

## BREAKING DOWN BARRIERS: SESSION V\*

### THE SPECIAL ROLE OF TECHNOLOGY

*Moderator: Richard K. Herrmann\*\**

*Panelists: Melissa R. Allman, Melissa Felder Zappala, Daniel Goldstein, and Professor Fredric L. Lederer†*

SANTINO CECCOTTI: As I mentioned, I knew I would forget to thank everyone. In coordinating this, the bar association decided to partner with the law school, and they had more resources than we did in helping to put something of this magnitude together. I've had the honor and privilege of working with Alice Eakin, who was our faculty liaison, and Rebecca Wilcox, the Editor-in-Chief of the law review. They have worked endlessly for the past months to get this to go as smoothly as it has today. So, just a big thank you to them. Also, there is Carrol Perrupato and Rosemary Callahan. A huge thank you to the law school for hosting us.

Our final panel involves the special role of technology. I think a lot of us have heard about the various accommodations, and I think in this panel, we'll see those adaptive technologies up front and in person. Our moderator is Richard Herrmann. It is impossible to talk about technology and the practice of law in Delaware without mentioning his name. He is currently the co-chair of the Delaware Supreme Court Commission on Law and Technology, and the director of the Center of Law Practice Technology here at this law school, where he has taught technology-related courses since 1993. The Delaware filing system, which I use on a weekly basis to file briefs to the Delaware Supreme Court, was established by Richard. He got it started in Delaware and that's why we have electronic filing in our state. Hence the reason why our technology in the court bears his name. So when Richard signed on to not only help our committee but moderate this panel, it was

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\* The transcript that follows was produced from a contemporaneous audio recording of the *Widener Law Review's* 2016 symposium, *Breaking Down Barriers: The Benefits of a More Inclusive Legal Profession*. This transcript is based on a panel discussion that focused on the effects of technology on various aspects of the judicial system, and how technological advances facilitate lawyers with disabilities in the practice of law. The transcript has been edited for grammar and clarity. Footnotes have been added throughout to aid in further reading.

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pretty tremendous. I know they have a lot of interesting things planned. I'll let them get started. Enjoy.

RICHARD HERRMANN: Thank you, Santino. I want to thank you and Judge Rocanelli for inviting me to participate in this program. I was taking a look at the program and I noticed that it's approved for a total of six CLE credits, but then it says it's worth no ethics credits. I took a look at the definition of enhanced ethics in Delaware. In the rules of the continuing legal education commission, it says enhanced ethics means both legal and judicial ethics. It also means professionalism, which is a broader concept embodying an attitude and a dedication to ethics, civility, skill, business-like practices, and a focus on service, which encompasses obligations to other attorneys, legal institutions, and the public whose interest attorneys must serve.<sup>1</sup> It sounds to me like all six hours of what we're doing here today qualifies as advanced ethics. One of the things that Santino didn't mention is that I chair the continuing legal education commission, and Judge Rocanelli is a judicial member of that commission. And so we're going to get six hours of enhanced ethics credits here, at least in Delaware.

I have presented in this room many times over the years, and you can tell when a program is successful: when the electronic gismos that people generally have out that separates the speakers from the audience are not actively being used. Santino, you've put together a great program because there has been very little use of the electronic devices in this room for the entire day.

You've already heard introductions regarding the speakers that are here, so I'm not going to reintroduce them. I thought we would start today by taking a field trip to William and Mary Law School in Williamsburg, Virginia. The gentleman that you see at the podium on the screen is Chancellor Professor Fredric Lederer, who is the Director of the Center for Legal and Court Technology at William and Mary.

Without question, he is the most technologically advanced lawyer in the world. When you can say that, there is not much more you need to say. I have had the privilege of working with him since 1993 on various projects. As a matter of fact, in 1993, we had our very first video teleconference between Delaware Law School and William and Mary, and the bond that we created as a result of that stuck. So what you see not only is the lawyer behind the curtain, but you're going to see some of the advancements, tests, and technology that William and Mary tries to implement with lawyers and the court.

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<sup>1</sup> See *Commission on Continued Legal Education of the Delaware Supreme Court*, DELAWARE COURTS, <http://courts.state.de.us/rules/pdf/CLE-RULES-Effective-JAN012016.pdf> (last visited Mar. 10, 2017).

Several years ago, Professor Lederer did a laboratory trial, which involved assisted technologies both at the subject matter level and the party level, the witness level, the juror level, and the lawyer level. It was an incredible weekend. Hopefully he's going to talk about that and some of the other kinds of technologies that he has experimented with. Welcome, Fred.

FREDRIC LEDERER: Ladies and gentlemen, welcome to Williamsburg. Welcome to the Center for Legal and Court Technology here at William and Mary School of Law, which I think, with some legitimacy, claims to be the oldest law school in the U.S. I want to thank Richard for being overly kind as always, as he has not acknowledged his own major role here. We treat him as our senior legal advisor, meaning that of all the lawyers in the country, we listen to him first. Hopefully Daniel Goldstein and all the other experts will do a far better job than I will in the next few minutes explaining some of the technology-based solutions that are now being used, and which are available to improve on in ways you wish to. We mean judges, lawyers, jurors, members of the public, court staff of all types, you name it; we're including it. And in the modern world, we're not only talking about courtrooms and hearings. We talk about websites and so much more.

