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The Digital Divide and Courtroom Technology: Can David Keep Up With Goliath?

Michael E. Heintz

Indiana University School of Law

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The Digital Divide and Courtroom Technology: Can David Keep Up With Goliath?

Michael E. Heintz*

I.	INTRODUCTION.....	567
II.	BACKGROUND INFORMATION ON COURTROOM TECHNOLOGY ...	569
	A. <i>Courtroom Technology</i>	570
	B. <i>Electronic Case Files</i>	573
	C. <i>Chambers Technology</i>	576
	D. <i>Feasibility of Implementing the Systems</i>	577
	E. <i>Overall Effectiveness</i>	578
III.	IS THERE A “DIGITAL DIVIDE?”	579
	A. <i>Comparing Law Office Technology</i>	579
	B. <i>Shortfalls of the Systems</i>	583
	C. <i>The Level Playing Field</i>	586
IV.	CONCLUSION.....	588

I. INTRODUCTION

The federal judiciary recently embraced the technological revolution. Select courts are now equipped with state-of-the-art technology to aid in trial presentations. Before the judiciary made the improvements, litigants

* B.S., Purdue University-West Lafayette, 1999; Candidate for J.D. and M.S., Indiana University School of Law and School of Public and Environmental Affairs-Bloomington, 2003. Mr. Heintz would like to thank several people for making this Note possible, but especially Judge James S. Gwin, David Cohen, Geri Smith, Michael Montgomery, Rajesh Bagga, and Vicky Armstrong for answering what must have seemed like endless questions. Most importantly, Mr. Heintz would like to thank his parents, Jeff and Rose, for their endless support and seemingly endless supply of red ink.

had to keep pace with the technological advancements themselves, and often at a great cost. One might think that the recent technological improvements made to federal courtrooms would have widened the gap between large and small firms where the available resources are vastly different, but that is not the case. In fact, the installation of new technology into courtrooms serves to equalize what would otherwise be a “digital divide” if the parties provided their own systems.

Although large firms have greater resources than their smaller colleagues, those resources do not create an unfair advantage inside “Electronic Courtrooms” as some feared. In those courts that offer the new systems equally to both sides, it is up to each attorney to create an advantage by effectively using the available resources. As a result, Electronic Courtrooms should become the standard in federal district courts.

In addition to their usual courtroom presentations, lawyers now have a growing number of technological choices in forming their arguments. They can present cases using computer-generated PowerPoint® presentations and witness videoconferencing. Light pens can annotate pictures projected digitally onto flat video screens in the jury box. Additionally, filing and serving all court documents can now take place electronically. In essence, a lawyer can dispose of a case, from complaint to judgment, without printing a single piece of paper.

The implementation of this new technology makes case management easier and more efficient. Some believe that the influx of technology may give an unfair advantage to “deep-pocket” litigants. The trend toward using additional and expensive equipment in trying cases raises the question whether small firms and solo practitioners can compete with larger firms inside these new Electronic Courtrooms.

Seventy-nine federal district courtrooms and five federal bankruptcy courtrooms are now using some form of new technology, whether electronic filing or new devices in the courtroom itself.¹ Although both federal and state courts are each installing new systems, this Note will focus primarily on the federal model and the advances made there.

Part II of this Note introduces the technologies available to lawyers when trying cases in the Electronic Courtrooms. This includes the equipment physically used in the courtroom and hardware used outside the courtroom. This Note also provides a brief overview of the types of technologies available in a judge’s chambers to facilitate caseload

1. Leonidas Ralph Mecham, *Report to Congress on the Optimal Utilization of the Judicial Process* at 11-12 (Feb. 1999), at <http://www.uscourts.gov/optimal99/qual.pdf>; U.S. Dist. Ct., N.D. Ohio, *Electronic Filing Overview* 1 (1999) [hereinafter *Overview*].

management. The technologies introduced are available to anyone who conducts a case in an Electronic Courtroom. Parties need not move special equipment into a courtroom to the potential detriment of the opposing party.

Part III of this Note analyzes whether large firms have any advantage over small firms or solo practitioners in effectively using the new, increasingly available technology. This portion of the Note compares the actual use of technology by large and small firms, examines reactions from practitioners who used the new systems, and analyzes why small firms and solo practitioners are not disadvantaged when litigating in an Electronic Courtroom.

II. BACKGROUND INFORMATION ON COURTROOM TECHNOLOGY

Several federal district courtrooms recently invested in new equipment to become cutting-edge "Electronic Courtrooms." Three of these courtrooms reside in the Northern District of Ohio and are assigned to District Court Judges James S. Gwin of Akron, Kathleen O'Malley of Cleveland, and David Katz of Toledo.² Further, Judge Peter Economus's court will come online in Youngstown, Ohio in the near future.³ Additionally, the new courtrooms are open to any judge in the district. All of the Electronic Courtrooms are shared resources available to all judges who wish to use them.⁴ Consequently, courts like the Northern District of Ohio are taking the lead in showing the legal community that technology and courtrooms are easily combined.

The court as a whole may choose from three types of equipment when upgrading its courtrooms. It may elect to install hardware into the courtroom itself, use Electronic Case Filing ("ECF") to manage documents filed with the court, and/or use different technology as part of the internal workings of the chambers.⁵ As the "bugs" get worked out of these three

2. David Cohen, *Your New Federal Courtroom-How You Will Litigate in the Near Future*, CLEV. B. J., 8, 8 (1998). [hereinafter *Federal Court*]; Telephone interview with Geri M. Smith, Clerk of Courts, U.S. Dist. Ct., N.D. Ohio (March 1, 2001) [hereinafter *Geri Smith*]. Also, at a minimum, there will be three Electronic Courtrooms in the new Federal Courthouse currently under construction in Cleveland. E-mail from David Cohen, Esq., Law Clerk to Judge Kathleen O'Malley, to Author (Jan. 31, 2001, 13:15:37 EST) (on file with Author).

3. *Geri Smith*, *supra* note 2.

4. *Id.*

5. U.S. Dist. Ct., N.D. Ohio, ELECTRONIC COURTROOM USER INFORMATION 1 (1999) [hereinafter *User Information*]; *Geri Smith*, *supra* note 2; E-mail from Michael Montgomery, Esq., Senior Law Clerk, Judge James S. Gwin, to Author (Aug. 28, 2000, 08:27:08 EDT) (on file with Author) [hereinafter *Montgomery*].

systems, lawyers should expect to see some or all of these additions become part of courtrooms across the country.

