

4-24-2014

Courtroom Technology

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Recommended Citation

Moyeda, Jessica, "Courtroom Technology" (2014). *Cornell Law School Graduate Student Papers*. Paper 30.
http://scholarship.law.cornell.edu/lps_papers/30

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COURTROOM TECHNOLOGY

I. OVERVIEW AND HISTORY OF TECHNOLOGY IN THE COURTROOM

Over a decade has passed since the first technological tidal wave hit contemporary courtrooms. Technology offered a multitude of advantages for courts, as well as attorneys, litigants, witnesses, jurors and judges. Practically every individual involved in some way, shape, or form with courtroom processes has been impacted by the advent of the electronic courtroom.¹

Federal and state courtrooms are currently being modified with technological improvements that will aid in trial presentation.² The federal judiciary, through the Administrative Office of the U.S. Courts, is consistently updating its courtrooms and infrastructure to reflect technological developments.³ Before the judiciary made such improvements litigants and their attorneys had the burden of staying up to date with technological advancements, often generating substantial monetary costs.⁴ Interestingly these technological improvements have not widened the gap between large and small firms (where the available resources are vastly different). Indeed, some scholars argue that “the installation of new technology into courtrooms serves to equalize what would otherwise be a ‘digital divide’ if the parties provided their own systems.”⁵ However, this could be considered an oversimplification of the circumstances: improvements in courtroom technology have leveled the playing field only to the extent that adversaries have the same level of access to technology. Complications of fairness arise when litigants use their resources to bolster arguments, for example, by creating Computer Generated Evidence (CGE).⁶

Regardless, courtroom technology has been shown to increase expediency, decrease trial costs, and improve jury retention. In sum, the use of courtroom technology allows the judiciary to handle a continuously growing caseload while, at the same time, minimizing spending and maintaining services to the public.⁷

¹ James O’Conor Gentry, Jr., *Effective Use of Technology in the Courtroom*, 43 M.D B.J. 36, 39-40 (2010).

² See generally *Long Range Plan for Information Technology in the Federal Judiciary*, JUDICIAL CONFERENCE OF THE UNITED STATES, ADMIN. OFFICE FOR U.S. COURTS (2013) (explaining that the Administrative Office of the United States Courts is responsible for preparing and annually revising the *Long Range Plan for Information Technology in the Federal Judiciary*; the Judicial Conference Committee on Information Technology provides guidance in the development of annual updates and recommends the plan for approval by the Judicial Conference).

³ *Id.* Examples include the CM/ECF System, Jury Management System, Integrated Library System, and Central Violations Bureau Management System.

⁴ Michael E. Heintz, *The Digital Divide and Courtroom Technology: Can David Keep Up with Goliath?*, 54 FED. COMM. L.J. 567, 567-68 (2002).

⁵ Fredric I. Lederer, *Courtroom Technology: A Status Report*, in ELECTRONIC JUDICIAL RESOURCE MANAGEMENT 179, 180 (Kamlesh N. Agarwala & Murli D. Tiwari eds., 2005) [hereinafter Lederer, *Courtroom Technology*].

⁶ See *infra* Part III.A.

⁷ See *Long Range Plan for Information Technology in the Federal Judiciary*, *supra* note 2.

II. LESSONS FROM THE COURTROOM 21 PROJECT: EXAMINING TYPES OF TECHNOLOGY AVAILABLE IN THE COURTROOM

The Courtroom 21 Project, “The Courtroom of the Twenty-First Century”, is a joint project between William & Mary Law School and the National Center for State Courts.⁸ The purpose of the project is to improve the legal system through technological advancement and appropriate use thereof. In order to accomplish this goal the Courtroom 21 Project emphasizes experimental trial work that focuses on legal technology and its different uses within the courtroom.⁹ Through the use of their “high-tech” courtroom students at William & Mary Law School both hone their trial advocacy skills and test the latest advancements in courtroom and legal technology.

Based upon the Courtroom 21 experience, modern trial courtroom technology can be roughly divided into five categories:¹⁰

1. Information Presentation
2. Remote Appearances
3. Court Record
4. Assistive Technology
5. Jury Deliberations

A. *Information Presentation*

The heart of an attorney’s case is the presentation of the evidence to the fact-finder. In the context of traditional trial advocacy an attorney would present the evidence for his case orally with documentary and real evidence.¹¹ However, a “technology-augmented trial inherently places great emphasis on the visual display of information to the fact-finder . . .”¹² Indeed, timelines, calendars, maps, charts, diagrams, and animations are some of the most effective and impactful examples of visual displays.

⁸ *About Us*, CENTER FOR LEGAL & COURT TECHNOLOGY, <http://www.legaltechcenter.net/about/> (last visited April 9, 2014).