Richard has asked me to give some background for approximately twenty minutes. One piece of that background is probably unusually relevant. Our goal is to improve the administration of justice through appropriate technology around the world. If you don't already see it, you will be seeing that we are honored today by a number of visitors here in person as well as all of you. They're from Afghanistan, and you will probably be hearing some of their interpretation as we go on. We're honored to have them. And it says something about the world that we are living in that we are all now together via video conferencing.

This courtroom that I am currently in is the McGlothlin Courtroom, generally acknowledged to be the most technologically advanced courtroom in the world. I always have to explain to potential law students that it doesn't mean that we have teleportation or anything out of science fiction. We are just comparing ourselves to other courtrooms and hearing rooms. And you should be seeing behind me our bench with its multiple monitors designed for remote judges. As I walk around in a few minutes, you will see much of the rest of the courtroom. But our goal is not to show you the courtroom; it's to talk about what we have tried to do to improve access to justice.

It's helpful to note that much of the technology that we use for traditional purposes also can be highly useful for people with special needs. Our video conferencing means that you don't have to come to the courtroom, regardless of who you are. In about ten minutes, I will show you a picture of what we think was the world's first remote juror, using the same technology that is today used elsewhere for museum tours, going to school, and so on. Much of what we have here can be very useful in ways that the manufacturers never

intended. But it causes a great deal of special purpose technology, and the experts of that are with you.

I am currently speaking to you from what we call the litigator's podium, which is where our lawyers present cases from. You can all see the courtroom behind me. Before I try to take my best shot at a courtroom walkabout, let me summarize one thing that we think we discovered a while back. This is the proverbial, "We have good news, we have bad news." The good news is that much of the technology we increasingly use in courtrooms and hearing rooms helps a great deal for people who have special needs. On the other hand, courtrooms like ours place a premium on visual presentation of evidence. In that respect, we are perhaps increasing problems rather than solving them. If we are presenting evidence that must be seen, we are placing at a disadvantage those that have no vision. So we are working on all of that.

The first place we can easily start is mobility. This cause is a need that is generally recognized and can be readily helped. And on the off chance that some of you have not seen some of the solutions to matters like that, I will walk over here to our witness stand. You are now looking where our witness sits, who looks directly at our jury with the bench immediately to the left. Perhaps we need to get a judge in a wheelchair to the bench. This is our wheelchair lift. It will allow us to get the witness or a judge to the bench or to testify here. Not coincidentally, it also extends our ability to seat more judges for an appellate case because sometimes the federal court with five judges sits here.

I am standing right behind the location that we originally designed for interpreters, which includes foreign languages and sign language interpretation. Of course, if there is a mobility issue, which means that you can't come to the courtroom at all, we can handle you remotely. If I walk over to the bench, if our judge has limited or no vision, counsel will hand up a document and a device will scan it and read it to the judge. As I'll show you in a few moments, at the trial that Richard spoke of, we created a special court officer called the court explicator, or the court explainer. That individual described to the judge and everyone else who had limited vision in the courtroom everything that was going on. Our counsel could object if they thought it was not impartial and objective, and we captured it all on our digital audio recording system.

Your experts will almost certainly tell you that when you're dealing with a question of limited or no hearing, there are multiple ways of proceeding. When we did that trial, we were under the impression that we could do a real-time transcript so that our court reporter would describe for counsel who could not hear everything that was happening by text. It turns out that while that does work for some people, you are probably better off with a sign language interpreter if that's going to work for the individual who can be seated.

Our normal court reporter or court record manager is to my left over here. We have numerous forms of technology here that may be of help. There is a comprehensive assistive listening system behind me mounted on the wall near the ceiling. Our high-definition cameras are designed to be of assistance in the proper spot. If I walk over to our jury box where we have the distinguished guests from Afghanistan, it has a device for people who have constrained vision. It not only can enlarge, it changes the color of the background and the brightness. The problem with it is that you have to handle physical evidence; it doesn't take electronic signals. This particular location, however, is designed for individuals who have special needs that we may not have predicted. It's designed to accommodate wheelchairs and almost any other special needs that we might possibly have.

At this point, it might be useful to take a quick look at some of the pictures from that trial. In this particular case, we assume that the lady that you can see, who is appearing remotely in the first seat in our jury box, could not physically come to the courthouse. She is appearing from her living room with a court officer with her and she controls the remote-control camera that you see on top of that monitor. She can see and hear everything going on in the courtroom as if she's seated here. When it came time for deliberations, we simply patched her into the jury room where she can do exactly the same thing. Again, this is not new technology. It's been used for some years for other purposes, but it even works for purposes such as a juror.

If we go to the case that Richard spoke of, which was a case designed intentionally to see how we might be of some use, this gentleman played the part of a father of a college senior and he had wanted to take her out to dinner to celebrate her many accomplishments. As it turned out, he had a poor taste in restaurants. He went to a restaurant that was almost impossible for him to navigate in his wheelchair, and he could hardly get to a table inside. Later, it turned out that all fifty or sixty restaurants in the chain were designed the same way because they had been given advice that from a large plate glass window, it would make them look busy. So, they sued under the ADA, and the Department of Justice took over the case.

In real life, all of these people are as I am describing them. The only difference is that there was no real case. Here, our plaintiff is paralyzed below the waist and he is testifying from the same location I showed you a few minutes ago from his wheelchair. The judge had very limited vision, he suffered from angular difficulties, and he had limited vision from the corners of his eyes. So here he is using a very small video camera to see what he could of the testifying witnesses, and here he is shown with headphones, and that's because our device is reading to him the papers that are handed to him, and because of our court explicator. A small note for those of you who are not fully acquainted with the nature of law students. They're wonderful at all law schools, and we particularly have a penchant for finding extraordinarily talented ones with unusual backgrounds, backgrounds that

sometimes turn out to be far more relevant than we expected.

