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CD-ROM BRIEFS: MUST TODAY'S HIGH TECH LAWYERS WAIT UNTIL THE PLAYING FIELD IS LEVEL?

I. INTRODUCTION

The use of CD-ROM¹ briefs,² also known as hypertext³ briefs, is gaining momentum in the United States federal court system.⁴ Three important judicial decisions concerning CD-ROM filings were made in 1997.⁵ These three decisions signal a new level of acceptance by the courts for cutting-edge multimedia⁶ briefs.

The first turning-point decision for a CD-ROM filing occurred in February of 1997, when the United States Supreme Court agreed to accept,

1. See generally ALAN FREEDMAN, *THE COMPUTER DESKTOP ENCYCLOPEDIA* 116 (1996). The acronym CD-ROM stands for Compact Disc Read Only Memory. *Id.* Unlike the audio CD, the CD-ROM stores software data that is retrieved with a CD-ROM computer drive, which is connected to a computer. *Id.*

2. See generally Francis X. Gindhart, *Documents, Transcripts, Exhibits Are On Hand in Hypertext Briefs*, N.Y.L.J., Apr. 15, 1997, at 10. Appellate briefs recorded on compact discs can contain not only a lawyer's written argument supporting an appeal but also the trial transcript, documentary evidence, animation and motion picture exhibits and the legal authorities relied upon. *Id.*

3. *Id.* Hypertext markup language ("HTML") is what made the CD-ROM brief possible. *Id.* Hypertext language allows a user to click with the computer mouse button to a document that is referenced in the original document. *Id.* Compare Carl A. Solano, partner with the Law Firm *Schnader, Harrison, Segal & Lewis* (Oct. 12, 1998). Information on file with the author. Current cyberbrief submissions have been in Portable Document Format—or PDF—because "[o]n a computer screen, a PDF document has an appearance identical to that of a printed page, which is why the Administrative Office of the United States Courts favors it."

4. See Cindy Collins, *Technology Advance: Rejection of HTML Brief Just Temporary Setback*, 11 No. 6 *INSIDE LITIG.* 17 (1997). The author quotes technology consultant James Keane, who states that CD-ROM briefs are, "coming down the track at 200 miles per hour." *Id.* Mr. Keane further stated, "two years from now, the little problems we're having in the Federal Circuit will be forgotten. The problem is getting started, and then everybody's going to be doing it." *Id.*

5. See Janet Reno, Attorney General of the United States, et. al. v. American Civil Liberties Union, et. al., 117 S. Ct. 1104 (1997); *Yukiyo, Ltd. v. Shiro Watanabe*, 111 F.3d 883 (Fed. Cir. 1997); *In re Berg*, 43 U.S.P.Q.2d 1703 (Fed. Cir. 1997).

6. See generally FREEDMAN, *supra* note 1, at 561. Multimedia is a term used to describe information that is presented in more than one type of format. *Id.* For example, a single presentation which is made in a variety of formats, such as "text, audio, graphics, animated, and full-motion video" is a multimedia presentation. *Id.*

in an unofficial capacity,⁷ a CD-ROM amicus brief⁸ in the case of *Reno v. American Civil Liberties Union*.⁹ A second judicial opinion regarding a CD-ROM filing was handed down two months later by the United States Court of Appeals for the Federal Circuit, in *Yukiyo v. Shiro Watanabe*.¹⁰

Although the *Yukiyo* brief was rejected because the opposing side did not have the necessary equipment to view the CD-ROM,¹¹ the holding proved to be a benchmark¹² decision in favor of such filings.¹³ In its opinion, the court stated it did not want its refusal of that brief to deter

7. See generally Carl Solano, *Special Feature: The First Law Firm Ever to Submit a Legal Brief to the Supreme Court in an All-Electronic Format, Responds to Bill Amderton's Q&A*, (Mar. 12, 1997). Mr. Solano is an attorney with the law firm that submitted the amicus brief to the United States Supreme Court in *Reno v. ACLU*. *Id.* He explained that since the Court did not accept the brief as a "formal filing," the firm was required to also submit a traditional paper brief. *Id.*

8. BLACK'S LAW DICTIONARY 82 (6th ed. 1990).

Amicus means, literally, friend of the court. A person with strong interest in or views on the subject matter of an action, but not a party to the action, may petition the court for permission to file a brief, ostensibly on behalf of a party but actually to suggest a rationale consistent with its own views. Such amicus curiae briefs are commonly filed in appeals concerning matters of a broad public interest; e.g. civil rights cases.

Id.

9. See generally Bill Pietrucha, *U.S. Supreme Court Gets Its First Cyberbrief*, NEWSBYTES, Feb. 21, 1997, at 1. *Reno v. ACLU*, is a First Amendment case concerning the right of free speech over the Internet. *Id.* The American Civil Liberties Union ("ACLU") brought action against the United States government claiming the Communications Decency Act ("CDA"), passed in February of 1996, was unconstitutional. *Id.* The CDA "makes it a crime, punishable by up to two years in jail and/or a \$250.00 fine, for anyone to engage in speech that is 'indecent' or 'patently offensive' on computer networks if the speech can be viewed by a minor." *Id.* The law firm of Schander, Harrison, Segal & Lewis, located in Philadelphia, Pennsylvania, filed a CD-ROM brief on behalf of twenty-five various groups that agreed with the position of the ACLU. *Id.* at 2. The objective in filing the CD-ROM brief was to give the court an opportunity to "review the matter in cyberspace to fully appreciate the medium Congress is attempting to regulate." *Id.* See generally Shannon P. Duffy, *Cyberbrief Shows Web's Workings*, THE LEGAL INTELLIGENCER, Feb. 21, 1997, at 1. The CD-ROM brief gave examples of works by Michelangelo, and other artists that might have been considered indecent under the CDA. *Id.* at 2. Additionally, the CD-ROM brief contained examples of medical information that also might have banned under the CDA. *Id.*

10. See generally Michael D. Fibison, *CD-ROM Brief Foreshadows the Electronic Courtroom: The Visual Power of a Good Witness Can Sway a Judge's Decision*, U.S. BUS. LITIG., May 1997, at 17. The *Yukiyo* case involved a patent infringement concerning porcelain dental veneer. *Id.*

11. See *infra* text accompanying note 181.

12. RANDOM HOUSE COMPACT UNABRIDGED DICTIONARY 193 (2d ed. 1996). A benchmark is "a standard of excellence, achievement, etc., against which similar things must be measured or judged." *Id.*

13. See *Yukiyo*, 111 F.3d at 886. (The court set a standard for guiding future CD-ROM filings).

future filings of CD-ROM briefs.¹⁴ In fact, the court called upon various groups in the legal community¹⁵ to develop standard rules for filing briefs in the CD-ROM format.¹⁶ In its opinion, the court included guidelines that should be followed when submitting CD-ROM briefs.¹⁷ Three months later, in July 1997, the Court of Appeals for the Federal Circuit accepted a CD-ROM brief in the case of *In re Berg*.¹⁸ In the span of seven short months, it appears that the fate of CD-ROM briefs has been determined.¹⁹ These decisions resonate with the courts' apparent willingness to allow the technological revolution into the courtroom.²⁰

Critics of CD-ROM briefs worry that the gatekeepers²¹ are not yet in place to ensure that such high-tech filings will not tip the scales²² of justice in favor of more affluent litigants and litigators.²³ Critics fear that litigants and litigators who already possess the savvy, skill, and money to take advantage of the latest technology are going to be allowed to do so at the peril of the less knowledgeable or the less fortunate.²⁴

14. *See id.* at 887. ("By no means, however, does the court intend to discourage the filing of CD-ROM briefs under appropriate rules and standards.")

15. *See id.* (called on the Court's advisory Committee on Appellate Rules, the Federal Circuit Bar Association, and other interested members of the bar).