A. *Courtroom Technology*

Lawyers in the Northern District of Ohio are no longer limited to a simple poster-board and easel set-up.⁶ Now, they may present their cases electronically through laptop computers and digital imaging cameras. Additionally, these courtrooms feature flat plasma screens, microphones, and headsets, for the benefit of witnesses, jurors, and spectators. A completely “wired” courtroom will include:

- Multi-media presentation capabilities;
- Flat-screen technology in the jury box, witness box, at each counsel table, the bench, with the court reporter, and courtroom deputy;
- Videoconferencing technology for virtual courtroom testimony and for viewing depositions;
- High-speed printing for video evidence preservation;
- Video cameras located throughout the courtroom;
- Real-time transcript sent to both counsel tables and the judge’s computer;
- Sidebar enhancement using a highly sensitive microphone and white noise;
- Complete judicial override of any evidence being published to the jurors’ screens from a “kill switch” at the bench;
- Infrared wireless headsets for the hearing-impaired and language interpreters;
- Evidence camera display with a light pen for annotating graphics (nicknamed a “John Madden style light pen”); and
- Touchpad control over the entire system.⁷

Finally, the Digital Evidence Presentation System (“DEPS”), housed in a lectern in the center of the courtroom, gives lawyers control over the systems available to them.⁸

The DEPS serves as the primary tool in electronically presenting a case. From the DEPS, lawyers can control most of the presentation systems listed above, including the evidence camera for publishing information directly to the jurors’ screens, as well as a light pen for annotating digitally

6. Telephone Interview with David Cohen, Esq., Law Clerk to Judge Kathleen O’Malley (Nov. 9, 2000) [hereinafter *Cohen*, 11/09/00].

7. *User Information*, *supra* note 5, at 1.

8. *Id.* at 2.

presented evidence.⁹ The lawyer may then print annotated images in the courtroom, for later use.¹⁰ Finally, the DEPS houses a VCR system that includes freeze-frame technology.¹¹ An advocate can completely control the presentation of his evidence from the DEPS lectern.¹²

In addition to presenting hard evidence from the DEPS, lawyers may plug their laptop computers into interface ports at the lectern and at each counsel table.¹³ By integrating a laptop computer directly into the system, they can now use computer-generated presentations, such as PowerPoint® or other computer-generated evidence, when arguing a case. In fact, lawyers may use computers at both the lectern and the counsel table simultaneously; with one lawyer controlling the laptop while a colleague conducts the oral presentation at the lectern.¹⁴

Although attorneys have significant control over the systems in the courtroom, the court has instantaneous override capability. With the touch of a button, a judge can turn off every screen in the courtroom, including the screens in the jury box and the large screen displaying information to the gallery spectators.¹⁵ As David Cohen, Senior Law Clerk for Judge O'Malley, said when commenting on the judge's control over the screens, "If the juror's screens go dark without your foreknowledge, you should hope the problem is a power failure and not improper presentation of objectionable evidence."¹⁶

Technology also allows jurors to participate more fully in the trial. In addition to the screens in the jury box, hearing-impaired jurors can request infrared headsets in order to hear the evidence better.¹⁷ All of the key presentation points—lectern, bench, witness box, and counsel tables—are equipped with microphones; consequently, the headsets allow jurors to fully hear any speech in the courtroom.¹⁸

When lawyers and judges converse on matters not meant for the jury to hear, the judge utilizes a special microphone at the bench during sidebars. When a sidebar occurs, the judge simply turns the microphone on, the court fills with white noise, and the court reporter, who wears a headset connected to the sidebar microphone, can hear and record the sidebar

9. *Id.* at 3.

10. *Id.*

11. *Id.*

12. *See id.* at 1.

13. *User Information, supra* note 5, at 5.

14. *Id.*

15. *Federal Court, supra* note 2, at 9-10.

16. *Id.* at 9.

17. *User Information, supra* note 5, at 15-16.

18. *Id.* at 5, 17.

without relocating any of the reporting equipment.¹⁹ All of the parties engaged in the sidebar can then speak in normal voices without the jury or witness overhearing the discussion.²⁰

The ability to examine witnesses through videoconferencing adds another dimension to the Electronic Courtroom. Two permanent cameras allow a video-conferenced witness or party to see the courtroom as though physically present.²¹ In addition, there is a third, wide-angle, mobile camera mounted on top of a rolling television cart for positioning in front of specific individuals or the jury.²² If the need arises, the mobile camera may be transported in order to accommodate a witness at a different location.²³ The testimony of a "virtual" witness can be displayed on the rolling television, or any of the screens located throughout the courtroom, including the 42-inch fluid plasma screen located above the witness box.²⁴ Additionally, the rolling television has split-screen capabilities, allowing the parties in the courtroom to see both speakers at the same time, on the same screen.²⁵ The videoconferencing technology is particularly useful when individuals, such as expert witnesses or incarcerated defendants/witnesses, can only be present at the proceedings with great difficulty or cost.²⁶

A final piece of technology available to lawyers inside the courtroom permits them to receive an unofficial, real-time transcript of the proceedings in progress.²⁷ When a lawyer installs specialized software onto his or her laptop computer and connects into a counsel table data port, the court reporter can send an unofficial copy of the transcript directly to the laptop.²⁸ The software allows for quick searching and annotating of text,²⁹ and the system can send a transcript to a courtroom screen for a hearing-impaired juror.³⁰ The judge's computer on the bench also has this capability, allowing the judge to quickly review past statements in the event of objections.³¹

19. *Id.* at 17.

20. *User Information*, *supra* note 5, at 5.

21. *Id.* at 10.

22. *Id.* at 9.

23. *Id.* at 10.

24. *Id.*

25. *Id.*

26. *Federal Court*, *supra* note 2, at 10.

27. *Id.*

28. *Id.*

29. *Id.*

30. *Id.*

31. *Id.*

Two points must be emphasized regarding the real-time transcript and accompanying technology. First, the transcript is unofficial, and is for quick reference only.³² The court still administers official transcripts in the traditional manner. Second, unlike most of the other courtroom technologies, parties must contact the court reporter to pre-arrange using the transcript technology.³³ They must install special software onto their laptops, and then arrange for the reporter to send the transcript to their machines.³⁴

All of this technology is equally available to all parties free of charge. When the court provides the technology to use in presenting a case, neither party can “outspend” the other by moving technology into the courtroom. The largest investment that a lawyer must make is the time needed to learn how to effectively operate the systems.

