

SOFIA Thanks for joining the webinar entitled, "Video Accessibility at the University of Washington."

ENAMORADO: I'm Sofia Enamorado from 3Play Media and I'll be moderating today. And today, I'm joined by Terrill Thompson, technology accessibility specialist, Sheryl Burgstahler, director of accessible technology services, and Doug Hayman, senior computer specialist, all from the University of Washington. And with that, I'll hand it off to Terrill, Sheryl and Doug, who have a wonderful presentation prepared for you all.

SHERYL
BURGSTAHLER: This is Sheryl. It's great to be with you today. We're all here, myself, and Doug and Terrill, in the beautiful, sunny city of Seattle, Washington. So we had a good, dry day today. We do have a few of them. And we're glad to join you for this.

My email address is S-H-E-R-Y-L-B@UW.edu. If you want to get in touch Doug, D-H-A-Y-M-A-N@UW.edu and Terrill at T-F-T@UW.edu. So I'm going to start the presentation. And then I'll move on to Doug and then to Terrill.

So we're going to be talking about video, how we make video accessible at the University of Washington. We certainly aren't a role model, as far as having every one of our videos captioned and audio described, but we feel we have something to share in our struggles and our ongoing improvements in this field.

So if we take a look at the landscape at the UW, we have 57 known UW-affiliated YouTube channels. These represent nearly 2,000 videos. And of course, there are some videos that aren't actually on YouTube. So we have a lot of videos and growing every day.

We have over 430 hours of programming and at least 18 videos with over 100,000 views. We use Panopto, which is our lecture capture software. And in that system we've had around for a few years, we have almost 60,000 videos, and almost 10,000-- representing over 6 million minutes-- reviewed in fall of 2016.

And we have other videos. We have Vimeo, we have DVDs, VHS still-- a lot of those around. So we have tons of videos, like a lot of other institutions.

So what we're going to talk about today is captioning, audio description. We're going to talk about an accessible media player to view these videos and tools that can support video accessibility efforts. So we hope we'll make it real practical. And you can compare what you're

doing on your campuses and maybe discuss more with us later.

So the first question we can ask-- and we have to answer this question all the time here at the University of Washington-- is, why caption every video? Why would that be a reasonable goal?

That would be the perfect situation. Are we ever going to reach that goal? Probably not. But why would we want to?

Well, captioning makes the videos accessible now, right this minute, so we don't have to have wait time for someone that needs captioning. And so that's one valuable part about captioning ahead of time. It definitely benefits people who are deaf or hard of hearing, obviously.

But it also benefits people who aren't proficient in the video's spoken language, which in our case is English, for the most part. And we have a lot of students where English is not their first language. And so this benefits them when they can see the spelling of the words, as well as hear the words.

People who benefit from multimodal communication, in other words, reading text while listening, which can help retention for some individuals, particularly those who have reading-related disabilities, people who have limited internet bandwidth can benefit from being able to read the text and captioning, and people with limited time. So reading an interactive transcript might be more efficient than watching a full video. So this is why universal accessibility is important.

These benefits are worth a sizable investment, because they can benefit so many people. Captions, specifically, also benefit people that are in a noisy environment, like an airport, or a noise-less environment, like in the evening when the rest of the family is sleeping and you want to watch a video. So there are good reasons to work toward having more and more videos accessibly-designed. By that, we typically mean captioning every video and audio description, as well, which we'll get to later.

So our IT accessibility efforts are guided by the following things. First of all, we think it's the right thing to do. But if we look at some of the legal basis and a policy basis, we look to Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act and its 2008 Amendments as our primary guidance. As most of you know, those are civil rights laws. They do not specify specific guidelines for, say, captioning or audio description of videos. They just make it very clear that we need to make any products or services we have available here at

the University accessible to people with disabilities.

Then we have a lot of Department of Justice and Office of Civil Rights resolutions. And we, at our institution-- knock on wood-- haven't received one of these. But they have resulted from complaints about the inaccessibility of IT on other campuses. And we look very closely to those resolutions to see what DOJ and OCR are requiring those schools to do. And then we pattern our efforts after that.

Along those lines, in 2015, EDUCAUSE wrote a great report called "IT Accessibility Risk Statements and Evidence." And that report looked to the existing resolutions available to them at that time. And since [INAUDIBLE], it came up with a list of recommendations that they would make to campuses who were trying to make their IT accessible, including videos.

In the state of Washington, we comply with Policy 188, which is about IT accessibility. And it points to WCAG 2.0 Level AA for guiding us, as far as accessibility. We have a UW policy about accessible IT. We have, from that, developed guidelines, which also pointed to WCAG 2.0 Level AA.

