



# A CAMPUS TOOLKIT FOR COURSE CAPTIONING

A product of the Minnesota State Captioning Project

*Minnesota State is an affirmative action, equal opportunity employer and educator.*

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# FOREWARD

With the rapid growth of online and hybrid learning, easily accessible recording tools, and instructor-created videos, concerns have been raised about *accessibility* of course-based videos. Without captions, deaf and hard of hearing students may not be able to access the information in the videos effectively or equitably. This toolkit embraces learner diversity through inclusive design. Learner diversity covers variation in capabilities, needs and aspirations. Inclusive design respects the contribution of diverse learners and includes as many people as possible.

## The Content of the Toolkit

The focus of the toolkit is on captioning course videos within institutions of higher education. While we know that captioning all videos is important, captioning of general campus web videos or any videos that are not course related is outside the scope of this toolkit. Although not a focus of this toolkit, this toolkit may be applicable to non-course related videos.

The content will provide step-by-step processes on how institutions can develop an incremental, but sustainable captioning plan that goes beyond accommodation requests. Included will be practices for captioning sustainability, staffing models to manage captioning requests, and methods for prioritizing videos since it's unreasonable to tackle all videos at once or even in a single year. The toolkit also includes the elements of successful captions, such as placement of captions, captioning when there are two speakers, searching for existing captioned videos, copyright issues for captioning videos for which you are not the copyright owner, Frequently asked questions (FAQs) addressing the most-asked legal questions on captioning, the importance of Web Content Accessibility Guidelines (WCAG) 2.0 guidelines, information on products and services available to create captions in-house or by outsourcing, and so much more.

## The Four Chapters of the Toolkit

1. Introduction – Captioning is a Best Practice for Universal Design (and is Also Required by Law)
2. Creating a Sustainable Captioning Model at Your Campus
3. Getting Started – Captioning Course Videos
4. Technical workflows Using the Minnesota State Media Management Solution (Kaltura MediaSpace)

Content note: information is provided on the automated captioning function of Kaltura MediaSpace available to all Minnesota State faculty and staff. This option provides the benefit of a low cost entry into captioning course videos and can be considered an effective means for getting most of the way there. Your cross-functional captioning team could then decide on the

appropriate workflows and staff who could cover the “gap.” By that we mean manual work needed to fix any inaccuracies in the text or synching of the text to audio.

## **Intended Audience – A Team Focus**

The audience for this toolkit can be campus administrators responsible for compliance with the Americans with Disabilities Act (ADA), faculty who plan to caption their own videos, accessibility directors, instructional technologists or media/IT staff who may do the work of captioning videos and who are seeking to better understand captioning options, and anyone who supports and trains faculty on captioning efforts.

However, it is particularly intended to be read by each institution’s own cross-functional captioning team so that they can work through it together; learn together; make recommendations or decisions together about captioning workflows and prioritization models; help change campus accessibility culture together; and ultimately help implement the campus’ captioning plan. The toolkit is without a doubt, team focused.

## **How to Use the Toolkit**

For institutions participating in the Minnesota State Sustainable Captioning Seed Funding Program, this toolkit will serve as the basis of work that needs to be completed before receiving your allocated funds. You will be asked to complete the activities in each chapter of the toolkit and submit confirmation of having completed the elements listed in the end-of-chapter checklists.

For anyone reading this outside of the Minnesota State System, the practices and information contained in this toolkit should assist you at your institution. Feel free to use the toolkit in whatever way works best for your environment.

## **Conclusion – It Takes a Village**

This toolkit on course based video captioning is not all-inclusive yet is intended to get a campus ready to implement incremental but sustainable captioning processes. Developing your workflows and determining your captioning budget is just part of a sustainable accessibility improvement plan. Technology for speech-to-text and text-to-speech will continue to improve and become easier to use and incorporate within our learning management systems and websites over the next several years. It takes a village to raise a child and it takes an expansive, campus-wide effort that commits to equity for all students attending your institution.

## ACKNOWLEDGEMENTS

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# CHAPTER 1: CAPTIONING IS A BEST PRACTICE FOR UNIVERSAL DESIGN (AND IS ALSO REQUIRED BY LAW)

## Chapter 1 Contents

1. Historical Perspective
2. Federal Laws Pertaining to the Use of Closed Captioning in Course Videos
3. Minnesota State Laws Pertaining to the Use of Closed Captioning in Course Videos
4. Applicability to Institutions of Higher Education
5. Frequently Asked Questions on Federal Laws Pertaining to the Use of Closed Captioning in Course Videos
6. The Standards for Closed Captioning of Course Videos
7. Frequently Asked Questions on the Standards for Closed Captioning of Course Videos
8. Other Aspects of Closed Captioning Course Videos
9. Inclusive Design
10. Universal Design Principles
11. The Process of Universal Design
12. Apply Your Knowledge
13. Recommended for Further Reading and Resources
14. Chapter 1 Activity
15. Appendix 1.1 Chapter Checklist

## Historical Perspective

One of the first questions that is often asked by campuses is, “What media needs to be captioned, and when?” The proliferation of lecture capture systems and new media on campuses has made this question more difficult to answer. To understand how your campus is affected, it’s useful to provide a quick overview of laws that govern accessibility. Before the Internet and new media, closed captioning was once a concern only for broadcast television providers. Beginning in the early 1980s, with the creation of the FCC’s National Captioning Institute, major networks such as ABC, NBC, and PBS began to voluntarily broadcast some of their programs with closed captions. In 1990, Congress passed the first law governing closed captioning. It required televisions with screens larger than 13 inches to contain the circuitry that is necessary to display captions. Since January 1, 2006, all new English-language video programming, including live broadcasts (with a few carefully carved-out exemptions), must contain captions. The introduction of new media has shifted the landscape. Today captioning is far more complex.



## Federal Laws Pertaining to the Use of Closed Captioning in Course Videos

Three federal statutes combine to require that all electronic information distributed by colleges and universities be accessible to persons with disabilities. The requirement of accessibility has been interpreted to include a requirement of closed captioning for course videos.

Title II of the Americans with Disabilities Act includes a provision that states, "No qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of a public entity, or be subjected to discrimination by any such entity." 42 U.S.C. § 12132. [Source: Legal Information Institute [42 U.S. Code § 12132 – Discrimination](#)].

The Rehabilitation Act of 1990 contains two sections that require colleges and universities to provide accessible information content. Section 504 prohibits employers that receive federal financial assistance from excluding or denying individuals with disabilities an equal opportunity to receive program benefits and services. This section of the Rehabilitation Act is specifically applicable to State and local government activities without regard to receipt of federal financial assistance by Title II of the Americans with Disabilities Act. [Source: Legal Information Institute [29 U.S. Code § 794 - Nondiscrimination under Federal Grants and Programs](#).]

Section 508 requires federal agencies to provide disabled employees and members of the public access to any electronic and information technology (EIT) that is comparable to the access available to others. The standards created under this section of the Rehabilitation Act are applicable to State and local government activities by virtue of Section 504. [Source: Legal Information Institute 29 U.S. Code § 794d - Electronic and information technology.]

[The Assistive Technology Act of 1998](#), as amended in 2004 requires that all state programs receiving federal funds comply with Section 508 standards. This includes colleges and universities. Additional federal statutes, such as the [Twenty-First Century Communications and Video Accessibility Act of 2010 \(CVAA\)](#), may apply to specific course videos that are broadcast in real time or are pre-recorded television broadcasts.

## Minnesota State Laws Pertaining to the Use of Closed Captioning in Course Videos

The Minnesota Human Rights Act contains a section covering educational institutions. [Minn. Stat. § 363A.13, subd. 1](#) prohibits discrimination "in any manner in the full utilization of or benefit from any educational institution, or the services rendered thereby" or "to fail to ensure physical and program access for disabled persons." These provisions require educational institutions to provide accessible content, including closed-captioned course videos.

Your campus key stakeholder/administrator(s) will need to understand the importance and rationale for how captioning fits into accessibility legal requirements. One way to describe to someone who doesn't understand captioning as being important to more than just deaf students, within an accommodation, is to relate captioning to curb-cuts. Curb-cuts are something most everyone understands as benefiting many and not just the disabled. Healthy people, who read well and see well, are not always the best at understanding why accessibility is essential for learning.

## Applicability to Institutions of Higher Education

The Americans with Disabilities Act, the Rehabilitation Act of 1990, and the Assistive Technology Act of 1998 apply to any educational institution that receives federal funds. The U.S. Dept. of Education and the U.S. Dept. of Justice are responsible for enforcing the requirements of those statutes. Private parties may also sue to enforce the rights granted by these statutes under certain circumstances. [The Minnesota Department of Human Rights](#) enforces the requirements of the Minnesota Human Rights Act. Private parties may also sue to enforce the rights granted by these statutes under certain circumstances.

### Related Links

- [U.S. Department of Education Listing of Regulations Enforced by the Office of Civil Rights](#)
- [The United States Department of Justice Types of Educational Opportunities Discrimination](#)

## Frequently Asked Questions - Federal Laws and the Use of Closed Captioning in Course Videos

Q1: I know that the law requires us to make a reasonable accommodation when requested by a qualified individual. What is the difference between a reasonable accommodation and accessible design?

The difference between a reasonable accommodation and accessible design centers on when accessible content must be provided. The reasonable accommodation paradigm requires the student to self-identify as a person with a disability and to request the accommodation. The U.S. Dept. of Education takes the position that accessible design requires educational institutions to provide accessible content for all users without regard to whether any user is identified as having a disability or requests an accommodation.

The U.S. Dept. of Education includes this definition of accessibility in many of its resolution agreements with educational institutions:

"Accessible" means a person with a disability is afforded the opportunity to acquire the same information, engage in the same interactions, and enjoy the

same services as a person without a disability in an equally effective and equally integrated manner, with substantially equivalent ease of use. The person with a disability must be able to obtain the information as fully, equally and independently as a person without a disability. Although this might not result in identical ease of use compared to that of persons without disabilities, it still must ensure equal opportunity to the educational benefits and opportunities afforded by the technology and equal treatment in the use of such technology.” [Source: [Resolution Agreement South Carolina Technical College System OCR Compliance Review No. 11-11-6002.](#)]

Accommodation is the backup plan when accessible design is inadequate for a particular student. Accommodation remedies are usually more expensive and time-consuming than creating accessible course content.

Q2: I don't have any students with disabilities in my courses. Am I still required to provide closed captioning of course videos?

Yes. The requirement of accessible design applies to the technology used in the course, not the individuals who will use the technology. Closed captioning of course videos assists viewers who access course videos in rooms with poor acoustics, viewers who are learning English as a second language, and viewers with audio processing disabilities. Studies show that learners process information more effectively if it is presented in more than one sensory mode.

Q3: My school is already providing closed captioning of course videos on request. Is this good enough to comply with the laws on accessibility?

Reasonable accommodation is not the same as accessible design. One of the problems is that a reasonable accommodation may not be available to students other than the student who requested the accommodation. Ideally, educational institutions should be committed to accessible design while making reasonable accommodations as needed.

Q4: My school is already provides sign language interpreters for course videos on request. Is this good enough to comply with the laws on closed-captioning?

Providing sign language interpreters is not the same as closed-captioning. This solution does not provide accessible content to all users because not all viewers know or use sign language.

We use some course videos that are close-captioned and some that are not. Will we comply with the law if we identify the videos that are captioned and include a statement that the other videos will be close-captioned on request?

It is probably good practice to highlight the educational institution's ongoing effort to achieve accessible design. However, this type of notice should not substitute for those efforts. [The Minnesota Judicial Branch's website](#) includes the following statement:

The Minnesota Judicial Branch is committed to providing all people with equal access to the courts. We continually refine our website in an effort to conform to accessibility standards and provide our online information in an accessible format. If you are having accessibility issues please contact us using one of the forms below.

## The Standards for Closed Captioning of Course Videos

[The United States Access Board](#) is responsible for creating the accessibility standards that apply to federal agencies under Section 508 of the Rehabilitation Act of 1990. These Section 508 Standards require that all analog and digital television displays and all computers be capable of decoding and displaying closed captions. Any video used for education purposes that contains audio necessary to understanding the content of the video must have open or closed captions.

The United States Access Board is in the process of updating the Section 508 Standards. A proposed rule was published in February 2015 but it has not yet been approved. These updated standards incorporate the standards promulgated by the Worldwide Web Consortium (WC3). These standards are known as the [Web Content Accessibility Guidelines \(WCAG\)](#). WCAG rates the accessibility of electronic and information technology on four levels. WCAG requires compliance with levels A and AA. Compliance with levels AAA and AAAA is encouraged, but not required.

Minnesota requires all "State information systems, tools, and information content" to comply with WCAG Level AA. [Source: [Minnesota State Accessibility Standard](#).] This includes educational institutions under Minn. Stat. § 363A.13, subd. 1.

## Frequently Asked Questions on the Standards for Closed Captioning of Course Videos

Q1: What is the legal distinction between closed captions, open captions, and audio transcripts? Do all of these comply with the laws on accessibility?

Both the Section 508 Standards and WCAG Level AA require open or closed captioning of course videos that contain audio necessary to understanding the content of the video.

Closed captions are the text of the audio portion of the video (including important non-speech sounds) that are encoded into the video signal (technically, the 21st line of the vertical blanking interval). Closed captions appear as white letters in a black box. Closed captions can be turned on and off by CC button that is an element of the video controls.

Open captions are "burned into" the video and cannot be turned on or off – they are always present when the video is viewed. While the technology used to display course videos must be capable of displaying closed captions, the use of open captions meets the requirements of the Section 508 Standards.

Audio transcripts are verbatim transcriptions of the words spoken in the video. While some commentators believe it is a best practice to include transcripts with course videos, audio transcripts do not comply with Section 508 Standards because the student cannot simultaneously read the transcript and view the video. Audio transcripts are required for course content that is audio only.

Q2: I provide transcripts of my course videos. Is this sufficient to meet accessibility standards?

No. Transcripts do not meet Section 508 or WCAG 2.0 standards for closed captioning of instructional videos because transcripts are not synchronized with the images on the screen.

Q3: Do the standards that apply to the closed captioning of course videos include a standard governing the accuracy of the captions?

None of the Section 508 or WCAG 2.0 standards address the accuracy of closed captioning. However, the U.S. Dept. of Justice regards captioning accuracy as a factor that affects the "substantial equivalency" of the video experience. The National Federation for the Deaf states that comprehension of video contents decreases markedly at accuracy levels less than 95%.

Q4: Do the standards that apply to the closed captioning of course videos include standards on what non-speech sounds must be captioned?

The Section 508 and WCAG 2.0 standards require captioning of non-speech sounds that are necessary to understanding the content of the video. A closed-captioned course video should include a notation of student laughter, but need not include references to noises made by doors closing or chairs shifting position.

Q5: Do the standards that apply to the closed captioning of course videos apply to videos from outside sources, such as links to YouTube videos?

Yes. The Section 508 and WCAG 2.0 standards apply to any instructional video used in a course. This includes links to outside videos that may not have been created with an instructional purpose in mind.

Q6: YouTube offers auto-captioning of posted videos. Can I rely on that to meet my obligation to provide accessible course videos?

Any auto-captioning feature including YouTube will have varying accuracy rates depending upon the voice (accent) of the speaker and if there are multiple speakers the accuracy rate likely goes down. Accuracy rates can vary from 60-90% in general. Auto-captions should always be corrected to be precise and provide equal access. A redeeming aspect of auto-captions is that they can be used as a starting point for captioning videos.

YouTube can use speech recognition technology to automatically create captions for videos. These automatic captions are generated by machine learning algorithms, so the quality of the captions may vary. YouTube is constantly improving its speech recognition technology. However, automatic captions might misrepresent the spoken content due to mispronunciations, accents, dialects, or background noise. You should always review automatic captions and edit any parts that have not been properly transcribed.

Q7: Do the standards that apply to the closed captioning of course videos apply to purchased videos that are not closed-captioned?

Yes. The Section 508 and WCAG 2.0 standards apply to any instructional video used in a course. All purchased videos that are used for instructional purposes must meet closed captioning standards.

## Minnesota State Board Policy and System Procedure

The following links are for the Minnesota State Colleges policies surrounding accessibility requirements.

- [Board Policy 1B.4 Access and Accommodation for Individuals with Disabilities](#)

## Additional Minnesota State Resources on Captioning and/or Accessibility

- [Presentation by Scott Goings, Minnesota State Office of General Counsel entitled: Understanding the Regulatory Landscape and Closed Captioning Requirements for Higher Education](#) (60 min)
- [PowerPoint “Serving Students with Disabilities: Accommodations and Inclusion”](#)
- [Memorandum “Captioning Videos – Disability and Copyright Issues” \(with permission form\)](#)
- [System Office Academic and Student Affairs Division Web-page on Disabilities Issues](#)
- Minnesota State [Office of General Counsel](#)

## Other Aspects of Closed Captioning Course Videos

### Who is responsible for ensuring that course videos are closed-captioned?

The institution is responsible for providing an accessible education for all students. However, the responsibility for ensuring that course videos are closed-captioned is often a shared responsibility of many parties including the instructor, Disability Services, and other departments such as Distance Education, Media Services, or those responsible for managing online tools for course materials. Best practice shows that institutions who develop a cross-functional team to outline roles and responsibilities and develop a process for implementing course video captions have the greatest success. Furthermore, institutions having the greatest success have people other than the instructor available to create captions or order captions when using a third party service. See Chapter 2 for more detail and campus best practices for captioning course videos.

Faculty who generate or select course videos should verify that those videos meet closed captioning standards. Achieving those standards may require the assistance of the institution's IT or Disability Services department. One example of meeting accessibility guidelines when an instructor records a video would be that they provide adequate oral explanation of images, charts and tables shown in the video.

Portland Community College has an excellent [chart outlining shared responsibilities for accessibility of an online course \(PDF\)](#).

### Doesn't the requirement of closed captioning for course videos interfere with my academic freedom?

No. The Section 508 and WCAG 2.0 standards apply to the infrastructure of a course, not the content. Rights of academic freedom apply to the content of a course, not its infrastructure. The purpose of the Section 508 and WCAG 2.0 standards is to ensure equal access to the content chosen by faculty.

### Intellectual Property Rights on My Videos

Intellectual property rights are determined on a case-by-case basis and involve a number of variables. Generally speaking, closed-captioned course videos prepared by faculty are the intellectual property of that faculty member.

## Inclusive Design

What is inclusive design? Inclusive design is Universal Design for learning. It is when educators make the learning environment more useable by all people without special adaptations or specialized design. Accessibility is a Civil Right. Many of the early adopters of Universal Design

and captioning projects agree with the statement made by Art Morgan, Autosync, “the most successful campaigns have a common thread: they promote accessibility as a civil right and explain how accessibility fosters diversity and inclusiveness.”

Following are the five main reasons why promoting accessibility as a civil right works better than other approaches.

1. Accessibility is a civil right.

Nearly everyone knows that laws and regulations related to accessibility exist, but few realize that laws such as Title III of the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act were passed with the intention of protecting the civil rights of people with disabilities and preventing discrimination. These laws and regulations are enforced by the civil rights offices within the Department of Justice (DOJ) and the Department of Education (ED). Helping people on campus understand the intent of the relevant laws is important because that understanding helps everyone who plays a part in implementing accessibility understand the *why* of what they are doing is important and how it benefits the campus community and society at large.

2. Diversity and civil rights do not "stifle innovation," they accelerate innovation.

Too often, we present accessibility as a sort of legal checklist. When it is presented in this way, even the best-intentioned people are tempted to skip items on the checklist under the guise of innovation and "thinking outside the box." On the other hand, most people now realize that diversity in an organization is an asset, and that it stimulates and accelerates innovation. For example, a McKinsey & Company study showed that companies with greater ethnic and gender diversity financially outperform those with less diversity. Moreover, recent research from the Center for Talent Innovation (CTI) demonstrates that even those in majority groups can reap long-term benefits by learning and working in a diverse environment. CTI calls this type of diversity "acquired diversity," referring to individuals "whose background and experience has conferred on them an appreciation for difference." In other words, if your students have the opportunity to study and learn in an environment that includes people with diverse abilities and learning styles, they will develop skills that make them more valuable in the workplace. It is a virtuous circle: **Students with disabilities and different learning styles develop valuable career skills by learning side-by-side with your "traditional" students, and your traditional students learn from the "nontraditional" students**, which in turn makes the organizations that they join more productive and innovative. [Source: “Why Diversity Matters” by Vivian Hunt, Dennis Layton, and Sara Prince, January 2015, McKinsey and Company.]

3. Increasing diversity on campus and protecting civil rights requires a significant investment, but one with huge dividends.



When faculty and staff charged with implementing accessibility view accessibility as a checklist, they are invariably tempted to take shortcuts that initially appear to save time or money. Purchasers might accept vendors that claim to "check the accessibility box," regardless of the quality of their product — even when quality standards for the college or university as a whole are very high. Their rationale often rests on the assumption that few students will ever use the accessibility accommodations and that the few who do will view the low-quality accommodations as "better than nothing." Closed captioning is an example of how easy it is to fall into the box-checking trap. Some campuses are tempted to use [captions generated by speech recognition engines or by crowd-sourced solutions, which have a significantly lower initial cost than professional captioning solutions.](#)

However, **students with disabilities expect, and deserve, educational materials that meet the same rigorous quality standards that other students receive.** Giving them anything less could be viewed as discrimination. On the other hand, when your organization understands that accessibility is a civil right and that diversity is an asset, staff are less likely to take shortcuts and your organization is more likely to reap the benefits of diversity.

4. "Separate but equal" is not a valid approach when it comes to education, and accessibility is no exception.

After decades of civil rights struggles, most people intuitively understand that "separate but equal" is not a valid approach when it comes to education. We need to help people understand that having all students use content and technology that is accessible is most always the best approach. Framing your efforts as a diversity and inclusion strategy helps avoid counterarguments like "when we do get someone like X, we can have them use Y instead." It is far better to be inclusive in your instructional design and follow the [principles of Universal Design for Learning](#) — and it is the only way to fully benefit from diversity in the classroom.

5. The right time to invest in diversity and accessibility is now, and it must be an ongoing investment.

Another common form of pushback when campuses take the legal checkbox approach to accessibility is that staff are likely to complain that "we don't have any people with disability X in our classes," or even worse, "we only have a few people with disability X, so it's not worth doing Y." Thinking of accessibility as a strategy for increasing diversity forces people to think about why they don't have a more diverse student population (especially in certain classes or majors) and what they could do to better include people with a wider range of abilities and learning styles. As an example, it is estimated that more than two percent of the adult population of the United States are deaf, and an additional 13 percent are hard of hearing. [Source: [Galludet University Library Deaf Statistics.](#)]

With percentages that high, it would be unusual for a large university not to have any students who are deaf or hard of hearing. If the percentage of students with disabilities at your college or university is low, your admissions and recruiting departments

need to do a better job of reaching out to more diverse groups by ensuring that all public information about your organization is accessible and assuring these audiences that the technology and resources are in place to help them reach their fullest potential if they choose to attend your institution. For this reason, the organizations that are most successful in their efforts to promote accessibility typically include it under the umbrella of diversity, equity, and inclusion, and they set goals and invest resources that ensure they make progress toward those goals.