16. *See id.*

17. *See id.* at 886. In its opinion the court stated that before future CD-ROM briefs are filed, the moving party must notify the other side. *Id.* Also, the party filing the CD-ROM brief must petition the court and make all parties aware of the hardware and software required to view the brief. *Id.*

18. *See generally* M. A. Stapleton, *First Brief on CD-ROM Finds Favor with U.S. Appeals Court*, CHI. LAW., July 30, 1997, at 1. This case involves an appeal of a patent-application case. *Id.* It is the first time that an appellate brief has been accepted for official filing in a CD-ROM format. *Id.*

19. *See id.* at 2. The author quotes attorney Charles L. Gholz, with the law firm of Oblon, Spivak, McClelland, Maier & Neustadt, the firm that filed the CD-ROM in *Berg*, 43 U.S.P.Q.2d 1703 (Fed.Cir.1997) as stating, "My belief is that not only is this the wave of the future, but that the wave is looming over us. I think it's fair to predict that, if not all of our briefs, 90 percent of them will be filed on CD-ROM." *Id.*

20. *See Berg*, 43 U.S.P.Q.2d at 1704. The *Berg* court stated that like the court in *Yukiyo* it also encourages the submission of CD-ROM briefs. *Id.*

21. RANDOM HOUSE COMPACT UNABRIDGED DICTIONARY 791 (2d ed. 1996). A gatekeeper is "a person in charge of a gate, usually to supervise the traffic of flow through it; guardian; monitor." *Id.*

22. *Id.* at 1709 (2d ed. 1996) (defining to tip the scale as, "to turn the trend of favor, control, etc.").

23. *See* Carl R. Moy, *No: Such Technology Calls Into Question Accepted Procedures*, A.B.A. J., July 1997, at 79. Although the author admits that hypertext briefs appear beneficial, he worries that the cost of such filings will "build into the appellate review system the ability of the wealthy parties to outstrip opponents' persuasive power, through the use of the communication medium itself." *Id.*

24. *See* John K. Gamble, *International Law and the Information Age*, 17 MICH. J. INT'L L. 747, 799 (1996). The author writes, "the pessimist might see the world dividing into two, increasingly segregated, camps: those with the technology and training to obtain and use

This Comment will explore the impact that CD-ROM briefs will have on the Federal judicial system. First, this Comment will discuss the capabilities of the CD-ROM and its potential impact on the legal community. Second, this Comment will explain the equipment, cost, skill, time requirements, procedure, and cases appropriate for CD-ROM brief filings. Third, this Comment will review how the courts, and the legal community, are developing rules for electronic brief submissions. Fourth, this Comment will analyze how CD-ROM briefs could affect the relationship between the federal appellate and trial courts. Fifth, this Comment will further analyze whether CD-ROM briefs have the potential to prejudice the cases of the less affluent litigants and litigators in the judicial system. Finally, this Comment will recommend that the use of CD-ROM briefs should not be discontinued while waiting for a level playing field in the legal community.

II. BACKGROUND

A. CD-ROM CAPABILITIES

The Compact Disc Read Only Memory ("CD-ROM")²⁵ is the latest success story in the Information Revolution.²⁶ The success of the CD-

information and those without." *Id.* See also Jonathan D. Kissane-Gaisford, *The Case for Disc-Based Litigation: Technology and the Cyber Courtroom*, 8 HARV. J.L. & TECH. 471 (1995). The author discusses the recent hype over CD-ROM presentations in the courtrooms. *Id.* "However, these high technology devices are not within the standard practice tool chest of most litigators and have received substantial criticism." *Id.*

25. See LARRY BODEN, *MASTERING CD-ROM TECHNOLOGY* 9-10 (Tim Ryan ed. 1995). The optical technology that a CD-ROM uses can be traced back to 1927. *Id.* at 9. CD-ROMs are read by a beam of light. *Id.* This is in contrast to the magnetic method that a floppy disk uses. *Id.* Therefore, unlike the method used to read a floppy disk, a CD experiences no wear when it is read because there is no physical touching of the disc itself. *Id.* at 9. It was in 1982, that the term "CD" became a household word. *Id.* at 10. This is when Sony and Philips introduced the compact disc for audio recordings. *Id.* Three years later, the same technology was applied to data storage to be used for computers. *Id.* See also DEVRA HALL, *THE CD-ROM REVOLUTION* 6-10 (1995). In 1992, the government, along with various professional fields, such as the medical and legal communities, started taking advantage of the huge data capacity the CD-ROM had, thus, sending the disc on its successful journey. *Id.* at 6. As further evidence of the growth of the CD-ROM industry, the author states that in 1986, *CD-ROM Directory* (a publication that lists available CD-ROM titles) contained only forty-eight CD software titles. *Id.* at 10. See, ERIN E. HOLMBERG, *CD-ROMS IN PRINT*, at vi (1997). "The 1997 edition of *CD-ROMs in Print* profiles nearly 4,000 companies associated with this industry and over 11,500 CD-ROM titles. The titles cover a variety of subject areas, including: business and industry, science and the professions, entertainment, games, and hobbies, culture, history, and education." *Id.*

26. See John Verity, *The Information Revolution: How Digital Technology is Changing the Way We Work and Live*, BUS.WK., May 18, 1994, at 10. The author states that prior to World War II, the word information referred to the "personal act of enhancing one's knowledge." *Id.* at 12. Something that was not "quantifiable" However, during World War II, the word information was redefined as "something quantifiable that could be collected,

ROM is attributed to the enormous storage capacity of the disc.²⁷ The CD-ROM disc, within its 4¾ inch diameter,²⁸ has the capacity to store up to 700 megabytes of data or over 716,000,000 characters.²⁹ That is equivalent to nearly 2,000 floppy disks, 275,000 pages of text,³⁰ 81 minutes of audio, or over 5,000 images.³¹

There are three additional elements that make the CD-ROM the medium of choice today. First, the CD-ROM is virtually error-free.³² Second, CD-ROMs are relatively inexpensive to manufacture.³³ Third, and most important, a CD-ROM is easy to use.³⁴ The CD-ROM is not a passing fad that will soon be overtaken by some newer, faster, less expensive medium because there is no other technology available that can store the amount of information that a CD-ROM is capable of storing.³⁵ In fact,

moved, and processed." *Id.* That trend has not stopped. *Id.* "The Information Revolution promises to touch—and in some cases radically transform—every aspect of life: our work and leisure, all manner of scientific techniques, and virtually every method for recording and transmitting knowledge. . . ." *Id.* See also Peter Coy, *Faster, Smaller, Cheaper*, *Bus.Wk.*, May 18, 1994, at 54. The evolution of technology is continuing to feed the Information Revolution. *Id.* The author states, "the Information Revolution's maxim might be faster, smaller, cheaper." *Id.* It is this philosophy that is pulling more people into the revolution, keeping it alive. *Id.* See also Hall, *supra* note 25, at 2. The author considers the birth of the CD to be when the Information Revolution really started. *Id.* "[The CD-ROM] as a tool of the Information Revolution, it facilitates access to the collective memory of our species and enhances our lives in many wonderful, subtle ways. Put simply, it changes everything." *Id.* at 18. The author reports that the Information Revolution is an international "phenomenon," not just a revolution within the United States. *Id.* at 16.

27. See FREDERICK HOLTZ, *CD-ROMS: BREAKTHROUGH IN INFORMATION STORAGE 1* (1988). "This tremendous storage capacity has caused the prediction of a similar revolution in the information industry that will change forever the manner in which we manipulate information." *Id.*

28. *Id.*

29. See BODEN, *supra* note 25, at 8.

30. *Id.* In order to conceptualize this amount of pages, the author reports that, "275,000 pages of single spaced text would completely fill 14 standard four-drawer filing cabinets." *Id.* at 8. "One expert figured out that a typist working at 65 words a minute would take 10 years at 24 hours a day to fill a CD-ROM." *Id.*

31. *Id.* "For audio, the standard volume is 74 minutes; however, in actual practice a disc could be as long as 81 minutes." *Id.* In a high-resolution format the disc is capable of storing over 5,000 images. *Id.* If a standard resolution is used the disc can store around 20,000 images. *Id.*

32. See *id.* at 52. The accepted standard error rate for CD-ROMs is "one erroneous byte in every 2,000 or so discs." *Id.*

33. See DANA J. PARKER & ROBERT A. STARRETT, *CD-ROM PROFESSIONAL'S CD-RECORDABLE HANDBOOK THE COMPLETE GUIDE TO PRACTICAL DESKTOP CD RECORDING*, at 1 (David R. Guenette, ed. 1996). Manufacturing costs for a CD disc range "between 60 cents and one dollar." *Id.* See also, Hall, *supra* note 25, at 8.