B. *Electronic Case Files*

In addition to the new hardware installed in these courtrooms, the Northern District of Ohio also has a new system in place for electronic filing of court documents in civil cases. Developed by the Administrative Office of the United States Courts in 1996, Electronic Case Filing was prototyped in the Northern District, and is now used for civil dockets nationwide.³⁵ In the Northern District alone, there are more than 3,000 cases on ECF, with all civil cases filed after July 1, 2000 appearing on the system.³⁶

The Northern District of Ohio uses the ECF system for all cases.³⁷ Other districts currently using the ECF system include the Eastern District of New York, the Western District of Missouri, the District of Oregon, and the bankruptcy courts in Arizona, California (Southern District), Georgia (Northern District), New York (Southern District), and Virginia (Eastern District).³⁸ In addition, many states are beginning to implement their own

32. *Federal Court*, *supra* note 2, at 10.

33. *Id.* A party wishing to use the videoconference technology must also pre-arrange its use with the court. *Id.*

34. *Id.*

35. *Geri Smith*, *supra* note 2. Although ECF is not equipped to accommodate criminal cases, the Administrative Office for the United States Courts is developing an expansion to ECF for criminal cases, and expects that expansion to be in use by 2002. *Id.*

36. *Id.* Even if a party cannot file using ECF, the Clerk of Courts office will electronically scan each manually filed document and then place it online. *Id.* As of March 1, 2001, only about 500 cases did not appear on ECF in the Northern District of Ohio. *Id.*

37. E-mail from Vicky Armstrong, Courtroom Deputy to Judge James S. Gwin, to Author (Jan. 11, 2001, 08:23:33 EST) (on file with Author) [hereinafter *Armstrong*].

38. *Overview*, *supra* note 1, at 1.

electronic filing systems.³⁹

In order to use the system, lawyers must have access to Adobe Writer, Adobe Acrobat Reader, Adobe PDF Writer, and e-mail and Internet access,⁴⁰ all of which are easily accessible to most lawyers. In fact, attorneys may obtain Adobe PDF Writer for half-price through an agreement reached between Adobe and the court.⁴¹ For documents not created electronically, lawyers will need to convert them to electronic format using a scanner.⁴² Once registered for ECF, lawyers may electronically file and serve all documents related to their cases.

Through e-mail, this web-based system notifies all registered counsel of all filings in the case, identifying the name of the document filed, and the date and time of filing. Lawyers can then view the documents through a web browser.⁴³ Although the system began as a voluntary endeavor, courtrooms such as Judge Gwin's now use ECF for all cases.⁴⁴ To facilitate the conversion to the ECF system, the court offers both in-person and online training sessions. In-person training is provided at both the courthouse and at law firms.⁴⁵ A toll-free phone number is also available if a problem arises.⁴⁶

ECF allows lawyers to quickly and easily retrieve and file court documents. The key benefits of ECF include: twenty-four hour access to the documents, immediate creation of docket entries with the dockets updated simultaneously, less reliance on paper files, immediate notice of filings sent to opposing counsel, and no fee for using the system.⁴⁷ By using ECF, a lawyer may file documents with the court at any time before the filing deadline, and from any place. Wherever a lawyer has Internet access, he may access ECF in order to file documents, or read documents filed by

39. Telephone Interview with Geri M. Smith, Clerk of Courts, U.S. Dist. Ct., N.D. Ohio (Sept. 22, 2000) [hereinafter *Smith*].

40. See, e.g., *Overview*, *supra* note 1, at 1; U.S. Dist. Ct., N.D. Ohio, ELECTRONIC FILING POLICIES AND PROCEDURES MANUAL 2 (1998) [hereinafter *Policies*]. The ECF website is located at: http://www.ohnd.uscourts.gov/Electronic_Filing/electronic_filing.html (last visited Feb. 7, 2002).

41. *Geri Smith*, *supra* note 2. Adobe Acrobat Reader, on the other hand, is free to download from the Adobe website at <http://www.adobe.com/products/acrobat/readermain.html> (last visited Feb. 7, 2002).

42. *Overview*, *supra* note 1, at 1.

43. *Policies*, *supra* note 40, at 4.

44. *Armstrong*, *supra* note 37. For example, Judge Gwin began using ECF for all of his cases on July 1, 2000. *Id.*

45. *Geri Smith*, *supra* note 2.

46. *Id.*

47. *Overview*, *supra* note 1, at 1. According to Geri Smith, fees for ECF have been approved at a rate of \$.07 per page, but have not been implemented yet. *Smith*, *supra* note 39.

other parties. Given that all the documents filed with the court may be online, parties can theoretically undertake court actions, from filing the complaint to entry of final judgment, without printing a single piece of paper. Because security concerns go hand-in-hand with online activities, ECF was developed to ensure uploaded documents are safe.

Given the potential for “cyber crime” in this technological age, the courts using ECF take precautions to ensure the security of documents filed electronically. In addition to the encryption that web browsers use in sending and receiving documents to and from secure sites, the court itself assigns “unique validation codes” to the electronic receipt issued by the clerk’s office.⁴⁸ This validation code works with the PDF format to ensure that no one can alter a document after a party files it with the court.⁴⁹ Further, only attorneys with a valid identification and password may file documents electronically.⁵⁰ ECF also ensures that electronically filed documents contain valid signatures by providing that a valid password serves as the attorney’s signature for purposes of Rule 11 of the Federal Rules of Civil Procedure.⁵¹

ECF is normally used, however, there are exceptions. Civil litigants can petition the court for permission to file documents traditionally. In Judge Gwin’s court, for example, cases not handled using ECF must have judicial approval, and usually involve instances where the filings will be too large to manage effectively in ECF.⁵² When ECF is not used, the clerk’s office either scans the documents and places them online, or places a notice of manual filing online.⁵³ At that point, conventional manual filing will apply for that particular case.

Despite concerns over the system’s ability to incorporate larger cases, Judge Gwin is quick to point out that “any case can effectively use ECF” and “large cases are frequently the best users of ECF.”⁵⁴ Geri Smith, Clerk of Courts for the Northern District of Ohio, says that although large

48. *Overview, supra* note 1, at 3.

49. *See id.*

50. *Policies, supra* note 40, at 4.

51. *Overview, supra* note 1, at 3.

52. *Policies, supra* note 40, at 5. The court discourages filing individual documents larger than 1.5 megabytes electronically because of the inconvenience to attorneys with Internet connections slower than 28.8 bps. *Geri Smith, supra* note 2.

