



CAPTIONING AND TRANSCRIPTION ACCURACY EXPLAINED





Table of Contents



01

Introduction

- 3

02

Key Accessibility Laws

- 4

03

Captioning Compliance.

- 6

04

Captioning Accuracy
Across All Industries

- 12

05

How Caption Accuracy is
Measured

- 16

06

Additional Resources.

- 19

01 Introduction



It's no secret that video transcription accuracy is a necessary part of creating ADA-compliant content. But the world of video captioning and compliance is vast, with many options and available solutions. How can you know which captioning solution is right for your institution? For example, do you need human-verified captioning? Or is machine-based suitable?

If your industry is held to state, federal, or international regulatory standards, then the choice is made for you – the highest level of captioning accuracy is required for compliance. But if you're not held to those standards, or perhaps creating video or audio used for an unregulated purpose, like marketing collateral for example, then it's time to understand all accuracy levels, where you'll find them, and when you will use each.

IN THIS EBOOK WE WILL DISCUSS

- Key Accessibility Laws and Regulations
- The FCC's High Captioning Accuracy Checklist
- 3 Levels of Captioning Accuracy Rates Explained
- Why Caption Accuracy is Important for All Industries
- How Captioning Accuracy is Measured

Title II of the ADA includes publicly-funded universities, community colleges, and vocational schools. Title III covers any public accommodation which includes undergraduate or postgraduate private schools and other places of education.

It was over Title III of The ADA and Section 504 of the Rehabilitation Act of 1973 that Harvard and MIT were sued in 2015. The National Association of the Deaf filed federal lawsuits saying both universities violated anti-discrimination laws by failing to provide closed captioning in their online

THE REHABILITATION ACT OF 1973

The Rehabilitation Act prohibits discrimination on the basis of disability in any programs executed or funded by federal agencies. The act focuses on several sections. However, the two that pertain the most to web accessibility are Section 504 and Section 508.

SECTION 504

Section 504 explicitly states that any organization receiving federal funding must provide accommodations to people with disabilities, including online environments.

SECTION 508

Section 508 addresses electronic communications and information technologies and states that all emails, web documents, and websites be accessible to those with disabilities.



02 Key Accessibility Laws



There are a couple of federal laws and global standards that Federal agencies and universities are required to follow in the US. It's important to be aware and compliant with them to avoid costly lawsuits later.

THE AMERICANS WITH DISABILITIES ACT

The Americans with Disabilities Act (ADA) was signed into law by President George H.W. Bush in 1990. The ADA, the most comprehensive of the nation's disability laws, prohibits discrimination and ensures equal opportunity for persons with disabilities in employment, state and local government services, public accommodations, commercial facilities, and transportation. Disabilities covered under the ADA include physical, sensory, and cognitive disabilities. The ADA covers the following five areas:

TITLE I Employment

TITLE II Public Entities & Transportation

TITLE III Public Accommodations

TITLE IV Telecommunications

TITLE V Miscellaneous Provisions



03 Captioning Compliance



FCC CLOSED CAPTIONING REQUIREMENTS

The Federal Communications Commission (FCC) is responsible for regulating communications across radio, television, wire, satellite, and cable across all 50 states. Their jurisdiction extends to video programming shown on TV, as well as when that same content is then re-shown on the internet.

In 2016, the FCC published their final ruling on closed captioning for video programming, stating that video programmers and content owners were directly responsible for providing closed captions that meet accuracy standards. As noted by the committee, captioning is intended to “replicate the hearing listeners’ aural experience”. The ruling states that captions should be 99% accurate to provide a full experiential auditory.

Now in 2021, the FCC continues to require closed captioning adheres to the following four areas:

- Provides Accuracy
- Synchronicity with Audio
- Program Completeness
- Placement of Captions



AS STATED BY THE FCC:

“We believe that each of these four components is essential to ensure that video programming is fully accessible to people who are deaf and hard of hearing through the provision of closed captions and that these standards will ensure that the visual information received through captions is consistent with the information provided through the audio track of the programming.”