34. See DAN GOOKIN & ANDY RATHBONE, *PCS FOR DUMMIES* 176 (3rd ed. 1995). The CD-ROM is placed in the CD-ROM drive of a computer and the computer then reads the information that is contained on the CD-ROM. *Id.*

35. See HALL, *supra* note 25, at 8.

CD-ROMs are so popular that the hardware and software necessary to read³⁶ a CD-ROM is standard on personal computers purchased after 1994.³⁷ Additionally, external CD-ROM drives are available for computers that do not have built-in CD-ROM drives.³⁸ The high demand for CD-ROM drives forced the industry to improve the technology of the drives to keep up with the technical advancements of CD-ROM discs.³⁹

B. THE IMPACT OF THE CD-ROM ON THE LEGAL COMMUNITY

The Information Revolution is fueled by society's need to gather, research, process, analyze, and store ever increasing amounts of information, in faster and more efficient ways.⁴⁰ Competing in this Information Revolution keeps a society viable in a competitive world.⁴¹ All aspects of the legal community mirror the drive that has fueled the Information Revolution, with its need to process enormous amounts of information into logical winning legal arguments, in an effort to remain competitive.⁴² The increasingly competitive nature of the legal field in recent years puts pressure on lawyers to find ways to present winning arguments more quickly and less expensively. Using the latest technology will be one way for lawyers to differentiate themselves from other lawyers by offering quality service in a cost-efficient manner. Technology, such as the CD-ROM, enables lawyers to share information with their clients in a fast and inexpensive way, as opposed to costly faxes and lengthy telephone calls.⁴³ The CD-ROM has proven to be a practical so-

36. See generally GOOKIN & RATHBONE, *supra* note 34, at 176. A CD-ROM drive is required to read data from a CD-ROM. *Id.* The CD-ROM drive can either be built-in the computer or it be an external component that is hooked-up to the computer. *Id.* A CD-ROM drive works like the floppy drive of a personal computer. *Id.* The drive has a button that releases a "caddy" that the CD is placed into. *Id.* The "caddy" is then pushed back into the drive. *Id.* The personal computer can now read the CD from the CD drive. *Id.*

37. See PARKER & STARRETT, *supra* note 33, at 2.

38. See *High Speed CD-ROM Drives: How Much Faster Can They Get?*, Computer Buyer's Guide And Handbook, Sept. 1997, at 66.

39. *Id.* Seven CD-ROM drives, with the latest technology, were reviewed. *Id.* Early CD-ROM drives read at a speed of between 2X and 8X. *Id.* The drives that are being manufactured today, range between 20X and 24X. *Id.* The increase in speed allows the larger databases that are being put on CD-ROMs to be read quickly. *Id.*

40. See HALL, *supra* note 25, at 1.

41. See Verity, *supra* note 26, at 12. The author states that being able to process information technologically has become crucial to the economy. *Id.*

42. See *Navigating the 90's; Technology and the Changing Practice of Law*, AM. LAW., Feb. 1994, at 31, 31-32. "The law business is more suited to the use of computer technology than any business I can imagine." *Id.* This is because the main task of a lawyer is to process facts just as a computer does. *Id.*

43. See Noel D. Humphreys, *Compact Disks Record the File, the Case, the Scene, the Client's Expression*, N.Y.L.J., Nov. 2, 1993, at 5. See *Trial Tech*, TEX. LAW, June 16, 1997, at 31.

lution for the legal community because of its enormous storage capacity, multimedia capabilities, durability, and small physical storage space requirements.⁴⁴

The CD-ROM has infiltrated every aspect of the legal community.⁴⁵ CD-ROMs are the medium of choice in law libraries,⁴⁶ and supplemental learning aids.⁴⁷ CD-ROMs are used to access federal law and statutes,⁴⁸ and for research.⁴⁹ Additionally, CD-ROMs can be used for data storage,⁵⁰ such as case files and evidence. Storing case files on CD-ROMs is advantageous to law firms because the information can be indexed and easily retrieved.⁵¹ CD-ROMs have been used to present evidence at trials⁵² and for electronic brief filings.⁵³

44. *See id.* at 2.

45. *Id.*

46. *See* Pamela Bluh, *Striking a Balance: Document Delivery in the Nineties*, L. LIBR. J., 1993, at 601. Libraries have been moving towards the use of CD-ROMs since the 1980's. *Id.* The CD-ROMs inexpensive format, ease of use, timely updates, durability, and large data storage capacity are the reasons libraries have made this choice. *Id.* Early disadvantages with using CD-ROMs in libraries were that only one user at a time could view the CD, and different CD's required different hardware. *Id.* at 602. These disadvantages have been eliminated with recent technological advances. *Id.* CD-ROM's can now be networked, so that multiple users can view the same CD simultaneously. *Id.* Interfaces automatically allow the user to read a CD-ROM without having to be concerned about specific hardware requirements. *Id.*

47. *See, e.g.*, THE LEGAL INTELLIGENCER, Sept. 11, 1996 at 1. Advertises that lawyers can purchase a complete estate planning library on a CD-ROM from Sphinx Publishing. *Id.*

48. *See* HALL, *supra* note 25, at 79. Legal Systems is one company that distributes federal laws and statues in the CD-ROM format. *Id.* The CD's are purchased for a flat price. *Id.* Periodical updates to the CDs are an additional cost. *Id.*

49. *See* CHRISTOPHER G. WREN & JILL ROBINSON WREN, USING COMPUTERS IN LEGAL RESEARCH 13 (1994).

50. *See* HALL, *supra* note 25, at 81. Using CD-ROMs to store a large amount of data, as well as small amounts of information, is cost effective. *Id.*

51. *Id.*

52. *See* Terri Tobey-Smith, *Trial Strategy: Demonstrative Evidence & Litigation Support*, N.Y.L.J., July 17, 1995, at S4. The author uses the phrase "paperless trial" to describe trials where the majority of the information relating to the trial is stored on a CD-ROM. *Id.* Both sides use the CD-ROM format to display their evidence and documents. *Id.* Paperless trials are becoming more popular because they are proving to be more effective and efficient than a traditional trial. *Id.* Attorneys, clients, judges and jurors are starting to prefer computer-assisted trials over the conventional paper trials. *Id.*

53. *See* Thomas R. Newman & Steven J. Ahmuty, Jr., *CD-ROM Briefs*, N.Y.L.J., Sept. 3, 1997, at 3. "Electronic filing includes delivery via the Internet, through an e-mail system, or by filing a computer diskette." *Id.* *See also, e.g.*, Francis X. Gindhart, *Hypertext Briefs: Interactive Appeals*, N.Y.L.J., Apr. 21 1997, at S10. The hypertext brief filed in *Yukiyo* was in the CD-ROM format. *Id.* The CD-ROM is an excellent method for electronic filings because it can store any type of medium (text, video, graphics). *Id.*

C. COMPILING A CD-ROM BRIEF

Technological advancements and ease of use seem to parallel one another.⁵⁴ As computer technology evolves, it becomes easier for the novice, or even the technophobe,⁵⁵ to use the latest technology.⁵⁶ With a minimal investment in the right equipment, and a small learning curve, even a novice can become enough of an "expert" to produce a CD-ROM brief.⁵⁷