And we even have a checklist that could help people make initial steps towards greater accessibility of their IT. And we have a high-level, IT Accessibility Task Force that reports campus-wide and continually works on efforts here at our campus to make our IT more accessible. So all of those things impact what we're actually doing with videos, in this case.

The other thing I wanted to cover before I move on to Doug is, who has responsibility for making videos accessible? When it comes to accessible IT, my policy is always to look at, where is the money? How is the money being transferred for various things? And in this case, what about for students who haven't disabilities? How is this handled?

For instance, assistive technology, sometimes that is made available to the Disability Resources for Students Office on some campuses-- not on ours. Ours is through IT, our organization. Because Accessible Technology Services reports to UW IT, our central computing organization.

And why is that? Well, we consider having access to the technology that we deploy is not an accommodation issue. It is an access issue, just like we make our products available to people using mobile phones. And so we kind of follow the money.

We set up a computer lab. Making it accessible is a responsibility of the person that put [? ups

?] the lab. And then Accessible Technology Services helps them do that.

So using that as our guide, the rest of this will make sense. The video owner or producer is expected to release successful products. And so in a perfect world, all those Panopto videos would be captioned and audio described.

In a not-so-perfect world, we rely on Disability Resources for students, DRS, and our Disability Services Office, DSO, which provides service to faculty, staff, and visitors at the University. But their services are quite similar between those two. And we expect them to provide the funding and the support for captioning and audio description if individuals request them as an accommodation.

So if a deaf student is in a class and the instructor is using Panopto to video all their lectures for a term, we would expect those two offices to provide captioning and, perhaps, even audio description if there are individuals with disabilities-- those would be primarily students-- who need them as accommodations because of a disability, so someone who is deaf or hard of hearing. And so that would be our accommodation response that we have for other things when something isn't accessible to students with disabilities or other people with disabilities on campus.

Then back to what we do, Accessible Technology Services within the Central Computing Organization, we have, right now-- and it looks like it's going to be able to continue-- a grant offered through the University that allows us to make high-impact videos accessible as a universal design practice. And so through this effort, we have-- free to the user on campus-- captioned over 430 videos. But these are ones that are very prominent on web sites, so they are available to the public, or a video that is going to be used over and over again in courses.

We feel that those should be captioned proactively. And so we're always looking for these high-impact videos to use this limited funding for. And that's been very successful, and we've found that it actually motivates people to do captioning on their own in other instances.

And ATS, then, is responsible for providing training across the campus on how to caption videos and gives support to individuals who are doing so. So Doug will pick up on that idea and tell us a little bit more of the mechanics of how we're doing this.

DOUG HAYMAN: So with this effort that Sheryl's talking about, going beyond what's being provided as an accommodation, we've been working, trying to get people to be more proactive in captioning

their videos, even where there's not a student in the class that's requiring the captions. In early efforts, we went around finding people and were showing them how to do captions within YouTube, or using Amara to work with YouTube videos. And we had somewhat limited success with that because people, for the most part, were finding they didn't have the time to be sitting down and working on large video files and getting that stuff done.

And at the same time we were in those efforts, we jumped in and took part with the community colleges, the two-year and technical colleges in Washington. A number of us four-year colleges all joined together in a process of working towards a caption contract. And we had specific requirements and we all were pretty clear in what we needed.

All of us were using Panopto, for the most part, and knew that we wanted Panopto to be captioned by the vendor that we chose. And a number of other things came into that process. So we had a pretty extensive process of going through and figuring out what we wanted in the caption vendor. And we ended up choosing 3Play for that process.

So when we're out talking with the various players on the campus, like Sheryl said, we can sell it as more than just a benefit for people who are deaf or hard of hearing. And we've been able to easily show not only those things that she mentioned, but also the capability of the caption content being able to use in a search result, which increase hits coming to video that people are doing where they're trying to do outreach. So that's been beneficial, as well.

We've done online and in-person one-on-one support with people if people have questions about how to do captions in various arenas. And as all these different technologies keep coming out, we have to keep up on it ourselves. We're finding, if we started out with, say, YouTube, and then as captions became available on Facebook, we're showing people how to do that. Because we have some campus partners that are using multiple platforms to do their videos.

So they might have a web page that's hosted on campus. They might have a Facebook page. They might be doing a number of other modalities for presenting their videos. So we're working with them so they're able to do the captions in a variety of formats.

We've tried some group trainings. That's been pretty successful. Oftentimes, we've done that with the cooperation of, say, our branch campuses in Bothell and Tacoma, where they bring together people to talk about accessibility options on a number of different arenas, not only captions. And we've been able to show them ways to do these things to improve their

accessibility on campus.

We also have this a community IT Accessibility Liaisons where we bring people that are working in a number of different roles on campus together and work with them to increase accessibility efforts on campus. So they can be with engineering, they can be with education departments, they can be support personnel on campus that are working in a number of different roles.