This gentleman who seems to be doing a play-by-play for the judge and a number of other people in the courtroom in his prior occupation was a sportscaster for Fox News. This was the lady who played his daughter. Here, she is testifying to a diagram of the restaurant using heat sensitive paper, and she's reading the raised portions on this using a handheld braille device. This gentleman was testifying and he could not speak or hear. We're doing remote American Sign Language and we have a remote interpreter. A small note for those of you who may not already know this lesson that we learned, but we discovered that it's often not the best technology solution that works best. He was used to a fairly small screen at home and he rejected what we had prepared for him, as it simply didn't fit him.

Some of you will know Professor Mike Stein of Harvard, who was originally part of our law school. Professor Stein, one of the world's leading experts on law and disability, helped design a podium you're going to see in a moment or two, which is designed for a lawyer in a wheelchair to wheel in and rotate mechanically. We asked Michael, who taught at the courtroom, whether he was going to use it, and he looked at me with some degree of shock and said, "Of course not. I like to pace. I like to roll." And so he never rolled into it; he just used this, and put his papers on the side. Each of us as individuals has our needs and preferences, and they are not always easily predictable. It is important that we accommodate those at every level.

Here was our court reporter. We had a member of the jury who could not hear and we were doing real-time text. The experts in the room told us that individuals who have been born without hearing sometimes have differing reading vocabularies, and that would not necessarily work for everyone. Here we have counsel who had wheeled into that podium, which was designed to rotate mechanically at the front. This gentleman is now a federal administrative law judge. He suffers from what is called Ehlers syndrome. He wears very heavy braces, and here he wheeled into the courtroom to make closing argument on a Segway and did quite well.

So ladies and gentlemen, that's a very quick and inadequate walk around our courtroom. Our goal here has been to attempt to do all that we can to ensure that everyone can participate in the legal process as easily as possible. I could report to you that we began some years ago and treated what was called the accessible courts initiative, with the goal being to help courts adapt this. And we worked with the American Foundation for the Blind and found in a dispiriting report that while all courts applauded what was being done, when it came to doing anything about it, let's just say it seemed to be an uphill fight. Ladies and gentlemen, that concludes the twenty minutes that Richard suggested. Richard, I don't know if you want me to take questions or we should simply say, "Please all come visit us in Williamsburg and help us improve the place."

RICHARD HERRMANN: Any questions from the audience, or any comments from anyone on the panel that have been in court and used or experienced any of the equipment that Fred might have shown?

SANTINO CECCOTTI: My question is for Professor Lederer. How far do you think we are from having that type of courtroom in all courtrooms?

FREDRIC LEDERER: I don't know how to answer that except as follows, which will probably be inadequate. Some years ago, the Administrative Office of the United States Courts declared as its goal that every federal trial courtroom should be high tech. I think they're well on their way to doing that. At the state level, it's a much harder call. However, I can report a development. We have spent the last fourteen months working on how to use evidence presentation. How can we go ahead and allow a lawyer to use a tablet to present evidence to a judge, counsel, and jurors without high-tech courtrooms and their expensive infrastructures? We solved that problem three weeks ago. There is almost a zero cost solution if you have the internet and tablets. There is a reasonable chance that if this develops the way I think it will, that evidence presentation technology might spread rapidly throughout the rest of the United States.

MELISSA FELDER ZAPPALA: One thing I wanted to note as a point of interest is how Professor Lederer mentioned that the federal judiciary has indicated that it wants all federal trial courtrooms to be accessible. I think it's very interesting to note that the ADA nor any federal statute requires the federal judiciary to be accessible. It's just a very interesting conundrum because Congress obviously cannot regulate the judiciary. But, the judiciary on its own has taken those steps.

DANIEL GOLDSTEIN: If I can just chime in on that. One thing the Administrative Office of the Courts has not done, although it's been brought to their attention, is that under the ECF system, you can file inaccessible PDFs as your pleadings. There are some circuits that require filing accessible PDFs, but they are the minority of jurisdictions. When you consider how easy it is today to take a word document and create a fully tagged and fully marked PDF, it's absurd that the Administrative Office of the Court has not taken that step. And it's a huge barrier for blind attorneys.

RICHARD HERRMANN: Let me ask you both a question about that. It's a term that I'm not familiar with, and that is accessible PDF. I assume that you mean it's just the image and there's no text base behind the image.

DANIEL GOLDSTEIN: That's an inaccessible.

RICHARD HERRMANN: That just the image is inaccessible?

DANIEL GOLDSTEIN: Right.

RICHARD HERRMANN: Alright, so I understand what you're saying. I don't understand why that is still an issue. It seems to me there is an easy procedural rule that simply needs to be put in place to prevent that from being an issue. Have you thought about what you do with attachments or exhibits where the document was not either originally supplied as a word document or is an old generation document, or is a drawing or penned document that can't easily be turned into text? How would you deal with that so you have a total package which is PDF accessible?

DANIEL GOLDSTEIN: Putting aside handwritten or drawn documents, which I think is a separate issue, what we do when we have attachments like that is we OCR it, which is an optical character recognition of the scanned document. Once we do that, we proof the heck out of it, and Adobe Acrobat Pro has an accessibility checker that allows you to see if the reading order is correct. It makes it very easy to make a fully-tagged, fully-marked PDF. I haven't had the experience of making non-textual information accessible, and probably to do that, you would either have to create a typographic or a 3D model. It's been a long time since I had a handwritten piece of evidence as an exhibit.