## Universal Design Principles

Universal Design is still the recognized nomenclature to signify making educational settings and tools accessible to create a welcoming environment for all students, regardless of their abilities is a requirement for a college campus. You are making an inclusive learning environment.

At The Center for Universal Design (CUD) at North Carolina State University, a group of architects, product designers, engineers, and environmental design researchers established seven principles of UD to provide guidance in the design of products and environments. The example principles and application of these principles designed by the Center for Universal Design are as follows:

1. *Equitable use.* The design is useful and marketable to people with diverse abilities. A website that is designed so that it is accessible to everyone, including people who are blind, employs this principle.
2. *Flexibility in use.* The design accommodates a wide range of individual preferences and abilities. A museum that allows a visitor to choose to read or listen to a description of the contents of a display case employs this principle.
3. *Simple and intuitive.* Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level. Science lab equipment with control buttons that are clear and intuitive employs this principle.
4. *Perceptible information.* The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities. Video captioning employs this principle.
5. *Tolerance for error.* The design minimizes hazards and the adverse consequences of accidental or unintended actions. An educational software program that provides guidance when the user makes an inappropriate selection employs this principle.
6. *Low physical effort.* The design can be used efficiently and comfortably, and with a minimum of fatigue. Doors that open automatically employ this principle.
7. *Size and space for approach and use.* The design provides appropriate size and space for approach, reach, manipulation, and use, regardless of the user's body size, posture, or mobility. A science lab with adjustable tables employs this principle.

## The Process of Universal Design

Many times we hear educators ask just how Universal Design (UDL) applies to the learning environment because they can visually see curb cuts and electric doors, but they are not quite sure how to apply the concept to an electronic classroom. The process of Universal Design for Learning requires consideration of the application as a whole and its subcomponents, whether that is architecture or today's electronic technology. The following list suggests a process that can be used to apply UDL in a postsecondary technology or classroom setting:

1. *Identify the application.* Specify the product or environment to which you wish to apply universal design.
2. *Define the universe.* Describe the overall population (users of service), and then consider their potential diverse characteristics (gender; age; ethnicity and race; native language; learning style; and ability to see, hear, manipulate objects, read, and communicate).
3. *Involve consumers.* Consider and involve people with diverse characteristics in all phases of the development, implementation, and evaluation of the application. Create an inclusive environment and work with your campus disability services office.
4. *Adopt guidelines or standards.* Create or select existing universal design guidelines or standards. Integrate them with other best practices within the field of the application.
5. *Apply guidelines or standards.* Along with best practices, apply universal design to the overall design of the application, its subcomponents, and all ongoing operations (e.g., procurement processes, staff training) to maximize the benefit of the application to individuals with the wide variety of characteristics.
6. *Plan for accommodations.* Develop processes to address accommodation requests (purchase of assistive technology, arrangement for sign language interpreters) from individuals for whom the design of the application does not automatically provide access.
7. *Train and support.* Tailor and deliver ongoing training and support to stakeholders (faculty, computer support staff, procurement officers, student workers. Share institutional goals with respect to diversity, inclusion, and practices for ensuring welcoming, accessible, and inclusive experiences for everyone.
8. *Evaluate.* Include universal design measures in periodic evaluations of the application; evaluate the application with a diverse group of users, and make modifications based on feedback. Provide ways to collect input from users (online, in print, through communications with staff and in your student and employee surveys).

**Consult the following resources for additional materials to better understand universal design:**

- *Universal Design in Education: Principles and Applications*—Applications of universal design to educational settings at all levels.
- *Universal Design of Instruction: Definition, Principles, Guidelines, and Examples*—Designing instruction to maximize the learning of all students.

- *Equal Access: Universal Design of Student Services*—Applying universal design principles to the development of accessible student service units on postsecondary campuses.
- Universal Design for Learning in Higher Education

Efforts toward making a postsecondary institution more welcoming and accessible to people with disabilities can be made by faculty, administrators of student service organizations, and other staff (DO-IT, 2007). But change for any institution can be difficult.

## Apply Your Knowledge

With your campus captioning team (explained in Chapter 2), watch the [Video on Self Examination of Campus Accessibility and Understanding Universal Design](#) and complete Activity

1. The video is from the University of Washington State Do-It Center. Being committed to accessibility is across departments on a campus. Universal design for learning is a commitment to captioning and making your campus accessibility friendly.

## Recommended Further Reading and Resources

1. “Accessibility as a Civil Right Art Morgan, 2016 Educause Review. [Automatic Sync Technologies-2012 White Paper](#)
2. [D2L MOCC Session](#)
3. Minnesota State [Captioning Symposium \(full recording\)](#), April 8, 2016
4. Minnesota State [Captioning Symposium Slideshare](#)
5. Encourage the practice of universal design of instruction, technology, and services. [Washington State’s Do It](#) for accessibility site provides extensive resources.
6. [Portland Community College Resources](#) – includes a freely shared Web Accessibility Handbook

## Chapter 1 Activity



Assuming you have a cross functional captioning/accessibility team (explained in Chapter 2), can you answer the following questions after watching the video. If your team is not yet formed, please come back to this exercise once the team is formed.

1. Do you know what captioning efforts are taking place at your institution and by whom? Which products or services are being used? How are captioning costs being covered?

2. Does your institution have an accessibility policy or established guidelines? Are they included in course syllabi?
3. Does your institution provide faculty training on and/or support for universal design?

## Appendix 1.1: Chapter 1 Checklist

Complete this checklist and submit as part of the package of materials needed to participate in the Minnesota State Sustainable Captioning Seed Program. This assumes you have formed a cross-functional captioning/accessibility team. Please read Chapter 2 before forming the team and/or completing this checklist.

### Checklist

- ☐ Institution's captioning/accessibility team has completed reading Chapter 1
- ☐ Institution's captioning/accessibility team has completed Activity 1 at the end of the Chapter 1 (no need to submit answers, but you are verifying you have completed the activity)
- ☐ Institution's captioning team understands the federal and state laws that govern accessibility including captioning for higher education
- ☐ Institution's captioning team understands the difference between a reasonable accommodation and accessible design
- ☐ Institution's captioning team understands who is responsible for accessibility for online or web-based course materials
- ☐ Institution's captioning team has reviewed the Standards for Closed Captioning known as the Web Content Accessibility Guidelines (WCAG) and ensures that they are utilized in the captioning of course videos
- ☐ Institution's captioning team understands the elements of inclusive (or universal) design and why it's significant in the course design
- ☐ Faculty at your institution have been consulted and are part of the campus team

# CHAPTER 2: CREATING A SUSTAINABLE CAPTIONING MODEL AT YOUR CAMPUS

## Chapter 2 Contents

1. The Importance of Creating a Sustainable Captioning Model
2. Elements of Successful Campus-Wide Captioning Models
3. Obtaining Sponsorship for a Campus-Wide Captioning Project
4. Forming Your Team
5. Creating a Multi-Year Sustainable Plan
6. Defining Campus Roles and Responsibilities for Captioning Course Videos
7. Changing Campus Accessibility Culture
8. Campus Accessibility Indicators for Inclusivity across Campus
9. Defining the Processes and Products to Use in Captioning Course Videos
10. Options for Creating Captions
11. Creating a Captioning Prioritization Schedule
12. What Amount of Funding is Needed
13. Faculty Development and Support
14. Minnesota State – The Story of Three Campuses and How They are Providing Captions
15. Chapter 2, Activity 1: Obtain Senior Level Sponsorship for a Campus-Wide Captioning Initiative
16. Chapter 2, Activity 1: Select Your Campus Captioning Team Members
17. Chapter 2, Activity 2: Develop Your Captioning Team's Charge Document
18. Chapter 2, Activity 3: Develop Your Campus Workflows for Captioning Course Videos
19. Chapter 2, Activity 4: Project Charter Development The Importance of Creating a Campus-Wide Sustainable
20. Chapter 2, Activity 5: Complete Your Multi-Year Sustainable Captioning Project Plan
21. Recommended Further Readings and Resources
22. Appendix 2.1: Chapter 2 Checklist
23. Appendix 2.2: Campus Captioning Team Members
24. Appendix 2.3: Team Charge Document
25. Appendix 2.4: Three Year Sustainable Course Captioning Plan

## The Importance of Creating a Sustainable Captioning Model

Institutions who are captioning videos beyond accommodation have implemented a sustainable campus-wide process that produces results for the institution. Without this, campuses may continue along as they are which sometimes means that captioning is only created upon an accommodation request, which also means the caption is not available right from the start and leaves faculty, staff, etc., scrambling to find resources. The confusion about whose role it is to caption will persist and departments will struggle to find funds and/or means for accomplishing the accommodation request.

In a 2015 Minnesota State system-wide captioning survey, the most frequently reported campus issues outside of the funding constraints included saying:

- There were no established guidelines or procedures and no common set of products, products or workflow requests at their institution
- Even if there was some captioning going on, there was an absence of any well-communicated captioning processes or a common understanding about whose role it is to caption or fund captions

If systematic change that produces results toward an accessible education is the goal, then creating a process model that will be followed throughout the institution is key. Such a model helps to outline the campus goals on a broad scale. In this chapter we will present strategic practices that should be considered when thinking of sustainability.

According to DO-IT includes the following as best practices of learning and should be considered in sustainability planning:

- Institution-level mission, vision, and values statements are inclusive of all people, including those with disabilities.
- Disability is included in campus discussions of and training on diversity and special populations.
- Policies, procedures, and practices are regularly reviewed for barrier removal and inclusivity of people with a diverse range of characteristics, including disability. Administrators, staff, faculty, and student leaders are trained and empowered to take action around disability and universal design issues.
- People with disabilities are visible (even if their disabilities are not) on campus including in positions of power and authority (administrators, faculty, student leaders, etc.).
- Budgeting reflects the reality of the cost of accommodating current and prospective employees, students, and visitors with disabilities.
- Measures of student success (retention, course completion, graduation, etc.) are the same for all student populations, including students with disabilities, and institutional research includes this data.
- Campus marketing, publications, and public relations include images and content related to disabilities.
- Campus publications and websites, including web-based courses, meet established accessibility standards.
- Disability issues are regularly included as a component of the curriculum.

[Source: [DO-IT's Self Examination: How Accessible is Your Campus?](#)]

## Elements of Successful Campus-Wide Captioning Models

While practices may vary from institution to institution, here are some of the best practices identified by the Minnesota State institutions who have processes in place for creating a sustainable campus-wide captioning model.

- Securing senior level campus leadership sponsorship which should include written support by the Chief Academic Officer (CAO) or Provost, addressing why captioning is such a critical initiative at the institution
- Creating a cross-functional team to develop a multi-year plan that captions course videos beyond accommodation requests
- Deciding on the processes and workflows to be used in the captioning videos
- Assigning and defining roles of those to be involved in the process and setting a prioritization schedule for videos to be captioned
- Determining sources for a funding model (i.e. cross campus funding, grants, student technology fees, etc.)
- Determining how often and when faculty training will occur and who will provide support (IT, the learning management system team, Instructional Designer, outsourced training, etc.)

The 2015 Minnesota State system-wide survey mentioned above revealed that for institutions that are going some measure towards captioning course videos beyond accommodation requests, they have these elements in common:

- They have obtained limited campus financial commitment with dedicated budget item for captioning. In some cases it is under \$8,000 per year, excluding the cost of staff resources
- They have formed a cross-functional team with senior level leadership endorsement; prioritizing videos to be captioned
- They have a presence of tools, software, or services for captioning (outsource, insource, or some combination)
- They provide training and technical support for those involved in captioning and for faculty who want to caption their own videos
- They have established and published clear processes and workflows

## Obtaining Sponsorship for a Campus-Wide Captioning Project

It is important to the success of any plan to have sponsorship from the senior leadership levels in any organization. Having the support of the President, Provost or Chief Academic Officer (CAO) shows that captioning is critical and a priority of the institution. Your campus leadership should be able to support the forming of a cross-functional captioning/accessibility team that will develop a long-term sustainable plan for course captioning. This team may well serve to work on accessibility and/or inclusive design efforts that go beyond captioning.



Leadership sponsorship and/or support can take several forms:

1. A memo or other form of communication from a campus leadership role enabling the formation of a campus-wide captioning project and the formation of a cross-functional captioning/accessibility team
2. The naming of the project sponsor in a captioning project charter
3. A letter from the Provost/CAO to faculty emphasizing how critical captioning is to help meet the needs of all learners in addition to meeting the legal requirements on both the Federal and State levels

## Forming Your Team

The importance of a cross-functional team cannot be emphasized enough. Roles must be determined and decided from those across the institution. This could include individuals from the academic leadership team, your campus academic technology team, Disability Services, IT, the D2L Brightspace Team, media services, etc. Equally important is the inclusion of faculty in your captioning plan. You should ensure that you consult with the faculty bargaining unit at your institution to seek input on captioning efforts, member recommendations for your team, and training and support needs. You will need to form a team to be eligible to receive funds from the Minnesota State Sustainable Captioning Seed Funding program. [Please see Activity 1 at the end of the chapter.](#)

While the Disability Services office at your institution is handling accommodation requests, a sustainable captioning effort means pro-actively captioning course videos as a natural, standard part of the course design process, and before an accommodation request is made. Ironing out the finances, the prioritization model, and work flows will require people from across the campus and certainly across departments and functions. Implementing a sustainable practice will call upon staffing and monetary resources that likely go beyond the capacity of the Disability Services office.

The team should be ongoing and willing and able to review the processes put into place. When determining your campus team, think about the various stakeholder groups are and ask how they can best work together to address the vast needs of captioning at your institution. Are these individuals willing and able to work together to maximize the captioning process and funds available?

## Creating a Multi-Year Sustainable Plan

Ultimately, captioning all course videos cannot be done in a single year nor can sustainability happen overnight. Sustainability is about making progress, showing a good faith effort towards ADA compliance. This could include developing processes that can be added to workloads and

existing budgets, even if biting off a small chunk at a time. For example, your campus might want to develop a three year plan and evaluate progress on that plan after one year. Find out what's working well or needs tweaking. Adjust the plan where needed based on data collected by key stakeholders.

A captioning plan minimally should include:

1. A project charter naming the project sponsor and team members and roles
2. The captioning processes, products, and workflows that will be used
3. The prioritization schedule (i.e., new videos first, current semester course videos first)
4. Demonstration of financial commitment from the institution per year (or years determined by the plan)
5. How often and when the plan will be reviewed, by whom and revised

## Defining Campus Roles and Responsibilities for Captioning Course Videos

Often when looking at closed captioning an immediate discussion ensues on whose role it is to implement captions. Is it the responsibility of the Institution? Faculty? Administration? Disability Services? In short the answer includes all of these parties are responsible and all have a significant role in the process. Your team should review the various ways that campuses have structured roles for captioning and assess which model would work best for your institution.

As you develop the team, process and roles, how do you decide who will do what? This may vary depending on the process and products selected. For example, if you choose to use a third party product for all of your captions, the staffing model may look somewhat different than deciding to caption in-house. Remember, you are not the first campus to struggle with the development and sustainability of change and there are many resources and examples to follow. Examples of staffing models can be seen in the Stories from the Field Section below, as well as examples of processes and teams.

This may prove to be a valuable resource when attempting to define campus roles for captioning and/or other accessibility efforts: [Portland Community College Infographic on Defining Responsibilities for Accessibility of Online Courses](#).

## Changing Campus Accessibility Culture

A Washington University's DO-IT article "[What are the Motivations, Objectives, and Processes for Systemic Change?](#)" posits that "Change can be viewed from three perspectives: the Reason for change, the content of change, and the process of change." As we know the reason for the change is emphatically lack of equal access to all learners, the content of the change and process involve providing that equal access to all learners by captioning all videos, lectures, etc. With "buy-in" established, the next areas to work on would be content and process

development. This is where a work-flow and prioritization schedule for what videos will be captioned first should be established. Since it is not one party who is responsible, where at the institution will the captioning process begin? In other words, which department or role? In IT, within your learning management system team, Training and Development, Instructional Design, Faculty, or Disability Services? Who would initiate and maintain the process, distribute funds, and keep captioning sustainable? As was discussed earlier, though captioning is the responsibility of many, it must be formally housed in one area of the institution as this is part of the college process.

As your plan evolves, it is important to begin to think about the long-term sustainability of your commitment to change. How will you support your ongoing faculty training? Should software such as Camtasia or YouTube be chosen? As part of the process what is the time-frame for captioning and expectations of turn-around? If the institution is looking at a multi-faceted approach what is the timeframe and turn-around and time-frame? Finally, where might the institution consider surrounding ongoing budget planning and growth strategies and revision for future captioning?

## Campus Accessibility Indicators for Inclusivity across Campus

At the end of this chapter, we've included stories of three Minnesota State campuses and how they are providing captions. More importantly, they are stories about how they organized, have been changing campus culture around accessibility starting with captioning, structured the captioning work and workflows, and have provided for faculty training and support. You will see different examples, to be sure, but what they have in common is that they in fact are implementing many of the best practices noted in the 2017 University of Washington's DO-IT.org article ["Self Examination: How Accessible is Your Campus?"](#)

*Table 1: DO-IT.org "Self Examination: How Accessible is Your Campus?"*

According to DO-IT.org “there are a number of Campus Accessibility Indicators surrounding best practices for learners surrounding disability.” These include and should be thought out as the institution develops the process and procedures for captioning across campus and not just inside courses. Though all of the following may not be in direct relation to captioning, all should be considered as captioning is the first step in the process toward sustainability. DO-IT includes the following as best practices of learning:

- Policies, procedures, and practices are regularly reviewed for barrier removal and inclusivity of people with a diverse range of characteristics, including disability.
- Institution-level mission, vision, and values statements are inclusive of all people, including those with disabilities.
- Disability is included in campus discussions of and training on diversity and special populations.
- Policies, procedures, and practices are regularly reviewed for barrier removal and inclusivity of people with a diverse range of characteristics, including disability. Administrators, staff, faculty, and student leaders are trained and empowered to take action around disability and universal design issues.
- People with disabilities are visible (even if their disabilities are not) on campus including in positions of power and authority (administrators, faculty, student leaders, etc.).
- Budgeting reflects the reality of the cost of accommodating current and prospective employees, students, and visitors with disabilities.
- Measures of student success (retention, course completion, graduation, etc.) are the same for all student populations, including students with disabilities, and institutional research includes this data.
- Campus marketing, publications, and public relations include images and content related to disabilities.
- Campus publications and websites, including web-based courses, meet established accessibility standards.
- Disability issues are regularly included as a component of the curriculum.

## Defining the Processes and Products to Use for Captioning Course Videos

The process, meaning how your campus goes about providing captioning, should determine what route is best for the institution to complete the captioning process. Your cross-functional captioning team should assess which method or combination of methods are best for your institution.

Examples of the types of questions you should ask:

- Which staff can you assign to captioning and to which functions?
- How will requests for captioning be made and tracked?
- How will video and/or SRT files be shared between faculty and captioning staff?

- Will you caption entirely in-house,<sup>1</sup> outsource,<sup>2</sup> or use a combination of methods?
- If you caption in-house, what software will you use?
- What communication process will you use to inform departments and faculty of the captioning project, processes, and methods for captioning?

## Options for Creating Captions

Each will be discussed separately in more detail to follow.

1. Creating captions in-house using computer software
2. Creating captions in-house using web-based automated captioning tools such as Kaltura Machine Captioning (Cielo24) in MediaSpace or YouTube
3. Outsourcing captions to a third party service

## Creating Captions In-House Using Computer Software

Using a third party captioning service makes the process easier overall, however it's not for everyone since the main constraint can be cost. There are several software products available to caption videos and overall the cost may be lower, however, it will take someone who knows how to use that software to be successful.

### Computer Software Products to Create Captions

Camtasia Studio by TechSmith is well-known primarily as a screen capture tool, however its ease of use and support for captions make it a robust captioning tool. Captions are a text transcript synchronized to its corresponding video (see Figure 1 below describing the steps involved in preparing a caption file in Camtasia). Typing and pasting between Camtasia and Word makes the process of adding the captions by hand a painless process. Additionally, you can create your voice file using speech-to-text and caption automatically in Camtasia 9.

Other products include Subtitle Horse, MAGpie, MovieCaptioner by Synchrimedia, and several others as listed at these two locations:

- [Caption It Yourself Website](#) (Basic Guidelines for Busy Teachers, Families, and Others Who Shoot Their Own Video)
- [Adobe Captioning Tools page](#)

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<sup>1</sup> In house: without assistance from outside an organization; completed internally

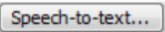
<sup>2</sup> Outsource: to obtain (goods or a service) from an outside supplier, often referred to as a third-party vendor or service, especially in place of using an internal source for that service

*Figure 1: Preparing a Caption File Using Camtasia*

**Requirements for this process** include a copy of Camtasia 7.1 and Windows 7 installed on the PC. This process uses the Speech-To-Text feature available in Windows 7 so it will not work on a Mac installation of Camtasia 7.1

- Either create or import your video into Camtasia



- Click on the “More” button in the control panel of Camtasia and select “Captions”.
- Click the “Speech-to-text” button . The button is a small, light-colored rectangle with the text "Speech-to-text..." in a dark font.
- If you are creating content on your personal computer, or dedicated work computer, take the time to “Train your computer to understand your voice” by clicking on the “Start voice training” on the pop-up. This one time process will take approximately 45 minutes. Highly recommended!
- You can also set up your microphone and add words to the speech recognition dictionary if you are using words specific to your subject area that may not be in the normal vocabulary.
- Click Continue
- If prompted, select the Audio track you want to transcribe, typically Audio 1. Click Continue
- Progress bars will appear during the two transcription processes. Depending on how long your audio track is, it could take some time. (average 6 minute video can take up to 11 minutes)
- When the process is complete, you can start proofing and editing each caption
- NOTE: Punctuation and capitalization are not transcribed by Camtasia.

[Source: [Video Captioning Using Camtasia](#), Portland Community College]

## Creating Captions In-House Using Web-Based Automated Captioning Tools

Everyone can create captions in YouTube at no cost, for any videos in your persona Video Manager (videos you created and have uploaded to YouTube). But there is some editing work involved to correct caption text and to ensure that the captions synch correctly with the audio.

**As of 2017, all Minnesota State faculty and staff have access to Kaltura’s automated machine captioning process (Cielo24) at no cost through their MediaSpace account.** Because so many faculty have videos in MediaSpace already, it is a very simple process (one keystroke to request) to have captions created for their videos, whether they complete the process or a campus staff person does it on their behalf. As with YouTube, there is the same editing work to correct caption text and to ensure that the captions synch correctly with the audio. Information about both products is presented in more detail below.