53. *Geri Smith, supra* note 2.

54. E-mail from Judge James S. Gwin, U. S. Dist. Judge, N.D. Ohio, to Author (Feb. 8, 2001, 12:36:03 EDT) (on file with Author). Judge Gwin pointed to a series of patent law cases that effectively used ECF. These cases include: *Picker Int’l, Inc. v. Mayo Found.*, 6 F.Supp. 2d 685 (N.D. Ohio 1998); *The Wooster Brush Co. v. Newell Operating Co.*, 46 F.Supp. 2d 713 (N.D. Ohio 1999); and *Boler Co. v. Neway Anchorlok Int’l, Inc.*, 92 F.Supp. 2d 680 (N.D. Ohio 2000).

individual documents are discouraged, ECF can easily accommodate “mega-IP cases.”⁵⁵ Judge Gwin also cites two cases, one where ECF could have been used and was not, and one case that effectively used ECF.⁵⁶

In the first case, *Iron Workers Local Union No. 17 Ins. Fund v. Philip Morris, Inc.*,⁵⁷ the parties did not use ECF.⁵⁸ As a result, attorneys manually served each of the 113 lawyers on the service list. By the end of the case, the parties filed 925 separate docket entries,⁵⁹ generating tens of thousands of dollars in expenses.⁶⁰

In contrast, the case of *Re/Max Int'l v. Realty One, Inc.*,⁶¹ involved twenty-six lawyers and 977 separate filings.⁶² Had the court not utilized ECF, the lawyers would have paid to serve 25,402 separate documents. The cost savings were significant, particularly because the court imposes no fee to use the system. Judge Gwin further stated: “we have gotten only positive comments from attorneys” using ECF.⁶³

Like the technology in the courtroom, ECF is available to all lawyers involved in a case at no cost. Only minimal investments into computer hardware at the office and the time to learn the system are needed. And, as Section III explains, most law offices have the necessary technology already in place.

C. Chambers Technology

Technology in the judge’s chambers, primarily utilized for facilitating communication between the bench and chambers while court is in session, is the third and final area of technological improvement. Initially considered a minor part of courtroom improvement, the systems installed in chambers are proving to be invaluable in facilitating communication between judges and law clerks.

In addition to the e-mail that all chambers’ staffs have, they can now communicate with the judge while on the bench using a “chat” function through the court’s computers, which are configured in a local area

55. *Geri Smith, supra* note 2.

56. E-mail from Judge James S. Gwin, *supra* note 54.

57. 186 F.R.D. 453 (N.D. Ohio 1999).

58. E-mail from Judge James S. Gwin, *supra* note 54.

59. *Id.* One summary judgment motion, by itself, accounted for forty-six pages, plus a 600-page appendix. *Id.*

60. Postage alone, assuming each piece weighed no more than one ounce, would have exceeded \$35,000 for the more than 104,500 pieces of mail.

61. Docket No. 1-94-00062-JG.

62. E-mail from Judge James S. Gwin, *supra* note 54.

63. *Id.*

network (“LAN”).⁶⁴ Using a LAN, the judge, law clerks, and deputy clerks can exchange information when the judge is on the bench. Although used sparingly, the function is invaluable when documents, like jury instructions, need editing, or when a clerk answers a question for the judge during the course of a trial. When coupled with the judge’s e-mail, which he can access from the bench, the judge is no longer cut off from his clerks while presiding over a trial.

While the “chat” function proves useful for quick questions sent to and from chambers to the bench, law clerks might need, or want, to hear the proceedings in the courtroom. Rather than spending the day in the courtroom, law clerks have speakers in their offices connected to the audio proceedings in the courtroom. They can listen to the proceedings as they occur, while still working in chambers.

D. Feasibility of Implementing the Systems

It is no small task to convert a traditional courtroom into a state-of-the-art Electronic Courtroom. Courtrooms must be completely re-wired in order to accommodate the systems.⁶⁵ Hardware installation does not stop with monitors and microphones. All of the systems must be networked, and cable run, usually under the carpeting, throughout the courtroom.⁶⁶ Further, installing all of the technology can cost several hundreds of thousands of dollars.⁶⁷ Permanently installing the systems into the courtroom is an advantage to smaller firms who cannot afford to install and then remove technology from various courtrooms.⁶⁸ A fundamental question is whether

64. This technology is surprisingly simple. Anyone who uses a service such as America Online or Yahoo! for online conversations is familiar with the system. The difference between a commercial service and the court’s service is the lack of graphics and sounds in the court’s system.

65. See *User Information*, *supra* note 5, at 19.

66. See *id.*

67. See *Cohen 11/09/00*, *supra* note 6. Mr. Cohen stated that in a recent case involving several tobacco companies, the parties installed and then removed their own technology from the court. He said that to rent and install the video screens, DEPS, and computer hookups in Judge Gwin’s courtroom for eight weeks, and then remove the technology, cost around \$150,000. *Id.* Judge Gwin later permanently installed technology in his courtroom. Judge O’Malley had all of the technology in Judge Gwin’s court, plus laptop hookups, videoconferencing capabilities, light pens, and headphones permanently installed in her court for about \$150,000. *Id.*

68. See *id.* The *Electronic Courtroom User Information* manual states that parties have installed and removed their own equipment for costs of around \$60,000. See *User Information*, *supra* note 5, at 10. This cost would be incurred every time a litigant wished to use technology in presenting their case if the court did not have the hardware already in place. See *id.*

the expense is justified.⁶⁹ It would be easy to view these expenditures as extravagant, and it is unknown how they will be viewed as budgets become constrained. Home computers, however, now as common as televisions and more valuable to students than home encyclopedias, were also once viewed as an indulgence.

Courts will need some maintenance to keep the systems in proper working order, but a properly installed system should not have any major failures.⁷⁰ Courts will need to replace a screen, or fix the settings that lawyers unknowingly changed, but teaching someone in the court the necessary skills to correct such problems is the best solution.⁷¹ Potentially, a court will sign a service contract with the vendor to protect against serious failures.⁷² As long as small firms are not financially responsible for installing or maintaining the Electronic Courtroom, larger firms will not have an unfair advantage.

E. Overall Effectiveness

Those who use the new systems believe them to be effective in presenting cases.⁷³ Court employees and judges believe that jurors are more responsive to electronically presented material, and retain more information than in traditionally presented cases.⁷⁴ Lawyers and court employees also express satisfaction with the ECF system.⁷⁵ Judges who use the systems in their courts seem to embrace the new technology.⁷⁶ Given the advantages of

69. It is important to keep in mind the savings to parties of large cases in filing and serving documents. *See* discussion, *supra* note 60.