And we specifically focus on accessibility and topics that are important to all of them. It might be accessible documents or, in our case, more recently, captioning and how they can do that. And we've had captioning parties where people are interested in learning how to do captions, captioning it themselves, sometimes getting together and working side-by-side and showing each other how to do the process. Makes it more fun and helps spread the word around, as well.

On our website, which is washington.edu/accessibility, we break down into a lot of detail the various modes of doing captions, for example, on a number of different arenas, or how to do audio description, working with vendors, doing things yourself. So we're working to get the word out for people so that it's easier to jump in and be proactive and do this sort of effort. And then we've got funding, as Sheryl said, through our UW IT. We've got some foresight on the leadership to give us the ability to go after doing these as a proactive process.

And we do it in a simple manner by having a-- what we have is just a survey tool. And people can submit. And the top of the survey tool is pretty clear, and what the guidelines are for what's going to get funded, and what is probably likely not to get funded.

And like Sheryl said, at the bottom of the slide, highly-visible, high-impact submissions are more likely to get approved by our committee, whereas a one-off video that someone's going to show one time and then delete a week later is just not a good candidate for this funding.

I think you could jump back one slide on that. We've been trying to get the word out through publications, university newsletters, or newsletters put out by various departments just to let them know that we have this caption funding. And then other people also just tell, word of mouth, how to go about doing this process.

And from there, let's see. Yeah, once people have submitted, we sometimes ask some clarifying, follow-up questions just to see if there is some question about whether it meets our

criteria or not, and also ask them questions around the formats they're using. Some things, we're able to jump in and caption. Others, it's a little bit more tricky to work with.

Let's see. So on the files we get from people, for the most part, we're getting either YouTube video links or we're getting MP4 files. So if people are working in Panopto or a couple of other different tools, it often works best for us to get an MP4 file. We get those submitted to 3Play. And then once we get the caption file that they want, format-wise, back to them, then they're able to integrate that in the platform they're using.

What we found is, in some cases, we might have one person that's the recipient of this funding for captions that has dozens and dozens of videos. And in those cases, what's worked well for us as an institution is using a shared Google Drive. And they put their MP4 files in there. We're able to download those, send them off to the caption vendor, 3Play.

And then we're able to get the-- SRTs is the most common format we're using-- and upload those to that shared folder. And then they have access to them right away, rather than making the attempt to send those things in some other format. Especially when we're working with pretty large files, that works the best.

And in addition to doing this funding and doing these captions for people, each person that's granted access to us doing the captions for them, we have a boilerplate language that we submit back to them and say, congratulations. We're going to caption these videos. We encourage you to caption them in the future. And we want them to take this on as a practice and not just rely on us from here on out. We want them to see the value of it and take it on as a practice on campus.

And we work on just showing people how to do these various techniques. And some people are pretty proficient. All they need is the caption file done. We give it to them. They're good.

Other people have no idea. They might be working as an assistant for a department. And we have to start from ground zero and work our way up just to show them how the process works. And then as they need ongoing support, as things move along, we're able to do that, either on email, on the phone, or popping into their office and helping them out.

So yeah, in terms of those that are most likely to get funded, videos that are going to be used over and over again. If there were three or four different instructors in biology, for example, and they all had a video that they found was useful-- let's say, something about

photosynthesis, if that's the most simple. If they found it was content that didn't expire and they could just use it over and over again, that's a great candidate where we could caption that video. And two or three courses could all use the same video, and share it, and use those captions over and over. And so that's the several faculty using the same content.

And then, also, if an instructor is using the same sort of core material over and over. We had one person that was granted funding who would use Panopto Lecture Capture and record a different video every quarter. But she had, I think, 10 core videos that were essential for everybody to see in that Earth sciences class. And so we captioned all of those, because we knew she was going to use them every quarter. And that was a great candidate.

And then also those videos that are going out to the public that are going to get seen by thousands of people. Those are perfect. If it's presentation about some new effort on campus. In our case, one of the big things that rolled out recently on our campus was changing to a different financial system for doing payroll. And they had to reach everybody on campus that was going to be a participant in that. Whether it was administrators or employees, they were going to have to interact with this technology. And so we've captioned all of their content for that.

And then videos that are presented to the public, just in terms of advertising the benefits of coming to the University of Washington. Those are also really good candidates. We have some that are health-related, just a variety of things that we can see are reaching quite a few people. And they'd be great candidates for captioning.

TERRILL

THOMPSON:

Well, thanks, Doug. I have a slide up that shows a particular video. This wasn't one of the videos that was funded with the grant funding, but it was a video that came out of the University Marketing and Communications Group, where they're marketing the University of Washington with this annual *Best of UW* series. And it was a very high-profile video. It was announced on the president's blog and website and received thousands of hits right out of the gate.