MELISSA ALLMAN: It's not been a long time since I've had something like that.

DANIEL GOLDSTEIN: Then Melissa can address that better than I can.

MELISSA ALLMAN: I'd like to speak to a couple things here. This issue of an image PDF versus an optical character recognition PDF that is now made out of characters is such a problem and accessibility issue in the legal profession. If you're a sighted person, all you know is that you are looking at a document. You don't think about it because you don't think about whether it consists of characters that were created as characters or whether it's just a picture. So one of the things I think is important in our profession is just to help. And it's okay that people don't know this because they don't need to know it, but we need to help people know this because it is really baffling to a lot of people.

One of the things that Daniel mentioned is that if you don't have a document supplied as a word document and then you run it through OCR and the accessibility features of Adobe, proofing the heck out of it can involve a great deal of time. That's something that I have to have others do all the time, and it does take a lot of time. Not all of my clients are tech savvy; some



of them don't even have computers. So they handwrite something. That involves either someone typing it out for you, which is very clerical. If there is a picture, diagram or a police report that comes through, it may be so poorly scanned that you can't proof it. Instead, you have to have someone reliable to either describe or summarize those things in writing or verbally.

RICHARD HERRMANN: That raises two questions. One to Fred and then to Daniel. Fred, when you were showing the picture of the blind witness looking at the diagram of the restaurant, you referred to some kind of device that she could touch. Can you explain that?

FREDRIC LEDERER: We took an image and we ran heat-sensitive paper through the printer. This created raised surfaces so that she can read it with her fingers.

MELISSA ALLMAN: I have to ask this question because I'm just fascinated by this heat sensitive paper. First of all, I have two questions. Where did you get that and how did you do that? Is it expensive? If not, I want some. And then my other question is, are you saying that what was raised was like a physical diagram of the restaurant, like the outline of the restaurant or the stuff in it? I'm just fascinated with this and need to know more.

FREDRIC LEDERER: This is the problem with not having all of the details of how we used to do things. What we did and how we did and where we got the paper I have totally forgotten. So that's a problem, but I suspect it's out there. What we had was the scenario in which we had the equivalent of an architect's drawing of the restaurant. It consisted entirely of lines, and when we ran the paper through an ordinary laser printer, the lines would become slightly raised above the surface of the paper so that she could feel it as a tactile matter. Unfortunately, I don't remember where we got the paper. At the time, it seemed very easily done.

RICHARD HERRMANN: So Melissa, is there a printer that you're familiar with that will permit an image to be printed so that it's raised like Fred's talking about?

MELISSA ALLMAN: No. I know there are braille embossers, but that's just braille. See, just because I use the assistive technology doesn't mean I know all of it.

RICHARD HERRMANN: Alright, Daniel has the answer to this.

DANIEL GOLDSTEIN: So that's one of the things. Everybody assumes that if you have a disability, you're aware of all of the technology that's available for that disability. That's just not the case; you're a consumer. I use a laptop all the time and I have absolutely no knowledge of what I could be doing otherwise or elsewhere.

Puff paper<sup>2</sup> has been around for a long time and it causes carbon lines to rise up. The other is something called a tiger embosser, which is a braille embosser that can do tactile graphics. What's a little tricky there is that there are conventions. If you have two lines crossing, it's important to know that it's not one line taking a left turn. You need to know that's a straight line crossing another line. The Braille Authority of North America, a.k.a. BANA, has a whole set of conventions to make tactile graphics understandable when you produce them either with a tiger embosser or with puff paper. But eventually, I want to get to the point that the issue here with the technology is not technology, because the technological solutions aren't that hard and a lot of the solutions are old. The problem with accessible technology is culture. How many people in this room have an office phone that has soft buttons, which may be the button for hold, add a party or redial changes depending on what you have just done, and there is a dynamic screen that tells you what that soft button is now for?

RICHARD HERRMANN: Right, just like the Cisco phones.

DANIEL GOLDSTEIN: Right. Well, only a few hands went up, and that surprises me. I think most offices have them. There used to be nothing more accessible than a phone. They used to be fully accessible and nonvisual, but now most of us have an office phone that is completely inaccessible non-visually. I heard that they've infected the federal government, and one blind Department of Commerce employee told me, "I know how to put people on hold but I don't know how to get them back." And I said, "Well, you're a federal government employee. You don't have to get them back." But I think that's a demonstration of the fact that it's possible to make a phone with a changing visual display accessible. Since the iPhone 2 going forward, the iPhone has been a fully accessible device non-visually. But if you're not thinking about it, then you go out and you procure something that's completely inaccessible, and that's what happened with the phones.

RICHARD HERRMANN: I want to see whether anybody has any further questions for Professor Lederer so we can let him go and continue with the discussion.

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<sup>2</sup> Puff paper is another name for swell paper, which allows images to be raised so that they provide a tactile sense.

AUDIENCE MEMBER: Professor Lederer, is there a state that you would point to as a model in terms of how they integrated technology into their state courtrooms, so that we might use as leverage to get the federal government to show more leadership on this?