70. *See* Fredric 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, 831 (1998).

71. *See id.*

72. *See id.*

73. E-mail from Judge James S. Gwin, U. S. Dist. Judge, N.D. Ohio, to Author (Aug. 29, 2000, 08:41:53 EDT) (on file with Author). Judge Gwin indicates that a jury's attention is better kept when electronic presentations are used. *Id.* Judge Gwin noticed that jurors paid particular attention to evidence presented on a video screen in front of them. *Id.*

74. *Federal Court*, *supra* note 2, at 8. The Federal Judicial Conference Committee on Automation and Technology ("FJC") discovered that using video evidence increases juror retention by four times. *Id.*

75. E-mail from Rajesh Bagga, Esq., Attorney, Brouse McDowell, to Author (Jan. 30, 2001, 14:54:23 EST) (on file with Author) [hereinafter *Bagga*]; *Montgomery*, *supra* note 5.

76. The primary evidence that shows that judges are welcoming the technology is simply that the technology is being installed into their courtrooms. Additionally, the FJC discovered that eighty-three percent of judges found that they could manage proceedings easier, and eighty-one percent of judges better understood the material presented with electronic courtrooms. *Federal Court*, *supra* note 2, at 9. The FJC also found that some judges could cut the length of their trials by up to forty percent by using electronic courtrooms. *Id.* In fact, Judge Gwin said, "I have found that we move through trials much quicker because there is not the shuffling of papers to the witness nor the need to try to

these systems, all the new tools are winning approval. Like most new systems, however, there appear to be some drawbacks. One lawyer indicated that the Electronic Courtroom is best used in conjunction with a “document consultant” to help run it, particularly when complex presentations, such as animations, are required.⁷⁷ It seems then, that while lawyers can operate the system using standard equipment, hiring trained professionals can make even better use of the systems. If hiring a staff of “document consultants” is a luxury only deep-pocket litigants can afford, can smaller firms effectively use the technology without investment? The answer is a resounding yes.

III. IS THERE A “DIGITAL DIVIDE?”

The question becomes whether the introduction of courtroom technology gives an unfair advantage to larger firms. By comparing large and small firms, the new technology, in fact, does not disadvantage the small firm or solo practitioner. Rather, the systems “level the playing field” between law firms.⁷⁸

A. *Comparing Law Office Technology*

With today’s rapid technological advances, there is a concern that large firms will leave small firms and solo practitioners, who supposedly have more limited resources, behind. Large firms may also seem to have a further advantage with their ability to staff a department in the firm dedicated to “tech support.” Initially, it would appear that large firms dominate the profession from a technological point of view. Upon closer examination, however, while having more resources may allow technology to be more readily available, this does not necessarily translate into effective use. The issue becomes one of intelligence, not of resources.⁷⁹ Lawyers cannot effectively represent the interests of their clients if they cannot effectively use the resources available to them. Indeed, five or ten years ago, when all lawyers used poster boards and easels, differences among them involved not only who had the resources to create a more appealing presentation, but also who could most effectively convey a case

convey to the jury what the exhibit contains. Attorneys seem to quickly get comfortable with using the system and the jury is very appreciative.” E-mail from Judge James S. Gwin, U. S. Dist. Judge, N.D. Ohio, to Author (Jan. 10, 2001, 15:45:37 EST) (on file with Author).

77. *Bagga, supra* note 75.

78. 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, 297.

79. *See Cohen 11/09/00, supra* note 6.

to the jury.⁸⁰ Today, the situation is basically the same, but instead of easels, lawyers are using software. While there is a financial limit to the types of software that small firms and solo practitioners can purchase (some can exceed \$30,000),⁸¹ buying the systems does not guarantee that the lawyer can use the technology effectively.⁸²

In 1997 and 1998, the American Bar Association Legal Technology Resource Center ("ABA") conducted two surveys. One was directed at large firms of seventy-five or more lawyers,⁸³ and the other at firms of twenty or fewer lawyers.⁸⁴ Both surveys concluded that small and large firms are using cutting-edge technology in their practices.⁸⁵ The ABA further found that while smaller firms approach new technology, especially the Internet, with more caution than larger firms, they nonetheless embrace it.⁸⁶

More importantly, small firms and solo practitioners have an edge over larger firms in computer literacy. In small firms, 87.5% of respondents stated that all of the lawyers in their office use computers.⁸⁷ By contrast, large firm respondents indicated that only 50.7% of their lawyers use computers at the firm.⁸⁸

Although smaller firm lawyers appear to use computers more, a difference emerges when looking at specific technologies. For example, law offices need the capability for outside communication when using systems such as ECF. Lawyers must have e-mail and a web browser in order to file and access documents.⁸⁹ The surveys indicate that 71.8% of smaller firms have outside communication capabilities, while 98.7% of large firms have such technology.⁹⁰ As noted previously, however, having the system does not mean that it is used efficiently. A more recent ABA study indicated that small firms and solo practitioners are more likely than larger firms to use e-mail professionally.⁹¹ Overall, about 90% of solo

80. *See id.*

81. *See id.*

82. *See id.*

83. ABA, LARGE LAW FIRM TECHNOLOGY SURVEY: 1998 SURVEY REPORT 1 (1998) [hereinafter *Large Firm*].

84. ABA, SMALL LAW FIRM TECHNOLOGY SURVEY: 1997 SURVEY REPORT 1 (1997) [hereinafter *Small Firm*].

85. *See Large Firm, supra* note 83, at 3; *see also Small Firm, supra* note 84, at 3.

86. *See Large Firm, supra* note 83, at 3; *see also Small Firm, supra* note 84, at 3.

87. *Small Firm, supra* note 84, at 5.

88. *Large Firm, supra* note 83, at 6.

89. *See Policies, supra* note 40, at 2.

90. *Large Firm, supra* note 83, at 11; *Small Firm, supra* note 84, at 13.