But I wanted to talk a little bit about this because it's really an interesting video that forces us to think a little bit outside of the box, in terms of how we caption videos and how we make videos accessible. It was a quick video, just two minutes. And it was a music video, essentially. It was just music and scenes of really cool things that had happened over the past year at the University of Washington.

So we had Nobel Laureates. We had championship sports teams, and lots of records broken in various academic contexts, and really interesting, breakthrough research. This was all shown in images with on-screen text.

And originally, the caption just said, "music." And we do this a lot, where we have the musical interlude in a video, just a few seconds of music. And it'll just say, "music," in square brackets, and that informs the person that can't hear it that there is music going on, so they're not missing any dialogue.

But in a video like this, where the entire thing is music, you can have two minutes of just the caption, "music," and that really doesn't give them the full story. And so University Marketing Group actually created their own captions for this and really spelled out what's happening, musically.

So on screen here at the beginning of the video, the caption reads, "Original piece of fast-paced instrumental music featuring strings, drums, brass and woodwinds." And then as the video progresses, the music starts out kind of mellow and new instruments are added. And it builds and it crescendos and it reaches its climax. And then everything sort of fades out at the end.

And so that's all captured in the captions. I think it's really essential to think about, what role is the music playing? And it's not just about captioning spoken audio. What is the other audio, including music, or sounds? What contribution is that making to the communication? And so I thought the Marketing Group really did a good job of thinking about that in writing captions that did try to express that.

And so that solves part of the accessibility problem. But as I mentioned, this is all just visual. So somebody who can't see it doesn't get any of the actual content. It's just music. And so that, then, is a use case for audio description. And they did end up getting this described.

And so I want to talk a bit about audio description because that's an issue that we're grappling with, as well, as are many higher education institutions. For many years, we've been slowly chiseling away at the captioning problem and trying to increase the number of videos on campus that are captioned. But audio description has kind of been the stepchild issue that we haven't really dealt with sufficiently. But it is a significant need.

And so part of our entry into this was just evaluating that need and looking at the types of

videos that we have. And some have a greater need for description than others. So for example, we have a lot of lectures. Sheryl pointed out on that opening slide that most of our videos are lecture capture videos in the Panopto system.

We've got millions of-- I forgot what the unit was, minutes-- viewed over just a single semester. So the need there depends on how good the instructor is at communicating what's happening visually. And so that's just good instruction technique, that you want to make sure you're describing things if you're writing stuff on the white board. Or if you're demonstrating something, describe so that the people in the back of the room know what's going on even if they can't see it.

And so that's just good practice. And if somebody does that when they're being videotaped, then the videotaped lecture ends up being good. A person can understand that without the need for additional audio description. But some lectures, the instructor hasn't done that good of a job or there are some key visual content that isn't verbalized. And so then the need increases for audio description.

We also have a number of documentary-style videos. These are the kind of videos that we-- we produce, actually, a lot of videos like this, where we have primarily people speaking, and it's fairly accessible. Somebody can listen to the audio track and they can understand what's going on.

But a key component that often is missing is, who is this that's speaking, particularly if you have multiple speakers? And you might have an on-screen graphic that identifies who this person is and what their affiliation is. And without that information, if it isn't part of the audio track, then that's going to need to be added through audio description, as well. Otherwise, somebody that can't see that on-screen graphic has no idea whether this person is credible, or who they are, or why we should trust them.

We also have a number of videos related to research. So those vary tremendously, in terms of how visual they are. But a lot of them do need audio description. And we've got videos that rely extensively on visual information, such as the one I just highlighted, the *Best of UW* video. And this seems to be a growing trend that a lot of videos that come out that are intended to market things rely on music and visual images. And therefore, somebody that can't see that needs to have an alternative, in order to get that same message.

So Sheryl mentioned that we had several videos that really have gone viral, that have

hundreds of thousands of hits on YouTube. And I'll explain how we know this later. We've got a tool that we use to track this kind of thing. But the top five videos at the UW just kind of give some indication of variations in the video content that's out there, and therefore, varying needs for audio description.

But the number one, by far, is a video from a research project. The title is *Toddlers Regulate Their Behavior to Avoid Making Adults Angry*. And this was just a camera that was set up in a room, been doing a research project. And they had a toddler that they were filming and doing some interactions with that toddler.

And listening to the audio, you can hear the person who's doing the experiment and the instructions that they give to the toddler. But you don't know from the audio what the toddler's reaction is. And so that's a need where, really, you don't get the content of what the purpose of this video is, and what its message is, and the reason it's gone viral unless it's audio described. So that's one example.