⁹ *Id.*

¹⁰ Lederer, *Courtroom Technology*, *supra* note 5, at 183.

¹¹ *Id.* Demonstrative evidence is offered at trial to illustrate and clarify. It includes objects brought into the courtroom and displayed to the jury: photographs, videos, maps, diagrams, drawings, and models. Modern technology has expanded the ways in which these exhibits can be displayed. The most frequently seen technological advancements used in courtrooms today are the document camera, computer whiteboards and computer display systems, which allow attorneys to display documents on a large scale in their actual format while also digitally highlighting or manipulating them. Elan E. Weinreb, “*Counselor, Proceed with Caution*”: *The Use of Integrated Evidence Presentation Systems and Computer-Generated Evidence in the Courtroom*, 23 CARDOZO L. REV. 393, 399-400 (2001).

¹² Frederic I. Lederer, *Wired: What We’ve Learned About Courtroom Technology*, 24 CRIM. JUSTICE 18, 20 (2010) [hereinafter Lederer, *Wired*].

Modern courtroom technology such as document cameras, computer whiteboards, and computer display systems¹³ allow attorneys to easily and quickly display information to jurors, witnesses, and judges. These formats inspire confidence and trust in the information being presented, and also capitalize on the visual learning style of most individuals. Indeed, many attorneys believe that the fact-finder is more responsive to electronically presented evidence, and generally retain more information than through the traditional trial methods.¹⁴ Furthermore, an attorney is able to alter a document on the spot, by highlighting, zooming in, and isolating certain portions. “When an attorney selects portions of documents for viewing, he, by definition, excludes what he or she considers irrelevant.”¹⁵ The result is that the jury members are presented with only the main statements or images that an attorney wants them to recall.”¹⁶

It should also be noted that because jurors place great emphasis on visual displays of information, there is the possibility that they will become distracted by such displays. Indeed, “it is likely that in jury trials jurors are likely to spend more time watching evidence than counsel.”¹⁷ This shift in focus, from the attorney to the evidence, demands that an attorney carefully consider the material or information to be presented, the technology used to present it, and the means by which the fact-finder will experience it (some visual display method).¹⁸

B. Remote Appearances

The use of videoconferencing is increasing, especially for remote witness testimony.¹⁹ The technology itself is self-explanatory: “the remote witness or court participant appears in the courtroom in a display device . . . [while] a camera co-located with the display ensures that when a courtroom participant looks at the remote person, as in counsel questioning a remote witness, there is effective eye-to-eye contact.”²⁰ Studies suggest that jurors believe testimony from remote witnesses can be as valuable as witnesses testifying in person.²¹

¹³ This refers to a system by which computers are linked to a system of video display monitors, where anything displayed on the computer can then be displayed in the courtroom. Lederer calls this technology a “video distribution system”. Lederer, *Courtroom Technology*, *supra* note 5, at 184.

¹⁴ Heintz, *supra* note 4, at 578.

¹⁵ Weinreb, *supra* note 11, at 401.

¹⁶ *Id.* Accord Frederic I. Lederer, *The Road to the Virtual Courtroom? A Consideration of Today’s – and Tomorrow’s – High-Technology Courtrooms*, 50 S.C. L. REV. 799, 813 (1998); Fred Galves, *Where the Not-So-Wild Things Are: Computers in the Courtroom, the Federal Rules of Evidence, and the Need for Institutional Reform and More Judicial Acceptance*, 13 HARV. J.L. & TECH. 161, 178-79 (2000).

¹⁷ Lederer, *Courtroom Technology*, *supra* note 5, at 183.

¹⁸ *Id.*

¹⁹ See Lederer, *Wired*, *supra* note 12, at 22-23.

²⁰ *Id.* at 22.

²¹ *Id.* (explaining that “Laboratory Trials suggest that remote testimony is likely ‘safe’, at least so long as the remote witness appears life-size in a display immediately behind the witness stand and is subject to cross-examination under oath.”). However, Lederer acknowledges that others do not believe remote witness appearances provide adequate demeanor evidence or that the technology affects either the testimony itself or the fact finder's perception of it. *Id.* (citing *Developments in the Law Access to Courts*, 122 HARV. L. REV 1151, 1181-88 (2009)).

