PEN-INTERNATIONAL

"ONLINE GLOSSARY OF ART AND DESIGN TERMINOLOGY UTILIZING VOICE-INTERPRETED/CAPTIONED SIGN LANGUAGE VIDEOS AND VISUAL IMAGES IN A MULTIMEDIA FORMAT"

PRESENTED BY: PAULA GRCEVIC, JULIE LINDSAY, CATHY CLARKE, SIMON TING

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>> PAULA GRCEVIC: Okay. We can start now. My name is Paula Grcevic, and I'm the art professor for the arts and imaging studies department here at NTID. I'd like to introduce the four people who are really important folks to present this project to you.

Julie Lindsay. She's an interpreter and also acting in the capacity of interpreter for this project. Simon Ting and Cathy Clarke. Simon works for the educational design and resources here on campus. They help to design this project.

So it really was a true team effort.

This project is called "Online Art and Design Glossary." I have been teaching art classes, six different courses, using this particular project that we developed, and we would like to share it with you all today.

Now, the last person who I didn't mention yet is Heather Smith. She was our ASL sign model for the project. So she is not here with us today, but she is the person who is presenting the signs and the project that you will be seeing.

So I would like to show you the basic concept of the program that we developed before we begin. There's about a minute-long video.

This is an example of what it looks like. Now Heather Smith is the ASL signer who is modelling for us. We will have captions with this. There's vocabulary definitions which will appear very soon, but I wanted to show you what it looked like.

(Video)

- >> Primary colors.
- >> PAULA GRCEVIC: So that's called the multimedia project, and this involves the captions and the signing components and also some artwork to illustrate the ideas. There is an explanation of the vocabulary embedded in this. So it involves a lot of work to get this going.

So the goal of this project was to design art vocabulary so that you could show visual samples for the students and make sure that they understood what the vocabulary meant better than they had before. It provides tutorial resources as well online.

The steps in creating this project, which were several as we went along, included first having to create the vocabulary definitions. We did this in text. We had to have a clear explanation so that it would help the student understand what the vocabulary was.

Now the text isn't only to help the student understand the vocabulary because it's not the only thing that will make that happen. It's not adequate in and of itself.

I used a lot of visual examples that were the art vocabulary, and basically this helped the student learn better. The more I was able to give visual examples, it tended sometimes to limit creativity, though, and so you need to limit those examples so that they end up only trying to emulate that.

After I would show the students these samples, these visual samples, of the art vocabulary, an idea would come up that we wanted to include the person's signing. So we thought that we would incorporate a video that illustrated the vocabulary that we wanted them to learn.

The goal was to eventually create a DVD. That was the primary goal that we came up initially with.

Eventually the DVD didn't prove to be successful, so we converted it to an online format which tends to be easier to use.

So I am going to explain the video production component. I developed the vocabulary. This was on newsprint paper, very large format. I actually handwrote it. This is written for Heather Smith who was our ASL sign model. So this was large enough for her to see the vocabulary as she was producing it. Heather was a MFA graduate, so she was very familiar with the art terminology we wanted her to use, and she is a ASL signer as well.

So we both got together and practiced every week. We wanted to make sure that we fully understood how exactly to provide the category in the right way. Then we decided to use a camera to capture this. We did this at home in a small studio with regular lighting, nothing special.

So after we produced the videotapes, we gave it to Cathy and Simon, and then they designed the project for us. They did all of the editing. The DVD wasn't produced very well because the students never bothered to use it. You know, they got it, and it proved not to be very productive. So that's why we decided to put it in an online format instead. It's just much more easy to use, more user-friendly.

After the videotape and the ASL signer was captured on that, then the students gave me feedback, and they said that they would prefer that it had captions added, and also some audio. So I got mixed feedback. What I had to do then was have a meeting between all of us to discuss the project and where to go with it next.

I am going to turn it over to Julie right now because she will talk about the voice interpreting component.