All the stuff that comes from UW Marketing is another example, where there's a lot of visual content that needs to be described. Sports, actually, not surprisingly, in a major university that is a major player in athletics-- two of our top five videos are sports-related. There's one that is Isaiah Thomas winning the dunk contest.

So you've got a lot of different basketball players who are dunking the ball. And you got crowds cheering. You've got the coach kind of providing some narration over the mic, but not sufficient to really know what is unique about Isaiah Thomas's dunking method that makes the crowd get so excited about it.

And so that's a unique challenge. How do you describe something like that? And on the next slide, we're going to talk about some of the methods that we use for figuring out how to approach the problem of describing visual content.

Now, there's also a similar sort of thing when the football coach revealed new uniforms. And there was kind of a gag where he initially unveiled new uniforms that were not the real new uniforms and surprised the football team with these really ugly uniforms. And part of the magic of that video and the reason it was so popular is that the football team was shocked and appalled.

But you only see that in their faces. They don't express that. And so, how do you know what's

going on here and what the gag is unless it's described?

And then finally, there's another research project video. We see these are Wi-Fi signals enabling gesture recognition throughout the entire home. That was actually pretty well-described. So the person that was doing the research and was producing this video was describing, very well, what was going on throughout the video. And so, arguably, that video doesn't need any or needs very little audio description.

So one of the challenges that we face is educating people across our campus how to do this sort of assessment. How do we know whether our video needs audio description and how much audio description? And that will sort of dictate what the method is for describing.

So there are a couple of different methods for delivering audio description. One of those is to outsource it. And so that's where we have looked for vendors to do that work. It really is a specialized skill, even more so than captioning, I think, in that the words you choose to describe something have a huge influence on how people perceive it. And so you can change the message by choosing your own words.

And so there's also a real art to choosing words efficiently and describing something and then getting out of the way. Because you don't want the description to take over. It is there to supplement and provide access to content that otherwise isn't accessible. But the real headliner is the video itself.

So the American Counsel of the Blind has an audio description project where they have compiled a comprehensive list of audio description service providers. And so I've got a link here on the slide to that. That is a really useful resource. And that's where we started.

However, it had roughly 70 vendors listed. A lot of those were local providers who do live descriptions for things like theater, and really weren't a good fit for our needs. Some are really high-end and are focused on things like Hollywood movies. And they, therefore, have a lot of security and privacy built into their operations. And they have astronomical prices that are well beyond what we felt that we would be able to afford.

And so, essentially, I went through the list and pulled out anybody who seemed like they would be a potential service provider for higher education institutions. And I sent an email to each of those asking a series of questions, and from that process, was able to narrow the list of 70 vendors down to seven. And you can see those on our video accessibility website at

uw.edu/accessibility/videos.

And at least six of the seven chosen vendors have prices ranging from \$12 to \$25 per minute. And most of them don't have a fixed rate. It depends, really, on the content. Because some videos require a lot more description than others. A single minute of production may need to be extensively described. Whereas in another video, a single minute may have no description at all. So really, prices ranged a lot, depending on what you're asking of them.

Six of the seven produce human-narrated descriptions. And so they write the script. And then they have voiceover talent that provides that narration. The turnaround time for the vendors that made the cut for our purposes express their turnaround time in days, not weeks. Whereas, there were other vendors that had a much lengthier turnaround time.

The seventh of the seven providers is 3Play Media, who now have just recently entered the audio description market. And they are a little bit different, in that they use synthesized speech for output, rather than human narration. That, and probably some other automation that's in their processes, allows them to provide it at a low rate. And so they're offering services at \$9.50 per minute, which is lower than any of the others.

But it's synthesized speech, as opposed to human narration. And from what we've done-- we were pilot testers with 3Play's work. And we've tested in a variety of other contexts with users asking them whether they prefer human narration over synthesized speech. And it really varies, depending on the video content. And so for academic content, synthesized speech is often believed to be better than nothing and is often believed to be pretty good.

There were quite a few differences when we did the 3Play test, quite a few opinions about different voices. And so we did kind of get some agreement on, I believe, it was Mike is one of the voices that's available. And more people preferred Mike than the other voices. And there were some opinions about whether they prefer a normal speed, versus a slow speed, versus a fast speed. And that's kind of all over the map. It really depends on the particular video that you're producing.

So typical deliverables when you outsource are a separate version of the video in one form or another. It could be just a separate audio file that has the soundtrack of the program audio and description mixed in with that. Or it could be a video file that takes that audio file and mixes that into the program audio-- mixes that into the video. And so you get, then, a separate audio-described version of the video.

And so that's what, in the example that I shared-- the *Best of UW*-- that was a separate, described version that was simply linked adjacent to the non-described version. And so on the President's blog, there was an embedded YouTube video that had the non-described version. But immediately adjacent to that, there is text that reads, "video is also available with audio description."

