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THE AMERICAN JUDGES ASSOCIATION

54th Annual Educational Conference

Las Vegas, Nevada

October 6, 2014

Presentation by:

Fredric I. Lederer

Chancellor Professor of Law, CLCT
William and Mary Law School
Williamsburg, Virginia

**Court and Courtroom Technology
In the Age of the Cloud and iPad**

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The American Association of Electronic Reporters and Transcribers

1 JUDGE EUGENE LUCCI: All right. We're going to get
2 started.

3 Can I have your attention? It's my pleasure to introduce
4 our next speaker, Professor Fred Lederer. He will address us
5 on the topic of court and courtroom technology in the age of
6 the Cloud and the iPad.

7 Frederic I. Lederer is the Chancellor, Professor of Law
8 and Director of the Center for Legal and Court Technology,
9 abbreviated CLCT, formerly the Courtroom 21 Project at William
10 and Mary's School of Law.

11 Professor Lederer's areas of specialization include legal
12 technology, evidence, technology augmented trial practice,
13 electronic discovery and data seizures, criminal procedure,
14 military law and legal skills. He's the author and co-author
15 of numerous books and articles, working with CLCT deputy
16 director, Martin Gruen.

17 Professor Lederer conducts legal and empirical research
18 and provides courtroom and hearing room designed consulting
19 throughout the world.

20 Please help me welcome Professor Fred Lederer.

21 PROFESSOR LEDERER: Thank you very much, ladies and
22 gentlemen. It's my pleasure and honor to be with you.

23 So our topic is Court and Courtroom Technology in the Age
24 of the Cloud and the iPad.

25 How did all this start? Before the announcement of

1 Windows 10 -

2 You don't know about the announcement of Windows 10?

3 What happened to 9 is the question from the back? And
4 indeed, last week, I believe it was, Microsoft announced that
5 Windows 10 would come to us in the next -- I guess in the
6 spring, and they will skip the number 9 in recognition of how
7 important the next version of Windows will be.

8 Indeed, there's a comment that's also a reaction to how
9 well 8 and 8.1 worked.

10 So how did this used to be? Well, courtesy of my law
11 school, which as many of you will know is the oldest law
12 school in the United States -- at the very least, we claim the
13 first law professor, that is two -- a statue of two
14 particularly great judges: John Marshall, the great chief
15 justice of the United States, and Professor Wythe, the U.S.'s
16 first law professor who was a noted Virginia judge.

17 Just imagine how life must have been like for them. They
18 got up in the morning. Someone, the clerk, had supplied them
19 with a list of the day's cases. They might even have had
20 written briefs that they had to read the night before. And
21 they walked into the courtroom and they sat down, and they
22 listened and they talked. Imagine. There wasn't a selfie to
23 be had. No counsel attempted to friend them. There was no
24 issue as to the security of the court system. And no lawyer
25 popped up with a, Your Honor, could we please wire your

1 courtroom for next week?

2 I'm not going to claim that this was the golden age of
3 judging. In fact, that's probably today, although they
4 probably were not overly concerned with case management and
5 moving the caseload. So this might be a more difficult
6 discussion than I want it to be. But certainly it was a
7 simpler day. And it's a day in which many of today's judges
8 partially live in.

9 So things have changed quite a bit. What is a typical
10 judge's day like today? Well, I confess I had a short article
11 coming out in the ABA Judges Journal that attempts to deal
12 with that. I will not review the details with you except to
13 imagine what life is like for many of us today. We get
14 awakened by electronic noise. There's actually an amazing
15 number of people who listen to music in their shower
16 electronically.

17 Soon we will go to court in a driverless car so you'll be
18 able to review, perhaps, the day's work, but you'll have to
19 check the case management system and the e-filing to determine
20 what that will be. And then you'll be in court where the
21 evidence is being presented by technology. One or more
22 participants is appearing remotely. And as I will talk very
23 soon, you may review the court documents on your Google Glass.
24 This is not a fanciful future. It is increasingly the
25 present.

1 For those of you who have not seen our courtroom at
2 William and Mary Law School, this is the McGlothlin courtroom.
3 The pictures are coming out a bit dark on the projector. That
4 is an experimental trial. It is, in fact, a trial of
5 attempted -- of a defendant in federal court for attempted
6 child slavery. There is a federal district judge on our bench
7 who was -- at the time, Judge Rothstein was the head of the
8 Federal Judicial Center. Counsel is in the courtroom. We
9 have a remote witness testifying. And the evidence is all in
10 front of the jurors on each individual monitor.

11 Our courtroom is admittedly the world's most
12 technologically advanced trial and appellate courtroom. But
13 many of you, no doubt, have courtrooms somewhat similar. And
14 if not, you have them not too far away. Increasingly, that's
15 what a federal courtroom looks like. And many state
16 courtrooms are far superior.

17 Yes, sir?

18 UNIDENTIFIED SPEAKER: I'm sorry. I'm just curious. The
19 people in the picture, are those jurors or are those --

20 PROFESSOR LEDERER: You are looking at the jurors. There
21 are 12 jurors. Each one has an individual monitor in front.
22 And the evidence that the remote witness is talking about is
23 being displayed on the jury monitors. It has already been
24 offered and received in evidence.

25 You also have a stenographic court reporter, and

1 everything that is being said is coming up in text within
2 seconds on screens for the judge and for counsel or, if we
3 wish, on the internet, as I will show you somewhat later.

4 Yes, sir.

5 PARTICIPANT: (From unmiked location.)

6 PROFESSOR LEDERER: Yes. Real-time court-reporting is
7 showing on the judge's screens as well as on counsel, or
8 anywhere else we want to send it.

9 This is an experimental appeal for those of you who may
10 be appellate judges. This is the United States Court of
11 Appeals for the Sixth Circuit. Each judge is life-size in our
12 courtroom, and counsel is presenting a case pursuant to the
13 Sixth Circuit rules. Not a real one, because, as the movies
14 often tell you, no animals were harmed in the making of this
15 movie; no litigants were harmed in the experiment of this
16 case.