### Creating Captions in YouTube

Most people know that you can upload videos to YouTube, but not everyone knows that YouTube offers three means for adding captions. You can use the automated machine captioning feature or you can upload your own transcript to be associated with your video. Both of these methods will need reviewing and correction time to ensure that the words are correct, and/or that the timing of the audio with the text is accurate. The third method is to transcribe the captions by typing them in as the video plays. YouTube pauses the video as you

type and YouTube will then synch the transcript with the audio to create timings. This method will require review as well.

Chapter 3 will introduce how to search for YouTube videos that are captioned and how to enable closed captions if they are not automatically appearing.

To use the automated captioning feature in YouTube:

1. Log into your YouTube account and channel
2. Select Video Manager
3. Select the video to which you want to add captions
4. Select "Edit"
5. At the upper right of the screen, select "Subtitles and CC"
6. Select "Add new subtitles or CC "
7. Select the language
8. Select "Create new subtitles or CC"
9. When you do that, the captions are automatically generated and a caption text box with the time stamps appears next to the video
10. Select play to check to see if the words on the screen match the words being spoken
11. Correct any errors in the caption text box

[Short video demonstrating the steps to use the automated captioning in YouTube](#)

To create captions in YouTube by uploading your own transcript:

1. Make sure you save your transcript as a plain text file
2. Log into your YouTube account and channel
3. Select Video Manager
4. Select the video to which you want to add captions
5. Select "Edit"
6. At the upper right of the screen, select "Subtitles and CC"
7. Select "Add new subtitles or CC "
8. Select the language
9. Select "Upload file"
10. Select "Choose file" from your computer and upload
11. Select "Set timings;" this operations may take a few minutes to complete
12. You will see your text and timings next to the video; review and edit errors in words or timing
13. Select "Publish"

[Short video demonstrating how to create captions by uploading your transcript](#)

Remember, unedited machine-based captions will not be compliant for viewers under the Americans with Disability Act (ADA)

## Using Kaltura Machine Captioning (Cieolo24) through MediaSpace

As mentioned previously, all Minnesota State staff and faculty have access to the automated machine captioning option in Kaltura's MediaSpace. This option provides the benefit of a low cost entry into captioning course videos and can be considered an effective means for getting most of the way there. Your cross-functional captioning team could then decide on the appropriate workflows and staff who could cover the "gap." By that we mean manual work needed to fix any inaccuracies in the text or synching of the text to audio.

Experience shows that faculty may volunteer to do captions on their own once they are shown how to order machine captions in MediaSpace. Additionally, they often show interest in correcting the inaccuracies themselves.

You can access the machine captioning option by logging into your MediaSpace account via your StarID login. Once there, go to My Media. For the desired video, simply go to "Actions" and select "Order Captions." It takes about 3 times the length of the video for the captions to generate. You can check the status of your caption by clicking on "View Caption Requests."

Captions will need editing. Typically, the accuracy of machine captions in MediaSpace will be about 70-80% [Source: [Michigan State University Kaltura MediaSpace Machine Caption Help](#)]. Remember, unedited machine-based captions will not be compliant for viewers under the Americans with Disability Act (ADA).

Important note: As soon as the captions are processed, they will show up immediately in any videos embedded or linked to in a learning management system, such as D2L Brightspace. Therefore, users should hide the video page with the embedded video or disable the video link until the captions have been edited. Alternatively you could make a copy of the video to caption and then replace the former video with the captioned video.

## Outsourcing Captions to a Third Party Service

Alternatively to creating your own captions, the work of creating captions can be outsourced to third party services such as 3Play Media, AutoSync, Rev.com, etc. The benefits include:

- Outsourcing can be the most convenient option to create caption files
- Outsourcing requires minimal time to complete
- Outsourcing can provide peace of mind that your caption files are accurate
- Outsourcing requires no additional software or training of staff on that software

Some of these services require a contract and a minimum deposit of funds against which your institution draws down, and others offer pay-as-you-go services. The prices range from approximately \$1.00 to \$2.60 per video minute. You will want to inquire about each company's



process to caption videos, their accuracy rate, and how their employees are trained, especially for technical and mathematical subjects. Their processes vary greatly, but overall, institutions using these services report positive outcomes.

Specific questions to ask third party services are:

1. Cost per minute
2. File type(s) accepted
3. Length of time to use purchased minutes (some companies offer 3-5 years to use the minutes you purchase and others have shorter time frames.
4. File returned format
5. Accuracy
6. Guarantee

There are many more questions to ask these services before choosing a vendor. The Division of Disability Resources and Educational Services at the College of Applied Health Sciences at the University of Illinois at Urbana-Champaign, has put together this [list of Questions to ask Outsourcing Captioning Company](#).

In the section at the end of this chapter entitled “The Story of Three Campuses and How They are Providing Captions,” you will see that all of the campuses utilize a combination of in-house and outsourcing options. Outsourcing options often vary depending upon the amount you purchase. If you have several campuses that work together on captioning, you may be able to negotiate the minutes of captioning into a larger bundle.

### **Third Party Captioning Services**

These are some suggested third party services most frequently used by institutions of higher education:

- [Rev. com](#)
- [CaptionSync](#) by Automatic Sync Technologies
- [3Play Media](#)
- [Amara on Demand](#)
- MAGpie

## **Creating a Captioning Prioritization Schedule**

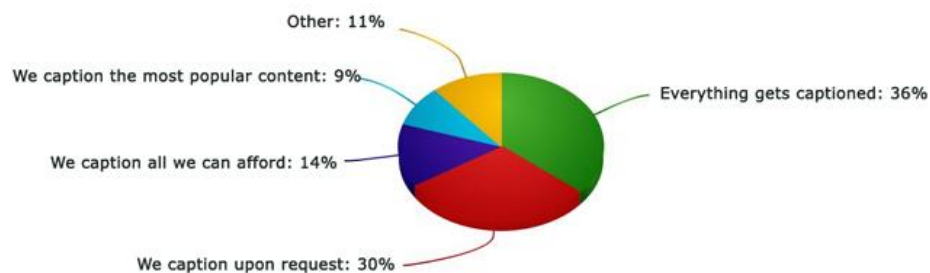
As the process and product(s) you choose to use come together, the next step for the committee to work through is prioritizing which videos get captioned first. Captioning course videos is a daunting task for any institution and especially those with a sizable number of course videos and/or who have a regular stream of new content. It is unlikely that your institution can caption all course videos at once, or perhaps even within a year. But to move in the direction of compliance, starting somewhere with a shared understanding of your video prioritization

schedule will help you press forward. With each ensuing semester your institution may find itself feeling comfortable that course videos in any given semester have been captioned, even if this takes a few years.

So how do institutions prioritize which videos are captioned first? Of course, videos in courses with students requesting accommodations are first on the list. But then which ones follow? For example, would you prioritize new courses? What about courses that have completed Quality Matters (QM)? Perhaps your institution prefers to start with high-enrolling courses, STEM<sup>3</sup> courses, General Education courses, or courses where faculty are on-board with captioning. Or is it some combination of these? Some institutions decide to forgo captioning face-to-face lectures or they have limits for the length of a lecture to be captioned. Overall, the process must establish a prioritization and means of organization of video captioning, especially when funding is limited.

*Figure 2: Which content gets captioned? A Survey of 3PlayMedia's customers*

### How do you prioritize which content gets captioned?



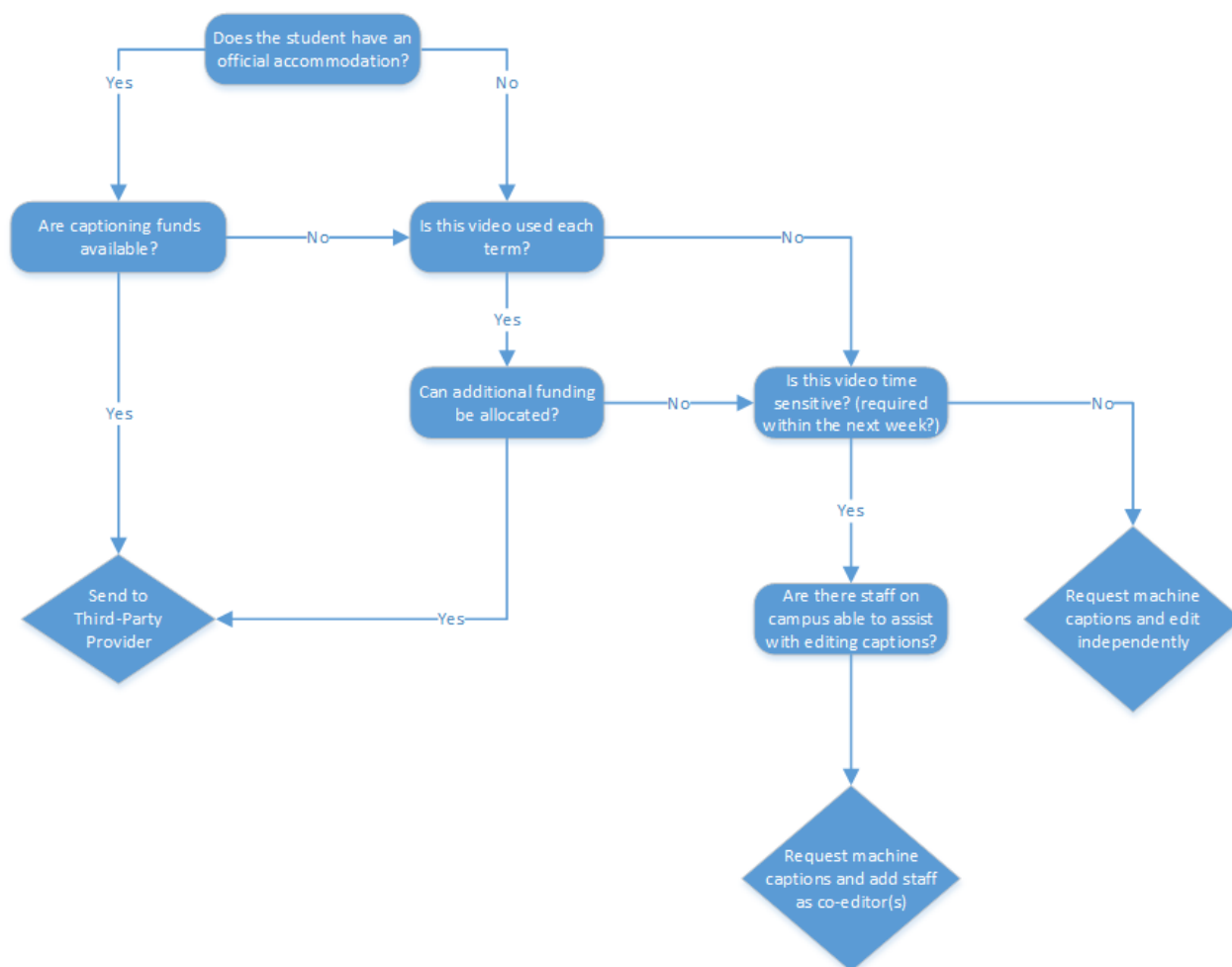
[Image source: [How Do You Prioritize Content for Captioning?](#) From 3PlayMedia.com]

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<sup>3</sup> STEM: Science, technology, engineering, and math. For more information visit: U.S. Department of Education [Science, Technology, Engineering and Math: Education for Global Leadership](#)

## Decision Tree: One Example of How to Determine Which Videos are Captioned

Figure 3: Decision Tree How to Decide Which Videos are Captioned



### What Amount of Funding is Needed?

Funding is one of the important points in a captioning plan. Based on a 2015 Minnesota State system-wide survey, the data collected suggests that of the institutions that have instituted an ongoing captioning process, costs excluding staff resources, range between \$4,000 and \$14,000 per year. Some campuses have used in-house captioning staff and others are using the machine based or human captioning options. An in-house captioning process will require dedicated staff due to the high volume of videos a campus uses. Most institutions do not have a dedicated staff and use an approach of assigned individuals and larger captioning projects or quick turn-around needs are outsourced.

Once you develop your prioritization schedule to assess reasonably how many video minutes can be captioned in a year given your preferred captioning processes (products or services), you can do scenario planning and compute your funding needs.

## Funding Options

1. Grants and Funding resources, [download the free ebook here](#)
2. The Catalog of Federal Domestic Assistance
3. The Federal Register for Educational Technology Materials
4. National Association of the Deaf
5. National Institute of Deafness and Other Communication Disorders (NIDCD)
6. Distance Education Captioning and Transcription Grant
7. Cielo Captioning Grants Website
8. Perkins Funding
9. Campus Foundation grants
10. Federal Grants, such as:
  - **Educational Technology, Media, and Materials for Individuals with Disabilities: Stepping-up Technology Implementation (Deadline: June 5, 2017)** The purposes of this U.S. Department of Education program are to: improve results for students with disabilities by promoting the development, demonstration, and use of technology; support educational activities designed to be of educational value in the classroom for students with disabilities; provide support for captioning and video description that is appropriate for use in the classroom; and provide accessible educational materials to students with disabilities in a timely manner.
  - **Distance Education Grants Program for Institutions of Higher Education in Insular Areas (Deadline: June 12, 2017)** The purpose of this program is to strengthen the capacity of Institutions of Higher Education in Insular Areas to carry out resident instruction, curriculum, and teaching programs in the food and agricultural sciences through distance education technology. The Distance Education Grants Program for Institutions of Higher Education in Insular Areas (DEG) is an NIFA-administered competitive grants program focused on improving formal, postsecondary agricultural sciences education.

Though funding is a huge part of the overall captioning process a combination of options should be considered leading to a sustainability plan for the institutional process. A combination of some machine captioning and editing, some in-house and a process for outsourcing some captioning should be considered. Will your campus be able to dedicate funds to captioning?

## Faculty Development and Support

*Table 2: Excerpt from University of Washing DO-IT's ["Self-Examination: How Accessible is Your Campus?"](#)*

"A truly inclusive campus takes a more holistic approach. As reported by Beatrice Awoniyi, director and assistant dean for the Student Disability Resource Center at Florida State University, 'We all have responsibilities for providing access and a welcoming environment for anyone on our campus. It is not an office responsibility; it is not just the disability services office or the disability services provider or the director or the coordinator that is responsible to making sure that access is provided for students with disabilities, or that their needs are being met. It is a university-wide responsibility.' It takes an entire campus, from administration to architecture to academics, to create a welcoming and inclusive environment. Accessibility issues should be considered at all levels."

The world of digital accessibility is replete with the language of compliance, inclusive design, clean code, and screen readers. So it can be easy to forget what really lies beneath our work in accessibility. Why do we do what we do? How do we get people, especially faculty on board with the need for creating accessible course content? The answer to these can be found in the word "empathy." As defined by Merriam-Webster, empathy is the capacity for understanding, being aware of, being sensitive to, and vicariously experiencing the feelings, thoughts, and experience of another (even) without having the feelings, thoughts, and experience fully communicated in an objectively explicit manner. Having faculty understand the challenges involved with accessing course materials via a screen reader or other assistive technologies is a place to start. Having English language learner students articulate the benefit of having captioned videos is another means for developing empathy. What other ways can you think of?

Having a clear direction and support of the captioning project on a campus are the first steps to motivating staff and faculty members to accept the change. When staff and faculty feel that they can complete the captioning, feel supported to be able to try on their own or not feel pushed into something they are not technically prepared to do, they are more likely to feel willing to become part of the solution. The value of captioning needs to resonate with everyone. How will you be able to do this at your campus?

Table 3: Second Excerpt from University of Washing DO-IT's [\*"Self-Examination: How Accessible is Your Campus?"\*](#)

By using principles of universal design to create course content, faculty can minimize the need for additional accommodations. As suggested by Rodney Pennemon, "When you're designing your class and putting it together, you really need to think globally in terms of who's going to be [your] audience, who do [you] need to reach? [There may be] younger students, non-traditional students, students from different backgrounds and different cultures...and so if you go in with the approach that you're going to try to reach as many people as possible, it's similar to giving a lecture: you're going to have an audience of people that come from a lot of different backgrounds, and so you want to be able to appeal to as many different levels as possible."

Instructors are encouraged to use a variety of methods for teaching content and offer alternative ways to participate in class activities. A statement on the course syllabus encouraging students to meet with the instructor to discuss accommodations helps create a supportive atmosphere. As summarized by Meryl Bernstein, director at the Center for Academic Support at Johnson and Wales University, "Universal design is really making the classroom accessible for all students, not just for students with disabilities, and it really comes down to just good teaching. By teaching students through all the modalities—by hearing, by seeing, by touching—the information is accessible to all students in different ways."

## Minnesota State – The Story of Three Campuses and How They are Providing Captions



The following section provides a variety of perspectives about how three Minnesota State institutions that have developed a campus-wide captioning process. Here are their stories.

### ***Anoka-Ramsey Community College***

In 2014 Anoka-Ramsey Community College (Anoka Ramsey) started with the union campus presidents a task force for captioning called the Campus Accessibility Task Force. A Dean led the work with 12 members of a newly formed cross-functional team consisting of faculty, Disability Services, faculty support, IT, educational services, and the library personnel.

#### **1. Roles and Responsibilities**

Six staff are used for faculty support. The staff try to dedicate one day per week as possible for captioning. The responsibilities are led by the Faculty Support Coordinator. All captioning requests go through the Faculty Support Coordinator who delegates to the staff

who then complete the captions based upon the project and the staff member's skill-set. Anoka Ramsey uses a combination of in-house products to caption and outsourcing captions to a third party vendor. Currently, most projects are being outsourced as it has been determined that outsourcing is more efficient and cost-effective than solely in-house captioning.

## **2. Anoka Ramsey's Cross-Functional Team consists of the following members by title/role:**

- Faculty Support Coordinator and five faculty support staff (not full time on captioning)
- Disability Services Coordinator
- Director of Academic & Support Services
- MANE Nursing Admissions Coordinator and Program Support
- Academic Technology Designer
- Office of Information Technology-Enterprise Applications
- Math instructor
- Philosophy instructor

## **3. Process and Resources**

Anoka-Ramsey uses a multi-prong approach to captioning which includes in-house staff to complete captions using selected software, some trained faculty who do their own captioning, and contracts with third party vendors to outsource their caption work. In selecting third party caption vendors, they evaluated using a list of pros/cons for each vendor interviewed. The Faculty Support Coordinator through a collaborative process, completed defining the workflows for both methods of completing captioning needs (in-house captioning and outsourcing to third party vendors).

## **4. In-House Software to Produce Caption Files**

- Camtasia Studio
- Kaltura MediaSpace machine captioning (Cielo24)
- YouTube

## **5. In-House Software to Produce Transcripts**

- Dragon Naturally Speaking
- Microsoft Excel – A Chemistry instructor created a spreadsheet containing formulas that would strip out time stamps and create a transcript.
- Microsoft Word
- WAVPedal

## **6. Faculty Training on the Following Products/Software**

- Camtasia Studio: team learning, self-taught, online tutorials, shared online course material
- Kaltura MediaSpace machine captioning (Cielo24): self-taught, faculty do their own captioning, Faculty support provide SRT file to upload to course media
- YouTube: self-taught, faculty do their own captioning, Faculty support provide SRT file to upload to course media
- Dragon Naturally Speaking: self-taught
- WAVPedal: self-taught, online transcription training course

## **7. Outsourcing to Third Party Captioning Vendors**

- \$20,000 initial budget earmarked for captioning course media; Disability Services continues to request and receive \$20,000 each fiscal year
- Piloted with three vendors: 3Play Media, Automatic Sync Technologies (AST), Rev
- After pilot, kept two vendors: Automatic Sync Technologies (AST), Rev
- Faculty are able to submit their videos and receive the SRT files within 24 hours. We have been very pleased with the accuracy that both Automatic Sync Technologies (AST) and Rev have provided

## **8. Additional Information**

- If the video which belongs to the instructor was created or uploaded to YouTube (their own channel) Anoka Ramsey outsources that video to REV for the SRT file and gives that file back to the instructor to upload
- Anoka Ramsey manages a YouTube channel and will upload the SRT files for any faculty who do not want to create their own YouTube channel
- All courses that need the captioning for accommodation purposes are funded at the 100% level. Other videos to be captioned are outsourced at the end of the fiscal year based on remaining budget

## **9. Pros and Cons of Vendors**

- 3Play Media – Pros: - good quality, edited for clarity, built-in editor, no “<<<” or “voiceover” at caption start; Cons: cost, caption & transcription bundled
- Automatic Sync Technologies – Pros: good quality, caption & transcription separate, contract with other Minnesota State colleges; Cons: most expensive, captions always start with “<<<” at start
- Rev - Pros: least expensive, good quality, voice recorder app; Cons: captions start with “voiceover” at caption start, captions more verbatim at times



## 10. Anoka-Ramsey Workflow

Anoka-Ramsey developed a workflow to both govern how to prioritize the videos for captioning and to determine exactly how the process worked. The Faculty Support Coordinator is the lead person and the one who coordinates all course captioning projects. The following steps illustrate the workflow at Anoka-Ramsey:

- a. Discuss and determine captioning needs with faculty
- b. We are piloting a Caption/Transcription Request pdf form that faculty return to the Faculty Support Coordinator (most requests are in-person or email for now)
- c. Faculty drop off their media in their designated folder on the network drive (update: now using Office 365)
- d. Faculty Support Coordinator converts media as needed and delegates to the designated faculty support “New Projects” folder on the network drive
- e. Faculty support saves completed projects to their “Completed Projects” folder on the network drive and notifies the Faculty Support Coordinator

## 11. Changes Made to the Workflow after Piloting

- a. Discuss and determine captioning needs with faculty based on request
- b. Faculty drop off media in designated folder on the network drive
- c. Media is converted as needed and delegated to faculty support staff
- d. Faculty support staff save completed projects back to network drive
- e. Faculty Support Coordinator sends completed project files back to faculty

Anoka Ramsey no longer uses the Caption/Transcription Request pdf form. Faculty seem to prefer email as a means to express their need for captioning. Since faculty seem to prefer email, we have deferred to the process that works best for them. Faculty share their videos through OneDrive or the network drive. We have had some limits on what we can do with OneDrive and are evaluating that as a feasible delivery option for the future. Currently, the network drive still operates as the best delivery option.

## 12. Record Keeping Videos

Anoka-Ramsey keeps a record of the videos captioned and it has always been the total minutes of videos captioned and expense to caption them that has been important. The Faculty Support Coordinator maintains the outsource logs to know when to put in the paperwork for more funding and to track the minutes of captioning. The Faculty Support Coordinator also does all the video prepping, oversees the vendor contracts, and submits all SRT files to faculty. This is an essential element because if you outsource your videos and have not kept record of the minutes used, it could become costly to go over your purchased number of minutes. Additionally, it helps you in future years to plan when you know the number of minutes per video that were captioned. It helps you develop your sustainability report to have these analytics.