And there's a link, then, to the audio-described version, which is also on YouTube. So that's one way of delivering two different versions, making sure that, if you provide an audio-described version, that people know that the audio-described version is available somewhere and they can easily access that.

The second method is one that is really interesting and one that I've been doing a lot of work with in exploring. The HTML5 specification actually has audio description built into the spec. And so it actually is part of HTML now. So with HTML5, you get a new video tag, which allows you to add video to a web page very easily, just a very simple tag.

And you can also, then, use the new track tag to add time text that appears in sync with the video. And so the track tag is most popularly used for captions. And so you have track and then you have kind equals captions, which tells the browser that this text track is a captioned track. And therefore, you need to treat it as captions.

And so what browsers will do, then, is they'll display the captions-- as captions usually are displayed-- down at the bottom of the video. And there's also kind equals subtitles. There are lots of different kinds of tracks.

One of the kinds is descriptions. And so the Worldwide Web Consortium built this into HTML5 that you've got a timed text track that's similar to a caption track. But its purpose is to deliver audio description. And so the exciting thing about this, from my perspective, is that it makes it so easy.

If you've got just a really simple video that has, maybe, the on-screen identifier of the speaker that I was talking about, where everything else is accessible, but you don't know who this person is that's talking. You can very easily go in and just open up Notepad and create a text file that has the time stamp. And it has the audio description text that says, this is Sheryl Burgstahler, Director of Accessible Technology Services, University of Washington. Have that text in there, and then the person knows who's talking and what their affiliation is.

So very simple to create this, so it has a lot of potential. You can do this, again, just within Notepad. Or you can use any tool that you might use to create captions. I listed a couple on the slide here. Amara.org is one that we use a lot.

There's also a new tool from the National Center on Accessible Media. Those are the folks that brought us MAGpie years ago. Their new tool is called CADET, which stands for Caption and Description Editing Tool. Notice the word "description" in that title. So the idea is you can use a caption tool just like you would to create captions, but instead of writing captions, you're writing description text. And so you just type in the narration.

So I don't see this as replacing the professional audio description services. Because as I mentioned, it's an art form. And you really have to know what you're doing in order to describe something that has a high-description need. But if it's just a quick something which doesn't need a whole lot of description, but just something really quick, but something really critical, then anybody can do that very quickly and easily.

The format for delivering time text using the track element in HTML5 is WebVTT. So that stands for Video Timed Text. And that's potentially pretty straightforward. It also has a lot of extra features. But it can be as simple as just the start time and end time and the text. And it's the same format for all the different kinds of text tracks that are supported by HTML5.

So the problem is, even though this is a great idea and has a lot of potential, browsers don't support it yet. And I haven't heard any buzz as to which browsers are moving toward that. I don't know that any will. But hopefully, there is some talk behind the scenes and some browser will be the first. And we'll all be the first to champion that browser because that will be really awesome when they do that.

But for now, no browser natively supports that. But we built a media player called Able Player that does support it. And so I'll talk in a bit about how Able Player does that. In fact, I'll talk about that now.

Able Player is a free, open source, HTML5 media player. It's up on GitHub, so you can find that at ableplayer.github.io/ableplayer. And it fully supports the HTML track element. So all the different kinds of tracks-- captions, subtitles, descriptions, as well as chapters and metadata-- those are all supported by Able Player. And so we've got different ways of delivering those.

The chapters, captions and descriptions are automatically assembled into an interactive

transcript. And so then, a person can just read the transcript, click anywhere in that transcript, and launch the video at that point, which really helps to stress universal design. And it's a benefit for everybody. It's so much more efficient to read a transcript and just to click on the parts that you want to access or search-- search the transcript. That's much more efficient than watching all the video that's out there that could potentially be useful to you.

Able Player has fully-accessible controls. It supports multiple versions of a video, so you can have the described version and the non-described version, as we mentioned, that often is the way that description is delivered. And you can toggle between those two using a description button that's on the player control.

And so that's a nice way of uniting the two versions, rather than adding a link to an audio-described version. Actually, to have them both part of the same player really works well. It can play YouTube videos. And we're actively working on it right now and going to be releasing version 3.5 very soon, hopefully within the next few weeks.

So here's just a screenshot showing Able Player with lots of different features and buttons. It includes Slow Down and Speed Up buttons, so you can play the video slower or faster, as well as the Caption button, the Description button, Chapters button, Transcript button, and again, all fully-accessible controls. So the flagship website where you can see Able Player in action is the DO-IT video website. That's at uw.edu/doi/videos.

