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Technology and Deaf Education

"Meaning-for-Meaning Speech-to-Text Services:
A Better Understanding"

Presenters:
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>>PAM FRANCIS: Good morning. Thank you for coming this
morning. Do any members of our audience need an
interpreter? Yes? So all right. Well, then, thank you for
being here, and I would ask, if you would like to introduce
yourselves.
>> My name is Miriam.
>> My name is Erin Jacobs.
>>PAM FRANCIS: Thank you. I am Pam Francis, and I am one
of your presenters today and this is Cindy Camp and we are
here to talk about meaning-for-meaning, speech-to-text
services and to try to shed a little bit of light and share
some information with you. We do welcome questions during
the presentation, and we're a little short on time already,
so we'll -- there may be some sections we speed through a
little bit.
Briefly, we're going to talk just about a definition, a
general definition, some of the benefits of
meaning-for-meaning, give some examples, and make an
association with some -- a process that might be familiar to
some, and some strategies that service providers can use to
improve their skills. And we'll talk briefly about analysis
and evaluation.
So if I was to ask the members of the audience what would be
your description of meaning-for-meaning, do you have
something in mind? Perhaps a summary of the spoken English
content. But that's not really what we feel is an accurate
description. A translation or paraphrase of the spoken
English content. We went a little bit further. And I'll
give you a chance to read that.
So we'd like to offer this as a definition that you can take
away with you today of what meaning-for-meaning
speech-to-text services are. And where did we come up with
that, or where -- what do we think is important as part of
that definition?
Well, we use the word translation, and we also use the word
paraphrase. And again, I'd like to give you a minute to
read the slide.
So as we move through our presentation today, you'll have --
you'll be able to associate what we're saying with the
definition that we have provided.
What are some of the benefits of a meaning-for-meaning
representation? Well, it is a model of written English. So
what does that mean? Well, if a speaker -- and I'll use
myself as a good example -- a speaker doesn't necessarily
speak in correct English, and a meaning-for-meaning service
provider represents the information in clear grammar, clear
format, clear English of what written -- a model of written
English rather than spoken English. Succinct delivery of
spoken information. Well, that might mean if something is
repeated, then the information might be bolded or it might

be underlined rather than put down twice.
A manageable transcript. For an hour class, rather than receiving 25 to 30 pages of notes, they might review ten or 12.
Includes pragmatics of spoken information. And we'll talk about that a little bit more. But the words don't always represent what a speaker's meaning is.
And then it's visually accessible, meaning the information can be bolded, it can be underlined, it can be emphasized. There are many different ways to manipulate the information. So, let's talk a little bit more about words versus intent.
As I said, linguistic meaning does not always reflect a speaker's meaning. So let's look at your examples.
If I were to type, "Can you see Mary? " That might not give a clear indication of what I'm trying to say.
So I may choose to use a different word. It depends how the speaker is saying that information, what meaning they want to convey. Because can you see Mary is very different than "Can you see Mary? " Or "Can you see Mary? Can you imagine what she's doing? So one might be a question as to whether you can actually see her, and one might be a question as to can you imagine what she was doing?
Again, another example, sincerity versus sarcasm. The door is over there, I might be directing someone, whereas I might be telling someone where the door is because I'd like them to leave. How that information is conveyed is important. And that's where the pragmatics come in. Words do not always equal intent.

>>CINDY CAMP: How many of you, from being here, you've seen what CART or verbatim transcripts look like. How many of you have experience with meaning-for-meaning transcripts? Okay. A few of you.
What happens is if someone has seen a service provider who is not very skilled, then they come away with the impression that verbatim is always best, and meaning-for-meaning is a substandard service. And I'd like to challenge you today to think outside the box and realize that these are two different services. And it's very similar to thinking about an ASL interpreter as opposed to a signed English interpreter. They both have their place. It depends on the client who's using the service, and the presenter, and the situation.
I'm going to give you just a minute to read this transcript. It's a verbatim transcript of a person talking about transition services.
This is a very good example for our hearing audience because when you read this and there is no voice saying the words,

much of the meaning is lost.
If you were hearing the information, it would make a bit