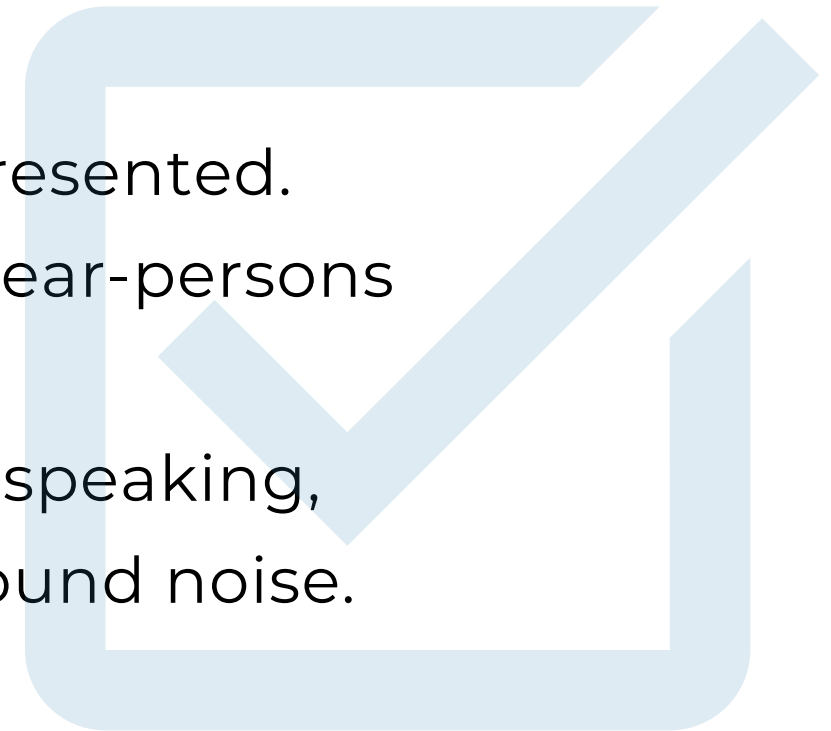


HOW TO ACHIEVE THE FCC'S HIGH CAPTION ACCURACY



Accuracy

- ☐ Must match the spoken words in the dialogue, in their original language to the fullest extent possible, and include full lyrics when provided on the audio track.
- ☐ Need to contain all words in spoken order.
- ☐ Proper spelling, including homophones, tense, punctuation, capitalization, and the proper representation of numbers.
- ☐ No rewriting or paraphrasing dialogue.
- ☐ No synonyms can be used to replace actual dialogue.
- ☐ Where necessary to understand the dialogue, the speaker's tone of voice must be represented.
- ☐ Where slang and grammatical errors are part of the dialogue, this must be represented.
- ☐ Utterances and false starts must also be represented to accurately mirror the hear-persons experience.
- ☐ Nonverbal information that is not observable must be included, such as who is speaking, multiple speakers, music sound tags, sound effects, audience reaction, background noise.





Synchronicity/Timing

- ☐ Must coincide with their corresponding dialogue as closely as possible.
- ☐ Caption synchronicity must pace at a speed that is legible by the viewer.

Program Completeness

- ☐ For “fully accessible” status, content must be captioned from beginning to end of the program without interruption, to the fullest extent possible.
- ☐ Re-editing of content requires re-editing of captions.

Placement

- ☐ Caption placement and size must provide for easy readability for both the caption content and screen content



CAPTIONING ACCURACY TABLE



Depending on your industry and use case, caption accuracy can play a crucial role in selecting the right captioning service. The following table outlines the differences between each offering:

ACCURACY LEVEL	WHAT IT MEANS	WHERE YOU'LL FIND IT	WHEN YOU NEED IT
60 - 80%	ASR or Machine Transcription verbatim, 1 out of every 3 words is wrong, meaning is misconstrued, and ill-timed with video play	YouTube or other ASR-only transcription platforms	Not advised for regular use, can damage brand perception and disrupt SEO
80 - 95%	Machine Transcription, manually edited by the content creator who isn't an expert in captioning and transcription requirements and best practices	Content creators using ASR-based transcription services	If you're on an extremely tight budget, but trying to utilize transcription services, basic SEO boost and keyword identification
95 - 99%	Human Verified Transcription, edited for clarity, jargon, dialect, tone, speaker identification, and descriptive audio	Schools, government agencies, entertainment, and businesses held to regulatory standards, companies invested in high quality video production	To meet compliance requirements, identify key media data insights, boost SEO



60-80% ACCURACY

Low quality transcriptions that come from rudimentary machine transcription and ASR. You find this on YouTube and other churn-and-burn transcription service, often free of charge. The downside is that the low quality can actually cause a negative impact on user experience and brand perception.

80-95% ACCURACY

Medium-quality transcriptions that come from advanced ASR and machine-based transcription services. These usually cost a very low fee and can help with basic SEO, record keeping, and speeding up manual editing and transcription processes.