All of our videos there are captioned and audio-described. We use Able Player. All of the captions are fully searchable, so you can search our entire library of videos that we've produced over the years. And we also are actively subtitling a lot of those videos using crowdsourcing. And so we use Amara for that, as part of the DO-IT Translation Project. And we've got hundreds of volunteers who are actively translating our videos into various languages.

Many of the videos are organized into chapters, and so you can see how that works. So you can have some actual structure and organization to your videos. And there's one video that includes synchronized sign language, which Able Player supports. And so that's the *IT Accessibility, What Campus Leaders Have to Say* video. And so you can check that out and see how sign language works.

While you're at the DO-IT video website, we have three videos that specifically focus on the

topic we're discussing today. This is part of our evangelization effort that Doug talked about, that we have produced videos just to kind of synthesize the message. And we actively promote these and show them whenever we get a chance to just raise awareness and get people on board with this whole idea that making video accessible really makes video much more usable for everybody.

And so we've got a video on captions, subtitled, *Improving Access to Post-Secondary Education*. Another one specifically on lecture capture. It's called *Captioning Lecture Capture Videos, A Promising Teaching Practice*. And then we've got a third video that isn't quite finished yet, but is going to be coming out within the next few days called *Making Video Accessible*. It covers both captioning and audio description.

Just real quickly, I wanted to mention, also, this free tool that we've developed called the YouTube Caption Auditor, YTCA. That is also at GitHub, github.com/terrill/ytca. And this is how we know so much about our videos on YouTube. You can feed YTCA a YouTube channel or a list of YouTube channels-- and we fed it all 57 of our WB YouTube channels-- and then it returns data using the YouTube API about those videos in each of the channels.

And so you can get either a summary report or a detailed report. The summary report includes a list of all of the 57 channels, or however many you feed it. And it compares them. So you get to see how many videos, how many minutes of video programming, how much of that is captioned, how popular those videos are.

So you can get an average for traffic for that channel. And then you can get some data about, how many videos are above average? How many are below average on traffic?

And then you can get a detailed report per channel that actually lists all videos and identifies whether it's captioned or not, what the number of views for that video are. And this is all sortable and filterable. So it really helps you to hone in on your captioning efforts on campus and focus on those channels, perhaps, that need the most help.

Because we've got some that are captioning everything and we've got some that are catching nothing. And so we've got to reach out to those that are captioning nothing and show them that table that says, hey, look at your results here compared to everybody else's. How can we help?

And then within that, let's look at some specific videos. Let's look at the detailed report and

sort it by traffic, and see what your highest traffic videos are. And then we can focus our captioning efforts on those videos, in particular.

So that's all that we had prepared. We've got just a few minutes left for Q&A. But I want to leave you with this one website that we use as the hub to communicate to our campus about video accessibility issues. And that's uw.edu/accessibility/videos. So you can go there, and find out more about what we're doing and get links to various resources that we're promoting on campus. So now we'll open it up to any sort of questions that are out there.

SOFIA ENAMORADO: Great. Thank you so much, Sheryl, Terrill and Doug. The first question we have here is, what was the process of getting this grant approved? And how much is the grant for captioning? And does this amount change?

SHERYL BURGSTAHLER: I'll answer that one. This is Sheryl. The grant-- we wrote the proposal to our parent organization, which is the major IT organization on campus, UW IT. And it's part of a regular process where you can apply for some grant funding, and particularly, if you anticipate that you'll try to institutionalize what you're doing. And that's what we'd like to do.

We were able to secure \$60,000 for captioning. But it also covered one of the videos that we created and some staff time. But most of that money is available for the captioning itself. And we pay about \$2.00 a minute for these captions.

And so it is temporary funding, but we expect it will last for at least another year. And then what we will plan on doing is trying to seek funding beyond the UW IT funding through, probably, the Provost's Office to see if this can be ongoing. It doesn't need to be funded at the same level to be successful.

The way we've done it, where you actually apply for funding through this quick survey, our advisory board decides whether it's appropriate. If it is, we say yes and we caption it. We don't have deadlines. So the way it works, we could just simply do free captioning until we ran out of money.

And then if that budget could be supplied again for the next year, then we could use that money, as well. So we've kept that in mind. But if we can get a small chunk of money, we can still use it for proactive captioning.

SOFIA ENAMORADO: Thanks, Sheryl. This is another question related to the grant. But who sits on the committee for the captioning grant?

SHERYL We don't actually publicize that information. But if you were setting up a similar service, I'd
BURGSTAHLER: recommend that you include people that are interested in captioning, of course. But it doesn't have to be very complicated to scrutinize whether it fits within the guidelines.

And actually, you can look at our website that Terri gave, the URL, and look in that video area at the bottom of that page. It'll link to where you can apply for captioning. But it says what we're looking for. So it's pretty straightforward.