FREDRIC LEDERER: I don't think that I have the answer. I will say that in terms of regulation or an affirmative requirement, California is pretty good. In terms of delivery, I simply don't know, and what little I have seen in the field is that there are individual court systems, such as King County outside of and including Seattle, that do very well largely because they have a human being or a group of human beings who've decided that this is really important. And they're going to make it happen. But then you can have a place that has all the rules and not necessarily implementing anything. So there may be a good number of great models out there, but I lack the current knowledge to be sure of where they are.

RICHARD HERRMANN: I think that's been true for the history of technology. You need a champion who is going to be out there pushing it in order to get it done. Even if you have a rule or policy in place, you need somebody who owns it to really get it accomplished. Next to William and Mary Law School is the National Center of State Courts, which is a trade association for many of the state courts. With their membership, they have all kinds of professional consultants and committees. Fred, do you know whether there is any committee at the National Center that is focused on assistive technologies?

FREDRIC LEDERER: Well, the National Center for State Courts is the one body that deals with state courts around the country, and there are various professional organizations that it assists, including all the state supreme court chief justices and all the state chief judges of the intermediate appellate courts. It's responsible for NACM, the National Association for Court Managers. It's also responsible for all the state court administrators. So I don't know the specific subcommittee, but I think it's fair to say that all of them have this topic within their responsibilities.

RICHARD HERRMANN: There are two organizations that I can think of. One is the National Center, and they have a good website to get through the hierarchy of where the organization goes. And two is possibly the National Judicial College in Reno, Nevada, which teaches judges. I don't know whether they have a focus on this issue, but they might have an interest in it because they are funding oriented. To the extent they can find funding to advance an interest in something like this, I expect it's something that they would be interested in advancing. Anything else for Professor Lederer?

FREDRIC LEDERER: On that note, I say we, too, would be able to do better with a little bit of advanced funding, so please pass it on. And at the moment, we are in the midst of a building expansion. We have an experiential learning center going up next door, and you probably can't feel it, I hope, but we certainly can feel and hear it. It feels like a low-grade earthquake, and I'm suggesting that to save your audio equipment, we probably need to say goodbye.

RICHARD HERRMANN: Fred, thank you very much.

FREDRIC LEDERER: Thank you.

RICHARD HERRMANN: So we talked about the courtroom and we're going to talk to the Melissas about their experiences, but more focused on the devices that they use in practicing law. The way I thought that we would do this is first we'll hear from Melissa Felder Zappala, who is going to talk with us about her experience in practice and what devices and accommodations she uses to make her the most efficient. Then we will ask Daniel to give us a broad picture—as he has already started to do with the issue of the printers—with regards to the sight-impaired and the issue of websites, which all of our schools, law firms, and courts are using. And we ought to focus on how to make those websites more accessible, which will lead into a demonstration that Melissa Allman will present with regards to a couple of devices that she has brought with her.

MELISSA FELDER ZAPPALA: First, I want to note that technology has really enabled people with hearing losses to be able to practice law. There has been a slow but steady growth in the number of deaf and hard-of-hearing individuals who practice law because of technology. In fact, if anyone is interested, there is an article that was written by an attorney named John Stanton in 2011 called "Breaking the Sound Barriers: How the Americans with Disabilities Act and Technology Have Enabled Deaf Lawyers to Succeed."<sup>3</sup> It's interesting reading.

In terms of how deaf and hard-of-hearing attorneys are able to practice law and the available technology, I will tell you that I am hard of hearing, which means I did not learn sign language until I took the initiative when I was twenty. So, the type of technology that I use is going to vary from the type of technology for someone who never learned to speak, who relies exclusively on sign language use. I will try to give an overview of the type of technology that someone with that type of a hearing loss would use, but it is not something that I would use.

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<sup>3</sup> John F. Stanton, *Breaking the Sound Barriers: How the Americans with Disabilities Act and Technology Have Enabled Deaf Lawyers to Succeed*, 45 VAL. L. REV. 1185 (2011).

Let's talk about the economics of the type of accommodations that are necessary. There is technology right now that I use, that all of you use, to communicate with someone who has a hearing loss, but it costs nothing: video phones, Facetime, and Skype. I use them to communicate with my colleagues. It's very easy and costs nothing because I can lip read and I have some residue of hearing. So, I don't have to pick up the phone; I just Facetime.

Another thing that I use is something called a captioned telephone. It's provided by an entity called CapTel. It's a free device and is funded by the FCC. It allows communication by me with someone who is hard of hearing without any expense. When I pick it up, the phone call gets wired to someone that is called a relay operator. That person has a court recording device just like this, but the phone call also gets wired to the person that I want to call. So both the court reporter and the person that I'm dialing pick up the phone at the same time. When the hearing person speaks, I can hear with the limited hearing that I have what that person is saying. But the relay operator is also using a court reporting device to type what is being said. This is a way to read what someone else is saying.

The issue with these types of free services is that there is a lag time between when the court reporter types and when I see it, and sometimes it can be a thirty-second delay. Sometimes, if I'm talking to someone and I'm not able to hear them, I have to say, "Please, wait. I need the caption to catch up." That type of service would not be sufficient, for example, if I have a teleconference with the court or with opposing counsel, or I have a conference call where there is going to be a lot of different people speaking at the same time. What I will do is pull out a remote court reporter. I will call in the court reporter using a conference line. That court reporter will hear everything that is being said on the phone and type it for me. A screen provided using WebEx allows me to see the court reporter's screen and what is being said.