17 What was arguably our greatest error in this case -- the
18 chief judge is on the far left. She should have been in the
19 center. This is a remote appeal. Each judge appears remotely
20 from his or her courthouse. Each appears remotely from
21 chambers using a laptop. In the courtroom, that person might
22 as well be physically present.

23 That is not tomorrow; that is today. There are many
24 judges attending this conference -- for instance, from British
25 Columbia and Canada -- which is arguably the codinance experts

1 on the use of remote appearances.

2 So change due to technology is constant, and today is no
3 exception. With the help of the AAERT, the American
4 Association of Electronic Reporters and Transcribers, and FTR,
5 we are now audio recording through digital audio every word
6 that I say. It is being sent to remote transcribers in six-
7 minute blocks. It is being transcribed and sent back to us
8 here, and you will be able to look at that transcript through
9 the websites of AAERT or FTR. If all goes well, the first few
10 pages will be in shortly.

11 This is electronic recording, and we are most honored to
12 have particularly a very fine members of AAERT in the back,
13 who is handling annotations for us. Thank you, Margaret.

14 Yes, ma'am.

15 PARTICIPANT: (From unmiked location.)

16 PROFESSOR LEDERER: There are, in fact, significant
17 differences among the different ways of doing court record.
18 I'll address that toward the end of this program, if I might.
19 But basically, first, not all court -- all proceedings merit
20 having a real-time stenographic or voice writer court reporter
21 in the courtroom. Digital audio or digital audio and video
22 can be a significant factor in budget discussions, because the
23 price issue, when you do not have to have a court reporter in
24 your courtroom, can be a substantial factor.

25 PARTICIPANT: (From unmiked location.)

1 PROFESSOR LEDERER: All that I can say -- and by the way,
2 none of these questions, because they're not being spoken into
3 microphones, will be in the transcript. We are one of the few
4 neutral locations in the world in what we call the court
5 reporter wards. We believe that all forms of making the court
6 record are sound and useful for the right type of case and the
7 right situation.

8 However, analysis of this is a far more sophisticated
9 issue than some courts have had an opportunity to deal with,
10 and there are also issues that deal with what the intent and
11 purpose of the record will be. If it is viewed from the court
12 perspective, you get one result in some cases; view it from
13 the trial lawyer result, you get another entirely.

14 And ladies and gentlemen, if I might, I welcome the
15 questions, but if I continue taking them, I will only make it
16 about a third of the way through. With your permission, may I
17 attempt to go through this and then take questions, especially
18 because I may well be getting to what you want to talk about
19 in a few moments. So if you'll be good enough.

20 So the cloud, as most of you are familiar, is simply data
21 stored somewhere else, usually on a server, and it's available
22 through the Internet. There are any number of questions that
23 lawyers and judges are now dealing with on the cloud.

24 It's lovely if somebody else has to host your
25 information. The problem is who are they? Do they understand

1 that legal information is special information? Can we be sure
2 your information will be available when you need it? That you
3 will not have a maintenance problem at the location, or they
4 will not have gone bankrupt, for instance? The cloud is not a
5 panacea.

6 You're looking at a picture somewhat dark from what I can
7 see of an experiment we did about a year ago, attempting to
8 determine with our Canadian partners in Montreal at the
9 Cyberjustice Laboratory, how a joint bilateral commission,
10 appointed by the President of the United States and the Prime
11 Minister of Canada, a simulation, could, in fact, hold
12 hearings together from two different countries.

13 The information that you see on the monitors is actually
14 coming from the cloud in the form of a server in Australia.
15 All the evidence has been put on that server, and when we
16 needed to show documents or other information, in this case a
17 photograph, it came to us from Australia. That's a cloud-
18 based evidence solution.

19 Is it any different from doing it locally? Not really,
20 except it's a bit faster if it's local.

21 Now, my perspective comes from running the Center for
22 Legal and Court Technology, which is a joint initiative of our
23 law school and the National Center for State Courts.

24 Just for those of you who may not be familiar with us,
25 our goal is to improve the administration of justice through

1 appropriate technology, understanding that sometimes the only
2 appropriate technology is no technology.

3 We're the world's center for courtroom and related
4 technology, and we design facilities around the world. We
5 conduct legal research and empirical research. We train staff
6 for courts all around the world in how to maintain these
7 systems, and to some degree to install them. We also train
8 lawyers and judges in trial technology and the consequences of
9 them.

10 We also are the Center of the Court Affiliates, which are
11 a group of state, federal, and primarily -- in fact, entirely
12 Canadian courts that are interested in using technology as
13 inexpensively and successfully as possible. Thanks to our
14 affiliates, we tend to be current on what's going on in the
15 real world.

16 So our topics today are going to include why technology,
17 court technology, ever so briefly, including some hybrid
18 categories, a couple of words about the impact of technology
19 in the courtroom, including technology issues in the law of
20 evidence, and then courtroom technology. And then I'll
21 endeavor to answer the questions that you've been good enough
22 to start asking.

23 So the traditional answers on why technology had begun,
24 from a judge's standpoint, with the answer that you get
25 enhanced accuracy, meaning improved administration of justice.

1 You may also get efficiency. And you can get cost savings.

2 Until recently, judges had little interest at all in the
3 discussion of cost savings. When your court is losing staff,
4 when you are closed for business, so to speak, justice, that
5 is, for a day of the week, and such, you begin to care a great
6 deal more than we used to about whether we can have cost
7 savings.

8 And then you begin to get what the businesspeople call
9 "return on investment". Traditionally, judges have not cared
10 very much unless you're the chief judge or in charge of
11 administration. Now, increasingly, we do care.

12 The goal is not to enhance efficiency or to cut cost at
13 the cost of justice. At least no sane court ought to be
14 considering that. But sometimes, you can get enhanced
15 accuracy in at least one, if not both, of the others.
16 Sometimes we can't function adequately, sometimes at all,
17 without technology.