SOFIA Thank you, Sheryl. And also related to the grant, is audio description part of that grant, as
ENAMORADO: well?

SHERYL Technically, we did not include audio description when we applied for the money, in part
BURGSTAHLER: because captioning was a bigger issue we were dealing with and we promoted it in that way. Now it is flexible. That project is flexible enough that we're now looking for opportunities to do some audio description with that funding, as well, to show how that can be done.

And 3Play Media getting in this market was a real positive thing for us because that's who we have our contract with. So we're going to do some of that as well. But my guess is most of the money will still be spent on captioning.

SOFIA Thank you, Sheryl. The next question is, what's the difference between a statewide contract
ENAMORADO: and the captioning grant? What type of content is covered under each system?

SHERYL The statewide grant is simply a grant. We sent out a request for proposals for giving us a good
BURGSTAHLER: discount price on captioning. And 3Play Media won that competition. And so everyone in the state, the post-secondary institutions in the state, can use that contract if they wish. They don't have to. They go to any vendor they want. But if they use that 3Play Media contract, then they will get a discount.

The grant is money that is used to pay for captioning for some campus unit. So for instance, it might be video that our group looks at. Doug is kind of the key person there, along with Susan Hockey, who works with him. And they think, well, in this case, it would be just as easy to help them use the YouTube system to caption their videos. They might help them do that.

Most cases, they go out to 3Play Media. And what it means is that \$60,000 is being used to pay that to \$2.00-plus per minute for captioning videos on campus. So it's free to the people on campus, but it's costing something that the grant covers.

SOFIA Thanks, Sheryl. The next question is, how do you handle videos that were posted without
ENAMORADO: captions? Can you go back in and edit to have captions? Or do you have to take the video down and re-post it with captions?

DOUG HAYMAN: Yeah, I think that varies platform by platform. If it's a YouTube video, it's pretty straightforward to just take the video and send the link off to 3Play. We get the SRT file and we give it back to the person. And we can either instruct them in the process of integrating that on YouTube, or we might sit down with them and go step-by-step in that process.

We've had videos that are in a whole gamut of formats that we've had this sort of go case-by-case and see what the mode is for doing it. There have been a few scenarios we've come across where there was no other solution than using a tool like HandBrake and embedding the captions in the video, but that's not the ideal way to go. So we've had to do a number of different scenarios. And if somebody has a specific question, we'd be happy to field questions over email and see if we could point out what we did in those scenarios.

SOFIA Thank you, Doug. The next question is, when a video is being shown in class, would the
ENAMORADO: instructor need to show the video with audio description on? Or does the student who needs it use their own laptop to view it simultaneously as the class?

TERILL That's a good question. And we haven't talked much here. We are all representative of
THOMPSON: Accessible Technology Services, where we're doing video accessibility from a universal design standpoint. And unfortunately, we don't have a representative here from Disability Services, who also provides accessibility for classroom settings and on an accommodation basis.

And so I know that's a question that has come up in their realm. And I, unfortunately, can't recall how they solved that. But it really is an interesting problem.

And I think it probably depends, to some extent, on how extensive the audio description is and whether it might be perceived to be disruptive to students who don't need it. If you think about captions, lots of people can benefit from captions. And so having them on, even for people who don't need them, might not be a bad thing.

But if you're watching a video in class and somebody needs description, that could potentially be disruptive for others. And so I would think having an alternative version that's watched on a laptop might be one approach. If it's just a little bit of description, then having everybody

exposed to that could be a good thing just for raising awareness, as well.

SOFIA Thank you, Terrill. I think we have time for one more question. Are there minimum
ENAMORADO: requirements that must be met to qualify for your internal grants? Or is it all relative to other requests in a given semester slash fiscal year?

SHERYL As far as our requests, we evaluate them as they come in because we want to have a really
BURGSTAHLER: quick turnaround. So we don't have the opportunity to compare with other requests that are coming in about the same time.

But we're really looking for high impact. And that means a lot of people will see it. They'll see it over time. And so we tend not to fund, for instance, a Panopto lecture that a faculty member is using, unless they're going to use it repeated times. And so we're really looking at the impact, the number of views that we would expect.

One thing to be careful about in interpreting what I'm just saying is, we're referring to the proactive captioning. If a person who's deaf requests captioning, they get captioning. It's just that we don't handle that part of the operation. That's through Disability Resources for students and the Disability Services Office.

That's why we can focus on the high-impact one. Because there are likely people that would benefit from the captions. Now, we don't have the money to caption all the others, but we do make sure that accommodations are provided quickly.

SOFIA Great. Thank you so much, Sheryl. And thanks, everyone, for joining. And especially, thank
ENAMORADO: you to you, Terrill, Sheryl and Doug for such a great presentation.