A court reporter is always present during a deposition because a deposition is on the record. What a lot of attorneys these days will do, even though they're hearing is fine, is get something called LiveNote, which is a real-time transcript of what's going on during the deposition, which is exactly what I'm using right now. I simply make sure that I have that technology at my depositions, which helps a lot of hearing attorneys because what matters when you are using the testimony at trial is how the question and answer were presented during the deposition. You may think you got a great answer, but the question is kind of mangled and rambling. You want to know that during the deposition. You can go back and correct it. And this technology allows any attorney to be able to do that.

Technology is not perfect. There are hiccups. I will use this technology in the courtroom. And court reporters, again, are always present in the courtroom. I will just call the court reporter in advance, ask them to bring a

laptop, and then I have a caption for a hearing. However, sometimes my screen and the court reporter's machine don't work.

I had a situation about a year ago where I had a major summary judgment argument in a multi-defendant case in Ohio, and the courtroom was packed and the entire spectator area was filled. The jury box was filled with attorneys. Me and my colleagues were crammed at the plaintiffs' table. Everyone knew about my hearing loss and knew I needed this captioning. But, the hookup between the court reporter's machine and my screen was not working, so the entire hearing got delayed. The entire room was dead silent, except for the frantic feet of the court reporter running around the room. I was getting a little embarrassed because I'm obviously holding up this hearing. Finally, the solution was for me to leave the plaintiffs' table and sit next to the court reporter in front of the judge and read off the court reporter's machine. We finally fixed the issue after a few minutes and I was able to rejoin the counsel table. Things like that happen and you just have to be ready when you're using technology to participate in the legal profession. You also have to have a good sense of humor.

Now, I covered what I use, but just for a few minutes I want to talk about what attorneys communicating with sign language use. They use something called video relay. This is a service for a phone call where someone who is deaf will place a video call to a sign language interpreter, who then will place a phone call to a hearing person. The hearing person will speak orally to the relay operator, who will sign back to the deaf person. So it's called a relay service. What the deaf person wants to say is relayed to the hearing person.

There is also something called remote interpreting, which Professor Lederer touched on briefly. It is useful in the sense that if you are in a courtroom or you're in a medical office and you want to communicate with a doctor, you can bring in one of these devices and, using a video camera, the deaf person can talk to the doctor with the assistance of the sign language interpreter. The downside to those types of interpreting services is that sometimes the internet doesn't work, and sometimes the interpreter does not have the context for what's going on. Oftentimes, you need to be mindful of whether a remote interpreting service is an adequate accommodation or whether you should get a live interpreter to be present. I believe I've covered everything.

RICHARD HERRMANN: I have a couple of questions. I have had lawyers from other states who wanted to have court reporters at their end taking the transcript of the discussion without letting the other side know that it's happening. We have suggested that we would not do that in Delaware, and we haven't. But have you run into situations in your practice where the lawyer that you're dealing with, particularly opposing counsel, always knows that you are having a transcript made when you are having a meeting?

MELISSA FELDER ZAPPALA: That's a great question. Two responses to that. One, whenever dealing with opposing counsel, I always tell them, at least at the initial conversation, that I have a hearing loss and that I do have a court reporter taking down what is being said. Importantly, the second response to your question is that I never retain a copy of what is being transcribed. I treat the transcription purely as a way for me to be able to participate in the meeting. The only time I retain a transcript is in, for example, a deposition. In fact, that very issue came up in a meeting I had once in a case about five years ago. Opposing counsel stated that he did not have an issue with me having a court reporter present, but wanted to make sure that there was no permanent recording so that in case there was a dispute, there wasn't some potentially incorrect transcript about what we had discussed. I said that it was my practice that there would be no transcript.

COURT REPORTER: Right now, I'm providing CART<sup>4</sup> services, and that is different than the court reporter. This is not a legal transcript. This cannot be used in court; it is for accessibility purposes. So, if there is a trial and you went through a deposition and used CART services, that's not a certified transcript and can never be used in court. A real court reporter would be taking down certified transcriptions verbatim, which could be used in court for testimony

RICHARD HERRMANN: Madam court reporter, have you ever been called as a witness?

COURT REPORTER: No.

RICHARD HERRMANN: But see, since you're a witness to the conversation and you have a transcript of what was said, you could testify that this was a fair remembrance or a fair recording of what it is that you heard. It might end up being very important.

COURT REPORTER: At the beginning and the end of my transcript, it says that it's for accessibility purposes. It gives you a warning not to use it and that it's not to be taken too seriously.

MELISSA ALLMAN: I don't think I fully understand what the issue was with this opposing counsel. Are you saying that they were concerned that you would retain the transcript?

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<sup>4</sup> "CART" refers to Computer Access Realtime Translation, which is a system that provides a contemporaneous transcription of speech for those who are hearing impaired.

MELISSA FELDER ZAPPALA: They were concerned that I would have a transcript of the meeting, and I said that I never retain a copy of the transcript.

RICHARD HERRMANN: Okay. A question from the audience?

AUDIENCE MEMBER: I have no hearing loss despite what my husband and daughter say. It is hearing selectivity and not hearing loss. But I use LiveNote in the courtroom on the bench during trials, especially for bench trials and oral arguments, but including jury trials. For example, in a jury trial, if there is an objection to a question, even though I am paying attention, I am very visual. It helps me to see the question written out. When I have an objection and before we go to sidebar, I will reread the question as it was asked on LiveNote and then step down from the bench for the side bar conference. In a bench trial, I am using LiveNote to supplement my handwritten notes, but it's not a transcript so I am not retaining it. However, I'm listening, reading, and writing at the same time. So I use LiveNote and I don't think I am the only judge who does that.