18 So what happens when a court outgrows its ability to cope
19 because of paper? Along with the National Center, we have the
20 honor of helping to modernize the Supreme Court of Nigeria,
21 which you're now looking at. The Nigerian courts, despite a
22 valiant effort, were largely entirely paper based, and there
23 was too much paper to cope. Their answer was to get help from
24 the National Center through e-filing and case-management
25 systems.

1 In the modern world, increasingly courts cannot cope
2 simply with paper; and for many of the courts represented in
3 this room, you take such technology as a given.

4 And then there is the question of do we really want to
5 just cope? "Cope" is an interesting word that's entirely
6 subjective. Can we survive no matter what we do often? Is
7 that desirable? Judges' time is valuable. Many of you are
8 working way too hard -- I suspect you'll agree with that
9 statement. If there's a way to make your life easier and that
10 of so many other participants in the legal system, we ought to
11 at least consider it.

12 But one of the factors that judges do not often consider
13 -- and I strongly suggest that you might want to -- is the
14 impact of culture on the court system. Culture changes
15 expectations.

16 As we are part of our nation's populations, we're
17 affected by what goes on in our average working day. It was
18 not all that long ago that if I discussed remote testimony,
19 everyone looked at me blankly.

20 Today if I ask, "Has anyone Facetimed your children or
21 your grandchildren?" I tend to get a fair number of people
22 smiling. And if not, I get to ask, "Well, have you Skyped
23 them?" That changes our expectations of what normal is.

24 But increasingly, the public, which pays our salaries and
25 pays the costs of our courts -- admittedly, not at the levels

1 perhaps that they ought to -- assume that we are measuring up
2 to what they think we ought to be doing. Their notions of
3 what we ought to be doing can come as a surprise.

4 So I discovered some years ago -- and I suggest strongly
5 if you're not doing so, you may want to do so yourself -- that
6 one way to understand our culture better is to read the comic
7 strips. So some suggestions.

8 This is an old one. Automobile hits a truck -- if you
9 cannot see it from where you were. "I was on my cell phone
10 watching my iPod when the Blackberry buzzed."

11 Now, note that Blackberry is not in good straits these
12 days. I am unclear but believe that Apple may have just
13 discontinued the iPod, since we now have iPads. But our
14 problem of not paying attention due to gadgets in the
15 automobile is very real and current.

16 Mother to child: "There aren't many nice days left. Why
17 don't you go outside and text?" According to a real study --
18 citation available to you -- teenagers now text over 100 times
19 a day. And I'm going to give you some comic examples of that
20 in a moment.

21 And then very close to home, from the comic strip of that
22 name, says the employer to the applicant, "We were ready to
23 hire you until we saw the photo of you on Facebook sliding on
24 the ice at Rockefeller Center wearing only bowling shoes and a
25 Viking helmet."

1 The number of people out there who post everything to
2 Facebook and are then quite annoyed when employers and other
3 people read it and act on it seems to be impressive.

4 And, indeed, many of you have already undoubtedly, if you
5 have a criminal docket in particular, or sometimes family law,
6 discovered people seem to be incapable of doing something -
7 let us call politely "inappropriate" without immediately
8 posting it to Facebook. And the number of criminals who seem
9 to advertise my most recent crime is available for you to see
10 today is truly impressive. I recommend strongly that if you
11 do not already, you pick up the habit, unless you are very
12 much a technologist, of readings Zits.

13 Zits is a wonderful comic strip, as you can see, by Jerry
14 Scott and Jim Borgman. And Zits is the story really of a
15 teenage boy and his friends and his parents, who are trying to
16 cope with them all.

17 A fair number deal with modern technology. And for some
18 of you, none of what I'm going to tell you is new. For
19 others, it may be disturbing.

20 Mom reads to son, "On average, adults spend twice as much
21 as time answering their e-mail as they do playing with their
22 children."

23 "Wow. That's just sad," says mom.

24 Son says, "Yeah, who uses e-mail anymore?"

25 Father to son, son being on phone and computer, "I

1 thought you were hanging out with Sarah tonight."

2 "I am."

3 "Where is she?"

4 "At home. We're texting while we stream the same movie."

5 Father, "And that qualifies as hanging out?"

6 Son, "The malt shop closed a long time ago, Archie."

7 From last week, father to son, "Hey, Jeremy, what are you
8 watching?"

9 Son, "On which screen?"

10 This is the world of the present. This is where our
11 litigants, our lawyers, our jurors and our taxpayers are
12 coming from.

13 And given age factors, there are probably not quite as
14 many judges living in this world as there are some others,
15 which is not to say there are not an amazingly large number of
16 technology using judges. I'll get to that throughout this
17 discussion.

18 There are other reasons for technology. Sometimes, only
19 technology works. Some of you may know this member of the
20 bench from Denver, who, when he was kind enough to preside
21 over a case for us, had acute macular degeneration. And we
22 gave him all the technology we could find that would allow him
23 to preside over a case when nearly blind.

24 We do have blind judges, lawyers and potentially jurors,
25 as well as those with no or little hearing and other

1 circumstances. Technology often offers us a way for them to
2 contribute fully in the modern world.

3 Now, if you look at court information from a judge's
4 view, it's a somewhat complex topic. Judges are consumers of
5 court information and, of course, you produce that information
6 in many respects. But the clerk's office is customarily
7 responsible for it. This includes e-filing, case management,
8 what I call -- just having made up the expression -- data
9 management for those matters that judges often are not
10 involved in but may be -- land records and probates came to
11 mind -- and of course, the court record.

12 We'll talk more about the court record as we go on, as we
13 already have, because the court record is a court issue, a
14 judge issue and, in fact, important to a large number of other
15 people as well.

16 So the question now arises, can you, in fact, manage your
17 cases as an active judge without understanding, at least, how
18 to use your case management system? If I say you have to have
19 basic IT proficiency, I will get any number of unhappy judges.
20 But if I say, can you use your case management system, most
21 judges will say, well, obviously, I have to, duh. That's IT.
22 We don't tend to like to think of it that way, but it's true.