1. *Equipment*

Personal computer systems purchased within the last couple of years should meet the basic requirements for interfacing with CD recording technology.⁵⁸ For personal computers ("PCs") that fall short in a specific area, for instance, lacking sufficient megabytes of Random Access Memory ("RAM"),⁵⁹ upgrading is an inexpensive option.⁶⁰

A Compact Disc Recordable ("CD-R") drive⁶¹ is the device that "burns"⁶² information onto the CD. A CD-R looks just like the standard CD-ROM drive, but with an extra light to indicate recording.⁶³ Recent models come with the software required to operate the drive.⁶⁴ A blank CD-R disc is required for recording.⁶⁵

54. See Coy, *supra* note 26, at 57.

55. RANDOM HOUSE COMPACT UNABRIDGED DICTIONARY 1950 (2d ed. 1996). A technophobe is a person who has an "abnormal fear of or anxiety about the effects of advanced technology." *Id.*

56. See Catherine Arnst, *Tackling Technophobia*, BUS.WK., May 18, 1994, at 144-45.

57. See *Trial Tech*, *supra* note 43, at 31. A person does not have to be a "techie" to achieve their ultimate objective. *Id.*

58. See ASH PAHWA, *THE CD-RECORDABLE BIBLE*, 53 (1994). Any personal computer can be used for CD-ROM recording. *Id.* See also Street Price Guide Staff, *Computer Buyer's Guide and Handbook: Product Comparison Charts*, COMPUTER BUYER'S GUIDE AND HANDBOOK, Sept. 1997, at 119. The price guide to national brand personal computers reflect that the standards for today's computers far exceed the recommendation of eight megabytes of RAM. *Id.* at 132-42. The majority of national brand personal computers are sold with a standard of thirty-two megabytes of RAM. *Id.* See also Newman & Ahmuty, *supra* note 53, at 3. The hardware and software required to produce a CD-ROM brief are standard equipment on newer computers. *Id.*

59. See generally FREEDMAN, *supra* note 1, at 712. RAM is the acronym for random access memory. *Id.*

60. See GOOKIN & RATHBONE, *supra* note 34, at 325.

61. See generally *First Look at Mitsumi's CR-2600TE CD-R Drive*, COMPUTER BUYER'S GUIDE AND HANDBOOK, Sept. 1997, at 20. CD-R is the acronym for CD-Recordable technology. *Id.*

62. See HALL, *supra* note 25, at 271. "Burning" is the term used to describe the process of recording data onto a CD recordable disc. *Id.*

63. See *First Look at Mitsumi's CR-2600TE CD-R Drive*, *supra* note 61, at 20.

64. *Id.* at 21.

65. *Id.* at 20. A CD-R disc is a blank disc that data is recorded onto. *Id.*

2. Cost

Today's personal computer systems can more accurately be called multimedia work stations.⁶⁶ Options that were once considered additional accessories, such as modems, are now standard.⁶⁷ Standardizing these accessories has not increased the price of personal computer systems. On the contrary, computer prices have continued to fall.⁶⁸ As with personal computer systems, CD-ROM drives and CD-R drives have been improved, yet the price of these drives have also continued to fall.⁶⁹

The manual hours required to produce a CD-ROM brief are the most costly aspect of compiling the brief. Estimating figures for staff time required to produce a CD-ROM filing is difficult.⁷⁰ There are personnel hours involved in training, setup, preparing the information, ensuring accuracy of the brief, and then actually recording the brief to the CD-R disc. Everyone from the support staff to the attorneys may be involved.

Producing a CD-ROM brief in-house is less expensive than outsourcing the brief to consultants. There are also miscellaneous costs associated with generating a CD-ROM disc such as licensing fees or for converting videotape to a CD-ROM. It is anticipated that as more CD-ROM briefs are produced, any costs associated with generating these briefs will decrease. The overall cost of a CD-ROM brief will depend on the amount and varying formats (text, videotape, or graphics) of the ma-

66. See GOOKIN & RATHBONE, *supra* note 34, at 312. A personal computer system must have the following requirements to be considered multimedia: "486SX or faster microprocessor; 4MB of RAM or more; hard drive with 160MB or more; 3½-inch, high density floppy drive; two-button mouse; SuperVGA video card; 16-bit sound card; and relatively speedy CD-ROM drive." *Id.*

67. See Paul M. Eng, *The High-Tech Home*, BUS. WK., May 18, 1994, at 160.

68. *Id.* See, e.g., Street Price Guide Staff, *supra* note 58, at 128. A personal computer system that is capable of interacting with a CD-R drive can be purchased for less than \$2,000.00. *Id.*

69. See *High Speed CD-ROM Drives: How Much Faster Can They Get?* *supra* note 38, at 66. The consumer's demand for faster CD-ROM drives has prompted the industry to develop "state-of-the-art" drives. *Id.* The cost for a new faster drive is less than what an outdated drive cost two years ago. *Id.* See, e.g., *First Look at Mitsumi's CR-2600TE CD-R Drive*, *supra* note 61, at 20. A recently introduced CD-R model, complete with necessary software, has a suggested price of \$599.00. *Id.* It is anticipated that by 1998, the price of this new model will drop to \$200.00. *Id.* The cost of a blank CD has also dropped. *Id.* The price of a blank disc a couple of years ago was \$10.00. *Id.* Today, a blank disc costs less than \$5.00 if purchased in a pack of five or more. *Id.*

70. See Telephone Interview with Carl A. Solano, Partner with the law firm of *Schnader, Harrison, Segal & Lewis* (Sept. 19, 1997). See also Telephone Interview with Charles L. Gholz, Partner with the law firm of *Oblon, Spivak, McClelland, Maier & Neustadt* (Sept. 17, 1997). Marc R. Labgold & Kevin M. Bell, *Courts Begin to CD Light on CD Briefs*, 20 NAT'L L.J. 10, Nov. 3, 1997, at B8. "The cost of preparing an electronic brief, although not trivial, may be less than one might assume." *Id.* "The most costly component is the time required for manual preparation of the hypertext brief." *Id.*

terial put on the disc, as well as, how many hypertext links the disc will contain. The first disc a firm generates will be more costly than future CD-ROM briefs due to incremental start-up costs.⁷¹

3. Skill

Computer literacy⁷² is an obvious benefit when learning new software.⁷³ However, according to one systems manager who prepared a CD-ROM brief,⁷⁴ being able to produce a CD-ROM brief only requires basic word processing skills and as little as two weeks of training.⁷⁵

4. Time Required to Generate a CD-ROM Brief

A CD-ROM brief essentially contains the same information as a traditional paper brief.⁷⁶ Therefore, the preparation required to compile a CD-ROM brief is already required for traditional paper briefs.⁷⁷ The CD-ROM brief does have the additional step of burning⁷⁸ the brief onto

71. See Interview with Carl Solano, *supra* note 70. See also Interview with Charles Gholz, *supra* note 70. David G. Keyko, George Lange, *The Second Circuit Court of Appeals—CD-ROM Briefs, Electronic Filings, The Web and Video Arguments*, 6 METROPOLITAN CORP. COUNS. 7, July 1988, at 22. Mr. Keyko stated that producing the CD-ROM brief in-house reduced the cost by approximately a third of what an outside consultant would charge. *Id.* Additionally, Mr. Keyko stated “a fee is involved for assessing and downloading material from Lexis-Nexis and Westlaw.” *Id.* A cost was also involved in converting a videotape for use in the CD-ROM. *Id.* Mr. Lange discussed the costs of producing a CD-ROM brief and reported that the costs will decrease. *Id.*

72. RANDOM HOUSE COMPACT UNABRIDGED DICTIONARY 1122 (2d ED. 1996). Literacy refers to “possession of education; a person’s knowledge of a particular subject or field. . . .” *Id.*

73. See Arnst, *supra* note 56, at 145. The author states that technophobes know more about computers than they think. *Id.* The reason for this is because people use computers more than they realize, for example, programming a VCR or using voicemail. *Id.*

74. See *Trial Tech*, *supra* note 43, at 31. Ryan Murphy is a systems manager for the Houston, Texas, office of Fish & Richardson. *Id.* Mr. Murphy assisted in producing the CD-ROM Brief that was filed in *Yukiyo*. *Id.* The CD-ROM brief Mr. Murphy worked on contained more than “3,000 pages of documents and portions of several videotaped depositions.” *Id.*

75. *Id.* In fact, Mr. Murphy is heading a new project to provide training to all the paralegals and secretaries at the firm on how to store pleadings, briefs, and related documents onto a CD-ROM. *Id.* He has allocated up to eighty hours of training per person. *Id.*

76. See interview with Carl Solano, *supra* note 70. The CD-ROM brief filed with the United States Supreme Court in *Reno* contained the same information as the traditional paper brief that was filed with the trial court. *Id.* The paper brief filed with the trial court contained photocopies of the Internet Web pages that would have been banned under the Communications Decency Act. *Id.* See also Interview with Charles Gholz, *supra* note 70.