We established it because we had a hearing-impaired judge at one point. And I agree with you completely about seeing the question and knowing when you see it whether it's an appropriate question or whether it's objectionable as to form. In Delaware, there are objections to form, and the reason you make an objection is to give the lawyer who is asking the question the opportunity to rephrase the question so it's not objectionable. If you can see it, it helps many people because we are so trained to read as opposed to being verbal, and Melissa would probably have an entire different experience in that regard because you are more orally trained. Is that right, Melissa?

MELISSA ALLMAN: I actually am and I do think I would be visual. I had an orientation and mobility instructor tell me that if I had been born with sight, I would be a visual learner, because sometimes I just need to see it, meaning I have to have it under my fingertips in braille. So yes, you are absolutely right. I've had to learn how to be more oral. It's funny to be told by someone that if I could see, I could be a visual learner.

RICHARD HERRMANN: This LiveNote that the judge was talking about and Melissa Felder Zappala was showing has increased the quality of the calls from the bench tenfold. I probably was in practice for thirty years before I realized that during a jury trial, the judge is not necessarily listening to everything that's being said. They're writing opinions, navigating emails, playing Flight Simulator in the old days. Now that they have LiveNote, they can go back and do an instant replay in order to see what the question is that's being objected to. But I'm going to take the liberty of switching so that we can have Melissa Allman talk to us about the devices she uses to make herself the most efficient.



MELISSA ALLMAN: One thing I use a lot that I unfortunately do not have here to demonstrate is a piece of screen-reading software calls JAWS.<sup>5</sup> It's a screen reader that basically reads to you what is on the screen. It doesn't just read from beginning to end without you being able to control what is on the screen. What it does is it reads character by character, line by line, word by word. However, it needs to read the text on the screen. It's designed so that you have control over how you're reading and what you're reading.

The reason I don't have it is because I have my braille note taker and my iPad. This software can read to you word documents, e-mails, and it reads Excel files much better than it used to. And it reads web pages. Is it perfect? No. One of the issues that we have is that a lot of web pages are not very accessible. I am not that tech savvy so I don't know all the terms, but JavaScript is a problem. It causes problems for accessibility on websites, so I can't always read them. Websites that are very graphically based can be hard for the screen reader because it tells me that I'm going to click on one link, and then then it takes me to another link. The more text and the fewer graphics that are on a website, the easier that it can be read. It's technology that has advanced significantly but is still evolving.

What I have here today is called a Braille Sense, which does two things. It will read to me what's on the screen. It'll say to me what the data is like JAWS does, but it also has a braille display and a regular computer keyboard. You can get one with a braille keyboard, but it will read to me what is in the word processor or what's on the internet like JAWS does. Let me see if I can make it speak.

BRILLE SENSE: I had a lot of fun being on this panel.

MELISSA ALLMAN: I can set it to go really fast, too, if I need it to read fast and still understand it, which is why I don't have a difficult time understanding people who speak fast. Now, you all just heard it, but if you're in court doing a direct examination or your closing argument, you don't want opposing counsel and everybody in the world to be able to hear that speech. So that's where the Braille display comes into play. Braille is made up of six dots. If I turn the display on, you can see the dots rise. I'm going to turn it off and what you'll see is that they'll gradually relax. The letters in braille are different combinations of those six dots.

AUDIENCE MEMBER: But it looks like there are eight.

MELISSA ALLMAN: Oh, you're right. I forgot. I have this one set to an eight-dot braille. You can do six or eight.

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<sup>5</sup> "JAWS" refers to "Job Access With Speech."

RICHARD HERRMANN: Are there advantages? Is it like a dialect?

MELISSA ALLMAN: No. That's really funny. One time I was at church a long time ago as a kid and I had somebody ask me to say something in braille. What should I say, "Dot dot dot dot dot?" I'm sorry. But it's okay, because people don't know, right? I had a law clerk two years ago who was deaf but had lost her hearing later in life, and I had a hard time understanding why she didn't sign, but she explained that to me. So we all need a sense of humor with these things and be able to laugh at ourselves and at each other, because we just don't always know.

What's really nice about this device is that I can stand up and hang it around my neck. So if I'm doing closing arguments, at a meeting, or in a class doing a presentation, I can put this around my neck and read what is on the braille display. Braille note takers are costly, they're sensitive pieces of machinery, and they're not perfect because they're trying to do a lot. They're trying to give you braille and speech.

One of the issues that I have is that sometimes if I'm typing too fast and the braille can't keep up, it'll just freeze. That's not really fun when it happens when you're in an adversarial situation. Or sometimes you have to use an old kind of internet browser and some websites don't work. But it doesn't take away your literacy. I obviously use a lot of screen-reading software and I don't have too many braille books anymore because they take up so much space. But braille is still my literacy; that's how I read.

So, I have to listen to the speech and then verbalize a step behind what the speech is saying, which is very difficult for me. I know some blind people who became blind later in life and they don't read braille, so they had an earbud and they hear what something is saying and speak after that. For me, that's hard, and I feel like it delays me. Whereas, if I have it under my fingers, I can instantly read what it says.

RICHARD HERRMANN: Do you have a reading speed? I'm a slow reader. I have no idea what you and Melissa Felder Zappala have in terms of speed.

MELISSA ALLMAN: I can read braille pretty quickly. I feel like if I can read something, I can read it at the same pace that a lot of people can read out loud.