23 We are increasingly dealing with what I will call
24 collateral consequences. And one that I thought we should
25 call to your attention, if you're not already well aware of it

1 - and, hopefully, many of you are -- is the problem that takes
2 place when a court, usually quite proudly, places on its
3 website its court information.

4 But that's not just docket information. It's often the
5 e-filings. It may be the court record itself.

6 Some years ago, we discovered, thanks to a number of
7 court reporters, that in a surprising number of courts we
8 would have the following happen. State your name, your
9 address, and your occupation, Mr. Witness. Witness does all
10 that.

11 Judge interjects. Oh, for the record, what's your social
12 security number? It turned out that in an amazing number of
13 cases, judges were personally soliciting the key information
14 which, when made public, gives rise to identity theft and
15 privacy invasion.

16 Today, many of our jurisdictions have rules about
17 redacting information from e-filing, but that does not protect
18 against what happens in the courtroom during a hearing when
19 lawyers usually are the ones who ask the unfortunate question.
20 And it's unreasonable to assume our court reporters or
21 transcribers are going to go ahead and redact the court
22 record. That is really a judge function to ensure that it
23 doesn't happen in the first place. Often, we need that data,
24 but we don't necessarily need it as part of the public record.

25 So what are the collateral consequences of all this move

1 to the web, all this move to electronic information, or
2 corresponding privacy questions? And we hold a conference
3 periodically to deal with that. But I'm talking about
4 privacy. The odds are a fair number of you will say, what
5 privacy? And indeed, the founder of Facebook is somewhat
6 famous, I believe, for having said there isn't any privacy.
7 We are amazingly schizophrenic on this issue.

8 From another comic strip, Brewster Rockit, Space Guy:
9 "Yes, your government can snoop on you and monitor your
10 internet activity. What happened to privacy? I don't like
11 the idea of every detail of my life being exposed."

12 Now, if you'll excuse me, I have to post what I had for
13 lunch on Facebook. Perfectly normal. The same people who
14 complain about privacy violations are rushing to tell the
15 entire world every detail of their private lives. We will
16 eventually have to come to grips with this in a better way
17 than we've been able to do so thus far. And an immense number
18 of judges and court administrators and other people are
19 working tirelessly to try to discover where you draw lines.

20 And if you're interested, please join us for the next
21 conference on Privacy and Public Access to Court Records in
22 Williamsburg in 2015. We conduct this with the help of the
23 Administrative Office of the U.S. Courts, the National Center
24 for State Courts, and many members of the judiciary, state and
25 federal.

1 Now, if we're going to deal with technologies that fit
2 somewhere in between, meaning they are arguably court or
3 courtroom, the single largest topic here is what for no --
4 what for best I can explain, I call communications. We have
5 meetings. Some of us spend, it appears, much of our lives in
6 meetings. We can now have virtual meetings. We can have them
7 by videoconferencing or through other forms of technology and
8 I will show you one such means.

9 We have had remote first appearances or remote
10 arraignments for a very long time, and many of you take them
11 for granted. We do not often have, but could have, remote
12 motion practice. We are beginning to have remote
13 interpretation. We have remote witness testimony, sometimes
14 as I have already shown you remote judges appearing, or remote
15 lawyers. Increasingly, and King County in Washington State
16 comes to mind, we're having mental health court use of remote
17 appearances.

18 If we proceed where it make sense and is lawful to use
19 remote appearance, we save often a great sum of money. We cut
20 down on pollution and traffic. Arguably, we ought to be
21 saving legal fees because we are no longer having lawyers
22 billing individuals for sitting in court. But you do notice I
23 have question marks after that because that's a leap of faith.
24 Provide representation that otherwise is impossible.

25 We have been asked at CLCT to conduct a proof of concept

1 project where pro bono lawyers and law school clinics will
2 represent people by remote video conferencing using laptop
3 computers who are detained in institutions pending deportation
4 hearings. So that a lawyer at her desk will be able to meet
5 her client, interview, consult, and then later represent that
6 person remotely in what is already often a remote immigration
7 court hearing.

8 Now, note, when you evaluate these things -- and we have
9 no data yet on which to evaluate that -- often the question
10 is, what standard are you going to use? Is that as desirable
11 as having a human being sit next to the client, and, if need
12 be, say, if that person is distraught, pat that person on the
13 shoulder, "Now, now, we'll do our best"? Probably not. Is it
14 better than not having a lawyer at all? I suspect strongly
15 so.

16 The question on many of these remote appearances we are
17 comparing what to what? Is it desirable for a judge to be in
18 the courtroom? Surely. If your flight has just been
19 cancelled, as mine was a few minutes ago leaving today, and
20 you are supposed to be on the bench later today or tomorrow,
21 is it better that you not show, or you appear live as I showed
22 you with the Sixth Circuit? Depends on which standard you
23 want to use.

24 And, again, we have changes in culture. Back to ZITS.
25 "Jeremy, where have you been? I've been calling you for

1 hours?"

2 "Oh. Was that you?"

3 "Mom, we've been over this before. You have to text
4 someone that you're going to phone them. Otherwise, people
5 won't answer their phones."

6 "Mom, what is it about communication that you find so
7 confusing?"

8 For a number of years, I ran what we called our Legal
9 Skills Program at William and Mary. We discovered to our
10 shock that a fair number of second- and third-year law
11 students who are doing simulated client representation, where
12 their clients were people like hospital presidents for real,
13 were quite outraged that their clients thought they should be
14 phoning -- could be phoning them. They expected them to make
15 appointments with their student counsel by texting. We did
16 our best to disabuse them of this interesting notion, but it's
17 not just law.

18 There is no way for you read this, but this is from The
19 Wall Street Journal of August 27, 2013, talking about
20 businesses that have executives who come in in the day and
21 lock their phones up in a drawer, so they won't have to answer
22 them because they expect people to text them and sometimes
23 even email them. This is a change in our expectations.