### **13. Captioning Results in Year 1 of Captioning Initiative**

- In-house Captions: 180 videos (2,770 minutes), 108 transcripts, 10 departments represented
- Outsourced Captions: 95 videos at \$3,390 (1,530 minutes)
- Approximately 55% of course captioning requests completed during one summer with one faculty support position

### **14. Recommended Practices**

For getting started with captioning course media and developing guidelines for sustainability Anoka Ramsey is recommending the following:

- Form a cross-functional team and stay connected
- Have training resources available for team members
- Document your process
- Keep administration up-to-date on your process
- Publicize your process on campus
- See what other campuses are doing in regards to captioning course media
- Stay current on accessibility guidelines and technologies
- Take advantage of professional development opportunities surrounding accessibility

### **15. Next steps for Anoka-Ramsey**

We will begin to look at descriptive audio options as well as strengthening our ability to provide accessible documents.

## ***Central Lakes College***

Central Lakes College (CLC) began in 2014 developing processes and plans for captioning. They understood this involved changing the campus culture and quickly formed a team consisting of faculty, disability services, and technical support. What had happened prior is no one knew the workflow and who would be responsible. Roles and responsibilities were quickly developed, along with an overarching plan to reach the widest possible audience for the change to become a valuable part of their inclusive culture. What drove the formation of the team was having 11 deaf and hard of hearing students, so the need for the change was evident to everyone involved.

#### **1. CLC's Cross-Functional Campus Team consists of the following members by title/role**

- Coordinator of Disability Services
- Communication Instructor (faculty) and Online Instruction & Technology Committee Chair
- Online Learning System Site Admin

## **2. Captioning Processes and Resources**

CLC developed a hierarchy of need within their proactive planning decision to develop a captioning plan for their campus. They feel that the planning they did beforehand was the most important factor to their successful captioning launch. The planning helped them to decide upon the video and software logistics, along with how to promote and deliver the initiative. They started their plan with what they call the 5 W's:

- WHO – computer-savvy work-study
- WHAT – created a formalized process
- WHERE –online learning/disability services
- WHEN – incremental phases
- WHY – to meet needs in an efficient, collaborative manner

## **3. Developing a Prioritization Plan and Workflow**

CLC prioritized captioning the videos in classes in which their deaf students were enrolled. Next they determined whether the video was required, recommended or supplemental. With each video, they needed to know if the video required copyright permission to add captions. From these key pieces of information, CLC then developed their workflow and technical logistics.

## **4. Workflow**

- Faculty members submit their requests via a dynamic form triggering notification
- Their submission is given a priority status and entered into workflow log
- The time to completion is recorded on the log
- The requesting faculty member is notified when the captioning is completed

## **5. Technical Logistics**

- The videos were created as mp4 files using MovieCaptioner software
- CLC created a “CLC Closed Captioned” YouTube channel
- By default, the closed captioned video was uploaded to YouTube
- The privacy setting for each video was determined from the submission form

## **6. Change Management**

The key to success for CLC was knowing the new captioning process would require changing the culture of the campus. To do this, they used change management principles and ensured the entire initiative was developed collaboratively and transparently across the campus. Their Online Instruction and Technology committee helped to promote the captioning initiative. The campus has a Disability Advisory Council made up of administrators, Deans, Directors, faculty, and staff. This group helped to ensure needs were

being met and that communication was in place across campus via mass email messaging to faculty and staff. The collaborative groups presented the program during duty days and promoted the plan with positivity and assistance so as not to cause resistance to the change. The campus consulted with other schools to gain insight on successful practices. By using many of these practices, their work was viewed as a positive initiative.

## **7. CLC's Lessons Learned**

Starting a large captioning initiative like this involved trial and error. CLC's captioning team began using Work-Study students to assist in the captioning. In doing so, they discovered it takes a certain skill-set to complete the captions. The college quickly ran out of work study hours to assign to this work and had to rethink their process. Storage of the videos became their next issue and they had to develop a solution to house the project files. CLC found that many last minute requests were going unfulfilled and they had to remain open to outsourcing the captions and funding the project differently. The project they once thought could be a simple work-study enabled design needed to have a budget established for these bumps in the road. They tracked how long captioning projects stayed in their queue and assessed the average time it took to complete the captioning request. The times varied due to differing skill sets of the Work-Study student. Additional Work-Study hours had to be added during peak times.

Central Lakes College has now captioned over 200 videos. Their video library continues to grow and their plan evolves as it needs to. They currently use YouTube and Movie Captioner for their in-house captioning. Additional full-time captioning staff had to be added to meet their growing demand. CLC does not see the need for captioning to go away in the near future and is planning their captioning initiative as part of their commitment to an inclusive campus culture.

## ***Minneapolis Community and Technical College***

Minneapolis Community and Technical College (MCTC), saw a need over the last few years to take their captioning efforts to the next level. They had already utilized a combination of in-house and outsourced captioning processes but the demand was so great they needed to add another component to their captioning workflow. As a result, MCTC developed an Accessibility Resource Center. At the center a Director and staff coordinate the needs of the campus to provide their inclusive environment beyond helping students who require accommodations.

### **1. Accessibility Resource Center Staffing**

MCTC's Office of Students with Disabilities was revamped with the addition of new positions and they began working cross-departmentally. The Center for Teaching and Learning provided training was provided for faculty who prefer to caption their own videos and the MCTC team created a campus workflow for both in-house and outsourced video content was developed. The following positions were revamped and created:

- Captioning Coordinator (AFSCME)
- Two (2) Accessibility Specialists (MAPE)
- Accommodation Specialist
- Director (formerly called Office of Students with Disabilities)
- Three (3) Student workers

One of the key positions in the new department is the Captioning Coordinator. The Captioning Coordinator is a member of MCTC's Campus Academic Technology Team (CATT) and the position provides a sustainable option for serving a diverse urban community college campus. The Captioning Coordinator is a new position and responsibilities are being defined as the role evolves. The CATT team provides support to the development of the ideas for how to best develop this new role.

## 2. Captioning Process

The department created a form inside Sharepoint as the original option for faculty to make requests for captioning. They soon realized this needed to be a flexible process as sometimes someone had to submit on behalf of the faculty member since many faculty were did not understand how to participate in the workflow process or successfully find and use Sharepoint. While the department tries try to provide for a flexible flow they also have a need to track and document the work to be completed. The department plans on using summer sessions for promoting a proactive approach to getting as many videos as possible captioned.

## 3. Workflow

The request form was revised with new fields that now best triage the work (i.e., send to the Captioning Coordinator to complete, a student worker, or an external vendor). The workflow consists of the following:

- a. Faculty member submits a request form on Sharepoint where they need to specify if it is a required or optional part of a course.
- b. Form helps determine the ownership and format of video (physical copy, DVD, VHS)
- c. Form helps determine the source of a digital file (i.e., Youtube, Kaltura, Flashdrive, or in the learning management system).
- d. Files submitted by the faculty member allow for the SRT file to be attached and become part of the file library for easy tracking. If the faculty member "forgets" the location, the link can be sent to them.

## 4. Third Party Vendor Contracts

- Although there is a Minnesota State contract with Kaltura which includes the automated machine captioning function (Cielo24), MCTC had originally set up its own instance of Kaltura via a KMC, (Kaltura Media Console). They purchased 5,000 minutes with Cielo24

which they must use by the end of FY 2018. After that they will assess whether to continue or move over the Minnesota State system and use the machine captioning function at no cost to MCTC. MCTC is concerned that this is too short a timeframe to use all 5,000 minutes.

- AutoSync CaptionSync: MCTC purchased a package of 10,000 minutes. This can be used within a 5 year time frame. CaptionSync will work with the college if there are minutes remaining at the end of 5 years, so the department feels better about the purchase since they are still gathering data to determine usage and budget requirements.

## **5. MCTC In-House Caption Technology**

Each faculty member works on their own equipment and software, not provided by the campus, to create captions. The intention is to train more faculty how to caption on their own, but only faculty who feel comfortable with technology. The Captioning Coordinator and student workers use these options:

- Cielo24 machine captioning (through Kaltura) with editing to correct as needed
- Dotsub.com, a program website that allows individuals to manually captioning with time stamping
- Amara used for Vimeo videos, has an option for auto-captioning or manual option. Time stamping is done after the captions are created. This option is different than other choices. You drag the caption chunks onto the video and adjust the bars to create captions
- ELGATO video capture (device) for converting VHS to digital

## **6. Lessons Learned**

The newly designed office at MCTC has already developed an understanding for the need to be flexible in the support of faculty and for the project to be part of a sustainable campus initiative. The Accessibility Resource Center understands that not all staff or faculty will have the technical expertise to be able to participate in the workflow process nor to create high quality captions alone. The initiative is a collaborative, cross-campus initiative which has just begun to take shape.

## **Summary: The Story of Three Campuses and How They are Providing Captions**

The stories of the three institutions show that these key elements must be part of your campus commitment to accessibility:

1. Develop a sustainable model of accessibility
2. Allow for flexible workflow and processes
3. The need for a cross-functional team to develop and implement the processes
4. Create a support system for varied technology abilities
5. Employ a variety of technologies for multiple needs for video captioning

6. Evolve your captioning initiative as you learn lessons along the way

## Chapter 2, Activity 1: Obtain Senior Level Sponsorship of Your Sustainable Captioning Initiative



Towards the beginning of this chapter you read that securing senior level campus leadership sponsorship was a key success indicator. In this activity your captioning team should be ready to secure written support by the campus President or the Chief Academic Officer (CAO) or Provost addressing why captioning is such a critical initiative at the institution. This letter could then be circulated to all faculty and staff at some point as deemed appropriate. Include this letter in your three year sustainable captioning plan in Appendix 2.4.

## Chapter 2, Activity 2: Select Your Campus Captioning Team Members



As stated earlier in the chapter, the importance of a cross-functional team cannot be emphasized enough. Roles must be determined and decided from those across the institution. This could include individuals from the academic leadership team, your campus academic technology team, Disability Services, IT, the D2L Brightspace Team, media services, etc. Equally important is the inclusion of faculty in your captioning plan. You should ensure that you consult with the faculty bargaining unit at your institution to seek input on captioning efforts, member recommendations for your team, and training and support needs. You will need to form a team to be eligible to receive funds from the Minnesota State Sustainable Captioning Seed Funding program.

When your team is formed, complete the following table and include it in the Team's Charge Document (Activity 3).

Table 4: Team Composition

Department	Person Assigned	Responsibilities (training, technology, etc.)	Role (Faculty, Staff, Dean)

## Chapter 2, Activity 3: Develop the Captioning Team's Charge Document

### Activity



For teams to get off "on the right foot," Team Charge Documents (sometimes called Team Charters) should be drawn up when the team is formed. This helps to make sure that everyone is focused on the goals and desired outcomes. The Charge Document defines the purpose of the team, how it will work, and what the expected outcomes are, what's in scope or out of scope and more. They are "roadmaps" that the team and its sponsor(s) create at the beginning of the journey to make sure that all involved are clear about where they're heading, and to give direction when times get tough.

When ready, please complete a Team Charge Document by either using the template shown in Appendix 2.3 of this Chapter or by using your own campus team charge template.

## Chapter 2, Activity 4: Establish Your Prioritization Schedule

### Activity



Review Chapter 2 [section on prioritizing videos to be captioned](#). Assess prioritization needs and options and develop a prioritization schedule (which videos will be captioned first, second, etc.). Include this in your three year sustainable captioning plan in Appendix 2.4.



## Chapter 2, Activity 5: Develop Your Campus Workflows for Captioning Course Videos

### Activity



Earlier in this chapter, you read about three Minnesota State institutions' workflows and plans. It is now time for your team to work on its processes and workflows. In this section, your team should be assessing the various options for creating videos (creating in-house or outsourcing) and assessing the staffing structure (who will do what). Institutions who have already implemented campus-wide captioning workflows have indicated that their initial implementation processes were just that, initial. They have said that often times an adjustment or tweaking is necessary after a period of time, such as six months or the first year. For now, try to assess the best process, staffing, and captioning option or mix thereof that will work for your institution.

Note: there is more detail and sample workflows for a number of captioning processes in Chapter 4. For this exercise please review the [Sample Workflows](#) section and flow diagrams to offer more assistance to your team.

*Table 5: Definition of Work Flow*

### Definition of WORKFLOW

: the sequence of steps involved in moving from the beginning to the end of a working process

[Source: Merriam-Webster Dictionary]

What follows is an outline for your team to discuss and work through. It should be immensely helpful so you know the sorts of questions and decisions needed to develop your captioning process and associated workflows.

1. Determine the captioning standards and technologies that you will have available.
  - a. What hardware/software will be used?
  - b. What other tools will you use?
  - c. What will captioning look like for your campus?
2. Determine your priority list. You will need to decide where you will start. For example:
  - a. Newly created courses
  - b. High enrolling courses

- c. Departments determined by established criteria
  - d. First come, first serve
  - e. Determine the number of videos you expect per year/semester, etc.
  - f. Decide upon a budget and emergency captioning source of funds. For example, emergency funds for videos created on the fly with a student needing the videos may end up being funded through the Office of Students with Disabilities, rather than the usual workflow for funding priorities you develop.
3. Decide upon your workflow for campus captioning(s). What process will you use when a request is made? Often at this stage, you will need to sit down with your team and create a work flow. Items you will need to determine:
- a. When a new video caption request is made—how does a request happen (example ITS helpdesk ticket is completed)
  - b. What is your plan for existing Courses? There will be a need for prioritization for both new and existing courses with videos!
  - c. Next will the video be used again?
  - d. If no, will you require captioning or just for accommodations for videos that will not be reused? Remember, if you just do captioning for accommodation and have many videos in a particular course, those who won't be able to listen without a headset, or are deaf will not be able to use the video!!
  - e. If yes, the video will be reused then it goes where?
    - i. Do you teach the faculty member to caption?
      - 1. Does everyone understand that a full script is needed for captioning, meaning the laughing, joking, sarcasm, and other noises that contribute to the understanding of a video are needed in the captions?
      - 2. If faculty will caption, will the faculty member have high quality hardware and software to caption?
      - 3. What will you do if the faculty member is not technical? You may determine faculty have a certain responsibility, what happens if you find one not able to caption? Not just unwilling even, actually unable. Determine willing, unwilling, and not capable issues.
    - ii. Decide upon your support system(s)
      - 1. Will you need hardware and software to support captioning?
      - 2. Identify your overall resources needed.
      - 3. Determine if your typical faculty computer can handle the software and hardware needs.
      - 4. Determine if you have the campus resources to support all with roles and responsibilities in your workflow
    - iii. Will you have an on-campus support? What will this look like?
    - iv. Will you outsource the captions? What will that consist of on your campus? Who will be responsible to coordinate?
    - v. Will it matter how long the video is (example under 15 minutes faculty do their own captioning, 15-30 minutes on campus solution, over 30 minutes outsource captioning)?

4. Support Structures, Communication and Training Resources.
  - a. Identify your support structures, ITS, Academic Media, Disability Services, Administrator Responsible for Budget and Emergency items, and transparent structure, like websites for training or updates.
  - b. Develop a Regular Communication Plan
    - i. Determine a calendar method of communicating these resources and processes to faculty, administration, and other key stakeholders. How will new faculty find out about your captioning process?
    - ii. Include the captioning responsibility in someone's job description so that your captioning has a responsible person.
    - iii. Communicate frequently and develop reports demonstrating that you have a plan that is understood by all.
  - c. Determine, develop and update Training Resources
    - i. Media specialists will need training
    - ii. Hardware and Software updates—who is responsible? Who communicates new updates to those using the hardware or software provided?
    - iii. Faculty-how do you train them, how do you complete help requests from them, and how will you continue to train new faculty? How have you embedded your training into each department across a campus?

Using the above outline, begin to develop your campus captioning processes and workflows. There is no template for this. However there are several resources in this Toolkit for you to use:

1. Revisit the campus stories in this chapter to review how they described their workflows. You can describe your workflows in whatever format works best for you. Include this in Appendix 2.1, Chapter 4 Worksheet
2. Read the section [Sample Workflows](#) in Chapter 4 which provides more detail on possible workflows
3. Complete Appendix 2.1, [Chapter 4 Worksheet](#), when ready

## Chapter 2, Activity 6: Develop Your Three Year Budget



Assess your funding needs and develop a three year funding budget based on prioritization schedule and workflows selected. Include this in your three year sustainable captioning plan in Appendix 2.4.

## Chapter 2, Activity 7: Develop a Plan for Faculty Development and Support

Activity



This should be a cross-functional effort with members of your team working with those responsible for faculty training and development. Decide how faculty will be supported throughout the captioning initiative. See the Minnesota State campus stories for descriptions of other's efforts. Include this in your three year sustainable captioning plan in Appendix 2.4. There is a separate activity in Chapter 3 on developing your faculty training plan, which would drill down to the specifics of what you intend to include in training sessions for faculty.

## Chapter 2, Activity 8: Complete Your Multi-Year Sustainable Captioning Project Plan

Activity



You can use any format you wish; the elements to be included are repeated in Appendix 2.4.

Your plan should include:

1. Project name
2. Letter of support from the President of your institution
3. Confirmation of commitment of some funds to sustain the project over time from senior level leadership
4. Name of the project sponsor
5. Team composition from [Table 4](#) in this chapter
6. Name of team lead or point of contact for your institution
7. Captioning Team's Charge Document (see [section on completing the charge document](#))
8. Your institution's prioritization schedule (see [section on prioritizing videos to be captioned](#))
9. Workflow for captioning videos (see [section on developing captioning workflows](#))
10. Total budget for the captioning plan for a three year period. It can include the initial seed funds from the Minnesota State system. However, the budget needs to

demonstrate a commitment of funds beyond the initial seed funding (see [section on how much funds will be needed](#))

#### 11. Training and faculty development plan

## Recommended Further Readings and Resources

- [Accessible Image Sample Book](#) (n.d.). In *diagramcenter.org*. Retrieved February 10, 2017.
- Clark, R. (1998). Motivating performance: Part 1—Diagnosing and solving motivational problems. *Performance Improvement*, 37, (8), 39-47.
- Condly, S.J. (1999). Motivation to learn and succeed: A path analysis of the CANE model of cognitive motivation. Unpublished doctoral dissertation, University of Southern California, Los Angeles.
- Erler, K. (2012). [The Essential Higher Ed Closed Captioning Guide](#) by AutoSync Technologies.
- [General UDL FAQs](#) from the National Center of Universal Design for Learning.
- Linder, K. (2016). [Implementation of and solutions for closed captioning in U.S. institutions of higher education: Results from a national study](#). Corvallis, OR: Oregon State University Ecampus Research Unit.
- Linder, K. (2016). [Student uses and perceptions of closed captions and transcripts: Results from a national study](#). Corvallis, OR: Oregon State University Ecampus Research Unit.
- [Working Together: Faculty and Students with Disabilities](#) (n.d.). In *DO-IT.org*.

## Appendix 2.1: Chapter 2 Checklist

Complete this checklist and submit as part of the package of materials needed to participate in the Minnesota State Sustainable Captioning Seed Program. Additional items to be submitted for Chapter 2 include Appendices 2.2, 2.3, and 2.4.

### Checklist

- ☐ Obtained senior level sponsorship of your sustainable captioning initiative including a letter from the campus President or the Chief Academic Officer (CAO) or Provost addressing why captioning is such a critical initiative at the institution
- ☐ Selected your campus captioning team members and form a cross-functional team (to include faculty)
- ☐ Developed the Captioning Team's Charge Document
- ☐ Established your video prioritization schedule
- ☐ Developed your campus workflows for captioning course videos
- ☐ Developed your three year budget
- ☐ Developed a plan for faculty development and support
- ☐ Completed your multi-year sustainable captioning plan

## Appendix 2.2: Campus Captioning Team Members

Complete this checklist and submit as part of the package of materials needed to participate in the Minnesota State Sustainable Captioning Seed Program.

*Table 4: Team Composition*

Campus Captioning Team Members			
Department	Person Assigned	Captioning Project Responsibilities (training, technology, etc.)	Current Position/Role (Faculty, Staff, Dean)

## Appendix 2.3: Team Charge Document

(Use this template or a standard template from your institution)

Institution Logo or Name

Title of Team

### Charge

Type of group (e.g., permanent, ad hoc):

Charge: (Indicate the main purpose of the group)

---

Roles & Responsibilities: (What tasks/milestones will this group achieve?)

- \_\_\_\_\_

Scope (i.e., boundaries of the project)

- In Scope:
- Out of Scope:

Duration and Time Commitment: (How long will this group be meeting, how often?)

Meeting Times and Dates:

Membership: (Indicate how membership in the group is determined and who is leading the group, also include your table of members completed in Chapter 2 Activity 1)

Expectations of Committee Members: Members are expected to:

- \_\_\_\_\_

Resources: (what approximate budget will the group need to accomplish its purpose on an annual basis and where will it come from?)

- \_\_\_\_\_

Consultation Process: (how will the work of the group be communicated and to whom?)

---

Links: (List other groups or projects that are linked to the work of this group)

- \_\_\_\_\_

Questions or Clarification: (who should people contact if they have questions about the group?)



## Appendix 2.4: Three Year Sustainable Course Captioning Project Plan

Your Institution Logo or Name

Date completed

Complete in any format you wish, but your plan should include these elements:

1. Project name
2. Letter of support from the President of your institution
3. Confirmation of commitment of some funds to sustain the project over time from senior level leadership
4. Name of the project sponsor
5. Team composition from [Table 4](#) in this chapter
6. Name of team lead or point of contact for your institution
7. Captioning Team's Charge Document (see [section on completing the charge document](#))
8. Your institution's prioritization schedule (see [section on prioritizing videos to be captioned](#))
9. Your workflow arrangements for captioning videos (see [section on developing captioning workflows](#))
10. Total budget for the captioning plan for a three year period. It can include the initial seed funds from the Minnesota State system. However, the budget needs to demonstrate a commitment of funds beyond the initial seed funding (see [section on how much funds will be needed](#))
11. Faculty development and support plan

# CHAPTER 3: GETTING STARTED – CAPTIONING COURSE VIDEOS

## Chapter 3 Contents

1. Chapter Overview
2. A Definition of Captioning
3. The Components of a Captioned File
4. Copyright for Videos
  - a. Minnesota State System Resources Regarding Copyright and Captioning
5. Finding Already Captioned Videos
  - a. Searching Library Resources
  - b. Searching on YouTube
  - c. Searching Google
6. WCAG 2.0: The International Standard for Web Accessibility and Inclusive Design
  - a. New Level 1 Requirements in WCAG 2.0
7. The Elements of Quality Captions
  - a. DCMP's List of Best Practices for Captioning
  - b. Other Captioning Success Factors
  - c. The Pros and Cons of Speaking off a Video Transcript
8. The Importance of Audio Description in Your Videos
9. Faculty or Staff Professional Development Prior to Captioning
10. Captioning Resources

## Chapter Overview

In this chapter, you will find best practices for video content creation. The intended audience of this section are faculty who plan to caption their own videos, instructional technologists or media/IT staff who may do the work of captioning videos and who are seeking to better understand captioning options, and those who support and train faculty on how to best caption course videos. Additionally, this chapter will refer to WCAG 2.0; technical captioning standards of the World Wide Web Consortium.