91. ABA, HOW ATTORNEYS USE EMAIL: JUNE 2000 TELEPHONE SURVEY 3 (June 2000). The June 2000 survey was conducted with fewer respondents than were the 1997 and 1998

practitioners and 75% of small firm lawyers were likely to use e-mail professionally, compared to only about 70% of large firm lawyers.⁹²

A similar picture appears regarding lawyers' use of remote capabilities with their computers. "Remote use" refers to the lawyer's ability to use a laptop computer outside the office, and connect with the system at the office.⁹³ Sixty-eight percent of small firm respondents indicated that they use computers remotely,⁹⁴ and 50% of those indicated that they use a portable computer in their work.⁹⁵ Comparatively, 94% of larger firm respondents provide remote computer access to their lawyers,⁹⁶ and 96% of larger firm remote users have access to portable computers in the office.⁹⁷ Of course, all of these figures merely provide background for the more important issue: computer use in the courtroom.

Both large and small firm lawyers use computers in the courtroom.⁹⁸ Attorneys who take their computers into court tend to use their computer for some form of "litigation support."⁹⁹ Of the lawyers who use portable computers in the courtroom, 67.6% of smaller firm lawyers indicated a use for litigation support, compared to 87.7% of large firm lawyers.¹⁰⁰ Although this level of use is comparable, differences arise in the number of lawyers who use computers in the courtroom itself. Only 8.1% of small firm lawyers/solo practitioners use computers in court, compared to 74.3% of larger firm users.¹⁰¹ This disparity is undoubtedly related to the great difference in the availability of portable computers between large and small firms.

As indicated above, however, many of the technologies in use in courtrooms do not require the use of portable computers. In fact, virtually all of the courtroom resources are available without the need for a personal computer. The only components unavailable to a lawyer without the use of a computer are the image-generating and real-time transcription features, arguably two of the more minor tools available. The end result of both features can be achieved without the use of electronic devices in the

surveys. *Id.* "Professionally" means that lawyers are using e-mail for business purposes, as opposed to using e-mail for contacting friends and family. *Id.*

92. *Id.*

93. *Small Firm*, *supra* note 84, at 87; *Large Firm*, *supra* note 83, at 13.

94. *Small Firm*, *supra* note 84, at 86.

95. *Id.* at 87.

96. *Large Firm*, *supra* note 83, at 12.

97. *Id.* at 13.

98. *Id.* at 14; *Small Firm*, *supra* note 84, at 88.

99. *See Large Firm*, *supra* note 83, at 14; *see also Small Firm*, *supra* note 84, at 88.

100. *Id.*

101. *Id.*

courtroom. Lawyers can bring in prepared images to present to the jury, and the court reporter is still in the courtroom recording the dialogue.

In addition to keeping pace with large firms in terms of office technology, small firms and solo practitioners also recognize the importance of being fluent in using technology.¹⁰² Beyond using word processors, small firm lawyers and solo practitioners find technology invaluable for managing large cases.¹⁰³ Of course, the most important aspect of using the systems is one's understanding of computers.¹⁰⁴

As noted above, using technology in a courtroom does not depend on resources as much as it depends on intelligence.¹⁰⁵ David Cohen, Senior Law Clerk for Judge O'Malley, suggests that small firms and solo practitioners may actually be better equipped to handle computers than their large firm counterparts.¹⁰⁶ Smaller firm lawyers may be more computer literate than those at large firms, due to the lack of a dedicated computer department.¹⁰⁷ As a result, smaller firm lawyers must learn to use computers by themselves, rather than delegating the work to someone who, by the time of trial, may not be involved in the case.¹⁰⁸ Because small firm lawyers are often more computer-literate, they can better handle unexpected problems, and effectively utilize the nuances of both their computer and the accompanying software. Smaller firms and solo practitioners appear better equipped to use their technology more effectively in courtroom settings.¹⁰⁹

The major impediment for small firms and solo practitioners in gaining an equal footing with their larger counterparts is the disparity in financial resources that small firms can direct toward technology. Although

102. J. Stratton Shartel, *Small-Firm Litigators Say Technology Is Key to Managing Big Cases*, 9 NO. 5 INSIDE LITIG. 7 (1995) [hereinafter *Litigators*].

103. *Id.* at 7-8.

104. *Id.* at 7; *Cohen 11/09/00, supra* note 6.

105. *Cohen 11/09/00, supra* note 6.

106. *Id.*

107. The ABA Technology Surveys indicate that small firms and solo practitioners have either less or no computer support department. In fact, 87.6% of small firms indicate that they do not have any form of internal support group, such as a help desk, for their computer system. As a result, 46.2% of small firm employees teach themselves how to use the technologies available to them. *Small Firm, supra* note 84, at 52. In contrast, all of the large firm respondents indicated that they do have internal support staff, in addition to outside consultants and vendor support. As a result, 76.6% of the larger firm respondents preferred internal training classes to learn the technology, while zero percent preferred self-teaching. *Large Firm, supra* note 83, at 46. Finally, the average number of support staff employed by smaller firms is 1.2, contrasted with 13 in large firms. *Small Firm, supra* note 84, at 75; *Large Firm, supra* note 83, at 79.

108. *Litigators, supra* note 102, at 7.

109. *Cohen 11/09/00, supra* note 6.

larger firms still vastly outspend small firms in this area,¹¹⁰ efforts by the courts to cap the cost of equipment needed to access the system protects against unfairness. In addition, regardless of firm size, attorneys may allocate the cost of case preparation to their clients as a reimbursable expense.¹¹¹ Most importantly, however, as the science advances and the costs continue to fall, smaller firms will have a greater opportunity to spend their money wisely and effectively.¹¹² Legal research companies are now targeting products such as LEXIS and Westlaw to smaller markets.¹¹³ Small firms and solo practitioners can now purchase the same technology as larger firms, but at lower costs and in slightly different forms.¹¹⁴ It is important to remember that the equipment in the courtroom is freely available.

B. Shortfalls of the Systems

There are two occasions where parties will be precluded from using ECF.¹¹⁵ A case placed under judicial seal will not be eligible to use ECF.¹¹⁶ In the Northern District of Ohio, cases are placed under seal only with prior judicial approval.¹¹⁷ Also, parties such as prisoners do not have Internet access, and are therefore automatically excused from filing electronically.

Any system, no matter how innovative or sophisticated, is only as good as the skill levels of those who use it. Many lawyers, particularly older ones, are not very knowledgeable when it comes to computer technology and may resist using it. As an answer to the education problem, the courts, and at least one law school, are developing classes to educate lawyers in courtroom technology.¹¹⁸

110. Larger firms spend about \$80 in software for every \$1 spent by small firms and solo practitioners. *Large Firm*, *supra* note 83, at 71; *Small Firm*, *supra* note 84, at 48. Additionally, larger firms spend about \$60 on hardware for every \$1 spent by small firms and solo practitioners. *Large Firm*, *supra* note 83, at 70; *Small Firm*, *supra* note 84, at 18.