24 Back to ZITS. Jeremy to his friend, "I can't believe
25 that Sarah hasn't responded to me yet. I texted, Tweeted,

1 Facebooked, and emailed her.”

2 “She is right over there. Why don’t you just go over and
3 talk to her?”

4 “What generation did you say you were from?”

5 By now, you should all have had the experience of
6 watching two or more teenagers all sitting next to each other
7 texting to each other. What happens when they’re your
8 lawyers? And lest we forget, what happens when they’re your
9 jurors? Because before I finish today I’m going to argue that
10 a fair number of jurors believe that there is somewhere a
11 constitutional right to Google, which is depressing.

12 We will, we believe firmly, be increasingly dealing with
13 remote motion practice. Why is it that as judges you force
14 lawyers to come in to make what may well be a one-minute
15 motion, with the cost of getting to the courthouse, going
16 through courthouse security, waiting their turn? It’s
17 certainly easier for the court. But since we are supposed to
18 be worried about the administration of justice, is that the
19 right way?

20 Court Call is one of the companies that has a display in
21 the Exhibition Room, and their advertising is there. From
22 their website, they claim that in 2010 alone, judges helped
23 lawyers skip one million trips to and from courts using
24 telephone-based motion practice. And they now have video-
25 based as well.

1 This is a bad picture, because I took it. This is an
2 experiment with motion practice. You are looking at my
3 daughter, who is a lawyer in Chicago, a lawyer in Delaware,
4 myself in Williamsburg, and a gentleman from Cisco, because
5 we're using a Cisco product called Jabber. And this is the
6 functional equivalent of a judge sitting at your bench having
7 a motion argued from the desks of, in this case, potentially
8 four others.

9 Is there a reason not to do this for a mundane, ordinary
10 motion? You're not going to handle a major Constitutional
11 suppression motion this way. But why not this?

12 Remote interpretation is a matter of increasing
13 importance. This is the chief interpreter for the Ninth
14 Judicial Circuit of Florida, which is in Orlando, and Ody is
15 looking at a number of screens. She can interpret for, I
16 believe, any courtroom in her courthouse, as well as for the
17 other courthouses in that particular circuit.

18 So interpreters are very, very important people. We
19 never have enough of them. If we put them all in one place so
20 they don't have to lose time for travel and they can be
21 spliced in immediately -- bad word -- they can be connected
22 immediately, why not do it that way? We can potentially even
23 use interpreters from other courts.

24 Or, I already referred to remote hearings. This is, in
25 fact, our Immigration Courts Project. You're looking at a

1 room in a detention facility, and in that room, there's a
2 large flat panel, and you can see an immigration court
3 proceeding taking place. The individual who is detained is
4 sitting in that room, sometimes with counsel, sometimes not.
5 Counsel could be there or in the courtroom or potentially even
6 remote, and the individual is having a full hearing by video
7 conferencing.

8 This is, again, the picture of our bilateral commission
9 on oceanic geoengineering. You need to have a large meeting.
10 We need a fact-finding inquiry. We have three people in our
11 courtroom and three live from Montreal at the Cyberjustice
12 Laboratory. And all the information you need is available
13 electronically.

14 But there's a question here, and it's one that ultimately
15 becomes very important. How real do we need our proceedings
16 to be? Or put differently, to what extent do we insist on the
17 functional equivalent of being there in person?

18 I've had any number of judges tell me, "I don't like
19 remote testimony because I can't tell if the remote witness is
20 lying."

21 By the way, that presupposes that we can tell. Many of
22 us believe firmly that we can, and certainly the legal system
23 in the United States insists that demeanor evidence is
24 important. As a former trial judge, a rather unimportant one,
25 I'd point out, I grew to have grave doubt about my ability to

1 actually tell when someone was telling the truth or not, even
2 though it felt like I could tell.

3 People tell me over the years, I can't see the beads of
4 sweat rolling down their face. Now you can. I can give you
5 remote testimony that has the resolution that is so high and a
6 close-up so close that you can count pores. If that's
7 important to you, we can do it.

8 But do we need to do that? Suppose you're having a
9 meeting with other judges or other members of your courthouse
10 staff, and some of them just couldn't come in to the meeting
11 room that day.

12 How about this? This is from Avaya. It's a virtual
13 meeting program called AvayaLive Engage. You get yourself an
14 avatar; you don't have too many choices for customization.
15 I'm sorry, no wings, no tails, nothing like that. In our
16 Friday casual, jacket and ties, female equivalent.

17 And you can go ahead and meet, you can have classes, you
18 can have a conference. And you can even set it up so you can
19 whisper into the ear of the person next to you and no one else
20 can hear you.

21 Now, this seems like almost a toy or a game. It's being
22 used in William and Mary in our MBA program. Is there any
23 reason we have to be able to see each other and smile at a
24 fairly routine meeting? Well, sometimes it can be a good
25 thing.

1 The point is, technology gives us many more choices than
2 we sometimes think we have. And sometimes, this works
3 incredibly well. I'll be doing some classes this way.
4 Preliminary experiments say it works very, very well. In
5 fact, our students think it's fun. When was the last time you
6 went to a meeting and thought it was fun?

7 Now, I thought we might want to spend a couple of minutes
8 and talk about what happens when we deal with the impact of
9 technology on courtroom practice, as distinguished from
10 hardware and software. Often when, for instance, you're
11 trying to determine the admissibility of evidence that came
12 from a computer, a cell phone, a tablet or something, it can
13 look at bit strange. And I thought I might just talk about
14 that for about five minutes.

15 I said many years ago, and I believe this remains true
16 today, that the traditional evidentiary rules do handle
17 modern-day evidentiary disputes.

18 Most of you in the United States, anyway, are under the
19 Federal Rules of Evidence or variations of it, to be more
20 exact. I can't speak for the Canadian provinces that have
21 their own rule.