## A Definition of Captioning

**Captions** are on-screen text descriptions that display the dialogue, identifies the speakers, and describes other relevant sounds that are otherwise inaccessible to the viewers of a video, television show, movie, computer presentation, or similar media production. [[Washington University DO-IT's Fact Sheet #1050](#).] Captioning was developed to assist people with hearing impairments, but can be useful to all people depending on their situation. For example, captions can be read when audio can't be heard no matter what the reason, such as a noisy surrounding environment, or due to the need to keep quiet (no audio playing), such as in a

hospital or in a library when headphones aren't available. Captions can also help improve language comprehension and fluency, whether in your native language or a second language.

Table 2: *"What is Captioning?" National Association of the Deaf*

Captioning is the process of converting the audio content of a television broadcast, webcast, film, video, CD-ROM, DVD, live event, or other productions into text and displaying the text on a screen, monitor, or other visual display system. Captions not only display words as the textual equivalent of spoken dialogue or narration, but they also include speaker identification, sound effects, and music description. It is important that the captions are (1) synchronized and appear at approximately the same time as the audio is delivered; (2) equivalent and equal in content to that of the audio, including speaker identification and sound effects; and (3) accessible and readily available to those who need or want them. Captions must have sufficient size and contrast to ensure readability, and be timely, accurate, complete, and efficient. When displayed, captions must be in the same line of sight as any corresponding visual information, such as a video, speaker, field of play, activity, or exhibition.

NOTE: Captions should not be confused with subtitles. Subtitles provide text of only the dialogue and do not include important sounds and other contextual content for better understanding the material.

Captions can be either closed or open. Closed captions can be turned on or off, whereas open captions are always visible. For a good article on the difference between closed and open captions, visit [Washington University DO-IT's Fact Sheet #1050](#).

## The Components of a Captioned File

The basic components of a captioned file are the video itself and the caption or text file known as the SRT (SubRip Text) file. SRT is perhaps the most basic of all subtitle formats. It holds the video subtitle information including the start and end timecodes of the text and the sequential number of subtitles. SRT files are text files that are used along with video data and does not contain any video or audio data. Notepad or other text editors can open SRT files since they are plain text files. There are also SRT editors such as Jubler and Aegisub.

When moving a captioned video from one streaming service to another, you will need to move both the video file and the SRT file and rejoin them in the new streaming service location.

## Copyright for Videos

Table 3: [\*Web Accessibility MOOC for Online Educators, Section 3.2\*](#)

There is a challenging conflict between copyright and accessibility laws in the United States. While higher education institutions that receive federal funding have to provide captioned videos for a student who qualifies for this type of accommodation, it is a violation of copyright law to caption a video without permission from the copyright holder, which is often difficult to get, but especially in time to meet a student's need. For a very well written white paper on the conflict between copyright and captioning, see "[Captioning and Copyright Law—Tensions and Work-arounds in the Current Legal Landscape](#)," Caile Morris, April 14, 2016, Association of Research Libraries.

Given that many faculty use videos from publishers and YouTube, how are they to be ADA compliant if those videos are not captioned? (Note: many publisher and YouTube videos already have closed captioning available but until you enable the "cc" option during play, you wouldn't otherwise know. If these videos are used in a class, it's important that the faculty member alerts the students about how to enable the captions.

Furthermore, you should always scan already captioned videos for accuracy, since some videos captions only created by the automated voice recognition process. To understand if you can caption a video not created by yourself, please see the Minnesota State resources listed below.

### Minnesota State System Resources Regarding Copyright and Captioning

1. [Adding Captioning to Videos, Films and Movies](#) (flowchart to help you assess whether you can and cannot add captions to a video not created by you, prepared by Gary Hunter, System Director for Intellectual Property, Minnesota State System)
2. [Permission Request Form to Embed Adult Sign Language, Add Closed Captioning or Create Transcripts for Copyrighted Videos, Films and Movies](#)
3. [IP \(Intellectual Property\)/Copyright Tools and Forms](#)

## Finding Already Captioned Videos

This section will present a number of ideas and resources on how to find already captioned videos.

### Searching Library Resources

Check your school's library to see what captioned media they have available. Many video collections are already captioned, some also have interactive captions, streaming services, and they've been vetted by your library for educational quality. Additionally, your librarians should be able to tell you other sources for captioned media.

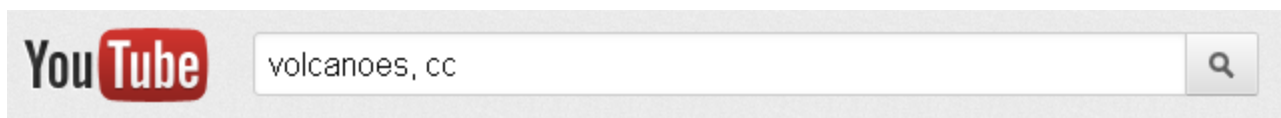
## Searching YouTube

*Don't be fooled by YouTube's machine captions.* YouTube uses voice recognition software to automatically create a video transcript and captions for almost every video uploaded to YouTube. So all YouTube videos have a CC (Closed Caption) button, but the machine transcribed captions are far less accurate than those transcribed by humans.

To be sure you find human transcribed captioned videos on YouTube, follow this easy search technique.

1. Enter your search term (for this example, let's say I'm searching for videos on volcanoes) in the YouTube search field
2. Add a : , CC (that's a comma, CC)
3. Hit Enter or select the magnifying glass icon

*Table 4: YouTube search feature*



All the videos found should have human created captions, and not machine captions, but test the videos you find by playing them with the captions enabled to determine whether the captions are useful, accurate, and synchronized with the video.

[Source: PCC [Searching for Captioned Media on YouTube](#)]

## Searching Google

Google owns YouTube, but they also offer a separate [Advanced Video Search](#) over the entire Web.

1. Fill out the Advanced Video Search fields that you need.
2. Choose the **subtitles > closed captioned only**
3. Hit Enter or click the Advanced Search button.

Table 5: Advanced Video Search Screen in Google

<b>Find Results</b>	with <b>all</b> of the words	<input type="text"/>
	with the <b>exact phrase</b>	<input type="text"/>
	with <b>at least one</b> of the words	volcanoes
	<b>without</b> the words	<input type="text"/>
<b>Language</b>	Return videos in	English ▼
<b>Duration</b>	Return videos within the duration	All durations ▼
<b>Date</b>	Return videos posted within the timeframe	Any time ▼
<b>Quality</b>	Return videos with the quality	Any quality ▼
<b>Domain</b>	<input type="text" value="Only"/> return videos from the site or domain	<input type="text" value="e.g. youtube.com"/>
<b>Subtitles</b>	Search only closed captioned videos	<input checked="" type="checkbox"/>
<b>Sort results by</b>		Relevance ▼
<b>Results per page</b>		20 ▼

[Source: [Web Accessibility MOOC for Online Educators, Section 3.2](#)]

## WCAG 2.0: The International Standard for Web Accessibility and Inclusive Design

WCAG (Web Content Accessibility Guidelines) was developed by the World Wide Web Consortium (W3C). The W3C is widely regarded as the highest authority in web accessibility goals and universal design.

WCAG 2.0 Level AA is the international accessibility standard designed to ensure baseline accessibility for people with disabilities. As such, Section 508 follows WCAG 2.0 Level A and AA, and the Department of Justice holds public and private universities to WCAG 2.0 Level AA conformance.

Following these guidelines will make content accessible to a wider range of people with disabilities, including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities, photosensitivity and combinations of these. Following these guidelines will also often make your Web content more usable to users in general.

Web Content Accessibility Guidelines 2.0 are the most current guidelines as of the 2017 writing of this Toolkit. WCAG 1.0 was released in May of 1999 and WCAG 2.0 was released in April of 2006. If you are going to place your video on a website, know that even the website is required

to be accessible. WCAG 2.0 through its informative support documents will clearly identify who will benefit from each requirement. WCAG 2.0 will address as completely as possible the needs of users with:

- Blindness
- Low vision
- Color deficit or distortions
- Deafness
- Hearing loss
- Cognitive limitations
- Reading disabilities
- Speech impairments
- Paralysis, weakness, and other problems with movement and coordination of limbs
- Photosensitivity
- Combinations thereof

[Source: [Requirements for WCAG 2.0](#)]

For a detailed comparison of WCAG 1.0 to 2.0 standards, refer to the [Checkpoint Mapping between WCAG 1.0 and the WCAG 2.0 Working Draft](#). The following items refer most to video content for media technologists to understand the differences, if they have been working with WCAG 1.0 and want a quick overview of new requirements.

## **New Level 1 requirements in WCAG 2.0**

### **Guideline 2.3**

1. SC 2.3.1 (level 1): When content violates either the general flash threshold or the red flash threshold, users are warned in a way that they can avoid it.

### **Guideline 2.4**

1. SC 2.4.1 (level 1): Navigational features within the content can be programmatically determined.

### **Guideline 2.5**

1. SC2.5.1 (level 1): If an input error is detected, the error is identified and described to the user in text.

## **New Level 2 requirements in WCAG 2.0**

### **Guideline 1.2**

1. SC 1.2.3 (level 2): Real-time captions are provided for live multimedia.

#### Guideline 1.3

1. SC 1.3.3 (level 2): Information that is conveyed by variations in presentation of text is also conveyed in text or the variations in presentation of text can be programmatically determined.
2. SC 1.3.4 (level 2): Any information that is conveyed by color is visually evident when color is not available.

#### Guideline 1.4

1. SC 1.4.2 (level 2): A mechanism is available to turn off background audio that plays automatically.

#### Guideline 2.2

1. SC 2.2.3 (level 2): Content can be paused by the user unless the timing or movement is part of an activity where timing or movement is essential...

#### Guideline 2.4

1. SC 2.4.4 (level 2): Delivery units have titles.

#### Guideline 2.5

1. SC2.5.2 (level 2): If an input error is detected and suggestions for correction are known and can be provided without jeopardizing the security or purpose of the content, the suggestions are provided to the user.

### New Level 3 requirements in WCAG 2.0

#### Guideline 1.1

1. SC 1.1.6 (level 3): For prerecorded multimedia content, a combined document containing both captions and transcripts of audio descriptions of video is available.

#### Guideline 1.2

1. SC 1.2.4 (level 3): Sign language interpretation is provided for multimedia
2. SC 1.2.5 (level 3): Extended audio descriptions of video are provided for prerecorded multimedia.

#### Guideline 1.3



1. SC 1.3.5 (level 3): When content is arranged in a sequence that affects its meaning, that sequence can be programmatically determined.
2. SC 1.3.6 (level 3): Information required to understand and operate content does not rely on shape, size, visual location, or orientation of components.

#### Guideline 1.4

1. SC 1.4.3 (level 3): Text or diagrams, and their background, must have a luminosity contrast ratio of at least 10:1.
2. SC 1.4.4 (level 3): Audio content does not contain background sounds or the background sounds are at least 20 decibels lower than the foreground audio content, with the exception of occasional sound effects.

#### Guideline 2.1

1. SC 2.1.2 (level 3): All functionality of the content is designed to be operated through a keyboard interface.

#### Guideline 2.2

1. SC 2.2.4 (level 3): Except for real-time events, timing is not an essential part of the event or activity presented by the content.
2. SC 2.2.5 (level 3): Interruptions, such as updated content, can be postponed or suppressed by the user, except those involving an emergency.
3. SC 2.2.6 (level 3): When an authenticated session has an inactivity timeout, the user can continue the activity without loss of data after re-authenticating.

#### Guideline 2.4

1. SC 2.4.6 (level 3): Titles and headings are descriptive.

#### Guideline 3.1

1. SC 3.1.3 (level 3): A mechanism is available for identifying specific definitions of words used in an unusual or restricted way, including idioms and jargon.

## The Elements of Quality Captions

A variety of sources are available regarding the best practices for captioning. [WebAim](#), [Washington State Do-IT](#), [Portland Community College Accessibility for Online Courses](#), and the [Described and Captioned Media Program \(DCMP\)](#) websites are excellent resources for expanding your knowledge of captioning.

## **DCMP's List of Best Practices for Captioning**

### **Caption Accuracy**

Errorless captions are the goal for each production. Split video captions s at appropriate understandable sections assists with understanding the video. To a hearing person, as long as the words on the screen match the words they hear, the captions look right. But to a deaf person, who only gets each chunk of information through reading the text, it's more important that the text is broken up in way that can be grasped immediately by the user.

### **Consistency**

Uniformity in style and presentation of all captioning features is crucial for viewer understanding.

### **Clear**

A complete textual representation of the audio, including speaker identification and non-speech information, provides clarity.

### **Readable**

Captions are displayed with enough time to be read completely, are in synchronization with the audio, and are not obscured by (nor do they obscure) the visual content.

### **Equal**

Equal access requires that the meaning and intention of the material is completely preserved.

### **Locating the caption**

Whenever possible, the captions should be placed to avoid cutting off portions of the visuals.

[Source: [Described and Captioned Media Program - DCMP Captioning Key](#)]

The Office of Information Technology at the University of Colorado has published [Captioning Standards for Quality](#) which goes into more detail for each of the practices above.

## **Media Access Australia's General Captioning Guidelines**

[Source: [Media Access Australia](#)]

## Reading speed

- Captions should not be so fast that they are difficult to read. Most captions for TV, cinema and DVDs adhere to minimum word speeds (typically 180-200 words per minute or about three words per second). If the dialogue is faster than this, then language should be condensed, with unimportant words and repetitions eliminated.

## Positioning and Two Speakers

- Captions should be displayed at the bottom of the screen (although they should be raised to prevent them from obscuring any other text on the screen).
- If there are two speakers in the one caption, they should be differentiated by placing dashes before their respective lines, e.g.: – How are you? –I’m fine.
- Off-screen speakers should be identified. If their names are known to the viewer, they should be named, e.g. JOHN: Hello.
- If their names are not known, they should be identified as MAN, WOMAN, CHILD, etc. It is important to avoid giving the Deaf or hard of hearing viewer more information than the hearing viewer receives.
- Sound effects should be indicated in a consistent manner throughout a video, e.g. BELLS RINGING

## Font size

- Captions should be in a font which is large enough to be easily readable, taking into account the size of the screen. Most captioning products will adhere to generally acceptable standards. If you’re using your own captioning software, a guiding principle is to maintain a maximum of 37 characters per line.

## Line Breaks

- Line breaks within a two-line caption should be made where there is a natural linguistic break within the sentence (e.g. after a comma). This also applies to longer sentences which go over two captions.

## Other Captioning Success Factors

There are many variables that go into effective captioning efforts, especially when using automated captioning functions or voice recognition technologies. These are reported to be getting better over time. Still, faculty and staff creating captions via the automated processes have reported differing captioning accuracy rates based on such things as:

- The tone of the speaker’s voice (lower voice quality reported anecdotally to have higher accuracy)
- The amount of technical terms
- Enunciation of the speaker

- Speed of speech of the speaker

## The Pros and Cons of Speaking off a Video Transcript

It is entirely up to the faculty members as to whether they are more comfortable recording a video by first creating the audio transcript. However, there are implications for time needed for editing captions based on the use of a transcript.

Pros:

1. Gives speaker more confidence and speech is likely to be more fluid and fluent (fewer “ahs” and “ums” that end up in the caption)
2. Transcript can be uploaded to an automated captioning tool and then matched to the voice to create captions. Editing time can be significantly reduced vs. not using a transcript

Cons:

1. Speaker may be more stifled and less spontaneous resulting in an audio track with more tonal platitudes (perhaps less exciting) than if speaking naturally, without a script
2. For the uploading of the script to work best to match words to narration, speaker cannot ad lib and stray from the script. Each time the speaker strays is one more time when the caption text will have to be edited (the voice won’t match the words in the transcript). For faculty members where there is more difficult, it may be best to work from talking points (not a complete transcript) and to have one of the automated captioning products produce the captions without first uploading a transcript. There may be more correcting required, but the faculty member may be more satisfied with the organic nature of the video

## The Importance of Audio Description in Your Videos

Table 6: Definition of Audio Description by the [Audio Description Project](#)

Audio Description is the narration added to the soundtrack to describe important visual details that cannot be understood from the main soundtrack alone. Audio description is a means to inform individuals who are blind or who have low vision about visual content essential for comprehension. Audio description of video provides information about actions, characters, scene changes, on-screen text, and other visual content. Audio description supplements the regular audio track of a program. Audio description is usually added during existing pauses in dialogue. Audio description is also called “video description” and “descriptive narration”.

Audio Description is usually delivered as a separate audio track that a person would play alongside the original video (in the same way as a commentary on a DVD). The Audio Description adds additional information such as "floor creaking" or "glass shattering" and provides a richer experience for viewers. They can fill in missing information a narrator fails to

provide. For example, if a narrator says, "As you can see, the three main points support the conclusion," but doesn't say what those three main points are, audio description provides the missing information in the captions. [Source: [DigitalGov 508 Accessible Videos: How to Make Audio Descriptions](#)]

For the purposes of this Toolkit, we will focus strictly on tips that faculty should be aware of when recording their own videos to ensure that even before they are captioned, the video narration includes sufficient information about charts, graphs, tables, and images shown in the video for everyone to receive a comparable experience.

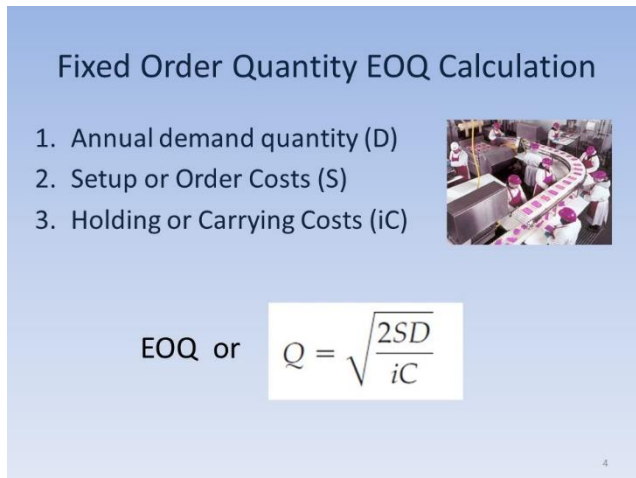
For academic videos, the easiest and most cost-effective method is to teach instructors how to verbally describe any of their visual material.

When looking at academic videos, audio description of displayed visuals assists not only blind and visually-impaired individuals but to many students as a whole:

- A majority of content today is viewed on small screens or in situations where the user may not be able to visually see what is being referred to on the screen
- Many students will watch videos on their mobile phones while they are commuting on public transit or riding in a car

Example:

*Table 7: Example of a Slide Used in a Course Video*



Fixed Order Quantity EOQ Calculation

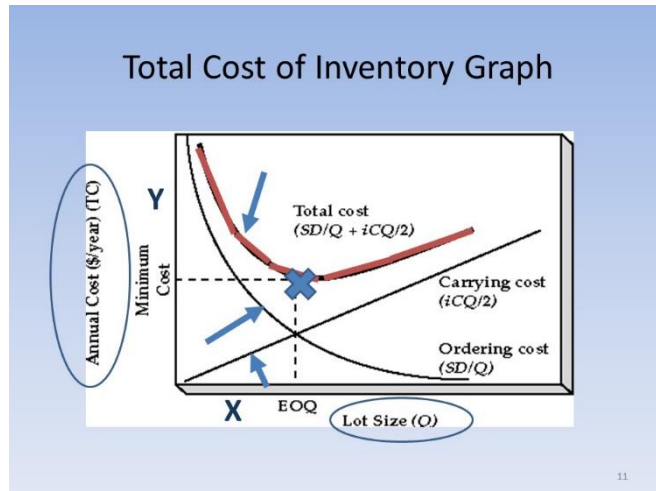
1. Annual demand quantity (D)
2. Setup or Order Costs (S)
3. Holding or Carrying Costs (iC)

EOQ or  $Q = \sqrt{\frac{2SD}{iC}}$

4

- An instructor's video includes the slide shown above
- Everything on it should be verbalized, including the formula box at the bottom of the slide. While it might be tempting to say "This is the formula for the Economic Order Quantity (EOQ) as shown in the text," the instructor should actually say the formula verbally

Activity: How would you verbally describe this graph included in a video?



Here is the narration used by the instructor for this slide. What do you think? Is there sufficient context for a visually impaired or low vision student to be able to understand what is being presented during the video?

*Table 8: Audio Description of Total Cost of Inventory Graph. Is it Sufficient?*

Let's take a look at the total cost graph. The X or horizontal axis represents the order quantity size, from small to large. The Y or vertical axis represents the cost, from small at the bottom to large at the top. The sloping brownish line is the annual total costs.

So let's compare the lot size vs. cost variables to our holding costs, represented by the 45 degree upward diagonal line. When the order size is low, our holding/carrying costs are also low. As our order size gets bigger, it follows that our average inventory will get bigger as well as our annual holding costs.

Now that you understand that, let's start focusing on the total cost [curved brownish line]. This line is the combination of the two previous lines discussed. Right in the middle of this curved line, which represents the lowest combined total cost, you'll notice where the X appears note that this is the same order size or point on the X axis as the intersection of the other two lines. This order amount represents any determined Q or economic order quantity. That's why when we used an order size of 60 in our example earlier, the annual ordering and holding costs were the same.

There are some good elements in this description, but still there are limitations. How would you improve it?

By using explicit image descriptions, faculty can better teach students across the spectrum of learning styles. Adding description in the main audio track of the video also improves the searchability by including keywords that users might be searching for in the text transcript, which is indexed by search engines.

## Faculty or Staff Professional Development Prior to Captioning

Whether your campus is going to have faculty caption their own videos or have staff caption course videos, training is needed. Training includes not only the software or hardware they will use, but also training on the requirements for captions. As you are training your faculty or video developers so that they understand the basics of accessible online video development, the following are key elements to have the most appropriate captions:

- Chunking- content and making videos short, no more than 7 minutes
- Enunciation-speaking clearly so that the captions are more accurate
- Audio Description – previously discussed. This is the act of clearly describing images, tables, charts, and graphs clearly and what the context or meaning of the use of the any of those items should be for the viewer
- Script or No Script Pro's and Con's—also previously discussed. If you choose to use a script write it as you would speak and not as you might post to a website
- Machine Captioning versus manual captioning. Also previously discussed – remember that machine captioning (using Youtube or Kaltura) is about 80% correct and must be edited. Having the script makes it much easier to caption and edit.