111. *Cohen 11/09/00*, *supra*, note 6.

112. Charles Davis, *Here Comes David with Techno Stones: Help for Attorneys Choosing to Fly Solo*, 31 ARIZ. ATT'Y. 20, 21 (May 1995) [hereinafter *Stones*].

113. See WestlawPRO at: <http://www.westlaw.com/SubOptions/WestlawPRO/default.wl>; See lexis.com For Small Law Firms at: <http://web.lexis.com/xchange/marketplace/MVPforSmallLawFirms.asp> (last visited Feb. 5, 2001).

114. *Stones*, *supra* note 112, at 21.

115. *Policies*, *supra* note 40, at 5.

116. *Id.*

117. *Id.*

118. U.S. Dist. Ct., N.D. Ohio, *Electronic Courtroom Training Demonstration*, at http://www.ohnd.uscourts.gov/Clerk_s_Office/Courtroom_Technology/Crt_tech_AKR/crt_tech_ahr.html (last visited Jan. 23, 2001); Fredric I. Lederer, *A Consideration of Today's-and Tomorrow's-High Technology Courtrooms* 16 (1998) [hereinafter *Consideration*].

The Northern District of Ohio instituted two programs in an attempt to educate lawyers about the systems. In addition to the manuals explaining both the electronic courtroom and ECF, attorneys are encouraged to go to the courtroom and practice using equipment,¹¹⁹ or they may take a court-sponsored class to learn about the equipment, and receive Continuing Legal Education ("CLE") credits for their effort.¹²⁰

Similarly, the "Courtroom 21" program is run by the College of William & Mary School of Law.¹²¹ Courtroom 21 is an experimental courtroom that utilizes commercially available technology in a litigation setting to test its feasibility.¹²² Because a law school administers Courtroom 21, students have the opportunity to learn about new systems firsthand and take that knowledge to their employers upon graduation.¹²³ The school made the class mandatory beginning with the Class of 1999,¹²⁴ and students at William & Mary must now complete it in order to graduate.¹²⁵

A final problem with the electronic filing system is that various state courts are now beginning to implement their own systems that are not compatible with their federal counterpart.¹²⁶ Given the choices in software, it is possible that firms will have to purchase two different systems to litigate in two different courts, a significant inconvenience and expense for lawyers who argue in both state and federal court. Geri Smith, Clerk of Courts for the Northern District of Ohio, says her district is pushing hard for cooperation between the federal courts and the State of Ohio to implement compatible systems.¹²⁷ A possible solution, she suggested, is simply to give the available technology to the states for implementation in their systems.¹²⁸ Ms. Smith added that the idea of giving the technology to state courts is only in the discussion stage.¹²⁹

There are two other disadvantages to implementing electronic systems into courtrooms. The primary downfalls are the costs associated with retrofitting the courthouses, and the possibility that interpersonal

119. *Smith, supra* note 39.

120. *Consideration, supra* note 118, at 16.

121. Additional information on the Courtroom 21 program can be found at: <http://www.courtroom21.net>.

122. FREDRIC I. LEDERER, *THE COURTROOM AS A STOP ON THE INFORMATION SUPERHIGHWAY 1* (1997).

123. FREDRIC I. LEDERER, *COURTROOM TECHNOLOGY FROM THE JUDGE'S PERSPECTIVE* n.1 (1997).

124. *Consideration, supra* note 118, at 16.

125. *Id.*

126. *Smith, supra* note 39.

127. *Id.*

128. *Id.*

129. *Id.*

relationships between all people involved in a case will suffer.

The cost associated with installing the new technology, especially on a national level, is immense. Not all courts need to be fitted at the same time, however, and over the course of several years, funding can be worked into budgets for technological advancements. And, with technology improving all the time, staggered installation would assure that courts fitted last would still receive state-of-the-art equipment. Additionally, as new courthouses are built, such as the new Federal Court in Cleveland, Ohio, the technology can be directly installed without having to retrofit any existing facilities. Between the three options of choosing when courts get fitted for the new technology, wise use of monetary resources, and taking advantage of building new courts, the cost factor associated with Electronic Courtrooms is sufficiently negated.

Conversely, the cost of either building a new courtroom or retrofitting an old one is cheaper to a small firm or solo practitioner than purchasing the large amounts of equipment that the court would otherwise provide. Large firms will move the necessary technology in and out of courtrooms as needed, and can afford to do so. Small firms and solo practitioners cannot afford to purchase all of the technology that a larger firm would, and therefore will depend on the courts to provide the available technology in order to keep the parties on equal terms.

The larger problem would be the loss of personal contacts between attorneys, judges, and juries. With the advent of new technology, lawyers will spend less time in a courthouse filing documents and more time in their offices e-mailing information to each other. Further, there is the fear that juries will be relegated to watching video screens, much like television, instead of listening to a lawyer present a case. Neither fear is warranted.

First, relationships can develop in electronic communication as easily as visits to courthouses. Lawyers will still have questions to ask judges and conferences to hold with and between clients. Practicing law is all about communication, and issues cannot be resolved unless the parties involved communicate with each other. Even today, e-mail is quickly taking the place of brief telephone calls and videoconferencing is moving to replace teleconferencing. Legal issues cannot be resolved without parties communicating with each other, at which point the mode of communication becomes irrelevant.

Second, lawyers will need to use the available technology sparingly in order to make effective use of the equipment. If an attorney presents his whole case to a jury on flat screens, nothing will be highlighted as an important piece of evidence. Whereas lawyers who pick and choose when to speak directly to a jury and when to use the video equipment can

emphasize important pieces of evidence.¹³⁰ Careful use of the available equipment to emphasize important pieces of evidence illustrates the idea that lawyers must learn how to operate the equipment in order to make an effective presentation. If a lawyer knows how to use the technology then he can learn how to use it in the most effective way possible. A lawyer who is uncomfortable with the equipment will not use it as effectively.

Knowing how to use the available tools is an advantage to small firm attorneys and solo practitioners. Lawyers from larger firms tend to be less computer savvy than those from small firms.¹³¹ The lawyer who can use the equipment effectively will generally make the better presentation.