22 Generally speaking, though, no matter how tortured it may
23 well be, the normal evidence rules will allow a judge to make
24 an evidentiary ruling on information that is electronic in
25 scope.

1 The question we're now beginning to ask is do we like the
2 way the answers come out? And I thought I would borrow one or
3 two examples of that in particular.

4 I have a colleague, Professor Jeff Bellin at William and
5 Mary, who has specialized recently in the subject and has
6 written a number of articles. If you have an interest, I
7 suggest you look him up.

8 Here I have some of the sites. He and Andrew Guthrie
9 Ferguson wrote a great article just about to come out, "Trial
10 by Google: Judicial Information in the Information Age."
11 Suppose there's a question, for instance, as to where
12 someplace is.

13 Under the Federal Rules and almost all the states that
14 follow this, you take judicial notice information when it is
15 either universally known within the jurisdiction or can be
16 verified by ready resort to sources, the accuracy of which
17 cannot reasonably be questioned.

18 One of the examples given by the authors of this article
19 is Google Earth. Everyone says no argument about Google
20 Earth. In fact, if you go ahead and use the Internet, you can
21 find immense amounts of information which arguably there may
22 not be any significant doubt about, thereby obviating an
23 immense amount of time spent and sometimes cost in trying to
24 prove things, especially because, as many of you know, Rule
25 104(A) says you do not apply the law of evidence, except to

1 privileges, to determinations of admissibility.

2 So in determining whether it's readily available or
3 accurate, you, for instance, don't have to worry about the
4 hearsay rule.

5 It's notable, by the way, that the authors point out that
6 the cases that exist have generally not recognized Wikipedia
7 as one of these accurate sources.

8 Another colleague, Ali Larson, wrote a very well-received
9 article talking about how the Supreme Court gets its factual
10 information: They Google it. In fact, I haven't heard of
11 this happening before, but later tonight Ali is going to be on
12 the Stephen Colbert Show to discuss the article. So if you're
13 looking for late-night entertainment with legal scope you
14 might want to tune in.

15 So whoever would have thought that the Internet would
16 give this vast amount of potential admissible evidence simply
17 by using the judicial notice escape hatch? I confess I
18 didn't.

19 Then he wrote a lovely article about the scope of the
20 present-sense impression. Rule 803.1, "A present-sense
21 impression and exception to the hearsay rule is a statement
22 describing or explaining an event or condition made while
23 or immediately after the declarant received it."

24 As Professor Bellin points out, this rule stems from
25 the period of time in which human beings would do things

1 like look out the window and say, "Oh, Joe's changing the
2 tire on the car," and if we had any doubt about the
3 accuracy, someone could usually call the person who made
4 the statement, even though the person didn't have to come
5 to court.

6 The person who heard it could testify to it as a
7 present-sense impression. That's a fairly accurate source
8 of information.

9 However, courtesy of Professor Bellin's article,
10 "Facebook, Twitter and the Uncertain Future of Present Sense
11 Impressions", published in 2012, he quoted the following
12 tweet, "I just raced Justin Bieber down Ventura in his
13 Ferrari. I won, but a FedEx truck got in his way."

14 So we now have Twitter. We have no idea who sent this.
15 Is it explaining an event at or immediately after the time?
16 Absolutely. Is it admissible under the rules that most of us
17 have? Absolutely. Ought it to be?

18 Isn't this a recipe for the creation of fake and
19 fraudulent evidence?

20 So here's yet another article. I won't bother you with
21 it, rather, it talks about maybe we need a special constrained
22 exception for all this.

23 The Fourth Amendment in the area of the Constitution in
24 the United States is in flux. After *Riley v. Florida*, it
25 appears that computer data is so numerous and so special that

1 we can't have the police search a cell phone ordinarily
2 without exigencies or warrant. And doesn't that suggest
3 something about the scope of searches for computers very soon?

4 All of this is in the day-to-day work of every judge.
5 And I already mentioned the problem of jurors.

6 Social media in the courtroom is a problem for many
7 courts. Increasingly, jurors seem to believe they have a
8 fundamental right to look up anything they want. And even
9 though many of you are giving instructions, telling jurors, if
10 they are allowed to keep their cell phones or other devices,
11 they shouldn't do this, a number are saying, "I won't, Judge,"
12 and then immediately going down and doing it. You've got to
13 be impressed.

14 So that brings me to courtroom technology. Why have
15 courtroom technology? We think it improves accuracy by
16 enhancing the factfinder's ability to understand and remember.
17 That, by the way, includes judges.

18 Most of us do best when we see and hear. And as you all
19 know, lawyers are really good at talking at judges. We
20 usually can get a more accurate and often a faster transcript
21 or an electronic court record.

22 It's amazing how much time you can save with a high-tech
23 trial. The usual estimate is a minimum one-quarter to one-
24 third time savings.

25 And in major hearings, I had a federal district judge

1 from Oregon and a particularly famous judge from Sydney,
2 Australia, who, in totally unrelated cases, claimed a fifty-
3 percent time savings, because we don't have to have people
4 walk around the courtroom showing documents. We just present
5 it electronically on screens. And of course, we have remote
6 testimony.

7 So the technologies that we're usually dealing with here
8 is evidence presentation of the type you're used to. We show
9 images of pictures and documents, but things are changing, as
10 I'll show you in a minute.

11 The court record, remote appearances, assistive
12 technology for those who have some special difficulties,
13 particularly seeing, moving and hearing, and then, there's a
14 software that may predict, for instance, rehabilitation
15 possibilities, as some of you may be using. I'm not going to
16 comment on that further today.

17 If lawyers are showing information visually in your
18 courts, that also means that, subject to your rules, they get
19 to it in opening statements and closing arguments.

20 Often, for openings, they have to give notice to you and
21 opposing counsels to what they want to show. No court that
22 I'm aware of has required that for closings.

23 Here is electronic evidence. This is from one of our
24 cases I showed you earlier. We have an FBI forensic expert, a
25 real one. He's trying to explain to jurors how e-mail works.