RICHARD HERRMANN: But it sounds like you can hear faster than I can read.

MELISSA ALLMAN: Right, because I've had to learn to do that. I just want to commend Apple for a minute. I know that nobody here probably works for them, but I just want to say that they have done a lot with accessibility. I have here a standard iPad. That's it. This thing is a braille note taker that, like I said, is costly and sensitive and you have to be very careful with it.

This is an iPad. What you guys might not realize is that you can make your iPad talk and say almost as much as you need it to any time that you want to. I'll open an iBook. I am reading *A Room with a View* because I was interested in a classic that was free, so I can have it read the text to me.

SANTINO CECCOTTI: I have a question. I think this point goes to Richard's question, which is that I can barely understand what the device is telling you, and the fact that you can comprehend that I think goes to two points. One, you have to be a much more efficient reader than your colleagues, and I think that goes to a point that we heard from the earlier panels where if you're getting work done effectively, then it's ultimately going to be a better bottom line for whomever it is you're working for. I just couldn't believe how fast you understood any of it.

MELISSA ALLMAN: I would say two things to that. Yes, that may be true. But one of the advantages that people with sight have is that they can skim. Most people, what I've been told is, can kind of glance at the whole page and see it.

RICHARD HERRMANN: Some people can skim.

MELISSA ALLMAN: Not everybody can do that?

RICHARD HERRMANN: Not everybody can skim.

MELISSA ALLMAN: What I would say is that I really wish I could skim. You're right, Santino, but it goes both ways. So, what Daniel pointed out earlier about these phones and how something changes on the screen, I can either use this Bluetooth keyboard or I can scroll around on this screen. I can tap that on the screen and bring up the internet. What's great about that is it shows that touchscreens can be made accessible.

It goes back to the point that a lot of people have made here today, which is that it's not about the inability to do something. It's just about how you're looking at it and how we think about it. Touchscreens most of the time are a problem and are not accessible for people with visual impairments, but they can be. The point I want to make is that I didn't have to do anything to make this accessible except take it out of the box, turn it on, and turn the voice on. It was just made that way. I didn't need a separate screen reader to do that.

There are a lot of apps that don't work very well with VoiceOver.<sup>6</sup> So, there are some products that are still inaccessible with this, too, because they don't talk well with VoiceOver. But that's an example of what Professor

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<sup>6</sup> VoiceOver is Apple's software that gives auditory descriptions of what is being displayed on a screen.

Lederer was saying in that there are ways to make things accessible for everyone if you want to.

RICHARD HERRMANN: We are just about out of time. I've got to ask Melissa Felder Zappala: have you developed a reading speed that's faster than my slow speed?

MELISSA FELDER ZAPPALA: I actually have. I'm known for my speed reading. The first time I met my mother-in-law, she handed me a letter and I handed it back within fifteen seconds, and she said, "She didn't even give me the courtesy to read that letter." But I actually read and absorbed it. So I do read very quickly.

RICHARD HERRMANN: 3,000 words and she reads 2,000 words a minute. Daniel, do you have any closing comments you want to make?

DANIEL GOLDSTEIN: I will make some very quick comments. If you want to know how to make a document accessible, go to NFB.org.<sup>7</sup> There is a short summary on how to make documents accessible. One of the reasons why I think people learn to read screen-reader software at such a high speed is because their auditory memory is very small. This wouldn't work for learning a calculus problem; for that, you're going to need hard-copy braille so that you can go back and forth in the problem. But even if you can't skim, Melissa, I suspect that without being aware of it, when you come to a multiple-choice question, just the way a sighted reader skips from the call of question down to the choices and back up to the facts, none of us are consciously aware we're doing that. When I've watched a screen-reader user take a multiple-choice exam, they're going all over the page. So, it essentially becomes a bit like the equivalent of reading.

Law practice management software is the biggest problem for blind lawyers. I had a thing going for a while with the ABA Commission on Disability Rights, and we were going to have all the big firms sign a letter to the vendors saying, "We're going to start asking about accessibility when we renew our contracts. Please be prepared to tell us where you are or where you plan to be on that." Then it turned out there was no ABA policy that could support that letter, and so that kind of died and I have failed to do that on my own with big firms. But, if the Delaware State Bar Association tells firms that they should not buy inaccessible software and that firms should consider accessibility as one of the criteria when it buys software, I think it would make miracles.

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<sup>7</sup> See *Creating Nonvisually Accessible Documents*, NFB (May 22, 2015, 2:48 PM), <https://nfb.org/blog/atblog/creating-nonvisually-accessible-documents>.

I just tried a case where I had a blind client and I brought in a blind lawyer. We just made sure that the other side provided all the documents fully accessible. Our documents were fully accessible, they were on a thumb drive, and it was very easy for the client to be able to refer to documents on the stand because she was able to demonstrate with the screen access software.

MELISSA FELDER ZAPPALA: Did you win?

DANIEL GOLDSTEIN: Yes, thank you for asking that. We did win. The jury came to a different conclusion than the judge earlier had in granting summary judgment before we got a reverse in the Fourth Circuit.

RICHARD HERRMANN: Daniel, I think I have to stop you. I thank Santino. To my panel, thank you very much. Santino, do you want to say goodbye to everybody?

SANTINO CECCOTTI: I just want to thank everyone for coming and to the panelists for being here. I hope this was insightful and that it carries with everyone and with the practice of law in Delaware. Maybe we'll have another one again at some point. Thanks, and have a pleasant weekend.