>> JULIE LINDSAY: Hi. I'm Julie Lindsay, and I work at RIT in the College of Imaging Arts and Sciences. I am an interpreter there. And a lot of the classes that I do are design, drawing, and graphic design. A lot of the concepts in Paula's video are concepts in these areas of the art field. So I'm very familiar with the information and that's one of the reasons that Paula asked me to do this.

First of all, the first video that Paula gave me, and I met with her just to discuss how to go about doing this and what she wanted to see, and also to clarify some concepts in that first video.

From that point forward I was on my own. There's a total of six videos, and I went ahead and interpreted them and I also used online resources, definitions, more clear definitions so that I could get an idea of vocabulary to use and also I looked for images that might help me just to visualize it myself.

Next, I analyzed each concept. Within each video there are a number of concepts that can range from 18 to I think the largest one was 41. So I would go through each concept one at a time. I would analyze it look through it a number of times, and also what really helped me, you saw it at the end of the clip that we showed at the beginning. The signer would stop signing, and then text would come up on the screen with an example of what they were talking about, and that helped me get the vocabulary that I needed to explain the concept more clearly and have the right vocabulary.

Next I would watch the video and formulate the script that I wanted to say in my head. I watched it many times, and formulated that in my head. Then it came time for rehearsing, and the way that I would do that is just to record it. This was through the computer using a very simple program called Audacity that Cathy helped me with I had never used a software program like that before. And I would record it, listen to it and then go back and choose better words that might describe it a little bit more clearly. For example, if I was talking about a grid system, I might say -- I could choose one of a number of ways to say a grid work to follow, a structure to follow, framework to follow, something like that, and I would pick the most accurate vocabulary.

And then there was the recording. (Laughter)

Many times I would record it, get almost finished with it, and then have to realize that I made a mistake and have to do it all over again. And in the beginning this was an extended process. It took awhile because I was new with the technology and just being able to do the whole thing continuously smoothly.

After I was done recording, each concept was put in $\--$ I created a file for each concept and I handed it off to Cathy who put it in the video and transcribed the captions.

Some of the challenges that I ran into was like Paula said that they wrote everything on a big piece of paper. Well, I didn't have that script. I didn't have any script to really follow. So that was a challenge for me.

But the thing that did help me a lot was, again, like I said at the end of each clip there was text and there was a visual image of some sort that helped me to explain that.

Also, when our signer, Heather, she would sign shapes and how the shapes come together and things like that, and you can see it, but to visually describe it with words it was a real challenge for me.

I'm going to try to play a clip here and show you just an example of that.

This is the concept called "closure." And here Heather is starting to explain it, and I will pause it when I'm at the place I want to show you here.

One example is this, the circle, and then stops, and then she goes on to -- and then what else do you see? You see a triangle. So it's the concept of closure, and it was just hard to, like I said, verbally describe that concept -- some of the concepts when they were using shapes.

And the other frustration was the accurate recording required a number of attempts before I got it correct and smooth. I didn't have a lot of experience, like I said, with the program itself, and also just to give you a comparison, after I had worked with the program and had gotten the system I was using down smoothly, the first video that I did was 18 concepts and 21 minutes long. I was able to do the recording of that whole video in 15 hours it took me.

The fifth video that I did was 41 concepts and 33 minutes long, and I did that in 15.5 hours. So it improved as I went along. And it's been a

great project. I've really enjoyed doing it I would like to turn it over to Cathy Clarke now, who is our multimedia specialist.

>> Cathy Clarke: I'm going to back it up a little bit before Julie gave me the audio, we had to start way back at the beginning of the project with actually creating the video.

So Paula gave Simon and I a mini-DV tapes which we then captured and digitized. And then we had to go through and edit the video and select the clips that we wanted to use. So after we finally had an edited video which we did all of our editing in Premier Pro, then we needed to add in graphics and other effects like that.