77. See interview with Carl Solano, *supra* note 70; See also Interview with Gholz, *supra* note 70.

78. See *supra* note 62.

the CD.⁷⁹ However, this step can be accomplished in a short span of time.⁸⁰ The *Yukiyo* CD-ROM brief took two weeks to compile.⁸¹ The *Reno* CD-ROM brief took half that time to prepare.⁸²

5. Procedure

The procedure for compiling the CD-ROM brief in *Reno* was remarkably less complicated than what was originally anticipated.⁸³ First, a written copy of the brief was submitted to the firm's Information Systems Department ("IS"),⁸⁴ who converted it into hypertext markup language ("HTML").⁸⁵ The attorneys instructed the IS staff on which documents and graphics were to be linked through the HTML codes.⁸⁶ It took the department one week to complete the task.⁸⁷

The second step required checking the brief for accuracy.⁸⁸ It was important to ensure that the data was accurate.⁸⁹ Due to the cutting-edge technology of a CD-ROM brief, there were no procedures established for producing such a brief, so the firm had to develop the guidelines as it went. Lastly, it is important that the CD-ROM brief be checked to ensure that all hypertext links are functioning correctly.⁹⁰

79. See Interview with Carl Solano, *supra* note 70. After the brief is checked for accuracy it is then recorded onto the CD. *Id.* See also Keyko, *supra* note 71, at 22. "The CD-ROM interactive brief simply entails downloading the Wordperfect or Word version of your brief onto a CD-ROM." *Id.*

80. See Interview with Carl Solano, *supra* note 70. Mr. Solano was surprised at how quickly the CD-ROM brief was compiled. *Id.* See also Interview with Charles Gholz, *supra* note 70. Mr. Gholz was pleased with the short amount of time it took to produce the CD-ROM brief. *Id.*

81. See generally Interview with Gholz, *supra* note 70. The entire CD-ROM brief filed in *Berg* was prepared in-house. *Id.*

82. See generally Interview with Carl Solano, *supra* note 70. The CD-ROM brief submitted in *Reno* was prepared entirely in-house at the law firm. *Id.*

83. *Id.* The whole process of producing the CD-ROM brief "just came together." *Id.*

84. *Id.* "IS" is the acronym for Information Systems. *Id.* This is the department that manages all aspects of the firm's computer hardware and software systems. *Id.*

85. *Id.* See generally *supra* note 3.

86. *Id.* See also Newman & Ahmuty, *supra* note 53, at 3. It is the hyperlinks that allow the CD-ROM user to instantly access a particular page that has been cited within the original brief, or even immediately jump to a videotape deposition, or a surveillance tape. *Id.*

87. *Id.*

88. *Id.* The attorneys and support staff worked together to proofread the brief. *Id.*

89. *Id.* The CD-ROM brief in *Reno* was lodged with the United States Supreme Court and concerned constitutional issues; it was very important to ensure that the brief was professional and accurate in all areas. *Id.*

90. *Id.* See also Labgold & Bell, *supra* note 70, at B8. The accuracy of a CD-ROM brief is just as important as the accuracy of any other document submitted to the court. *Id.* "Just as a paralegal would page-check each copy of the brief and appendix, so, too, should someone check that the hypertext links work properly on each CD." *Id.*

6. *Cases Appropriate for CD-ROM Filings*

There were several reasons why the attorneys made the decision to submit a CD-ROM brief in *Reno*, *Yukiyo*, and *Berg*. In *Reno*, the main objective in filing a CD-ROM brief was to expose the court to the very medium and materials that the Communications Decency Act could have restricted.⁹¹ In *Yukiyo*, the plaintiff's attorneys chose to file a CD-ROM brief in that case because it was a simple case that did not have a lot of convoluted evidence thereby making it a good candidate for mastering new technology.⁹² In *Berg*, the plaintiff's attorneys believed that the electronic filing would enhance the presentation of their case.⁹³

However, the common objective for filing a CD-ROM brief in every case is convenience.⁹⁴ All concerned parties would be able to access the case record through a single disc.⁹⁵ The disc could be reviewed anywhere one can use a laptop computer.⁹⁶

Using a CD-ROM brief eliminates the need to setup a video recorder, or dig through boxes of trial records to find a key phrase or piece of evidence.⁹⁷ All this searching can be done with the simple click of a mouse button.⁹⁸ The improved efficiency that comes from using CD-ROM briefs makes it a logical choice for most cases.⁹⁹

91. See Martha Woodall, *High Court Gets a First: A Brief For Digital Age*, INQUIRER, Feb. 1997, at 1. The author quoted Mr. Solano, "We wanted the court to be able to review the matter in cyberspace to fully appreciate the medium Congress was to regulate." *Id.*

92. See Katarena L. Zanders, *Boston Firm Introduces Hypertext*, INSIDE LITIG., Apr. 1997, at 17. "Fish & Richardson selected this fairly straightforward appeals case on patent validity for this hypertextual adventure because it did not involve reams of evidence." *Id.*

93. See Interview with Charles Gholz, *supra* note 70. Mr. Gholz stated that the cost of producing the CD-ROM brief was not a lot of money for this important case. *Id.*

94. Fibison, *supra* note 10, at 17. The author states that CD-ROM briefs could reduce the amount of time it takes to consider a case. *Id.*

95. *Id.* See also Interview with Carl Solano, *supra* note 70. Mr. Solano recently spoke at a conference attended by 15 to 18 judges regarding the benefits of CD-ROM briefs. *Id.* These particular judges were not computer-savvy, but their staffs encouraged them to attend. *Id.* Mr. Solano said, "it was a very skeptical audience." *Id.* Once Mr. Solano demonstrated to the judges how the CD-ROM brief worked, he had a "room full of enthusiasts on [his] hands." *Id.* The judges were most impressed with the idea of no longer having to carry briefcases filled with papers. *Id.* The judges liked the thought of being able to slip a whole case file in their pockets. *Id.*

96. See Fibison, *supra* note 10, at 17. Fibison gives the example of a judge being able to review a brief on an airplane using a laptop computer. *Id.*

97. See Gindhart, *supra* note 2, at S11. The "self-contained" nature of a CD-ROM brief is a benefit to judges. *Id.* "[A] judge need no longer put down a printed brief to pull a lawbook from a library shelf. No longer will he or she have to dig through a multivolume appendix to find a documentary exhibit or set up a VCR to play a videotaped excerpt of testimony." *Id.*

98. *Id.* A judge will only need to use a computer to review a brief. *Id.*

99. *Id.* The CD-ROM is a "natural vehicle" for appellate court cases. *Id.*

D. RULES

When the attorneys filed the CD-ROM brief in *Reno*, there were no rules to govern the submission of a CD-ROM filing.¹⁰⁰ This changed a few months later in *Yukiyo*¹⁰¹ when the court laid out guidelines for future CD-ROM filings.¹⁰²