more sense. Still not perfect, but better.
And this is a very good example of when someone says, oh,
verbatim, that's always what we need, if a student's sitting
in a classroom and reading this, how much information do you
think they're actually getting?
It doesn't make a lot of sense. This is exactly how the
speaker talks, but as we've discussed, speakers don't always
use proper grammar or complete sentences.
So, my point is, just like ASL is not bad English,
meaning-for-meaning is not bad verbatim.
In fact, the mental processes that a meaning-for-meaning
service provider uses is very similar to those that an
interpreter into sign language uses.
If someone is using a verbatim method to transcribe, there's
actually very little mental processing that occurs in the
use of the language.
You may process homophones such as T-H-E-R-E, T-H-E-I-R,
words that sound the same, you would need to choose which is
the appropriate word, but other than that, it's basically,
the sound comes in, the words go back out on the computer.
With meaning-for-meaning systems, such as C-Print and
TypeWell, we're processing more at the phrasal and sentence
level. So instead of hearing a word and typing that word,
we listen for a concept, a complete idea, and then process
that whole sentence, that whole concept at once.
Looking at some interpreting models can really help us at
this point understand how meaning-for-meaning is processed.
These are three quite famous models, if you know anything
about interpreting. And we're going to briefly look at each
one of them and see how they apply to a meaning-for-meaning
service provider.
The Colonomos Model, I've simplified it for you. But
basically, she says that the interpreter listens to the
source language, mentally processes it, and decides how to
output that into the target language. And she broke it down
into steps.
This is exactly the same thing that meaning-for-meaning
service provider would do, listen for an entire concept,
mentally process it, think about what the best
representation would be. You can't always give out a word
for word translation because our students may not understand
that. The meaning may not be clear.
Pam gave us some examples of words that -- of sentences that

look exactly the same, but have very different meanings. So
we have to think about that.
Also, meaning-for-meaning service providers include the
environmental cues, tone of voice and inflection and how
those influence the output.
I have a really good example. There was a student who was
taking a class, and the instructor had a reputation for

being very difficult. So right before the midterm test, all
of the students in the class were scared to death. This
teacher's really hard, our midterm's coming up, we're all
going to fail.
The teacher REALIZING that they're all stressed out says,
oh, yeah, you all need to be worried. Everybody in here's
going to fail.
All of the hearing students went, whew, it's okay.
The deaf student in the class who had a CART service
provider saw those words, left the class and dropped because
they didn't get the tone. They didn't understand that it
was a joke to make everybody feel better.
The second model I want to talk about is the Gish Model, and
this one is actually one I find most helpful because what
happens with most service providers doesn't matter what
language they're going with, they get stuck down here on the
detail level.
1492, Columbus! What about it? If you don't have those
connectors that Columbus discovered America in 1492, it
really doesn't matter that you got the year and you've got
the name.
So it's important to realize that we need the goal of the
speaker, and we always need to keep that in the back of our
heads.
What is the goal that this speaker wants to convey today?
Then we go down, there's going to be a theme. You'll have
several objectives. Then you get down into the units and
the details.
If you always keep going back up to that main goal, you're
pretty safe. I joke about if you're interpreting in church
or captioning in church and you lose the content, what's the
overall goal in church? God is good. Everyone should go to
church. You go back up to that main goal.
Another example from a classroom, a captionist went in, and
the teacher said, we're going to show a video today. Does
everybody love trying to interpret or caption for videos?
No.
It's impossible.

So the captionist went to the instructor and said, what is
the goal? What do you want them to learn from this video?
I'm not going to be able to keep up with the dialogue and
get it all, I'm going to have to summarize, so if you let me
know what you want them to learn, then I can focus on that.
The teacher said, the sound effects.
The captionist said, the sound effects?
Yes. It was a war movie, and this was a class where then
they were going to talk about how those sound effects
enhanced the plot and so on.
So the captionist dropped all the dialogue and focused on
the sound effects.

At the end, when the class was discussing the movie, the
student was able to fully participate, whereas if the
captionist had not asked what the goal was, she would have
focused on the dialogue, and then the follow-up
conversation, the student would have been totally lost.
So even had she been able to get verbatim of the dialogue,
that still wouldn't have helped. So that's why I find this
model very helpful.
This is the third model created by Vance Cokely, and I'm not
going to go into it at all because it's a very detailed
model of the mental processes involved in interpreting. But
I want to tell you that this is very similar to what a
speech-to-text person experiences, so this is your brain on
speech-to-text, and meaning-for-meaning. It's not an easy
thing.
The second part of the Cokely Model talks about how the
service provider influences the message sometimes
intentionally and sometimes not. And we can talk about how
things can be misrepresented. And again, this is the same
in meaning-for-meaning.
There are things that are omitted, there are things that
could be added that the speaker did not intend.
Sometimes substitutions with words that are not appropriate,
sometimes environmental intrusions into the service
provider's mind.
There's a cell phone ringing, there's a student who keeps
tapping their foot and the service provider misses
information because of that. And then sometimes there are
just those weird things that show up in the transcript that
we didn't intend.
In meaning-for-meaning, that can be a word that did not
expand correctly in the software. Just things like that.
When you're looking at a verbatim transcript you're going to