So first we started by trying to delete the background from the video so that we could take Heather's body and place it on top of some background graphics and images.

So we imported our edited video into Adobe After Effects which has filters, and it's called cromokey where you remove a particular color from an image, like when you see a weatherman giving a weather report they're in front of a blue screen or green screen so that they can superimpose images behind them. It was the same concept where we had to delete just a plain background from our video.

So after we removed that, and that had its challenges, too, because there was one part of the video where Heather was using a color wheel and demonstrating how to use that but the color wheel was the same color as the background. So it was kind of invisible through parts of the video. So that involved a little more complex going in frame by frame and creating masks to make sure that the color wheel wasn't invisible through the video.

But after we finally had that done then the next step was adding actual graphics to go along with each of the vocabulary words, and Paula gave us a huge stack of books and reference materials, and she told us what she had in mind for visual representations of the different vocabulary terms.

So I used just Photoshop and Illustrator to create a lot of the graphics that we used to illustrate each of the concepts.

I brought those in to After Effects along with text, and just added some really simple transitions and animations to the graphics and to the text to move through the video.

And we took that video, which we produced from After Effects, and we then created a series of DVDs which we thought would be distributed to students and they could take them home, put them in a DVD player and watch the videos.

And those DVDs we had a series of six, and they did not have audio or captions. It was just the video. So that was the first phase of this project.

And after that, we learned that students really felt that they would much rather access these materials online. They didn't want to have to bother with a DVD, as Paula had mentioned. So we decided that we needed to make these available through Paula's course websites.

So we took all of our videos and encoded them so that we could stream them online. We made streaming QuickTime movies so that some of these videos are more than an hour long. We didn't want students to have to wait for the entire thing to download. So we chose to stream our movies.

And we developed a DVD-like interface for the web where they select a topic like "color" and then when they open that up they have a list of categories that they can choose from. And then click on a concept, and it opens up a list of the vocabulary words within that

So students can click and play one individual word or play them in sequential order. So now we had a web-based Sign Language tutorials, but we still didn't have audio or captions.

The final phase of this was obviously bringing in the audio and captions, which was very important. Julie gave me her audio files, and each word was saved as a separate file. So then I brought those into Premier, and along with a video added each of the audio files to correspond with the Sign Language.

So from there we produced a video. So now we have a video with graphics and audio. And then I sat down and listened to the video and typed up the transcript. So we had all of the text along with the audio. So it followed Julie's audio.

And the next step was creating captions. So we used a feature of Idea Tools which is the course management system that Paula uses, and it's a captioning tool where you bring in your video, you bring in a transcript, and then it creates a series of captions. Like you can specify you want one-line captions. So it will take your text and break it up into one line at a time. And then you just go through and mark in the start time and the end time for each of the captions.

So finally our finished result was this web-based series of tutorials where we had video and audio and captions.

Now Simon is going to come in and give you a demonstration of the various parts of this project.

>> SIMON TING: We have covered the process of different phases of the project. Now we would see the end results.

Let me start again. We have talked about the phases of the project. I would now like to show you the final part of the project.

We will look at the file used to create a short tutorial called complementary colors. This is related to some colors that exist in pairs and associate with each other in special ways. To begin with, we show Heather performing the ASL without voice. Against a plain background. No voice, just signing. And the background is grey. Cathy said that we would be removing the grey background and replacing it.

 $\,$ The color wheel. Next is the raw audio recording by Julie and Heather signing. Can you hear that?

- >> (Video)
- >> Complementary colors. This is the color opposite the one chosen from the color wheel. It creates visual contrast using these two colors together. For example, if yellow was chosen --
- $\,$ >> SIMON TING: And now an example of Cathy's artwork -- can you hear me better now? Okay.

And now an example of Cathy's artwork used to illustrate the information that Heather was signing. This is used as part of the definition of complementary colors.