95-99% ACCURACY

Considered the highest tier of transcription quality, these transcripts achieve near perfect accuracy. But there is a difference between 95% and 99% accuracy in that, even with one incorrect word, "I'll marry you" can easily become "I'll bury you," taking on a whole new meaning.

04 Why Caption Accuracy is Important for All Industries



FOR EDUCATION:

For education, in particular, accurate and timely captions on videos are essential to student success. In the classroom, there are various opportunities for audio to become distorted. Whether it's a professor with a heavy accent speaking, shuffling of papers, or overlapping speakers, recorded audio can be difficult for machines to understand. If captions are poor, online education becomes an exercise in frustration. If the captions are wrong, the students learn inaccurate concepts. Overall, low accurate captioning comprise the mission of educational content, and valuable time is lost correcting and reviewing the videos. To enable the best possible learning outcomes, captioned content needs to be created accurately.

Media captions in education aren't just for students with disabilities or for the hearing impaired. Research shows that captioning of classroom media has proven benefits for all students because it:

- 1.Improves student engagement, retention, and overall learning experience through interactive learning.
- 2.Improves student literacy and language comprehension skills by making vocabulary synchronistic with visuals
- 3.Allows students to consume content on-demand, without concern for audio quality or setting.
- 4.Creates a more flexible educational atmosphere that enhances student technological experience.



FOR BUSINESS:

At every level, business growth relies on reaching more people. Today, the business and marketing landscape is heavily influenced by video. Fully leveraging media intelligence is the little-known and certainly underutilized tactic vital to ensuring business success. However, it relies on accuracy.

Captions and transcripts are two pillars of media intelligence that make your company's videos easy to find, available to everyone, eye-catching, and even interactive for a better viewer experience. But, if your captions aren't accurate, search engines will inaccurately crawl your video content and misindex it. Done correctly, there are many benefits of captioning for businesses including:

- **Engagement:** captions draw focus and allow viewers to watch the video when they otherwise would not be able to. Videos ads on Facebook receive a 12% lift in engagement.
- **Watch Time:** captions increase video viewing by 40%
- **Reach:** over 360 million Americans have a hearing disability and over 80% of views on YouTube come from outside the US.



FOR MEDIA AND ENTERTAINMENT:

News, media, and entertainment organizations are turning to video and audio content more than ever before to share stories, engage with their audiences, and build a dedicated following. Along with this increase in video and audio content, comes a need for captioning. While many media and entertainment (except for TV broadcast) organizations do not have compliance requirements when it comes to their content, publishing high accuracy captions have a significant effect on ROI. In fact, they produce a 20%-50% increase in content ROI.

Social Media

Using video captions on social media videos gives your content a big leg up – boosting engagement, searchability, indexing, ranking, as well as opening you up to a much larger target audience. Think about when you consume video content. Often, it's not always in a location that is conducive to having the sound on. On Facebook, 85% of videos are watched without sound. A simple way to ensure people can enjoy your videos without sound is to provide closed captions.

You've probably already used them on your Facebook feed and Snapchat channels. Mashable, Mic, and MTV all provide captions so viewers can watch on the bus or in the doctor's office without headphones. And of course, this service isn't just for convenience. Captions provide access to media for over 38 million Americans with hearing loss.



Online Content

From YouTube to company training videos, any video or audio content published on the internet should be captioned. Even if your organization has a large library of old content, there is an opportunity to add value to your media assets. Some of the biggest benefits include expanding your content's reach. By including captions and transcripts your message becomes global, available to second-language learners, and those with disabilities.

For brand reputation, enhanced SEO, and increasing demands for accessibility compliance, organizations are reaching for higher accuracy captions and transcripts. People don't want to see inaccurate captions when they're depending on them for ease-of-consumption or accessibility needs. Having poorly done captions – especially on a platform where people expect accuracy (we're not talking YouTube's auto-captions here) – can negatively impact an organization's perception.

Podcasts

There are many benefits to adding captions and transcripts to your podcasts. First, captions and transcripts help make your podcast content accessible to all people – including second language learners and individuals with hearing or learning disabilities. Secondly, captions and transcripts of your audio content allow your content to be crawled, indexed, and ranked on search engines, increasing your visibility. And finally, your podcast transcripts can be repurposed or reviewed for new insights, like news articles and new media content. However, all of this is contingent on accuracy. Without high accuracy captions, your listeners will misinterpret information, your content will be repurposed incorrectly, and your search engine ranking will be affected.