A variety of resources are available to demonstrate how to caption. Some campuses have access to Lynda.com or Atomic Learning tutorials. Each of these resources have training available for all aspects of captioning and accessibility. Campuses that do not have either of these resources have a wide variety of resources to learn how to caption. The following are links to suggested all-in-one training from the Commission of Deaf, Deaf Blind and Hard of Hearing Minnesotans.

- [Minnesota IT Accessibility Captioning Training Basics](#)
- [WebAim Captions](#)

## Captioning Resources

The following is a list of additional resources you may wish to consult for captioning.

- [National Center for Accessible Media \(NCAM\)](#). “A nonprofit R&D organization dedicated to achieving media access equality for people with disabilities.” The site has Cadet, which is a free captioning and description tool. In addition, the site has training resources.
- [WebAIM: Captioning Resource List](#). Webaim is an all-inclusive site with training and educational content to understand web accessibility.
- [W3C Customizable Quick Reference This resource is to better understand the web accessibility standards.](#)
- **Commission of Deaf, Deaf Blind and Hard of Hearing Minnesotans**  
<http://www.mncdhh.org>

- [Minnesota IT Services \(MnIT\) Accessibility Resources](#). “Whether you're planning an implementation, have questions about captioning, or need to create accessible documents, visit IT Accessibility for the State of Minnesota (this) website. You'll find a toolkit that can help implement accessibility at your organization, along with helpful information, tools, and links to online training and resources.”
- Portland Community College (perhaps one of the best resources to check):
  - [Guideline for Accessible Content](#)
  - [Describing Complicated Charts and Graphs](#)
- Butte College
  - [Checklist for Course Compliance](#)
  - [Closed Captioning](#)
- University of Minnesota
  - [Accessible U](#)

## Chapter 3, Activity 1: Minnesota State System Resources Regarding Copyright and Captioning

Activity



In your cross-function captioning team, study the Minnesota State System Resources and read through the flowchart: [Adding Captioning to Videos, Films and Movies](#). This will help educate the team on whether captions can be added to a video not “owned” by a member of your campus. It will also inform you on how to obtain permission from the video’s copyright owner.

## Chapter 3, Activity 2: Check YouTube Videos of Closed Captions and Accuracy

Activity



In your cross-functional captioning team, go to YouTube and play a handful of videos (randomly). Turn on the closed captions and check the caption accuracy. Then search for a video that might actually be used in a course and check the caption accuracy. This exercise is simply meant to alert you to the fact that the closed caption option is available in YouTube and to get in the practice of checking for caption accuracy before utilizing it in a course.



## Chapter 3, Activity 3: Touch Base with Your Campus Library

Activity



Touch base with someone at your campus' library to learn what captioned media they have available. This information should be available for anyone working with faculty and staff training activities.

## Chapter 3, Activity 4: Touch Base with a Video or Media Specialist

Activity



Determine who at your institution knows about the Requirements for WCAG 2.0 and how that will impact the creation of videos or captions at your institution. Have they reviewed the WCAG 2.0 Guidelines? What role will they play on this cross-functional team and/or in your captioning process?

## Chapter 3, Activity 5: Develop Your Faculty Training on Captioning

Activity



Work with your faculty development center or faculty trainers and develop the appropriate training materials for faculty who have interest in captioning their own videos. The training should encompass more than the captioning software and tools and include the items listed in [The Elements of Quality Captions section](#).

## Appendix 3.1: Chapter 3 Checklist

Complete this checklist and submit as part of the package of materials needed to participate in the Minnesota State Sustainable Captioning Seed Program. This assumes you have formed a cross-functional captioning/accessibility team. Please read Chapter 2 before forming the team and/or completing this checklist.

### Checklist

- ☐ Institution's captioning/accessibility team has completed reading Chapter 3
- ☐ Institution's captioning/accessibility team understands the section on Copyright for Videos and has read the Minnesota State System Resources Regarding Copyright and Captioning and has completed Activity 1
- ☐ Institution's captioning/accessibility team understands how to search for already captioned videos from library resources, YouTube, and Google and has completed Activity 2
- ☐ Institution's captioning/accessibility team understands what captioned media is available at your institution or elsewhere and has completed Activity 3
- ☐ Institution's captioning/accessibility team has completed Activity 4 and knows who at their institution knows about the Requirements for WCAG 2.0 and how that will impact the creation of videos or captions at your institution. The team will identify what role the WCAG "expert" will play on their cross-functional team and/or in their captioning process
- ☐ The institution has completed Activity 5 and has prepared its faculty training on captioning for faculty wishing to caption course videos. The training should encompass captioning software and tools and especially best practices for creating videos to be captioned, including the items listed in [The Elements of Quality Captions section](#).

# CHAPTER 4: TECHNICAL WORKFLOWS USING THE MINNESOTA STATE MEDIA MANAGEMENT SOLUTION

(Kaltura Media Space)

## Chapter 4 Contents

1. Overview
2. Kaltura MediaSpace
3. MediaSpace and Captioning
4. Attaching an Existing Caption File in MediaSpace
5. Requesting Captions Within MediaSpace
6. Machine-based Captions with Cielo24 (REACH)
7. How to Add/Order Captions with REACH
8. How to Access the REACH Caption Editor
9. Third-Party Providers for Human Transcription of Captions
10. Purchasing Human-Transcribed Captioning Services from a Vendor
11. Process and Key Considerations for Adding a Third-Party Integration into MediaSpace
12. Captioning Vendors that Offer MediaSpace Integrations
13. Location of Human-Transcribed Captioning Integrations in MediaSpace
14. Cielo24
15. 3Play Media
16. Rev.com
17. AST / CaptionSync
18. Sample Workflows
19. Additional Resources
20. Glossary
21. Chapter Four Worksheet
22. Chapter Four Checklist

## Overview

As institutions develop processes and workflows to accommodate captioning requests, it is likely that institutions will look for the availability of tools and resources available to them. The purpose of this chapter is to outline the captioning compatibility, functionality, and integrations associated with Minnesota State's Media Management platform.

## Kaltura MediaSpace

Minnesota State students and employees have access to a media management service called Kaltura MediaSpace. This service allows members of Minnesota State institutions to create or upload, store, and share media content.

MediaSpace is built to be compliant with Section 508 of the Rehabilitation Act and is WCAG 2.0 (Priority Level AA) compliant.

**Accessible HTML5 Player:** An accessible, HTML5 media player is used throughout MediaSpace. This player enables those who are visually impaired to easily navigate and view content through screen readers and keyboard navigation.

**Audio Description:** Audio description files can be added to video entries to provide an audio narrative of the video content individuals with visual impairments.

Because the purpose of this chapter is to outline the captioning functionality available within Kaltura MediaSpace, this chapter does not offer information and guidance on the general use and other functionalities of MediaSpace. Instead, please find detailed descriptions and how-to guides for uploading videos, embedding MediaSpace content in D2L/Brightspace, creating screencasts, creating media playlists, sharing media content, etc. on [Minnesota State's Kaltura MediaSpace Help Articles \(StarID login needed\)](#).

## MediaSpace and Captioning

MediaSpace supports a range of captioning options. Within MediaSpace, a user may:

- Upload and attach an existing caption file to media content
- Order and edit machine-transcribed captions requested for media
- Request human-transcribed captions from third-party captioning service providers
- Search for terms within caption transcripts

### Upload and attach an existing caption file to media content:

If you already have a caption file associated with a video, you can attach this caption file to your video in Kaltura MediaSpace.

### Order machine-transcribed captions for media:

One captioning service is already available to all Minnesota State students and employees within MediaSpace REACH. This embedded tool offers captioning of media content (at the user's request) via automated speech recognition / machine transcription.

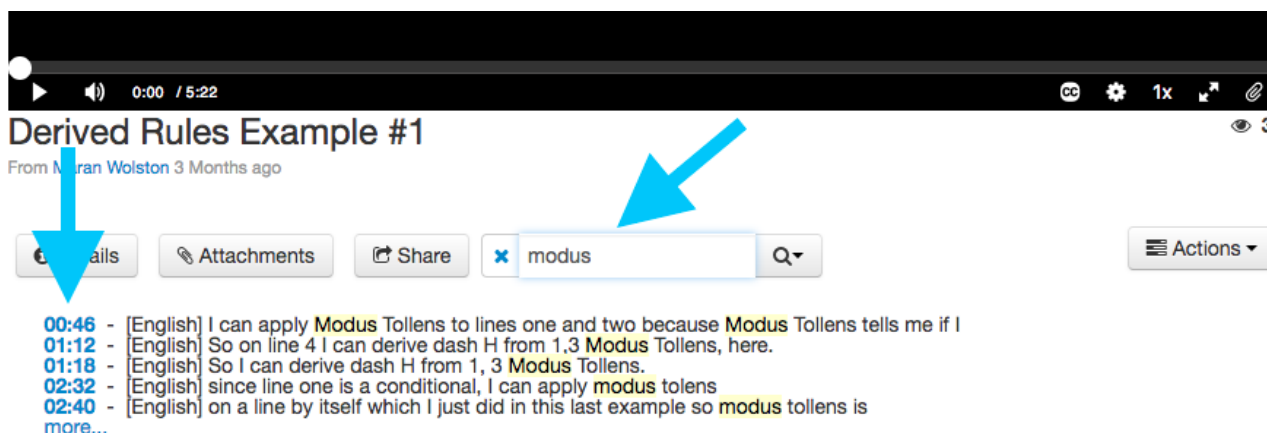
### Request human-transcribed captions from third-party captioning service providers:

Other captioning integrations, such as those that allow for flagging videos within Kaltura MediaSpace for human-transcribed captioning, are available as "pay-for service" options an institution may elect to adopt. For example, captioning service providers 3Play, Rev, Automatic Sync Technologies (AST), and Cielo24 all offer human-transcription captioning integrations within Kaltura MediaSpace. Institutions may select their own pay-for-service caption vendor. It

is up to each institution to determine which of the available captioning options is best suited to meet the needs of the institution. This chapter additionally offers guidance and information to take into consideration directed toward institutions who wish to integrate a paid captioning service within Kaltura MediaSpace.

### Search for terms within caption transcripts

Closed captions are fully searchable when viewed on the MediaSpace website. Any user with access to a captioned video in MediaSpace may simply enter a term in the search box below the video player. After entering a search term, a list of time-stamped matching terms appears below the video player. Each time stamp is offered as a hyperlink. By clicking a hyperlink, the user is brought to the specific area of the video associated with the time-stamped search term hit.



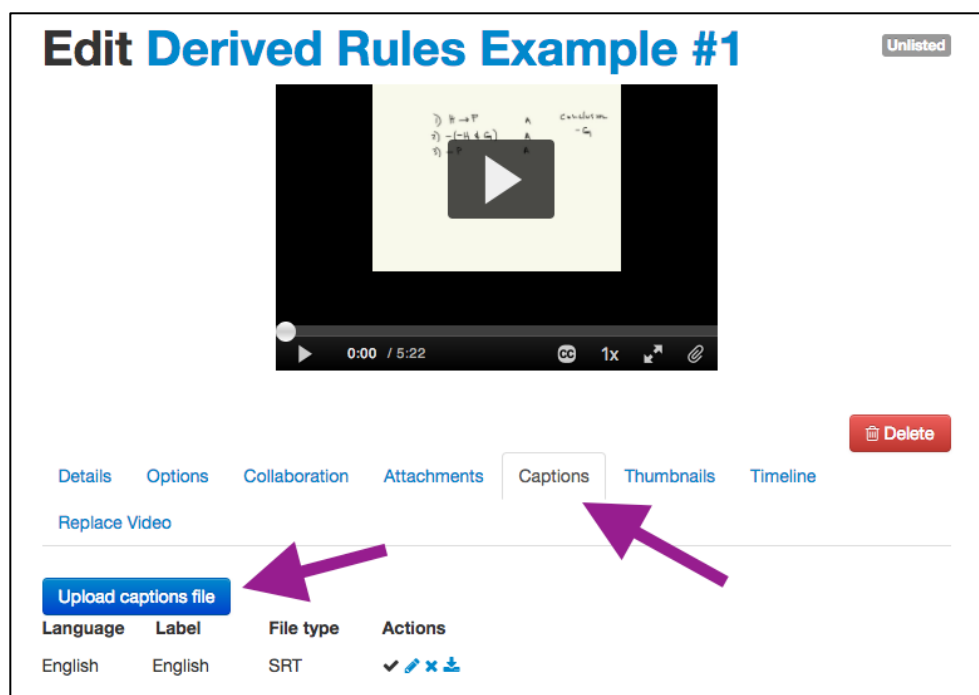
Note that searching for terms in captions can be performed only within an individual video. The ability to search across all videos in a media library is not available at this time.

### Attaching an Existing Caption File in MediaSpace

If you already have a caption file associated with a video, you can attach this caption file to your video in Kaltura MediaSpace. Within Kaltura MediaSpace, users can upload multiple closed caption files for each video entry (maximum 100 caption files per entry) which can be used by those with audio impairments. Industry-standard caption file formats can be uploaded, including SRT and DXFP.

How to add caption file(s) to media:

Select "Edit" next to desired media in MediaSpace library > select "Captions" tab > "Upload captions file".



## Requesting Captions within Kaltura MediaSpace

Kaltura MediaSpace provides two options for requesting captions:

The first option is to request/order captions via the machine-based captioning service in MediaSpace. There are no per-minute fees to use this service. All Minnesota State students and employees have the ability to order mechanical captions for videos they have posted to their MediaSpace accounts. This service is offered through a partnership with the captioning company Cielo24, and is offered within MediaSpace under the name of Kaltura REACH.

Kaltura also partners with limited number of third-party captioning providers (e.g. Rev.com, 3Play Media, etc.) to integrate their "pay for service" captioning options into MediaSpace. Each captioning provider has its own workflow and fee structure for managing captioning requests. Note that institutions assume all costs associated with services rendered from these third-party captioning providers.

Although many Minnesota State campuses have existing relationships with third party captioning providers, many have not added captioning vendor integrations into Kaltura MediaSpace to streamline the captioning request, ordering, and delivery process. The latter portion of this section, which describes how to integrate human-transcribed captioning services within Kaltura, will be useful to any campus wishing to initiate a relationship with a third-party captioning provider and may be especially useful to campuses that already utilize a third-party captioning service but at the current time utilize a caption-ordering and delivery workflow that exists outside of Kaltura MediaSpace.

Table 9: Overview and comparison of embedded machine-based captioning service offered in MediaSpace and third-party captioning integrations that may be added to MediaSpace

	<b>Mechanical Captioning (REACH)</b>	<b>Third-party human-transcribed captioning integrations</b>
Provider	Cielo24	Rev, 3Play, Automatic Sync Technologies (AST), Cielo24, and others
Cost	\$0	Varies -- see <a href="#">Captioning Vendors that Offer MediaSpace Integrations</a>
Turnaround Time	0 - 48 hours	Rush, 24 hours, 48 hours, and one-week options available, depending on service provider
Accuracy	Varies (Note: Implementing best practices when recording a video will improve caption accuracy. See Figure 4: Improving the Accuracy of ASR Captions)	>99%
Availability of this option	Available to all Minnesota State students and employees in the <a href="#">MediaSpace portal</a> .	A separate MediaSpace instance is required to integrate a campus's third-party captioning service within MediaSpace, as described later in this chapter.  <i>Note: Creating a new MediaSpace instance requires collaboration between each campus, the Minnesota State System Office and the third-party caption provider.</i>
Caption requests can be moderated	No	Yes
Caption file is attached to a video after a request is processed	Yes	Yes
Captions may be edited by owner	Yes	No

## Machine-Based Captions with Cielo24 (REACH)

Within MediaSpace, a user may request/order machine based captions for videos associated with their account. There is no cost to request/order machine based captions within MediaSpace. By default, ordering machine-based captions does not require approval by a moderator -- any student or employee of Minnesota State may request mechanically-generated captions for their videos.

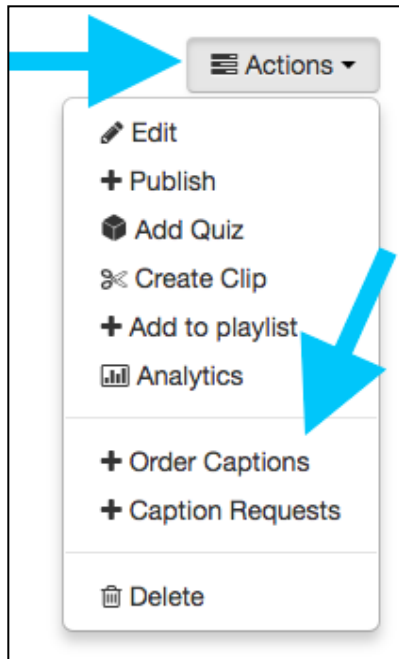
Key considerations when using Cielo24's REACH product (included in MediaSpace):

- **Accuracy:** Cielo24's machine based captioning service uses automated speech recognition (ASR) technology to create captions. Captions created through ASR **will not be 100% accurate** without additional editing. An online caption editor is available for captions requested/ordered through Cielo24 in MediaSpace.
- **Turnaround Time:** Most mechanical captions begin processing immediately and have a typical turnaround is 5x of the submitted video length. For example, if a 5:00 minute video is ordered, it should be returned within 25 minutes or so. The minimum processing time is 10 minutes. *(Note: Cielo24 allocates 48 hours to return mechanical captions if a request is corrupted or there is a large backlog of submitted projects.)*
- **Immediate Visibility:** As soon as a caption file is supplied to a video through the captioning request fulfillment process, captions are immediately visible to anyone with access to the video file. If a media file is visible to individuals other than the entity who ordered mechanical captions (e.g. if a video is already available to students prior to ordering mechanical captions), it is advised that the caption file is either immediately reviewed and edited for accuracy by the caption requestor or designated party, that the sharing setting for the file is temporarily set to "Private", or that the caption file (SRT) is deleted from the media file in Kaltura and later automatically re-added after approving captions that have been revised via the cielo24 caption editor. A how-to video tutorial on using the captioning editor can be found at [Cielo24 Edit Tool](#).

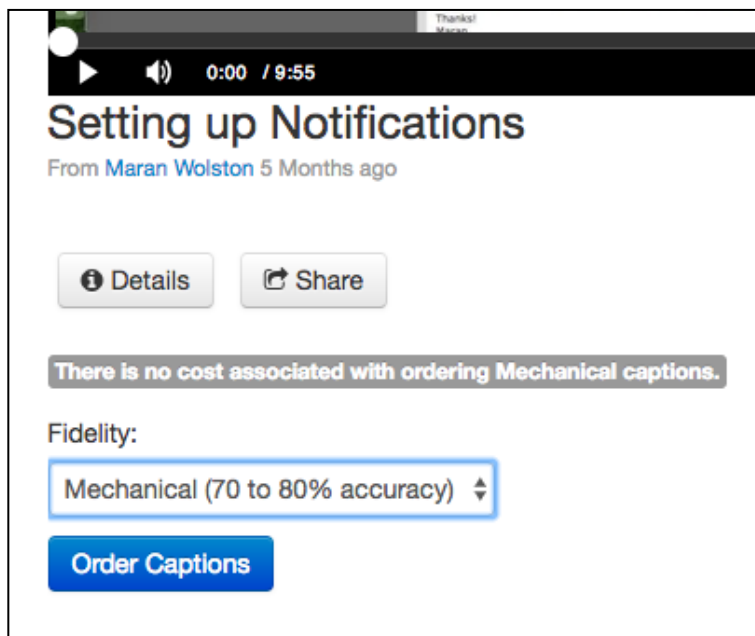
### How to Order/Add Captions with REACH

1. Find the video to which you want to add mechanically-transcribed captions in your 'My Media' area of [MediaSpace](#).
2. Click on the title of your video in your 'My Media' area and a preview of your video will display for you.
3. Select the "Actions" button and then choose the "Order Captions" option from the pull-down list:

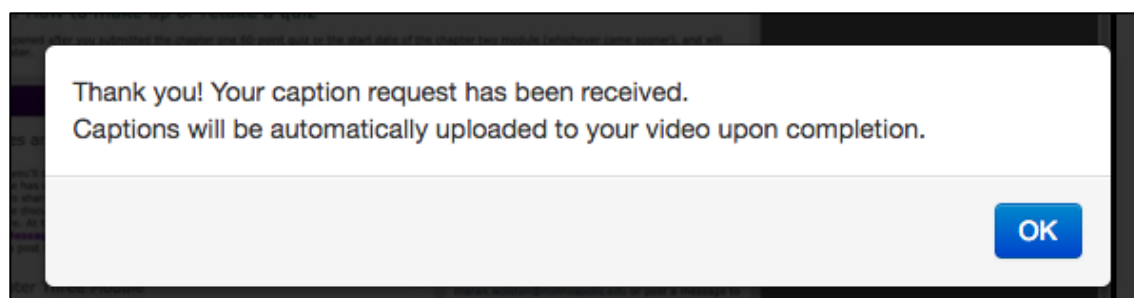




4. Click "Order Captions":



5. A confirmation pop-up window will appear. Click "OK":



6. A log will appear below the video player, indicating details and the progress/status of the caption request. Machine-based captioning requests do not require moderator approval, hence the status of a request will from "Authorizing" to "In Process." You may refresh the screen using the link below the log to see if any updates on the captioning process have occurred.

**Setting up Notifications**  
From [Maran Wolston](#) 5 Months ago

[Details](#) [Share](#) [Actions](#)

Requester	Requested	Due	Completed	Details	Status
mf3595fj	07/14/17	07/21/17		Fidelity Turnaround Time Language	MECHANICAL STANDARD-7 en AUTHORIZING ⓘ

[Refresh list: CLICK HERE to see all Caption Requests for this media](#)

7. When the captioning file has been created and added to the video, the request will appear with a status of "Complete" and an "Edit" button will also appear. By clicking on "Edit" you'll be brought to the REACH caption editing interface.

**Setting up Notifications**  
From Maran Wolston 5 Months ago

Details Share Actions

Requester	Requested	Due	Completed	Details	Status
mf3595fj	07/14/17	07/21/17	07/14/17	Fidelity Turnaround Time Language MECHANICAL STANDARD-7 en	COMPLETE <a href="#">Edit</a>

[Refresh list: CLICK HERE to see all Caption Requests for this media](#)

- (Final step). Refresh the page using your web browser's refresh option. If you press "Play," captions will appear at the bottom of the video, and by clicking on the CC button in the lower-right corner of the media player you can turn the closed captions on or off:

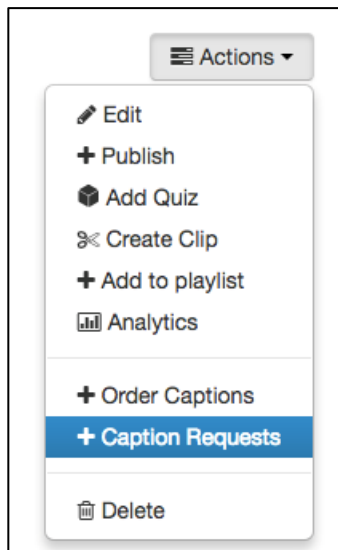
Hi folks in this video I am going to explain how to set up notifications on

Options  
Off  
English

CC ⚙️ 1x ↗️

## How to Access the REACH Caption Editor

- Select desired media file from My Media library in MediaSpace.
- Click "Actions" button below media player, and in the dropdown menu that appears select "Caption Requests:"



3. A list of caption files will appear. Select “Edit” next to the caption file you’d like to edit.



4. You’ll be brought to the caption editing interface. For detailed directions on how to use the caption interface, please see tutorial video link offered in resource list, below.