get basically the same thing. But I wanted to show you,
with meaning-for-meaning you're going to get variation, but
that's not necessarily bad.
Some service providers may provide more detail than others,
depending on skill level, depending on the content.
But I have an example of the verbatim of a lecture, and then
two different meaning-for-meaning transcripts. So you can
see what you might get. And I'll give you a minute to read
those.
Okay. After seeing an example of a meaning-for-meaning
transcript, what's your impression?
Do you think it's worse than verbatim? Do you think it's
appropriate in some situations? Everybody's still asleep
this morning. But I see some nodding.
Word-for-word transcript. Every single word. Everything
that's said, it's that.
Okay. Hopefully now you have an understanding of the

difference between verbatim and meaning-for-meaning, and
hopefully you can see that each has its place. If you have
an instructor who does not speak in complete sentences, and
rambles, then perhaps the student would prefer
meaning-for-meaning.
We had a situation where the instructor very clearly
outlined everything and was very organized, and the student
normally had a meaning-for-meaning service provider. We had
a substitute person come in who used CART, and the student
said they really preferred meaning-for-meaning in that
situation because of the formatting that could be shown.
In meaning-for-meaning systems, you can use bulleted lists,
numbered lists, bold, italics. It's very visual. And when
the instructor isn't -- speaks in an organized fashion and
uses those formatting tips, then the student was able to
follow along.
Whereas the CART provider used a paragraph format and didn't
have all of the formatting available to them. So I
challenge you to look at the situation and see what is going
to accomplish the goal of getting the information across.
Yes? We have a question?
>> I'm just wondering, with those two examples, do you have
any comment about the quality of one over the other?
>>CINDY CAMP: I think they are both very good examples. I
did not -- we have some examples later of where information
was missing and where things were lost. These are just
meant to show that there can be differences.
This is just a list of some skills that someone who was

providing a meaning-for-meaning service would need to have. Very strong short term memory because it's not going in and out. It's going in, process, then being put out. At the same time you're listening for the next chunk of information.

You need an expansive vocabulary. If there's a word that could be confused with another word, what do you have in your vocabulary to replace that?

Very good comprehension of the English language, understanding idioms and knowing that those are probably not going to translate well for someone who has English as a second language.

A good knowledge of deaf culture and syntactical references. Yes?

>> Is there a case where you may have the service provider provide the idiom and the true meaning so they still get exposed to that group of vocabulary, or in context of what the speaker was saying?

>>CINDY CAMP: It's going to depend on the student and the service provider. The majority of the time, yes, they will give both. However, I've had situations where it disrupted class greatly because the idiom was given and as soon as the

student read it, they burst out laughing because they had never been exposed to it, and then the instructor thought they were laughing at him, and so you have to be very careful about how you do that.

You need a broad knowledge base. If you don't understand the content that's being expressed, there's no way you can translate it into another language. And trust me, written English is a different language than spoken English.

If you've ever sat in a classroom and heard the instructor lecture, then they read from a book, the syntax, the rate of speech, the structure, it's all very different. So you have to understand the concept to be able to express it appropriately. You have to be very strong at summarization. And summarization doesn't mean contents left out. It means it's presented in a clear and concise fashion.

And then obviously you need to be a fast typer.

I'm going to turn it back over to Pam now and she's going to talk a little bit about how you could evaluate a service provider that you're seeing or at your institution, and then we'll have a few minutes at the end for questions, hopefully.

>>PAM FRANCIS: The evaluation of meaning-for-meaning could take -- the discussion could take a few hours. So we won't

dive very deeply into it, but we do want to briefly address
it. There are existing systems out there that evaluate
non-verbatim representations of information.
For example, foreign language certifications, that might --
that's one example.
And there are systems that are working, they're in court,
but to get there is a very, very complicated process and
time intensive.
So what do those certifications systems, those evaluation
systems have in common? A specified unit of analysis. For
example, idea units, certain chunk of information broken
down. Objective scoring criteria, very, very important
because as Cindy said, you can put five people in a room and
they can transcribe the information, and what you get at the
end looks different from all five people. Okay. So you
have to have objective scoring criteria.
Consensus scoring. For these systems you need something
that more than one person evaluates the output. That is
very important, and it's very important to really reach an
objective evaluation. And they want the final outcome, the
final outcome needs to be valid and reliable. This is a
quantitative system. It's not -- it's much more objective.
It's much more precise.
But to get there takes quite a bit. Five minutes? Okay.
To get there takes quite a bit. And this is just really a
representation of what it might take to develop one system.
Preparation of the source material. Getting the lectures or

getting a piece of spoken information that has a certain
level of content, and then recording it, so on and so forth.
Identifying the units of analysis. So breaking it down into
idea units. That's a huge task. If you're talking about a
one-hour lecture, you can end up with 300 to 400 pieces of
information or idea units.
Training judges, training people who will take that
information and evaluate that transcript. And that's not
just one judge. There may be three. There may be five. It
depends on the system.
Performing the analysis. Actually having the judges go
through idea unit by idea unit and deciding whether or not
it's appropriate. And then summarizing and reporting. So,
for one, okay, we're talking 38 to 42 hours. That's a lot
of time that most -- unless you have some system set up to
evaluate, for example, you have a company that's doing the
evaluation, you have some system that does evaluation,
that's a lot of time. And most places, especially campuses,

do not have that kind of time to devote to that evaluation. There is an effort to try to develop some type of national certification that is appropriate, but that -- to develop the system, that is legally defensible, that is objective, it will cost well over a million dollars. So what do you do in the meantime? And I'm going to be very quick about this. You have to look at the real time transcript and decide whether it has the qualities that are needed.