05 How Caption Accuracy is Measured

The FCC Electronic Code of Federal Regulations Rule 79.1.(iv) provides an easy method for calculating caption accuracy. This allows everyone working with captions, professional or not, to understand what their disabled audience is experiencing.

“Consider ‘accuracy’ of captions to be a measurement of the percentage of correct words out of total words in the program, calculated by subtracting number of errors from total number of words in the program, dividing that number by total number of words in the program and converting that number to a percentage. For example, 7,000 total words in the program minus 70 errors equals 6,930 correct words captioned, divided by 7,000 total words in the program equals 0.99 or 99% accuracy.”



CORRECT WORDS TRANSCRIBED



TOTAL WORDS TRANSCRIBED

= %



WHAT DOES THIS LOOK LIKE?

Below is an example that demonstrates the impact an accurate caption can have compared with an inaccurate caption. As you can see, one word transcribed incorrectly makes a big difference in the meaning and interpretation of the audio or video content. All the more reason to publish ADA-compliant captions whenever possible.

96% ACCURACY



VS

99% ACCURACY



Benefits of Captioning



EDUCATION

14% increase in
video viewers

14%

ENGAGEMENT

40% increase in
video completion

40%

REACH

177% increase in
audience

177%

COMPLIANCE

100% accessibility
compliance

100%



06 Additional Resources



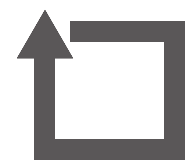
WHETHER YOU NEED INFORMATION ON CAPTIONING, COMPLIANCE, OR OVERALL ACCESSIBILITY, CHECK OUT THESE RESOURCES:

- [2021-2022 State & Federal Accessibility Guidelines Ebook](#)
- [WCAG 2.1 for Video Accessibility Ebook](#)
- [Accessibility Budget Resources](#)

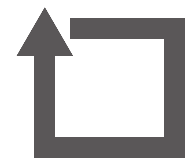
Caption Compliance Checklist



PRINT AND USE THIS CHECKLIST TO ENSURE THAT YOUR CAPTIONING PROGRAM IS IN COMPLIANCE.



Matches the spoken words in the dialogue in their original language to the fullest extent possible and includes full lyrics when provided on the audio track.



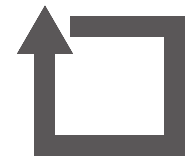
Contains all words in spoken order



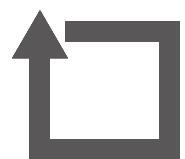
Uses proper spelling, homophones, tense, punctuation capitalization, and the proper representation of numbers.



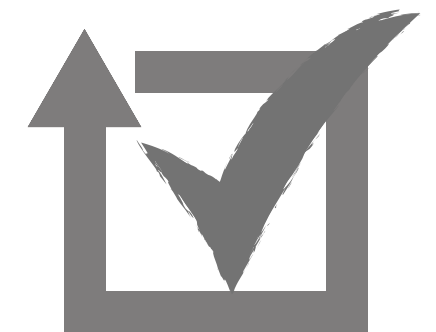
Does not rewrite or paraphrase dialogue



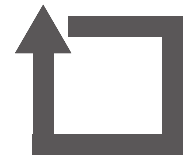
Does not use synonyms to replace actual dialogue



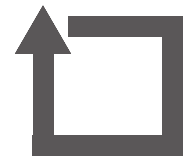
Represents speaker tone of voice where necessary to understand the dialogue.



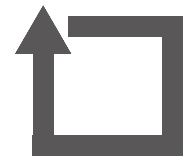
CAPTION COMPLIANCE CHECKLIST CONT.



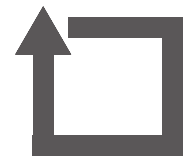
Uses slang and grammatical errors as part of the dialogue where necessary to properly represent the dialog.



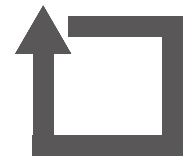
Indicates utterances and false starts where necessary to accurately mirror the hearing person's experience



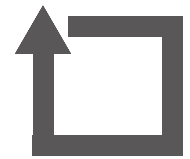
Includes nonverbal information that is not observable, such as who is speaking, multiple speakers, music sound tags, sound effects, audience reaction, and background noise



Coincides with the corresponding dialogue as closely as possible. Paces and synchronizes at a speed that is legible by the viewer



Occurs from beginning to end of the program without interruption, to the fullest extent possible. (This is required for “fully accessible” status.)



Re-editing of content requires re-editing of captions.