The screenshot displays the Cielo24 Customer Edit interface. At the top, there's a header with 'Filter', 'Jump To: 00:00', 'Customer Edit | 09:55', and 'Help'. The main area is divided into three sections:

- Left Panel:** Contains a transcript of the video content. The text reads: "Hi folks in this video I am going to explain how to set up notifications on a variety of activities that take place in detail including a discussion forum posts that have been made by a notification what I mean is that you can get an e-mail sent to you when various activities happen or are about to happen so what we were at right now is we're on our course homepage and if I want to set up notifications for various activities in this class what I would do is I would click on my name up in the upper right corner of this paid So Adele Abbott is actually just a fake student account that I have for demonstration purposes like what I'm doing in this video so I'm going to click on Adele's name and then we'll see that there's this notifications link that pops up underneath the name and a click on notifications and then I'm going to see that there are a few different options I have for customization here one of them is contact methods by default wants to send me notifications to my campus email address from my school email address I don't have to have notifications sent there though instead I click change your email settings and instead of having that radio box checked for my email address that is associated with the school I could instead click custom email and enter my custom email or my preferred email address here to have any notifications that appear lower down on the screen coming from D." Below the transcript are buttons for 'Save', 'Approve', 'Play Until End of Sentence', and 'Play Until End of Video'.
- Center Panel:** A video player showing a screen recording of a website. The video has a progress bar at the bottom with a play button and a volume icon. The start time is 00:00.9 and the end time is 01:34.6.
- Right Panel:** Contains 'Hotkeys' and 'Sound Tag Shortcuts'. The 'Hotkeys' section lists various keyboard shortcuts for video control. The 'Sound Tag Shortcuts' section lists sound tags and their corresponding actions.

## Helpful Resources:

- For details on how to edit machine based captions, see [Cielo24 Edit Tool tutorial video](#).
- Review best practice recommendations for creating captions in chapter two
- A helpful resource that offers additional techniques for creating quality captions is [Captioning Key](#), published by the Described and Captioned Media Program (DCMP), a co-project of the U.S. Department of Education and the National Association of the Deaf.
- See Figure 1, directly below, which offers suggestions on how to improve the accuracy of captions generated through automated speech recognition.

Figure 4: Improving the Accuracy of ASR Captions

The accuracy of captions produced through automated speech recognition (ASR) will vary, based on a variety of factors. Cielo24's ASR technology will not learn an individual's voice. Please consider attending to the following suggestions when creating video content to improve the accuracy, and hence accessibility, of ASR captions.

### 1. Select a high-quality microphone and use it in a quiet space

Use high-quality, noise-canceling, head mounted microphones (i.e. headset microphones) will do a better job of capturing audio. The better you can control additional sounds around you the clearer your audio will be.

### 2. Remove superfluous audio, multiple speakers

It is difficult for ASR to associate the appropriate words to speech when multiple audio sources (background music, speaker 1, speaker 2, etc.) are being used at the same time.

### 3. Reduce acronyms and domain-specific jargon

ASR technologies have a limited but growing vocabulary. Often, acronyms or domain-

specific jargon will not be recognized or will be misidentified as another word.

#### **4. Moderate the rate of speech and pausing**

It is quite natural to use a conversational tone within a video or speak quickly when talking about a topic we are passionate about. However, a rapid rate of speech may make it difficult for ASR technology to distinguish words and sentences. When appropriate, it is recommended to adjust the rate of speech and pause when appropriate.

#### **5. Adjust for dialect and accents**

Cielo24's REACH product (mechanical transcription) uses U.S. English as its standard dialect. ASR technologies are often programmed to recognize multiple pronunciations of a specific word. For instance, consider the word "data." Some individuals pronounce this word as "day-ta," while others may say "dah-ta." Create a short video with common words you anticipate you'll use in your video, order mechanical captions on the test-run video, and notice which words (if any) the ASR technology has difficulty recognizing. Consider using an alternative pronunciation for words the ASR technology mistranslates, or acknowledge this word will need to be edited using the Cielo24/MediaSpace caption editor.<sup>4</sup>

## **Third-Party Providers for Human Transcription of Captions**

A number of companies offer human-transcribed captioning and translation services. Companies that offer human-transcribed captions guarantee caption accuracy, syntax, and formatting that meet accessibility criteria. Companies utilized across Minnesota State institutions for human transcription of captions include Rev.com, 3Play Media, Automatic Sync Technologies (AST), DotSub, CaptionMax, and Cielo24. All of these companies, as well as others not listed here, offer standalone captioning services whereby a campus may establish an account with the vendor and submit captioning requests via the vendor's interface.

Additionally, several companies mentioned above have partnered with Kaltura to offer streamlined captioning request ordering and fulfillment functionality *within* Kaltura MediaSpace via a MediaSpace-third party integration. In this case, submission of videos by a campus to one of these vendors does not need to be completed via the vendor's independent interface or process for submission. Captioning vendors such as Cielo24, 3Play Media, Auto Sync Technologies (AST), and Rev.com allow users to flag videos within Kaltura MediaSpace to request human-transcribed captioning, and, with a campus moderator's approval, the video is accessed by the captioning service provider and appears after a designated timeframe directly within MediaSpace, with captions added. As these integrations are not pre-installed in MediaSpace, any institution that makes a decision to add a third-party captioning vendor integration in MediaSpace must proceed through a series of steps to activate the integration. Detailed directions for setting up a vendor's MediaSpace integration, along with points to consider before making this decision, are noted in the following pages.

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<sup>4</sup> Adapted from: Richard Kheir and Thomas Way. 2007. Inclusion of deaf students in computer science classes using real-time speech transcription. In Proceedings of the 12th Annual SIGCSE Conference on Innovation and Technology in Computer Science Education (ITiCSE'07). ACM, New York, 261–265.

## Purchasing Human-Transcribed Captioning Services from a Vendor

Note: If your campus already has an account with Rev.com, 3Play Media, AST, or Cielo24 and your campus is looking to add one of these vendors' integrations into MediaSpace, skip this section and go to [Process and Key Considerations for adding a Third-Party Captioning Integration into MediaSpace](#).

Whether your campus wishes to use a vendor's standalone request process for ordering and supplying captions or your campus wishes to add a vendor's integration into MediaSpace, contact your desired vendor directly to create an account and purchase human-transcription captioning services.

Please note that if your campus wishes to add a vendor's integration into MediaSpace (or if this may be an eventual goal for your institution), not every captioning vendor offers a MediaSpace integration. Companies that currently offer MediaSpace integrations are 3Play Media, Rev.com, AST, and Cielo24. To assist you in comparing and contrasting vendors that offer MediaSpace integrations, a table is offered in the next section. A number of other vendors offer human-captioning services through processes that exist outside MediaSpace -- contact your desired vendor to learn more about the specifics of their captioning request submission and retrieval processes.

## Process and Key Considerations for adding a Third-Party Captioning Integration into MediaSpace

Why utilize a captioning vendor's MediaSpace integration?

Campuses that already have a relationship with a vendor that offers human transcription of captions may find their current process for retrieving videos from members of the campus community (e.g. faculty members), sending videos to the vendor, and re-loading captioned videos or caption files into MediaSpace to be time and labor-intensive. Adding the vendor's integration into MediaSpace may dramatically reduce the time needed to proceed through the captioning request and retrieval workflow.

Generally, vendor MediaSpace integrations allow a user to initiate a request for captioning, a campus-designated moderator is notified of the request, the moderator approves the request within MediaSpace, approval of the request allows the vendor to access the video, the vendor creates a caption file associated with the video, and captions automatically appear on the video in the user's account.

Using a vendor's integration requires the creation of a new MediaSpace interface

By default, all Minnesota State institutions utilize a single, shared MediaSpace instance. This instance does not include any captioning integrations other than Cielo24's mechanical captioning (ASR) "REACH" product. Kaltura (manufacturer of MediaSpace) does not offer the option to split or partition a MediaSpace instance such that one instance may run separate

iterations within it, customized for individual institutions. For example, two 3Play Media integrations, one for “Institution A” and one for “Institution B”, with each respective integration isolated to each respective institution’s users and billing account, cannot both be added within a single MediaSpace instance. Because of this, any integration added to the system-wide MediaSpace instance would either a) be available to all users across the system, and/or b) would create a scenario in which all human-transcribed captioning orders across the system would be billed to a single institution.

Hence, if a campus wishes to add a vendor’s human-transcribed caption ordering and retrieval integration, that campus must request the creation of a separate MediaSpace instance, specific to that institution (and no longer utilize the shared, system-wide instance).

Below are steps and relevant considerations, in addition to those noted above, for setting up a separate, institution-specific MediaSpace instance.

### **Step One: Engage in a campus conversation**

Ensure that all campus stakeholders, including those in accessibility, IT, and academic technology-related groups, departments, and divisions, take part in the decision to request a separate MediaSpace instance and are aware of the process and considerations described in this guide.

Key considerations:

- Integrations offered by vendors are not uniform in their locations in MediaSpace or in their functionality. Review the section of this guide (below) that offers an overview of each vendor’s integration to determine if creating a separate MediaSpace instance for the sole purpose of adding an integration is worthwhile.
- Be aware that initial and ongoing collaboration will need to take place between members of your cross-functional captioning team, the Minnesota State System Office, and the third-party caption provider (see steps four and five for more details).
- It will be essential to communicate with and educate the campus community regarding how to request human-transcribed captions.
- Vendor-issued prices for human transcribed captioning is not impacted (neither increased nor reduced) by moving the request and retrieval process into MediaSpace via an integration.
- [Kaltura MediaSpace](#) (KMS) is a user-facing interface that draws from content in [Kaltura Management Console](#) (KMC). Videos that appear in KMS are stored in the KMC. There is only one KMC from which all KMS instances draw their content, and the system-wide KMC is managed and maintained by the Minnesota State System Office. When a new KMS instance is created, the KMC supporting the new KMS instance stays the same. Hence, videos currently existing on the default system-wide KMS instance will be accessible through a new, campus-specific KMS. Because the media storage location (KMC) remains the same when a new KMS is created:



- File migration is not needed when a new KMS is created
- Existing media links will not change
- Media added by a user within one MediaSpace instance will be accessible to that user through other MediaSpace instances (e.g. an individual who works at two institutions, using two separate KMS instances, will be able to see their videos at both institutions)
- Caption files attached to videos will persist across KMS instances (e.g. an individual who works at two institutions, using two separate KMS instances, will be able to see captions on their video at both institutions)
- The creation of a new KMS (Kaltura MediaSpace) instance **does** result in the following:
- All videos in the new instance will be marked “private”
- Existing channels (if used) will not be available in the new instance and will need to be recreated. Channels are specific to a KMS – by moving to a new KMS, channels are lost.
- Existing playlists may not be available

Questions to consider:

- What is your current process for captioning? How would creating a separate MediaSpace instance and using the vendor’s MediaSpace integration make this process more or less efficient?
- Remember that captioning is just a part of the functionality of MediaSpace. Would creating a separate instance serve all members of your campus community well? What are potential risks to creating a separate MediaSpace instance, given your campus’ current uses of MediaSpace?

### **Step Two: Create an account with a captioning service provider**

- If your institution already has an account with a captioning service provider that offers a MediaSpace integration, proceed to step three.
- If your institution does not yet have an account with a captioning service provider that offers a MediaSpace integration, see the table included [Captioning Vendors that Offer MediaSpace Integrations](#) for links to vendor websites. Each vendor’s website offers clear guidance on how to initiate the process of setting up a user account.

### **Step Three: Create a workflow and communication plan**

Taking into consideration...

- workflow considerations offered in chapter three,
- the functionality offered by your desired integration (recall each vendor’s integration is different), and
- sample MediaSpace-related workflows offered in this chapter,

...determine how caption orders will be issued through MediaSpace.

Questions to consider:

- Will all users be able to see the option to order captions, and a moderator receives and ranks the priority of every request received?
- Will users *not* be able to see the option to order captions, but instead will be asked to contact a moderator, who then requests shared access to the video and issues the captioning request to the vendor?

Sketch out a campus communication strategy that includes:

- Changes that may impact users by moving to a new instance of MediaSpace
- Protocols for requesting captions via an integration
- If applicable, where users can find the option in MediaSpace to request human-transcribed captions
- Any other processes that currently exist for issuing captioning requests, and how they are impacted (or not) by the addition of requests satisfied within MediaSpace

#### **Step Four: Contact System Office**

Designate one or two members of your cross-functional captioning team to serve as the primary campus contact(s) for navigating the process of creating a separate MediaSpace instance and for troubleshooting any issues that may arise from creating a separate instance. Once this or these individuals are identified, they should contact Scott Wojtanowski ([scott.wojtanowski@minnstate.edu](mailto:scott.wojtanowski@minnstate.edu)) at the System Office's Educational Innovations unit of Academic and Student Affairs to initiate the creation of a separate MediaSpace instance, or ask questions your team has about creating a separate instance not covered in this guide. Currently, Scott is the individual who...

- manages the system-wide Kaltura Management Console (KMC)
- manages the system-wide instance of MediaSpace
- works with individual campuses to navigate the process for creating separate instances of MediaSpace
- manages the new campus-specific MediaSpace instances that are created, to ensure a degree of uniformity across all instances
- serves as an intermediary between campuses, captioning vendors, and Kaltura to address and troubleshoot any issues that may arise from the creation of a separate MediaSpace instance

When you contact Scott with your request to create a new MediaSpace instance and vendor integration, make sure to:

- Indicate your campus and which vendor's integration you'd like to add
- Provide your account name, issued by your captioning vendor
- Indicate whether the default URL for your campus' MediaSpace instance that will be

created - institution.mediaspace.kaltura.com – is satisfactory, or if your institution wishes to use a custom domain (e.g. mediaspace.institution.edu). If the latter, an SSL certificate for the domain name should be ordered by your institution and attached with your request.

What to expect after requesting a new MediaSpace instance:

1. A new instance will be created and configured in approximately one week from date of request:
  - The System Office will request a new MediaSpace instance from Kaltura
  - Kaltura processes the request and creates new instance
  - System Office configures new instance: StarID authentication is added, settings are aligned to match those of the system-wide MediaSpace instance, site is activated
2. Vendor integration is added to new instance
3. System Office notifies institution that new instance is ready
4. Institution replaces existing links to MediaSpace portal and notifies campus of new URL

#### **Step Five: Ongoing communication and maintenance**

After the new MediaSpace instance is put into production and utilized by members of the campus, it will be necessary for the designated contact from your cross-functional team to maintain communications with the Minnesota State System Office regarding any questions or issues arising from new MediaSpace instance creation, and with the captioning service provider regarding any questions related to the vendor's MediaSpace integration. Note that the System Office will oversee management of your institution's instance of MediaSpace.

Note that as more Minnesota State institutions work through the process of implementing third-party captioning service MediaSpace integrations, we hope that models, workflows utilized, and additional information garnered from these institutions' experiences will be added to this chapter.

### **Captioning Vendors that Offer MediaSpace Integrations**

Listed below are four captioning providers whose services are integrated with Kaltura MediaSpace. Campuses wishing to utilize the services of third-party captioning providers integrated within MediaSpace should consider cost as well as the captioning provider's ability to accommodate the institution's desired captioning request process/workflow. Note that in some cases, the design of a captioning vendor's integration may not be compatible with the workflow desired by an institution. Subsequent sections of this chapter offer sample workflows and an overview of each integration's architecture. Up-to-date documentation on each of the providers, below, can also be found at [Kaltura Exchange: Captions & Subtitles](#).

Table 10: Comparison of Captioning Vendor Kaltura / MediaSpace Integrations

Vendor (and website)	<a href="#">Cielo24</a>	<a href="#">Cielo24</a>	<a href="#">3PlayMedia</a>	<a href="#">Rev.com</a>	<a href="#">AST / CaptionSync</a>
<b>Captioning Method</b>	Mechanical (ASR) captioning	Human-transcribed captioning	Human-transcribed captioning	Human-transcribed captioning	Human-transcribed captioning
<b>Vendor integration information</b>	<a href="#">Kaltura REACH Release Notes</a>	<a href="#">Kaltura Exchange: Cielo24</a>	<a href="#">3Play Media: Kaltura Integration</a>	<a href="#">Kaltura Exchange: Rev Captions</a>	<a href="#">CaptionSync Support Center: Closed Captioning with Kaltura</a>
<b>Pricing (per minute)</b>  <i>Note that pricing below may have changed since publication of this document. Contact vendor for up-to-date pricing.</i>	No charge (available by default within MediaSpace for all users)	\$2.33	\$2.50	\$1.00	\$2.59
Turnaround for price noted above	N/A	24 hours	4 business days	24 hours	3 business days
Volume discount available?	N/A	Yes	Yes	No	Yes
Stated accuracy	Varies	99%	Over 99%	99%	Nearly 100%
Foreign language translation? (at additional cost)	No	Yes	Yes	Yes	Yes
Applicable <a href="#">sample workflows</a>	Workflow 4	Workflow 1 Workflow 2 Workflow 3 Workflow 4	Workflow 2 Workflow 3 Workflow 4	Workflow 4	Workflow 3 Workflow 4
Caption requests may be moderated		X	X	X	X

Vendor (and website)	<a href="#">Cielo24</a>	<a href="#">Cielo24</a>	<a href="#">3PlayMedia</a>	<a href="#">Rev.com</a>	<a href="#">AST / CaptionSync</a>
Caption requests may be restricted to the owner	X	X			
Any MediaSpace user may request captions for a video		X	X		
Any MediaSpace video owner may grant co-publisher or co-editor permissions to another individual (e.g. a moderator)	X	X	X	X	X

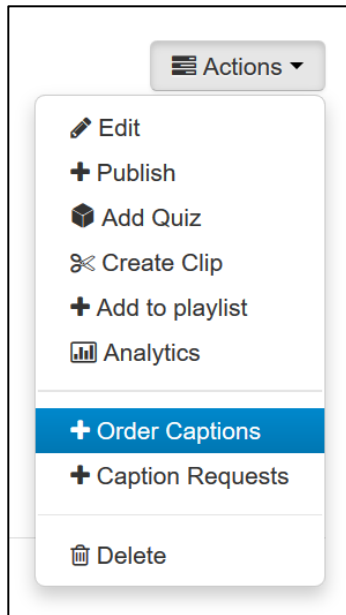
## Location of vendor human-transcribed captioning integrations in MediaSpace

This section provides an overview of the location and arrangement of human-transcribed caption ordering as it appears to users in MediaSpace. Four vendors' integrations are covered in this section: Cielo24, 3PlayMedia, Rev.com, and AST / CaptionSync.

### Cielo24

If Cielo24's human-transcription captioning integration is added to MediaSpace, the option to request captions is in the same location as earlier described for ordering mechanically-transcribed (ASR) captions:

After a user selects the desired media file, the user selects the "actions" button below the media player and a dropdown menu appears. To order human-transcribed (or mechanically-transcribed) captions, click "Order Captions" (also depicted in image, below).



Under the “Fidelity” a dropdown menu appears. To request human-transcribed captioning, select the “Professional (99%+)” option, and click the “Order Captions” button (also depicted in image, below).

There is no cost associated with ordering Mechanical captions.

Instructions & Notes:

Text entered here is seen by cielo24 workers...

Fidelity:

Mechanical (70 to 80% accuracy)

Mechanical (70 to 80% accuracy)

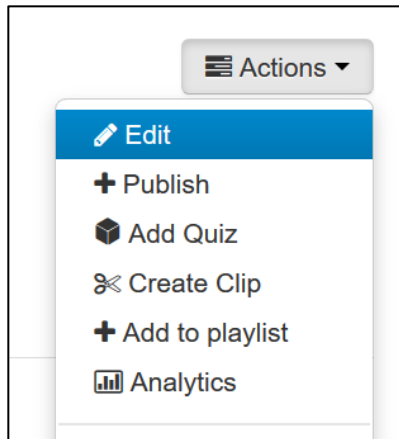
Professional (99%+)

Order Captions

### 3Play Media

If 3PlayMedia’s human-transcription captioning integration is added to MediaSpace, the option to request captions is located under Actions > Edit:

After selecting a media file, the user selects the “actions” button below the media player and a dropdown menu appears. To order human-transcribed (or mechanically-transcribed) captions, click “Edit” (also depicted in image, below).



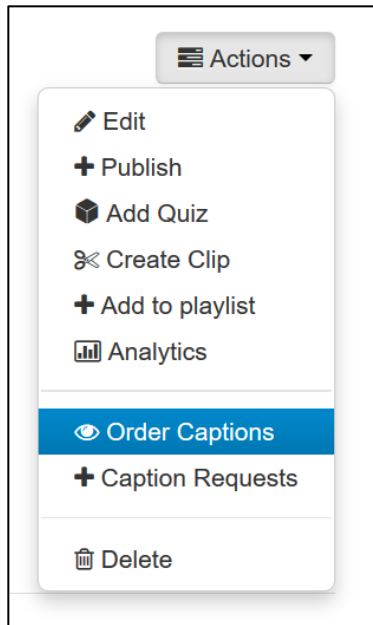
Under the “3Play” tab (below the media player), options for turnaround time appear. Select “Standard – 4 days,” Expedited – 2 Business Days,” or “Rush – 1 Business Day,” and click the “Request Captions” button (also depicted in image, below).

A screenshot of a web interface showing a tabbed interface. The tabs are 'Details', 'Options', 'Collaboration', 'Captions', 'Attachments', 'Downloads', and '3Play'. The '3Play' tab is selected. Below the tabs, there is a section titled 'Please select a turnaround service level for your captions request:'. There are three radio button options: 'Standard - 4 Business Days' (selected), 'Expedited - 2 Business Days', and 'Rush - 1 Business Day'. Below these options is a button labeled 'Request Captions'.

## Rev.com

If Rev.com’s human-transcription captioning integration is added to MediaSpace, the option to request captions is located under Actions > Order Captions:

After selecting a media file, the user selects the “actions” button below the media file and a dropdown menu appears. To order human-transcribed (or mechanically-transcribed) captions, click “Edit” (also depicted in image, below).