First, the party wishing to file the CD-ROM brief must inform the opposing side of its intention to file such a brief before the brief can be submitted to the court.¹⁰³ Second, any potential prejudice the brief might cause to the opposing side will be strongly considered by the court in deciding whether to accept the brief.¹⁰⁴ Third, the motioning side must obtain the court's permission and make all parties aware of system requirements for reading the brief.¹⁰⁵ The *Yukiyo* guidelines have already proved helpful in *Berg*.¹⁰⁶ The attorney who successfully filed the CD-ROM brief in *Berg* followed the guidelines outlined by the *Yukiyo* court.¹⁰⁷ Additionally, in the *Berg* opinion, Judge Rader reaffirmed the *Yukiyo* guidelines.¹⁰⁸

However, the courts are not alone in developing rules for electronic filings.¹⁰⁹ The federal government is expected to release new federal rules for electronic case files.¹¹⁰ Key issues of concern in the new rules range from timeliness to ensuring that all litigants have access to elec-

100. See Duffy, *supra* note 9, at 2. The clerks of the United States Supreme Court told the law firm submitting the CD-ROM brief that "because the rules are silent on issues such as illustrations and filing additional copies in CD-ROM format, . . . [they] would break no rule by doing so." *Id.*

101. See *Yukyio*, 111 F.3d at 886 (the Court rejected the CD-ROM brief because the moving party neglected to get the consent of the opposing side).

102. *Id.* "In order to guide future CD-ROM filings, until such time as the court promulgates rules governing such filings, the court sets forth the following guidelines." *Id.*

103. *Id.* "[A] party wishing to file a CD-ROM counterpart brief must seek consent of the other parties before submitting a CD-ROM brief to this court." *Id.*

104. *Id.* "[P]rejudice to another party could be an important factor in denying leave." *Id.*

105. *Id.* "[A] party must seek leave of the court to file a CD-ROM brief and must provide information both to this court and to the other parties about the computer equipment needed to view the CD-ROM brief." *Id.*

106. See Stapleton, *supra* note 18, at 2.

107. *Id.*

108. See *Berg*, 43 U.S.P.Q. 2d 1703,1704 (July 1997).

109. See Leonida Ralph Mecham, *Electronic Case Files in the Federal Courts: A Preliminary Examination of Goals, Issues, and the Road Ahead*, at 2 (Mar. 1997) <<http://www.uscourts.gov>>. The federal courts are turning to electronic filing to reduce its reliance on paper records. *Id.* See also Newman & Ahmuty, *supra* note 53, at 3. Rule 25(d) of the Federal Rules of Appellate Procedure was revised in 1996 to allow electronic filing. *Id.* Under FRAP 25(d), as amended, "[a] court of appeals may by local rule permit papers to be filed, signed, or verified by electronic means that are consistent with technical standards, if any, that the Judicial Conference of the United States establishes." *Id.*

110. See Mecham, *supra* note 109, at v (1997).

tronic filing.¹¹¹

III. ANALYSIS

This section will first analyze the effect CD-ROM briefs could have on the traditional relationship between the federal appellate court and the trial court. Second, this section examines whether CD-ROM briefs could prejudice the less affluent within the United States judicial system.

A. CD-ROM BRIEFS: THE TRADITIONAL RELATIONSHIP BETWEEN THE FEDERAL APPELLATE COURT AND THE TRIAL COURT

1. *Interaction Between the Federal Appellate Courts and Trial Courts*

The federal appellate courts ("FAC") and trial courts, in the United States judicial system, function with different objectives and responsibilities.¹¹² A trial court's primary responsibility is to hear evidence, decide the facts, and apply the law to the facts to decide the issues in favor of one of the parties.¹¹³ Therefore, a trial court is a court of first impression¹¹⁴ and its decisions only affect the particular case it decides.¹¹⁵

In contrast, an appellate court is a reviewing court.¹¹⁶ Its primary responsibility is to review the decisions of the trial court, in order to ensure that the law was applied accurately and uniformly.¹¹⁷ An appellate court relies on the record from the trial court and does not involve itself in fact-finding.¹¹⁸ An appellate court's decision affects future cases

111. *Id.* at 32-33. The decisions concerning issues such as timeliness and ensuring all litigants have access to electronic filings will be developed by the courts and the Judicial Conference. *Id.*

112. See DANIEL JOHN MEADOR & JORDANA SIMONE BERNSTEIN, *APPELLATE COURTS IN THE UNITED STATES* 1-4 (1994). The authors give a detailed outline of the structure of the trial court and the appellate court systems and the differences in the roles of each court. *Id.*

113. *Id.* at 1.

114. *Id.* The authors use the term "courts of first instance" to further distinguish the role of the trial court from that of the appellate court, which is a reviewing court. *Id.*

115. See THOMAS B. MARVELL, *APPELLATE COURTS AND LAWYERS* 26 (1978). Marvell considers the trial court the heart of the legal adversary system. *Id.* If a lawyer did not do a great job presenting his case, only he and the client pay the price at the trial court level. *Id.* The decision affects no other cases. *Id.*

116. See MEADOR & BERNSTEIN, *supra* note 112 at 1. The appellate court's reviewing jurisdiction is called "appellate jurisdiction." *Id.* This jurisdiction gives appellate courts the authority to review decisions made by subordinate courts. *Id.*

117. *Id.* at 3-4. The appellate courts, in their reviewing capacity, ensure that the trial courts and administrative agencies apply the law correctly and fairly. *Id.* This guarantees litigants justice. *Id.*

118. *Id.* at 2. Unlike trial courts, appellate courts are not concerned with fact-finding. *Id.*

based on *stare decisis*.¹¹⁹

2. *The Critics' Concerns*

It is the rule of deference between the two courts that the opponents of the CD-ROM brief fear will be eroded by the multimedia format of the brief.¹²⁰ Critics claim that giving the appellate court too much of the trial record threatens the standard of review, efficiency, and finality in litigation.¹²¹ Critics believe that if the appellate court becomes involved in fact-finding, it will take the court longer to decide cases. Additionally, if the facts of cases are given new meaning by the appellate court, cases will never have finality.

3. *Standard of Review, Efficiency, and Finality Between the Two Courts*

a. *Standard of Review*

Under the Federal Rules of Civil Procedure Rule 52(a),¹²² the FAC

119. See MARVELL, *supra* note 115 at 27. Appellate courts make law through its decisions by setting precedent. *Id.* Therefore, its decisions affect a greater number of people than a dispute decided in the trial courts. *Id.*

120. See Fibison, *supra* note 10, at 17. "The CD-ROM brief format could change litigation dramatically by bringing visual elements and multimedia presentations from lower court trials to the appellate level." *Id.* Compare Kissane-Gaisford, *supra* note 24, at 471. The author discusses how some critics of the CD-ROM format believe that its multimedia capabilities will turn the U.S. court system into a "circus-like atmosphere," thereby, causing a decline in the integrity of the entire system. *Id.*

121. See Moy, *supra* note 23, at 79. Moy states that the CD-ROM brief gives the appellate court too much information, thereby, lessening deference to the trial courts. *Id.* When this happens, efficiency and finality of litigation is threatened. *Id.* But see Francis X. Gindhart, *Yes: These Briefs Support Wee-Litigated Advocacy*, A.B.A. J., July 1997, at 78. Gindhart claims that the only deference a CD-ROM brief threatens is "bad advocacy," because the format of the brief makes it difficult to conceal a weak case. *Id.*

122. FED. R. CIV. P. (52)(a). Findings by the Court; Judgment on Partial Findings:

(a) Effect. In all actions tried upon the facts without a jury or with an advisory jury, the court shall find the facts specially and state separately its conclusions of law thereon, and judgment shall be entered pursuant to Rule 58; and in granting or refusing interlocutory injunctions the court shall similarly set forth the findings of fact and conclusions of law which constitute the grounds of its action. Requests for findings are not necessary for purposes of review. Findings of fact, whether based on oral or documentary evidence, shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses. The findings of a master, to the extent that the court adopts them, shall be considered as the findings of the court. It will be sufficient if the findings of fact and conclusions of law are stated orally and recorded in open court following the close of the evidence or appear in an opinion or memorandum of decision filed by the court. Findings of fact and conclusions of law are unnecessary on decisions of motions under Rules 12 or 56 or any other motion except as provided in subdivision (c) of this rule.