1 Each of the jurors can see a chart of the Internet and e-mail
2 systems as he explains it to them. So they're hearing and
3 listening and watching at the same time.

4 Most of you are familiar with document cameras. You put
5 a document or a gun or anything else underneath a camera, and
6 then the judge and jury, if there is one, can go ahead and see
7 it. It's been the single most basic form of evidence
8 presentation technology since the beginning.

9 Now, we have 3D. WolfVision has a 3D capable document
10 camera. And now, that means you could well have: Your Honor,
11 will you please instruct the jury and yourself to put on your
12 3D glasses. And we actually did demonstrate this at the Court
13 Technology Conference in Baltimore. It raises some
14 fascinating questions of unfair prejudice since we used a
15 bloody jagged brick.

16 And let me tell you, for those of you who were not there,
17 when you looked at this in 3D, it was arguably even more
18 impressive than it was looking at it in your hand. However,
19 in your hand, you could feel its weight whereas you couldn't
20 do that when you're actually just looking at it.

21 Lawyers are increasingly using computers to display
22 images on their screens for all purposes. I might tell you,
23 by the way, if you've not been following the gaming news or
24 the Facebook acquisitions, immersive virtual reality will be
25 coming to your courtrooms sooner than you think. It won't

1 just be put on your glasses. It'll be put on your Oculus Rift
2 headsets so that the jurors can now be back in the location of
3 the incident.

4 We've already done immersive virtual reality something
5 like ten years ago, but it wasn't 3D immersive for each of the
6 jurors who just saw what was happening and the witnesses.

7 Increasingly, we are moving to tablets, which is a fancy
8 word for saying mostly iPads.

9 Out of curiosity, ladies and gentlemen, how many of you
10 have tablets of some type?

11 Hands, please.

12 How many of you have Apple products?

13 Hands.

14 That's about right. Thank you.

15 Data that I cannot give you the source of suggests that
16 some two-thirds of federal judges are using tablets probably
17 of one particular manufacturer. And what this has done is
18 it's changed our culture yet again in a different way than you
19 might have expected.

20 An amazing number of judges for years have been very ill
21 at ease with computers, especially computers used in the
22 courtroom for evidence presentation.

23 However, for reasons I've never been able to understand,
24 iPads, in particular, are not computers. They are iPads.
25 They are fuzzy. They're warm. They're cuddly. And almost

1 all judges have them. So, increasingly, we have lawyers who
2 are trying very, very hard to go ahead and use iPads and maybe
3 phones in the courtroom for evidence presentation.

4 So in March, we're going to do an experimental case in
5 conjunction with the Federal Judicial Center where, to the
6 degree possible, everybody is using phones, tablets, and other
7 bring-your-own devices. We will report at the next Court
8 Technology Conference on that.

9 Now, think about what's happened with technology. Prices
10 of displays, as well as computers and tablets, have plummeted.
11 People increasingly expect to see things. But they're so used
12 to changing pictures in particular, we're fairly sure that
13 they're increasingly questioning whether this evidence is
14 actually the original evidence or whether somebody tampered
15 with it.

16 I'm not sure there's anything we're going to be able to
17 do about that by the way either. We're going to have a whole
18 lot more visual evidence, ladies and gentlemen. We may have
19 more questions about it.

20 We remain convinced in Williamsburg that document
21 evidence is best seen on small screens, individual displays or
22 one display for every two jurors and for judges, not on single
23 large screens that everybody has to strain to see.

24 Often, we have whiteboards. This is some smart
25 technology that everyone can see when you do want a large

1 image.

2 But what will we be showing on it? Well, I could have
3 brought you a clipping from last week or the week before that
4 or the week before that, as we now read about numerous
5 different law enforcement officers and agencies who are now
6 equipping their officers on the beat with cameras so they're
7 able to see exactly what happened.

8 This is from a local newspaper. These are body cameras
9 often worn on glasses or other places. All that information
10 is coming into your courtrooms, folks.

11 Drones. The amount of drone evidence is going up
12 sharply, even though the FAA is a bit concerned about the use
13 of drones.

14 You can just imagine the first family law case when
15 someone wants to show you pictures of an unfortunate liaison
16 taken through the bedroom windows.

17 And lest we forget there is Google Glass, because Google
18 Glass will allow people to record in audio and video from a
19 little device that is not on the cameras. Talk about privacy.

20 Where is all this stuff going to show up? In your court,
21 just like right now it's almost impossible to have an incident
22 take place without anyone pulling out a cell phone and
23 preserving it. It's all coming into your courtroom.

24 We're not at the point where we can say anymore "I'd like
25 to have that paper evidence, Counsel," and you can present it,

1 because now all this stuff has to be shown electronically.

2 And this, of course, is the iPad decade.

3 I am told the first transcripts have arrived. This is
4 the first 25 minutes of this particular lecture, all from
5 digital audio.

6 For those of you who haven't seen it, I couldn't resist
7 this. This is now an old Wall Street Journal article talking
8 about iPads for dogs. So, if dogs can use them -- Apple sold
9 20 million in the first year. Ninety-one percent of lawyers
10 who use tablet devices opted for the iPad from 2012.

11 From an ABA tech study in 2012 -- you don't have to look
12 at all the numbers -- this is the number of lawyers using a
13 tablet for law-related tasks, and you already know what the
14 vote is in this room for judges. Judicial use is very large.

15 What would you want to access? Almost everything. What
16 do the lawyers want? Evidence presentation. This is an iPad.
17 This is a case ready to be presented. You pull up your
18 document, and you go ahead and connect to the courtroom
19 evidence display system.

20 This is a contract. Here you annotate the contract with
21 a key phrase, and you display it. This is a deposition, audio
22 and video, all run off an iPad. Or you can use a tablet
23 computer. I am presenting this from a Dell XPS.

24 If I were to go ahead and switch it, this will become a
25 complete tablet. I can cradle it in my arm, and I can use it

1 for evidence presentation in court.

