser (computer, tablet, or smartphone) 	<ul style="list-style-type: none"> Captioned text can be displayed on <ul style="list-style-type: none"> App Projector screen (2nd screen) Projector screen (above or below PowerPoint) Embedded in virtual meetings (Zoom, WebEx, medical telehealth platforms) Walls Web browser (computer, tablet, or smartphone)
Advantages	<ul style="list-style-type: none"> Captioning is formatted for readability and familiarity, with paragraphing and correct grammar, and showing a change of thought within a sentence. If there are concerns, and if the environment allows, the CART provider can pause the presenter to: <ul style="list-style-type: none"> Ask for clarification Use the microphone better Slow down. If a speaker is going too fast, fast captions can be difficult to read Presenters can provide the CART professional a list of acronyms and technical vocabulary ahead of time. Uses established national and state standards. 	<ul style="list-style-type: none"> Quick and convenient
Good Practices	<ul style="list-style-type: none"> <i>In-person</i> CART professional: often preferable to have the best access to all sounds in the room. They need to sit in the front, off to one side. <i>Remote</i> CART professional. Remember to prioritize the effective use of the microphone(s). 	<ul style="list-style-type: none"> Accuracy depends on keeping the microphone close to each presenter, how clearly people speak, room reverberation, background noises, and only one person speaking at a time.

Caption Comparison: Human- and Computer-Generated

About “Effective Communication” under the Americans with Disabilities Act (ADA)

Source: [ADA Requirements: Effective Communication](#)

- **People who have hearing disabilities (“communication disabilities”) use different ways to communicate.**
- The ADA requires that title II entities (State and local governments) and title III entities (businesses and nonprofit organizations that serve the public) communicate effectively with people who have communication disabilities. The goal is to ensure that communication with people with these disabilities is equally effective as communication with people without disabilities.
- Covered entities must provide **auxiliary aids and services** when needed to communicate effectively with people who have communication disabilities.
- Aids and services include a wide variety of technologies including: open captioning, closed captioning, and realtime captioning

For more information on captioning about CART services, software options, HIPAA compliance, and other resources visit [Center for Hearing Access](#)

About the Center for Hearing Access

Founded in 2024, the nonprofit Center for Hearing Access is a national advocacy and education initiative of The John G. Shedd Institute. We champion and educate users, sites, audiologists, and hearing instrument specialists about all ADA-compliant assistive listening systems and other strategies to increase access to theaters, libraries, conferences, government offices, courtrooms, places of worship, and other public and private spaces. Effective hearing access can be life-changing for people with hearing loss to maintain community engagement.

The Center for Hearing Access provides educational and informational resources and does not endorse any product, business, or service.

© 2026, rev 3/29/26