Id.

must give deference¹²³ to the trial judge's fact-finding, unless it is "clearly erroneous."¹²⁴ Thus, the FAC is not at liberty to reach its own decisions concerning factual issues.¹²⁵ This same rule applies to jury decisions. A jury's fact-finding decision compels the utmost deference by the FAC.¹²⁶

The Seventh Amendment of the United States Constitution¹²⁷ declares that facts found by a jury cannot be questioned by the court.¹²⁸ Once again, the FAC is held to a strict standard of review prohibiting it from making fact-finding decisions.¹²⁹

b. *Efficiency*

The FAC receives the case record from the clerk of the trial court.¹³⁰ In an effort to promote efficiency, the FAC has rules governing the content, length, and page size of an appellate brief.¹³¹ These guidelines pro-

123. RANDOM HOUSE COMPACT UNABRIDGED DICTIONARY 522 (2d ed. 1996). Deference is the "respectful submission or yielding to the judgment, opinion, will, etc., of another." *Id.*

124. See MEADOR & BERNSTEIN, *supra* note 112, at 60. The author discusses the "clearly erroneous" standard. *Id.* The appellate court can only ignore the trial judge's findings of fact if it falls within this standard. *Id.* "An often-stated formula is this: [e]ven though there is evidence to support the finding, a trial judge's factual determination will be deemed clearly erroneous if the appellate court, after considering the entire record, is left with the definite and firm conviction that a mistake has been made." *Id.* at 63. Compare BLACK'S LAW DICTIONARY 251 (6th ed. 1990). Clearly erroneous is a "rule providing that findings of a trial court shall not be set aside unless 'clearly erroneous,' refers to findings when based upon substantial error in proceedings or misapplication of law, . . . or when unsupported by substantial evidence, or contrary to clear weight of evidence or induced by erroneous view of the law." *Id.*

125. *Id.* See also MARVELL, *supra* note 115, at 158. A trial court's or jury's findings of fact are not overturned simply because the appellate judges differ with it. *Id.* See FRANK M. COFFIN, ON APPEAL, 114 (1994). "What this means for reviewing judges is that in most cases we know that we must be prepared to acquiesce in decisions that we would not make ourselves, but are not sufficiently unsupported or unreasonable to allow us to reverse." *Id.*

126. See MEADOR & BERNSTEIN, *supra* note 112, at 63-64. The appellate court is required to give more deference to a jury's decision than to a trial court judge's decision. *Id.* This reflects the important role the jury plays in the American judicial system. *Id.*

127. U.S. CONST. amend. VII. "In suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury shall be otherwise re-examined in any Court of the United States, than according to the rules of the common law." *Id.*

128. See MEADOR & BERNSTEIN, *supra* note 112, at 63. The author explains that the terminology "rules of the common law" means that the evidence must support the jury's verdict, in that reasonable minds would have found the same result. *Id.*

129. *Id.* at 64. The standards of review give more deference to a jury's decision than that of a judge. *Id.*

130. *Id.* at 71.

131. See Moy, *supra* note 23, at 79. "Length and Form of Briefs. Briefs may be type-written. The length and form of briefs shall be governed by local rule." *Id.* See MARVELL, *supra* note 115, at 71. "The length of briefs is often regulated; in federal courts printed

mote uniformity among information supplied to the court.¹³² Additionally, restricting the size of briefs helps the court reduce storage space requirements.¹³³

c. Finality

The FAC will only consider issues raised in a case at the trial court level.¹³⁴ To promote finality, the court will not entertain new issues on review of a case.¹³⁵ Without this rule, there would be no finality in litigation.¹³⁶ This rule ensures litigants will not intentionally withhold an issue at the trial court level, in hopes of a “second chance” argument on appeal.¹³⁷

4. The Critics’ Fears

The remainder of this section will analyze whether the three CD-ROM briefs submitted in *Reno*, *Yukiyo*, and *Berg* compromised the standard of review, efficiency, and finality.

a. Standard of Review

The CD-ROM brief submitted to the United States Supreme Court in *Reno* was an amicus brief,¹³⁸ and so it received less critical analysis by the legal community than the briefs filed in *Yukiyo* and *Berg*.¹³⁹ The CD-ROM briefs filed in *Yukiyo* and *Berg* only contained a mirror copy of the paper brief. Still, the three briefs filed in the CD-ROM format did raise some concerns within the legal community regarding the standard of review and deference to the trial court because of the all-inclusive ca-

briefs cannot be longer than 50 pages without the court’s permission.” *Id.* The majority of briefs are not more than 20 pages. *Id.*

132. *See Moy, supra* note 23, at 79. “The limitations on the form of appellate briefs, for example, have typically been thought to spring from the court’s own, internal efficiency needs.” *Id.*

133. *See infra* Part III.A.4.a.

134. *See MEADOR & BERNSTEIN, supra* note 112, at 56. *See also Coffin, supra* note 125, at 113. “what an appellate court will consider is almost always limited to what has been adequately preserved in the record of proceedings in the agency or trial court.” *Id.*

135. *See MEADOR & BERNSTEIN, supra* note 112, at 56. “The practice of not considering issues for the first time at the appellate level also encourages finality in litigation. Appellate insistence on that rule forces counsel to take care to raise all possible issues during the trial when they can be heard and decided—perhaps to all parties’ satisfaction so that no one will appeal.” *Id.*

136. *Id.* “Not only would finality be eroded by such a practice, but there would also be an unfairness in making the trial winner undergo a second round of litigation on a matter that could have been litigated in the first round.” *Id.*

137. *Id.*

138. *See Duffy, supra* note 9, at 1.

139. *See* interview with Solano, *supra* note 70. Mr. Solano was instrumental in compiling the CD-ROM brief that was submitted to the United States Supreme Court in *Reno*. *Id.*

pability of CD-ROM briefs.¹⁴⁰

However, these concerns are unfounded because a CD-ROM brief contains no more than what has always been available to the appellate court.¹⁴¹ The critics of CD-ROM briefs are opposed to videotaped testimony being included in the CD-ROM brief.¹⁴² This argument is unwarranted because videotaped testimony has been included as part of the record with traditional paper briefs.¹⁴³ The CD-ROM format only makes access to the videotaped testimony easier, thus, leading critics to speculate that an appellate judge will spend more time analyzing the video and become more involved in the fact-finding process.¹⁴⁴ This speculation is without merit because appellate judges are not looking for more work.¹⁴⁵ Rather, they are looking for ways to expedite their caseloads.¹⁴⁶ Additionally, appellate judges have rules that govern the manner in which they review cases. The legal community must have faith that appellate judges will abide by these rules.¹⁴⁷ Poor advocacy is the only part of a case that will receive less deference by the appellate court.¹⁴⁸ The *Yukiyo* opinion supports the contention that the critics claims are overstated.

The rejected CD-ROM brief in *Yukiyo* copied the conventional paper brief that was filed in the case.¹⁴⁹ However, the CD-ROM brief also contained hypertext links that allowed readers immediate connection to published cases, statutes, rules, trial transcripts, district court orders,

140. *Id.* See Interview with Gholz, *supra* note 70.

141. *Id.* See also Interview with Gholz, *supra* note 70.

142. See Interview with Solano, *supra* note 70.

143. *Id.*

144. *Id.*

145. See MEADOR & BERNSTEIN, *supra* note 112, at 13. The appellate courts are making changes in order to maintain its caseload and prevent an overflow. *Id.* See also Interview with Solano, *supra* note 70.