C. Court Record

Advancements in courtroom technology allow the court record to be generated almost immediately upon adjournment of court. Today, court records are generated using digital electronic recording systems (sometimes accompanied by video), real-time transcription (provided by a stenographic reporter and made available instantaneously), or even automated recording devices.²² As the Courtroom 21 Project indicates, court record technology is moving toward a merger of several applicable technologies, creating a multi-media court record that incorporates the real-time transcript, digital audio and video, and images of evidence presented in court.²³

D. Assistive Technology

“Assistive technologies ‘assist’ those with special needs, especially those who have difficulties hearing, seeing, and moving in the courtroom environment.”²⁴ Ensuring access to courtrooms is obviously extremely important, and when considering the population size of older generations this concern is compounded. Some of these advancements include: real-time transcription for trial participants who cannot hear to instead read documents, sign language or foreign interpretation made available in court via videoconference, or reproduction of documents in braille for blind participants.²⁵

E. Jury Deliberations

Courtroom technology extends beyond closing arguments and the court record into jury deliberations. During deliberations jurors are now able to use display technology to review the evidence presented at trial. This ability has proven extremely useful in cases with many exhibits;²⁶ jurors are able to quickly access, review, compare, and examine courtroom documents rather than flip through notes or several papers.

III. ETHICAL CONCERNS ARISING FROM THE USE OF COURTROOM TECHNOLOGY

A. Disparities in Abilities to Afford New Courtroom Technology

Concerns over the fairness of courtroom technology have somewhat abated, the upgrades in courtroom technology made by the federal judiciary (and some state courtrooms) have, in some respect, created a more fair trial environment for litigants. However, upgrades within courtrooms have spurred new concerns regarding the equities of technology. For example, one

²² Lederer, *Courtroom Technology*, *supra* note 5, at 192-93 (discussing the implications of real-time court records: an attorney “can have a non-resident team that is fully cognizant of everything that is happening in court just as it happens, and able to respond to trial counsel’s immediate needs.”). Interestingly, since courtroom technology has enabled the creation of a more complete and accurate court record, reviewing courts at the appellate level are more easily able to understand what occurred at trial. In addition, the Courtroom 21 Project has the ability to “electronically capture” any annotations to exhibits as they are made. *Id.* at 195-96.

²³ *Id.* at 193.

²⁴ *Id.* at 194.

²⁵ Lederer, *Wired*, *supra* note 12, at 24-25.

²⁶ Lederer, *Courtroom Technology*, *supra* note 5, at 195.

of the primary concerns with technology like Computer Generated Evidence (CGE)²⁷ is that certain litigants will have capabilities to produce CGE while others will not. Such evidence is highly persuasive, and as a result its admissibility and fairness is always a question at trial.²⁸

However, some argue that “[t]his problem is not new . . . [i]nequality concerns begin *long before* litigants start considering the use of CGEs at trial. The economic inequality between litigants is a long-standing problem in the American legal system.”²⁹ In this sense, CGE is merely a scapegoat for larger issues of fairness within the legal system, issues that must be addressed on a much larger level. Indeed, some suggestions for combatting this particular instances of unfairness is for the court to provide some assistance: either a library of stock CGE programs, or appointing an expert in computer animation and pushing the cost onto the unsuccessful party.³⁰

B. Training and Ethical Obligations

“Training remains the single largest obstacle in the use of courtroom technology . . . a lawyer must have sufficient personal understanding of the technology to know what can be done with it, any limitations, and how difficult and costly it may be to execute.”³¹ The Courtroom 21 Project explains that training is essential, especially hands-on training.³² In addition, because the advances in courtroom technology are becoming widespread many lawyers believe that there is an ethical obligation to become competent in the basic uses of courtroom technology.³³ In sum, the importance of training cannot be understated, especially in the context of being able to competently represent a client.

IV. CONCLUSION

Courtroom technology, like all technology, will continue to change and, hopefully, improve. Technology can be an amazingly helpful resource, but it is only a tool. As lawyers develop and adapt to changes in technology, they must also remember to make efficient and effective use of these tools, to acquire the necessary training, and remember their obligation to the client.

²⁷ Computer Generated Evidence (CGE) is a form of either demonstrative or substantive evidence, encompassing computer animations, simulations, or data that assist jurors in understanding complex issues or theories during trial. Weinreb, *supra* note 11, at 403-04.

²⁸ However, it is not uncommon for CGE to be admitted and shown to the jury. *People v. Morency*, 940 N.Y.S.2d 138, 140 (2012) (upholding the lower court’s decision to admit computer generated animation as demonstrative evidence used to illustrate expert testimony) (explaining “[i]t is for the trial court, in the exercise of its sound discretion, [and] based upon the nature of proof and the context in which it is offered, to determine whether the value of the evidence outweighs its potential for prejudice.”)

²⁹ Galves, *supra* note 16, at 290.

³⁰ *Id.* at 297.

³¹ Lederer, *Wired*, *supra* note 12, at 21.

³² *Id.*

³³ *Id.*