And now we have the edited graphic. The grey background as it appears is replaced with Cathy's artwork. In order not to distract from Heather's signing we animated the part until she finished. This is the color wheel, and that took a lot of work on Cathy's part. Technically very challenging to present the color wheel.

Let me show you some transcript of Julie's recording.

This is the definition by Paula -- not Paula, but provided by Julie. This was created in a word processing program. Cathy listened to Julie's voice and had to type as fast as she could. If she got something wrong, she had to backtrack and start again. So this is a very tedious and time-consuming process.

Here are the captions formatted line by line. You can see here the start stop and the end time. This was done in our captioning application.

And here is the final video.

(Video)

>> Complementary colors.

>> SIMON TING: You can see Heather signing. The background, the captions, and hopefully you can hear Julie's voice. So these are all different processes all working together on the project. It is interactive because you can stop and start it. Let me show you the one that you saw at the beginning of this presentation.

So here you see a DVD-like interface. Any time you can go back and search for a new topic. This is the topic, complementary colors that we saw.

- >> (Video)
- >> This is the color opposite the one chosen from the color wheel. It creates visual contrast using these two colors together. For example, if yellow was chosen, the complementary color would be violet.
 - >> SIMON TING: Now Paula will talk about classroom tryout.
- >> PAULA GRCEVIC: Thank you. So after I showed this program to the students we had the video online, and I was curious as to the students' responses. I wanted to know how they felt about the whole project. I wanted to develop a feedback questionnaire for them to respond to. And I would like to show you the results of that.

I'll give you a minute to look it over.

So after that Simon and Cathy came up with a chart, and it was able to basically layout the results of those responses in a visual form. This is what we came up with as the results.

You can see it's a very high score for what they prefer, and they wanted the video -- without captions, they were able to understand it without them. They were able to understand the presenter without captions just fine, but then it goes lower.

Did you understand the presenter better with the captions? And it goes up higher. And are the visual examples helpful for not? And that's a pretty high response, too.

Many of them did say they would prefer to have the captions available. People preferred -- some of them preferred the signer to sign only without voicing or captions, so that's about average. And they did want to have an option of whether being able to turn it off or on, having a button. So it was mixed opinion as you can see.

- I'll turn the technical issues over to Simon now.
- >> SIMON TING: We were using Idea tools for the design work. It's a web-based application. Everything works in the web browser. For web-based development work, the biggest problem is Mac and PC incompatibilities. What worked in a PC sometimes would not work in a Mac, and what worked on a Mac wouldn't work on a PC. Sometimes you might get it to work on the Mac, but then it doesn't work on the PC. So that causes a lot of work.

The other thing is what you see here started as QuickTime, but because we have to work with captions, we have to use to put both captions and QuickTime into something called SMIL. That's a technical term. If you want to know more, you can talk to me after the presentation.

Other than that, it is technically challenging from a design perspective. From a programming perspective, it was not that hard.

- >> Audience member: I have one question. Do you have samples of some of the projects that you've created online so that we can share them with the people when we go back to our own schools and workplaces? Or are they accessible to people online that aren't part of NTID, one of the two, or samples?
- >> SIMON TING: Here or outside RIT? That would depend on Paula, if she wants to share this it is possible to make the project opened. Right now it is part of her course, so only those students in her course.

Other questions? Non-technical questions?

>> PAULA GRCEVIC: If there are no more questions, I want to thank you all so much for joining us this afternoon. And also I'd like to thank the

interpreters, Miriam Lerner, and Cheryl Reminder. Thank you to them, and also thanks to our captionist, I am very sorry I don't know his name. I apologize for that but thank you. If you have any questions for us, you are welcome to join us any time up here, and we'll be glad to answer them.

>> And after every workshop as you probably know, we always request that you fill out an evaluation form for us regarding this particular presentation.

And you can either fill out a hard copy form or you can do it online as well. That's up to your discretion. But I will be passing out the hard copies if you would like.

>> PAULA GRCEVIC: Thank you.

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