Please note: The location of Rev’s “order captions” integration directly conflicts with location Cielo24’s “order captions” menu item (for ordering mechanically or human-transcribed captions). The “order captions” menu item that exists by default in MediaSpace (for ordering mechanically-transcribed captions), which is the same item utilized if an institution adds Cielo24’s human-transcribed captioning integration, is replaced with Rev.com’s “order captions” menu item if Rev.com’s integration is added.

In the event a campus wishes to use Cielo24’s services (mechanical and/or human transcription) as well as Rev’s integration, special attention will need to be paid to which integration the campus wishes to appear by default to users, and how initial captioning order requests will take place for the other service, outside the out-of-the-box option offered by that vendor. It is recommended that the institution prioritize the Cielo24 “order captions” menu item, and create an alternative workflow for ordering captions using the Rev.com integration.

After selecting “Order Captions,” a window appears in which the user can add additional information and select “Order Captions” (also depicted in image, below).



Rev captions video using a hand-selected team of transcriptionists and captioners. The cost is \$1 per video minute. Videos of 30 minutes or less will be completed in 24 hours. When completed, the captions will be automatically uploaded and associated with your video.

For additional information, check out [Rev.com](https://www.rev.com) or contact us at [kaltura@rev.com](mailto:kaltura@rev.com).

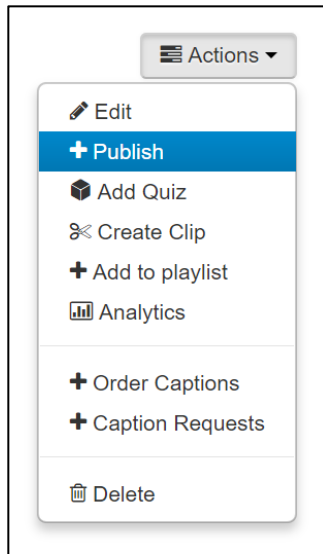
Additional Info:  
(Required)

Order Captions

## AST / CaptionSync

If Automatic Sync Technologies' CaptionSync human-transcription captioning integration is added to MediaSpace, captioning requests are issued by users by means of adding the video to a Kaltura category. Categories are deactivated in the system-wide instance of Kaltura MediaSpace, and can only be created by an individual who has access to Kaltura Management Console. Hence, if a campus utilizes the CaptionSync integration, a few additional steps to create a campus-specific category in the institution's new MediaSpace instance, as well as clear guidance to the campus on how to add media to categories, will be necessary.

Once a category is created and configured by the System Office and made available within an institution's MediaSpace instance, individuals requesting captions will go to the "Actions" button below the media player. From the dropdown menu, select "publish" (also depicted in image, below).



Under the “Publish in Category” tab, select the CaptionSync category that has been created for the institution (also depicted in image, below).

☐ **Private** - Media page will be visible to the content owner only.  
☐ **Unlisted** - Media page will be visible to anyone with a link to the page.  
☒ **Published** - Media page will be visible to individuals according to entitlements on published destinations

[Publish in Category](#)   [Publish in Channel](#)

\* Moderated   Open   Private   Restricted   Shared Repository   Public

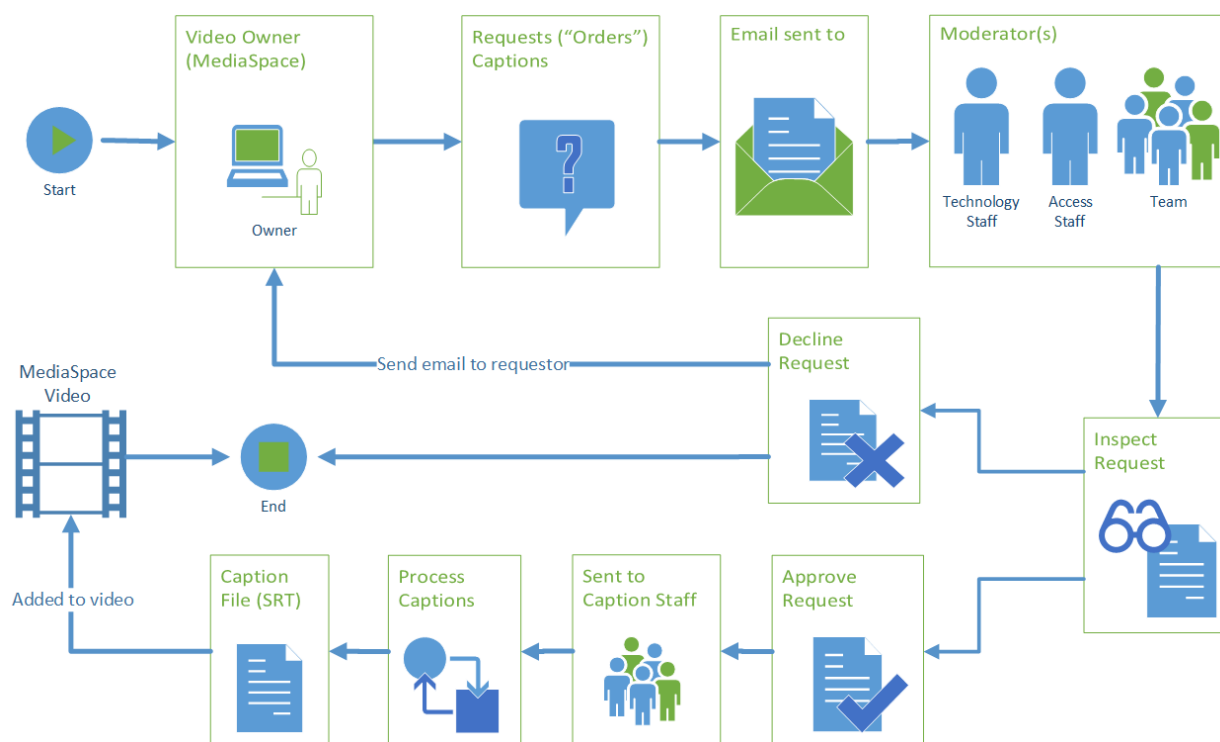
☒ CaptionSync Captions  
☒ ☒ Order Captions

A campus moderator who has access to manage the content in the category will receive a notification that a video has been added.

## Sample Workflows

Sample workflows for issuing and fulfilling captioning requests are offered, below. Each sample workflow includes a case in which the workflow might be utilized, and a description of the workflow. Note that the options below are not inclusive of all workflow arrangements. Consider the possibility that you may use one or more of these workflows as-is, or you may use them as foundations for further revision and adaptation.

*Workflow 1: Video owner is allowed to request human-transcribed captions*



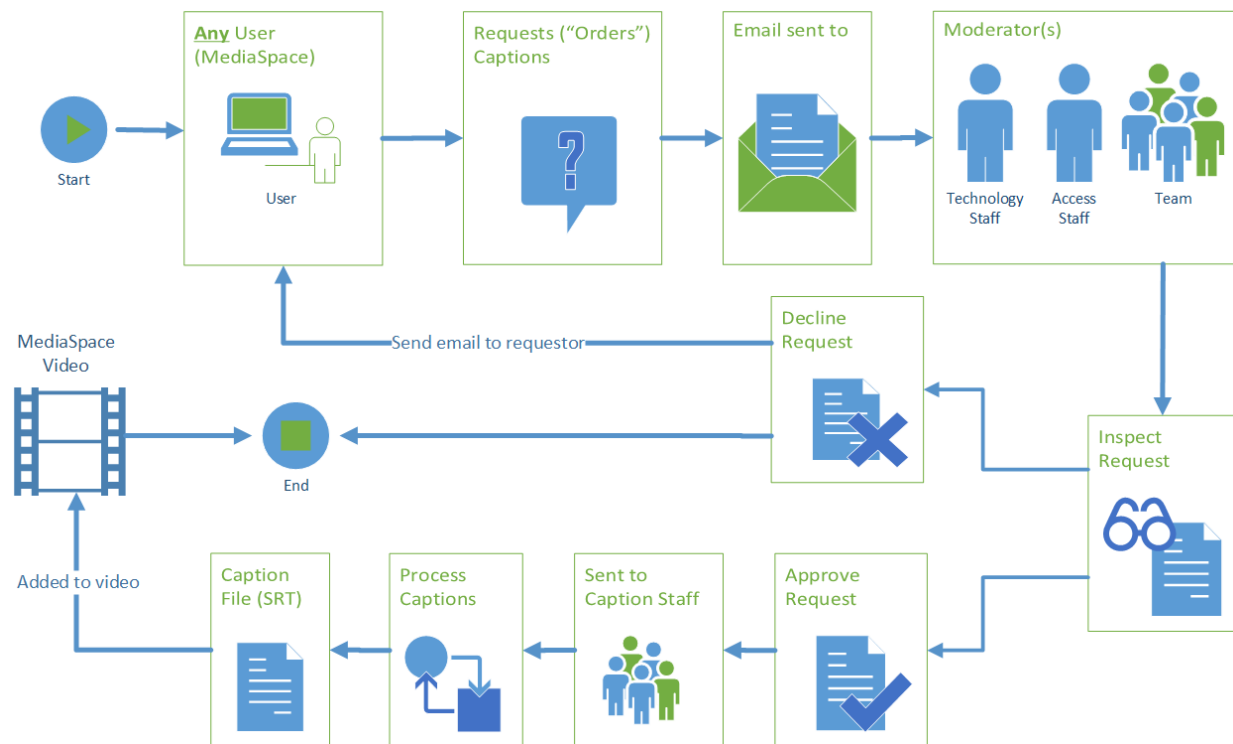
**When this workflow might be used:**

In the case a MediaSpace captioning vendor integration is added to a campus' MediaSpace instance, and the campus wants to allow any member of the campus (employees, students) to be able to issue a request for human-transcribed captions for *their own* videos, but not videos they do not own. In this case, the settings for visibility of an integration would need to be customized such that only the owner of a video can see the option to request captions.

**What this workflow describes:**

1. Caption owner utilizes the MediaSpace functionality offered by a vendor to request captions (e.g. a button, dropdown menu item, etc.).
2. An email is sent to a campus moderator.
3. Campus moderator inspects request and either:
  - a. Declines request, in which request is returned to owner via email
  - b. Approves request (see 4, below)
4. Vendor's captioning staff receives access to video file through MediaSpace integration
5. Captioning process takes place
6. SRT (caption file) is added to video
7. Video appears in MediaSpace with captions added

*Workflow 2: Any MediaSpace user may request captions for a video*



**When this workflow might be used:**

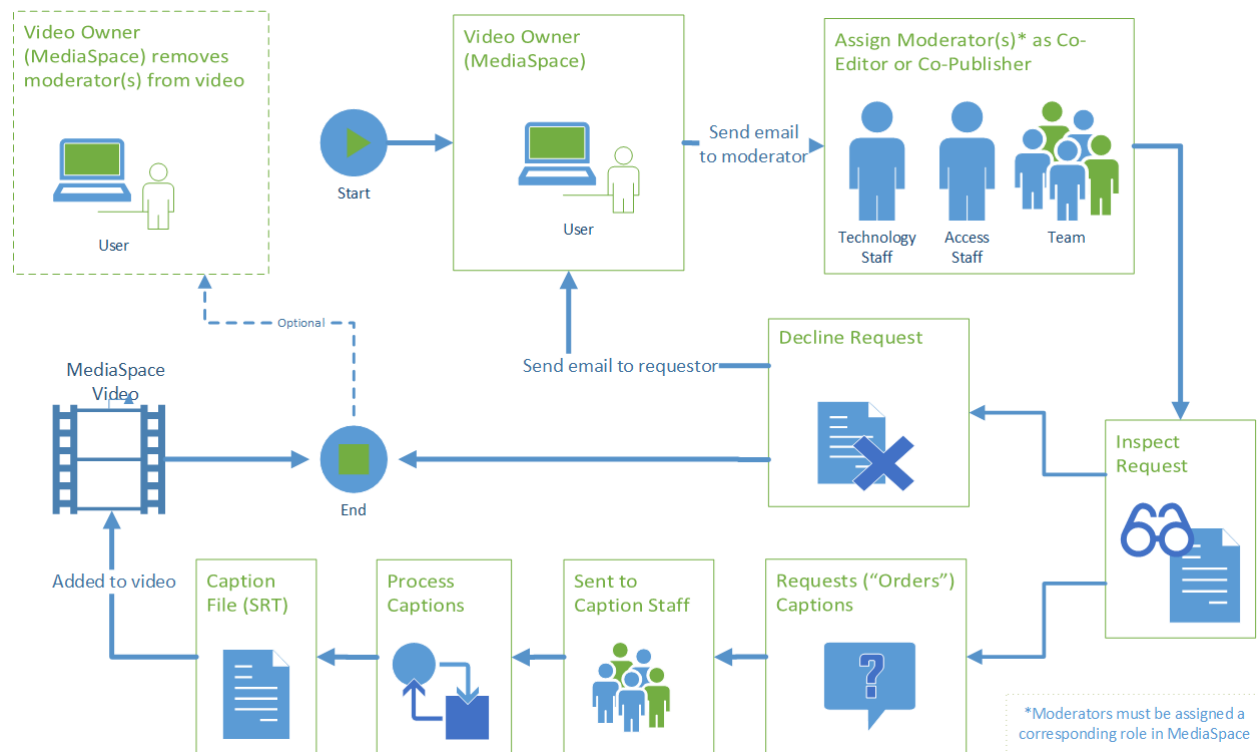
In the case a MediaSpace captioning vendor integration is added to a campus' MediaSpace instance, and the campus wants to allow any member of the campus (employees, students) to be able to issue a request for human-transcribed captions for *any* video they can access. In this case, the settings for visibility of an integration would need to be customized such that all individuals who can access a video can see the option to request captions for that video.

**What this workflow describes:**

User utilizes the MediaSpace functionality offered by a vendor to request captions (e.g. a button, dropdown menu item, etc.).

1. An email is sent to a campus moderator.
2. Campus moderator inspects request and either:
  - a. Declines request, in which request is returned to user via email
  - b. Approves request (see 4, below)
3. Vendor's captioning staff receives access to video file through MediaSpace integration
4. Captioning process takes place
5. SRT (caption file) is added to video
6. Video appears in MediaSpace with captions added

*Workflow 3: Any video owner (MediaSpace) may assign designated individual(s) as a Co-Publisher or Co-Editor who has access to request captions*



### When this workflow might be used:

In the case a MediaSpace captioning vendor integration is added to a campus' MediaSpace instance, and the campus wants the initial step of the captioning process (the step of requesting captions) to take place outside of MediaSpace. This may be a useful process in either of the following cases:

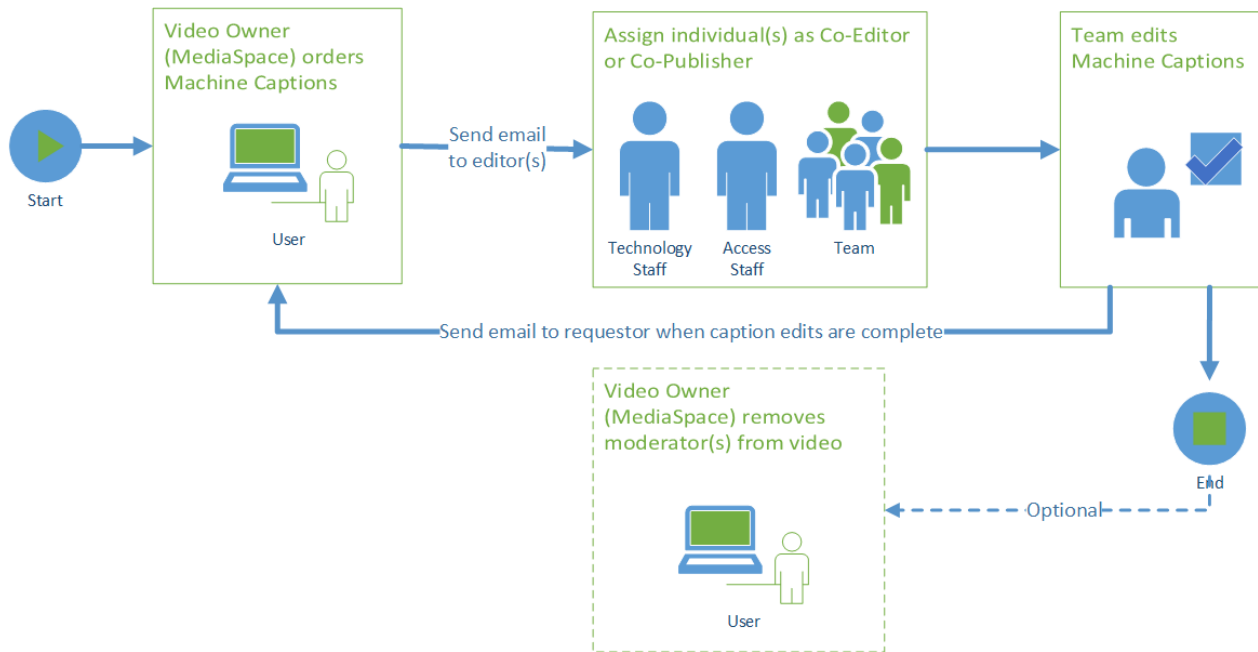
1. The method offered by vendor's captioning integration related to requesting captions requires user training to a degree that is impractical, or the method for ordering captions is inconsistent with standard campus practices related to MediaSpace (e.g. requesting captions involves adding a video to a MediaSpace "category," but the use of categories is discouraged or deactivated by a campus)
2. The institution wishes for the captioning request initiation process to take place via a process that exists outside of MediaSpace (e.g. via email), while the remaining steps are managed and executed by a moderator within MediaSpace.

### What this workflow describes:

1. Video owner conveys the request for captioning to a moderator via email or another campus-designated process (e.g. phone, SharePoint, etc.)
2. Video owner adds moderator as co-editor or co-publisher of video in MediaSpace

3. Campus moderator inspects request and either:
  - a. Declines request, in which request is returned to owner via email
  - b. Approves request (see 4, below)
4. Vendor's captioning staff receives access to video file through MediaSpace integration
5. Captioning process takes place
6. SRT (caption file) is added to video
7. Video appears in MediaSpace with captions added
8. (Optional step): Video owner removes moderator's co-editing permissions

*Workflow 4: Requests for "in-house" captioning or outsourced captioning not ordered via MediaSpace*



#### **When this workflow might be used:**

In the case that either:

1. An in-house team offers the service of editing captions produced by Kaltura's REACH product (mechanically-transcribed captions) to improve accuracy/accessibility
2. An in-house team offers the service of fully captioning videos for members of the campus
3. A third-party captioning service is used by an institution, but the service does not offer a MediaSpace integration or the institution chooses to not use the MediaSpace integration

#### **What this workflow describes:**

1. Caption owner either
  - a. Adds a mechanically-transcribed caption file within MediaSpace and sends an

- email to a moderator
  - b. Sends an email to a moderator to request in-house or outsourced captioning
2. Video owner adds moderator as co-editor or co-publisher of video in MediaSpace
3. Campus moderator inspects request and either:
  - a. Declines request, in which request is returned to owner via email
  - b. Approves request (see 4, below)
4. Captions are created or edited by in-house captioning team or is sent to a third-party service
5. Captioning process takes place
6. SRT (caption file) is added to video
7. Video appears in MediaSpace with captions added
8. (Optional step): Video owner removes moderator's co-editing permissions

## Additional Resources

### [Kaltura MediaSpace User Manual](#)

Version 5.62, published July 2017

See pages 44 – 46 for information specific to captioning (i.e. uploading captions and managing captions in MediaSpace)

### [Kaltura Exchange: Captions & Subtitles](#)

Detailed information on captioning vendors that offer MediaSpace integrations

### [Kaltura MediaSpace Video Portal](#)

More information on Kaltura's MediaSpace video portal

### [Minnesota State: Kaltura MediaSpace Help Articles](#)

Resources and how-to guides related to MediaSpace, offered by Minnesota State's Educational Innovations unit

### [Captioning Key](#)

Guidance on producing quality captions (helpful in the case that ASR technologies are used to create captions, such as Cielo24's REACH product, embedded in MediaSpace)

## Glossary

- **Automatic Speech Recognition (ASR):** A technology that allows for automated, machine-based transcription of spoken language. In this document, "ASR" and "machine captioning" and "machine-transcribed captions" are used interchangeably.
- **Kaltura:** The company with whom Minnesota State has an enterprise-level, system wide media management contract.
- **Kaltura Management Console (KMC):** An administrative interface that serves as a backbone upon which Kaltura's MediaSpace is built upon and draws media from.

- **Kaltura MediaSpace (KMS):** An end-user media management portal that allows users to create, upload, access, share, edit, and store media content.



## Appendix 4.1: Chapter 4 Worksheet

Include the workflow(s) that you anticipate will be utilized on your campus for processing captioning requests. Feel free to...

- copy and paste any of the workflows you created in completing the activities of Chapter 2 (see [Sample Workflows](#))
- adapt these workflows to your own specifications
- design your own workflow from scratch

You may include an image or a written description of your workflow(s), below:

Does your campus wish to initiate the creation of a separate MediaSpace instance for your campus in order to add a vendor's human-transcribed caption ordering integration?

Yes \_\_\_\_ No \_\_\_\_

*If "no," your worksheet is complete -- skip remaining questions.*

Please select **one** third-party human-transcribed caption provider your campus will integrate with MediaSpace:

	Check, below:
Cielo24	
AST (CaptionSync)	
3Play Media	
Rev.com	

Identify the names, emails and associated departments of those who will be serving as moderators for captioning requests processed through MediaSpace:

	First Name	Last Name	Email	Department
1				
2				
3				

	First Name	Last Name	Email	Department
4				
5				

## Appendix 4.2: Chapter 4 Checklist

Complete this checklist and submit as part of the package of materials needed to participate in the Minnesota State Sustainable Captioning Seed Program.

### Checklist

- ☐ Institution's captioning/accessibility team has completed reading Chapter 4
- ☐ Institution's captioning/accessibility team has completed the worksheet at the end of this chapter (see next section)
- ☐ Institution's captioning team is aware that a tool to order mechanically-transcribed (ASR) captions exists currently within MediaSpace, and is available to all Minnesota State employees and students
- ☐ Institution's captioning team understands how to order mechanically-transcribed captions in MediaSpace and how to access the caption editing interface
- ☐ The existence of an option to all Minnesota State employees and students to create mechanically-transcribed captions has been taken into consideration by the captioning team in its planning
- ☐ Institution's captioning team has engaged in a conversation regarding whether to utilize a third-party human-transcribed caption vendor
- ☐ Institution's captioning team is aware of the captioning vendors that currently offer integrations that can be added to MediaSpace

*If institution uses or will use a third-party human-transcribed captioning vendor:*

- ☐ Institution's captioning team has engaged in a conversation regarding whether to utilize a third-party human-transcribed caption vendor's MediaSpace integration
- ☐ Institution's captioning team has reviewed the five-step guide included in chapter four for setting up a third-party captioning integration in MediaSpace