2 We have iPads being used for jury monitors, at least one
3 court that we have heard of. Australia will experiment with
4 the use of iPads for evidence deliberations in the jury room.

5 We have talked about the court record a number of times,
6 and I will be finishing up my presentation in about five
7 minutes and will take questions.

8 Court records today, due to the combination of wonderful
9 human beings and great technology, gives us a more accurate
10 and useful court record, enhanced transparency for the public,
11 and increased accessibility.

12 Stenographic court records of course use stenographic
13 court reporters who can deliver, with proper equipment, real-
14 time. It comes to lawyer and judges, or, if you wish,
15 elsewhere in sometimes seconds. And you can have remote
16 reporters. This is a stenographic realtime reporter in our
17 courtroom.

18 This is a remote court reporter. Our court reporter
19 could be anywhere in the world, could go ahead and follow what
20 was going on, take the transcript, and send it to us
21 electronically within seconds. Or we could have voice
22 writing. The court reporter repeats every word into a mask
23 designed to muffle the noise, and we have text come out, often
24 realtime, some very good realtime voice writers.

25 Or we can do digital audio or digital audio and video,

1 and we have been showing that to you today. That is where
2 this first 25 pages came from. Everything that I am saying is
3 being sent to remote transcribers throughout the United
4 States. They are carving it up into six-minute pieces,
5 transcribing it, reassembling it, and sending it here, or, in
6 this case, available to you on the websites of FTR and the
7 AAERT.

8 Can we do this faster? Yes, depending on the ability of
9 your transcriber. Two years ago, we had a 15-minute return,
10 not quite realtime but very close.

11 Here, using FTR's pictures, you can see how to use an
12 iPad for access to the digital recording. And you can even go
13 ahead and annotate, flag issues.

14 Our court record is a multimedia court record made
15 possible by stenographic court reporters or voice writers, in
16 particular. Our court record consists of the digital audio,
17 the digital video, the text transcript in real time, and the
18 actual evidence images themselves as they're offered into
19 evidence in court. You can pick this up anywhere in the
20 world, so long as you have a computer with a connection to the
21 Internet.

22 This is the most comprehensive court record in the world.
23 It's also the most expensive. And you can imagine what a
24 court tends to say these days if we say, ah, we can give you
25 an even better court record. "Cost more? Not in my court."

1 Then we come to our last major topic, then I'll take
2 questions. I've already talked briefly about assistive
3 technology helping those who have difficulty seeing, moving,
4 and hearing. That includes courtroom participants including
5 judges, the court staff, and the public.

6 This is a witness in one of our trials who is blind since
7 birth. She's using a handheld Braille device, and her screen
8 reader reads documents to her at 750 words a minute. There
9 are experts in this room, but my former court reporter would
10 mutiny at 250 words a minute, and she's really good.

11 This is a witness who cannot hear and cannot speak.
12 We're using remote American Sign Language interpretation.
13 Here, he's signing, and then we get English from the courtroom
14 speakers from a remote interpreter.

15 This is a woman with macular degeneration, a juror. Our
16 equipment allows us to increase the size of images, at least
17 if they are physical.

18 Here is counsel suffering from a very real case of what
19 is politely called "Gulf War Syndrome." He wears large
20 braces. He's now an administrative law judge. He rolled into
21 the courtroom on a Segway. That, too, is legal/court
22 technology.

23 And while we're at it, in my closing, for those of you
24 who might possibly have missed it, a couple of years ago, the
25 American Bar Association made a change in the commentary to

1 the model rules. And Rule 1.1 is the basic rule of competence
2 that most of you are familiar with, requiring that a lawyer
3 must be competent.

4 The new Comment 8 says that lawyers should keep abreast
5 of changes in the law and its practice, including the benefits
6 and risks associated with relevant technology.

7 Ladies and gentlemen, we're now telling lawyers they have
8 to be technology aware, and in most cases, technology capable.
9 They're the people who are appearing before all of you. So
10 will the lawyers adjust? We hope so.

11 Will you? That, ladies and gentlemen, is your decision,
12 and the best way to be able to do it, if you are not already
13 current, is first understand what's going on out there, that
14 it is not silly, even though it can sometimes be silly, that
15 sometimes it can be acutely useful to you when properly
16 controlled by the judge.

17 And if you haven't done it before -- and I hope most of
18 you have -- if someone comes up with a suggestion, take it
19 seriously. Ask what good it can be and what its possible harm
20 could be. Don't go ahead and dismiss it immediately, or for
21 one or two of you, perhaps, don't assume it will be perfect
22 and not cause you any pain at all. That doesn't work well,
23 either.

24 Ladies and gentlemen, on that note, what questions can I
25 answer? And I apologize for having asked you to save them.

1 (Applause)

2 And my thanks to those folks who have been handling the
3 transcript. Thank you very much, and I apologize for some of
4 my word choices.

5 (This concludes the transcript of the lecture.)

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25REPORTER'S CERTIFICATE

I, Margaret Ann Morgan, hereby certify that I am an AAERT certified court reporter employed by the Third Judicial District, State of Minnesota; as such reporter and using FTR Falcon I digitally recorded "The Court and Courtroom Technology in the Age of the Cloud and iPad" presentation by Fredric I. Lederer, Chancellor Professor of Law, during the American Judges Association 54th Annual Educational Conference in Las Vegas, Nevada on October 6, 2014; from those digital recordings the foregoing transcript was transcribed to typewriting by AAERT certified transcribers in New Hampshire, Florida, Ohio, and Virginia; edited and proofread by SueLynn Morgan and Fraser Wyatt, ForTheRecord; and that the foregoing transcript consisting of 42 pages constitutes a full, true, and accurate transcription of the presentation.

Dated: October 6, 2014.

/s/

Margaret Ann Morgan, AAERT CER CET
District Court Reporter
Rochester, Minnesota
margaret.morgan@aaert.org

/s/

SueLynn Morgan, CSR
ForTheRecord
Phoenix, Arizona
smorgan@forthrecord.com