C. *The Level Playing Field*

Technology in the courtroom gives smaller firms and solo practitioners a chance to litigate with large firms on an equal basis. Because the courts provide the systems, the equipment is accessible to all parties equally. Thus, smaller firms have access to a level playing field when they step into a courtroom. Before the installation of technology in the courtroom, "deep pocket" firms could indeed gain an advantage because they could better use evidence presentation tools by outspending their opponent. In an Electronic Courtroom, however, the court provides the tools that either party can use without prejudice. Furthermore, simply installing technology into a courtroom does not make a lawyer a better advocate. As stated above, smaller firms and solo practitioners are more likely to understand the nuances of computers because they must learn the systems on their own, as opposed to staffing a full time Information Services Department of the firm. Technology does not help a lawyer if he cannot make the equipment present the desired information in the desired format.

An additional issue arises when a lawyer has access to the extra pieces of equipment that he can use in tandem with the court's hardware, such as scanners and portable computers. Although there may be additional expenses if the lawyer's office does not have ready access to these additional components, a quick look at today's technology market shows that the equipment is available and reasonably priced for a solo practitioner or small firm.¹³² Additionally, law firms can now purchase a combination printer/scanner/copier in one machine for potentially less than it would cost

130. See E-mail from Judge James S. Gwin, *supra* note 54.

131. See *supra* notes 83-86 and accompanying text.

132. Sunday Circulars, Best Buy at 19-21; CircuitCity at 14, 16; COMPUSA at 1, 6-7 (Jan. 2001) (on file with Author).

to buy the hardware separately.¹³³ Computers, scanners, and online services such as America Online, LEXIS, and Westlaw are all being marketed for use in smaller markets, which means that smaller firms and solo practitioners are not being “priced out of the market.” Smaller firms and solo practitioners may have to assess what technology they can afford for their offices based on their more limited funds, but those expenses have always existed in some form or another.¹³⁴ Instead of repeatedly purchasing expensive trial accessories, such as courtroom photographs or graphic designs, for one-time use, lawyers can purchase computers with the ability to create visual presentations. While it is true that solo practitioners especially will have to make more of an initial investment into equipment to be able to fully use the Electronic Courtrooms, these costs are generally one-time expenditures. The major difference is between a recurring cost, like photographs, and a one-time cost, such as a computer or scanner.

It is also useful to point out one last time that only a small amount of the courtroom technology is designed for use in tandem with the attorney’s own equipment. For example, while a feature such as real-time court transcripts may be useful, those transcripts are only unofficial copies that have only limited use in the courtroom. Additionally, the court reporter is still in the courtroom in the event a specific question arises. None of the pieces of technology in the courtroom are essential for arguing an effective case.

In fact, David Cohen suggests that a disparity in technology could be used against an opponent.¹³⁵ Advocates can attempt to persuade a jury to identify with the party who has limited funds, and try to create mistrust of a party with “deep pockets.”¹³⁶ Once again, the common denominator is the lawyer’s ability to effectively present a case to the jury.

On the surface, electronic courtrooms and electronic filing seem to favor “deep-pocket” lawyers who have easy financial access to the equipment. Upon closer examination, this is not the case. When the court supplies the systems for lawyers to use in presenting cases, neither party gains a clear advantage over the other. Lawyers do not have to use the tools the court offers, but that is not an issue of unfair advantage. Courts such as the Northern District of Ohio provide little excuse for a lawyer not to take full advantage of the equipment available. From manuals that advocates can read, classes that they can take for CLE credit, and knowledgeable

133. *Id.* Firms can now purchase scanners for less than \$50 in some circumstances. *Geri Smith, supra* note 2.

134. *Cohen 11/09/00, supra* note 6.

135. *Id.*

136. *Id.*

people to answer questions, all attorneys appear to have equal access to the newest technology used in litigation.

For these reasons, all courts should look to introducing electronic aids into the courtroom. By keeping the parties on an equal footing in terms of technology, litigants will enter courtrooms as equals. While large firms will still have large amounts of resources at their disposal, once the case gets to trial, lawyers will have to rely on their skills, and not their expense accounts. Courts should be forums for finding the truth, not for seeing who can impress the jury by introducing the most technologically advanced equipment into the courtroom.

As stated above, video evidence presentation is just a tool. Lawyers must learn how to use the technology in order to present evidence effectively. Overuse of the equipment has the possibility of completely disconnecting the jury from the case. Just as clumsy use of the tools can hurt a case, over-use of the tools can also desensitize a jury to important pieces of information.

By providing the technology to the parties, the courts remove the advantage of “deep pockets” that large firms notoriously have. While technology in the courtroom does not level the playing field outside the courtroom, it is a step in the right direction for maintaining a judicial system based on the truth and not on the amount that can be spent.

IV. CONCLUSION

Courts like those in the Northern District of Ohio, while relatively rare, should become the standard for courtrooms around the country. Although courts do not require lawyers to use systems like Electronic Courtrooms, it seems almost inevitable that courts will make electronic filing mandatory once the system improves, and developers work out the bugs.¹³⁷ Further, by providing the tools necessary to equalize resources between small and large firms, attorneys with limited resources would be unwise to not take advantage of the available equipment. If all lawyers do not accept technology in courtrooms, and the court-provided systems are abandoned, then “deep-pocket” litigants will assuredly gain an advantage over opponents with minimal funds. By keeping technology out of the hands of the “have nots,” “deep-pocket” firms can condemn smaller firms and solo practitioners to the use of easels, poster board, and enlarged photographs, while large firms electronically present pictures, graphics, sounds, and words to juries on screens with laser pointers and light pens.

137. *Montgomery*, *supra* note 5.

Lawyers can present highly effective arguments without using any more technology than a legal pad and a pen. Lawyers can always choose to present a case without using the available systems; courts should not make the choice for them. By providing technology, courts give all parties concerned the option of using it or not. Once courts provide the technology, a “digital divide” no longer separates the parties. Technology in the courtroom is a tool, and nothing more. Lawyers cannot win or lose cases by simply presenting evidence and arguments to juries on flat screens. Lawyers *can* win or lose cases on the effectiveness of the presentation of the case. If a lawyer does not effectively present a client’s case, no amount of money in the world can make up for that shortcoming.

In the course of a lawsuit, distinctions will arise among counsel for a number of reasons, among them, of course, the relative resources that can be dedicated by a client to a case. As with other innovations in the profession, however, in the final analysis the primary differences will be based on counsel’s relative skill, diligence, and initiative—in short, the differences will be based on ability. Once technology is available in the courtroom, equally and fairly to all parties, ability can, and should, be the deciding factor between winning and losing.