Placement and size provides for easy readability for both the caption content and screen content and legible font size for readability

About cielo24 Solutions



cielo24 is a leading online platform that creates searchable metadata, including indexes, transcripts, and captions for video and audio media creators across all industries.

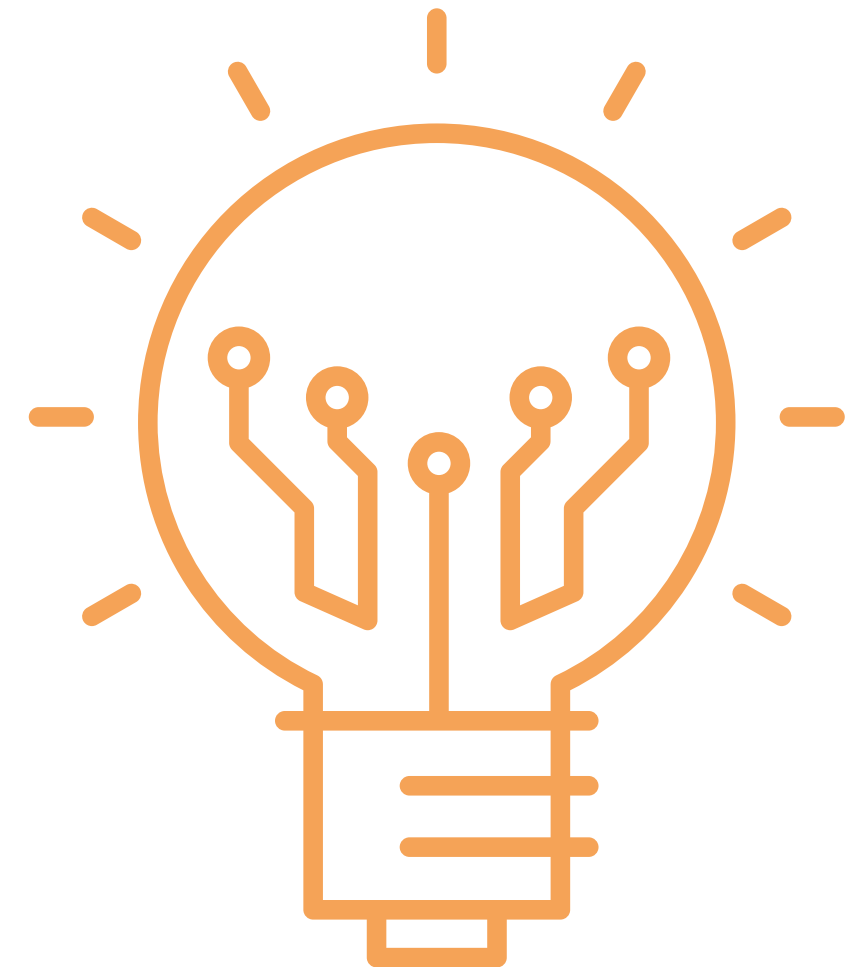
Through its trained speech engine and AI technology, cielo24's platform delivers cost-effective on-demand video and audio solutions for increased engagement to maximize video investment.

ALL OF OUR CUSTOMERS EXPERIENCE:

- Fast, affordable, and accurate captions and transcripts
- Optimized content search and discovery
- Media intelligence and keyword data
- Improved compliance and accessibility
- Fast and approachable customer support
- A one-stop-shop for all captioning and transcription needs

ENTERPRISE CUSTOMERS RECEIVE:

- Even greater video search capabilities
- Customizable transcription workflows and formatting
- Account management and billing services
- Integrations included



Products



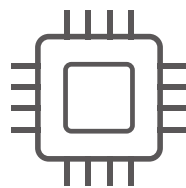
Captions and Transcripts: First-rate video captioning and transcription solutions that are seamless to integrate, 99% accurate, federally compliant, and quick to turnaround.



Video Intelligence: Smart video, as we call it, our video intelligence solutions create detailed information about the content within your videos, amplifying your video discovery, engagement, reach, and compliance.



Video Search: Our searchable video data technology solutions make your multimedia files to become as searchable as text by adding rich media data to optimize, tag, and index your video and media assets.



Video Integrations: cielo24 video data solutions that integrate with almost all popular video platforms, including usage of our API.



Audio Description: cielo24 offers audio description for compliance purposes, which includes the audio track and visual description of what is happening in the video.



SHANNA.JOHNSON@CIELO24.COM | +1 818-636-7620

Thank You

cielo24

CIELO24.COM | HELLO@CIELO24.COM | 1-855-243-5624