Again, you have five different transcripts. You have to look at them each individually. You have to decide whether things are clearly worded, whether the information is complete and accurate, and whether it's easy and quick to read. And that doesn't mean that it's at a lower educational level. That means that the reader can look at it, get the information and move on, that it's not convoluted in any way, short, quick sentences representing the information.

I apologize that I'm running along.

So, how do you do that? You get the unedited transcript. Okay? And you review it.

It would be great to be in the classroom or in the situation where you're hearing the lecture and then you can go back and review it. You don't always have that option. Some things you can do is get notes from a notetaker. You can review the transcript with a consent expert or the instructor. There are a few things you can do.

Okay. Check the transcript out. This is just a few examples. One thing that drives me crazy is when I see a transcript of just solid text. There's no visual breaks. There's no -- the information is not clearly represented where a thought starts and stops. So really look at it and make sure that the content is good and the representation is

good.

Once that transcript is reviewed, there are things that can be gleaned from that, and information -- assistance can be offered to the service provider.

For example, depending on how they're representing the information, perhaps giving them suggestions, and we passed out that strategies for service providers sheet. On how they might include their wording or their vocabulary, how they might better capture the information.

So really, what is gleaned from that review is very important, and that information can be shared with the service provider, and their skills can be improved.

This is a very basic one-hour, two-hour process. It's -- at

least for the review.
It's not meant to be a legal process or even a process that
can be used to hire or retain a person unless it's done at a
very -- much deeper level. But the point is, is the
interview -- or the transcript can be reviewed and
information can be provided to the service providers so that
their skills can improve.
As far as the certification or evaluation system, that is
widely available. That takes time. It's not easy to take a
meaning-for-meaning transcript and objectively say, you have
all the information, you have 60% of the information, you
have 30%, you have 90%. It's very difficult to do. And
it's time intensive. But there are things in the interim
that can be done. So what did we talk about today?
We gave a brief definition. We talked about some benefits.
Cindy talked about interpreting and the interpreting models
and things that might be familiar, and some skills that
service providers, meaning-for-meaning service providers
need. And a very brief discussion about analysis.
Are there any questions at all?
I think what's -- oh, go ahead.
>> I'm interested to see the meaning-for-meaning. In the
U.K., it is in the training course for notetakers, but I
found that it takes a lot longer for people to learn how to
do it, especially if they have fast typing speeds they tend
not to be good at summarizing. Is this part of your initial
training for a notetaker or is it an add-on?
>>PAM FRANCIS: Well, one of the things that is an issue
here is that the meaning-for-meaning service providers are
very concerned, and it's not notetaking. If they're
accurate and they -- and they get all of the information,
it's not really notetaking. And depending on the skills of
the student -- bless you -- depending on the skills of the
student, if the student needs notetaking and the information
that a meaning-for-meaning service provider gets is too
much, if they're overwhelmed, then they have to cut back.
So what we do, at least in the training that we -- that we

have done is we provide some skill exercises, we provide
information about listening, so on and so forth.
I think one of the very difficult parts is that
meaning-for-meaning service providers, one of the reasons
that they were established is because they wanted, and I
apologize for talking very quickly -- they wanted a training
that was quick, and the people could get it into the
classroom.

The problem with that is that you cannot develop the processing skills that are necessary in three weeks or four weeks or five weeks, in six months.

Okay. So that is the problem or a main issue is developing the processing skills to be able to take the information and put it back out. Many meaning-for-meaning service providers don't come in with that. It takes time. There are many people who are cross-trained. The best meaning-for-meaning service providers are people who have those skills, like interpreters.

>> Thank you, Pam and Cindy! Thank you very much for your presentation! I'm sure there are many of you with questions, and you can approach Pam and Cindy during the rest of the conference.

We are very interested in your feedback. We are encouraging you to fill out evaluations online, and the learning center is available for that.

I have some hard copy evaluation forms if that is your preference. Each session is named for the day and the time. This session is M10, Monday at 10:00, and that's the most important thing when you're providing feedback. If you would like to provide written feedback, please take one of these forms and complete that. Thank you so much for coming!

>>CINDY CAMP: I have some brochures on the speech-to-text services network, which is an organization for both meaning-for-meaning and verbatim. I don't have enough for everyone, but you're welcome to take them and go online and learn more.