146. See Interview with Gholz, *supra* note 70. See also MEADOR & BERNSTEIN, *supra* note 112, at 12. Since 1960, the number of appeals in the U.S. appellate courts has continued to increase. *Id.* There were 3,899 filings in 1960. *Id.* In 1992, the number of filings rose to 47,013. *Id.* The increase in the number of cases filed each year is expected to continue to grow. *Id.*

147. See Interview with Solano, *supra* note 70.

148. See Gindhart, *supra* note 121, at 78. The use of CD-ROM briefs will occur at the trial level. *Id.* It would not make sense to use the benefits of the CD-ROM brief at the trial level and then send a traditional paper brief to the appellate court. *Id.* By allowing the appellate court easy access to the complete information of case, it will be harder for lawyers to hide errors and irrelevant issues. *Id.*

149. See *Yukio, Ltd. v. Shiro Wantanabe*, 111 F.3d 883, 885 (Fed. Cir. 1997). "The CD-ROM brief filed in this case contains an electronic copy of *Yukiyo's* paper brief that, like the paper brief, includes citations to relevant law and matters contained in the record. Viewed page for page, the CD-ROM brief mirrors the paper filing." *Id.*

jury instructions, and videotaped evidence.¹⁵⁰ The opposing party moved to have the CD-ROM brief struck based on prejudice because the brief contained the full trial transcript and complete video testimony.¹⁵¹

Although the opposing side was successful in having the CD-ROM brief rejected, the brief was not rejected because of its all-inclusive content.¹⁵² In fact, the court did not appear to be impressed with that argument made by defendant's counsel.¹⁵³ In its opinion, Judge Archer stated that there could be times when it would be advantageous to have a complete transcript.¹⁵⁴ Judge Archer further stated that the main reason courts limit the content of briefs is because of storage space concerns.¹⁵⁵ However, as Judge Archer concluded, storage space is not a concern with CD-ROM briefs.¹⁵⁶

b. Efficiency

Further evidence suggests that the court system views technology as an enhancement to efficiency rather than, as critics claim, a threat. For example, the Administrative Office of the United States Courts is turning to electronic filings as a means of improving efficiency in the United States court system.¹⁵⁷ In fact, implementing electronic filing has been made a primary objective by The Judicial Conference's Committee on Automation and Technology.¹⁵⁸ The Committee set a goal to begin electronic case filing within the next three to five years.¹⁵⁹

150. *Id.* "By positioning the pointer with the use of a mouse and clicking on a hypertext citation, the reader is able to access the hypertext." *Id.*

151. *Id.* ([Defendant] "contends that the filing of the CD-ROM brief is improper because it contains complete copies of trial transcripts and a video of an entire deposition, while the paper appendix that will be filed will only include extracts of trial and deposition transcripts.").

152. *Id.* at 886. The court rejected the CD-ROM brief because the moving side failed to get the court's and the opposing side's permission before filing the brief. *Id.* The court also took into consideration that the opposing side did not have the equipment to view the CD-ROM brief. *Id.*

153. *See CD-ROM Brief Struck Down But Guidelines Provided*, 14 COM. L. No.5, 18 May 1997.

154. *Id.* The court did not give specific examples of when having the complete transcript would be helpful.

155. *See Yukio, Ltd. v. Shiro Wantanabe*, 111 F.3d 883, 885 (Fed. Cir. 1997). "The object of this rule is to reduce the size of the paper appendix and not burden the court with information that is unnecessary for the resolution of an appeal." *Id.*

156. *Id.* "[S]ome of the virtues of a CD-ROM are that the CD-ROM takes up far less physical space than a paper brief and appendix and the information contained on the CD-ROM is readily accessible. Thus, it may be appropriate for a CD-ROM brief to include materials such as a complete transcript given these capabilities." *Id.*

157. *See Mecham, supra* note 109, at 1. The court wants to move away from paper records in order to make managing case information more efficient. *Id.*

158. *See id.* at v (1997).

159. *Id.*

The Administrative Office of the Courts believes electronic case filing will enhance all aspects of the United States court system through improved productivity.¹⁶⁰ For instance, judges will have greater access to case information.¹⁶¹ Additionally, with less paper flowing through the system the physical storage space in the courts will be utilized more effectively.¹⁶²

c. Finality

Given the rise in the appellate court's case load since the early 1960's, it is unlikely that the court desires to increase litigation even more.¹⁶³ Thus, the critics' claim that CD-ROM briefs will deter finality in disputes is unsubstantiated. On the contrary, CD-ROM briefs will aid in the finality of litigation by eliminating lawyers' ability to hide irrelevant issues in mountains of papers.¹⁶⁴ The CD-ROM brief is not a trojan horse,¹⁶⁵ only an instrument that will enable judges to make enlightened decisions in a more timely manner.¹⁶⁶ Judges will no longer be forced to waste time searching through box after box of papers looking for pertinent case law, statutes, and trial transcripts. The all-inclusive content of the CD-ROM brief will provide easy access to all relevant case information, allowing judges to make time-efficient, quality decisions.

B. THE POTENTIAL FOR CD-ROM BRIEFS TO PREJUDICE THE
LESS AFFLUENT

Critics also argue that CD-ROM briefs cost too much to produce¹⁶⁷ and that most lawyers do not have the knowledge and equipment to generate this type of brief or even view a CD-ROM brief.¹⁶⁸ Therefore, crit-

160. *Id.*

161. *Id.*

162. *Id.*

163. See MEADOR & BERNSTEIN, *supra* note 112, at 12-13.

164. See Gindhart, *supra* note 53, at S11. "For one thing, it will be harder for appellate lawyers to concoct frivolous appeals, as bad arguments will be harder to make when every factual and legal assertion can be instantly verified by clicking on hyperlinks to supporting material." *Id.*

165. See Zanders, *supra* note 92, at 18. The author quotes one of the attorneys for the plaintiff in *Yukiyo* as saying, "the multimedia brief is not a weapon, just a technological timesaver that is otherwise no different from the normal brief." *Id.*

166. See Interview with Solano, *supra* note 70. See also Fibison, *supra* note 10, at 17. The author quotes Francis X. Gindhart as saying, "Anything that makes it easier for a judge is going to result in a better decision." *Id.*

167. See Moy, *supra* note 23, at 79. The author states that CD-ROM briefs cost much more to produce than the traditional paper brief. *Id.*

168. See Kissane-Gaisford, *supra* note 24, at 1. See also Wendy R. Leibowitz, *When High-Tech Is Over the Top: Is a CD-ROM Brief Fair or Foul?*, NAT'L L.J., Mar. 3, 1997, at B8. The author writes that Mr. Sutton, the defendant's attorney in *Yukiyo*, did not have the equipment to view the CD-ROM that was submitted in the case. *Id.* Further, a partner

ics claim that the high-tech format of the CD-ROM brief is only for the wealthy litigant and the technically savvy litigator, leaving the remainder of the legal community and poorer litigants at an unfair disadvantage.¹⁶⁹ However, the opinions in *Reno*, *Yukiyo*, and *Berg* demonstrate that there is no foundation to this claim.

1. *Reno v. American Civil Liberties Union*

The government had no objection to the CD-ROM brief filed in *Reno*.¹⁷⁰ The CD-ROM brief filed on behalf of the *Amici*, in an unofficial capacity, focused on the material that would have been banned under the Communications Decency Act ("Act"), not on issues of law.¹⁷¹ The format of the CD-ROM brief provided the perfect vehicle for the *Amici* to attain their objective¹⁷² and to expose the Justices to a firsthand look at the material the Act was attempting to control, in the medium at issue, the Internet.¹⁷³

The *Reno* brief contained examples ranging from masterpieces by Michelangelo to valuable medical information, all of which could have been outlawed under the Act.¹⁷⁴ The CD-ROM brief enhanced the *Amici's* argument by allowing these examples to be shown in the Internet environment.¹⁷⁵ However, because of the secrecy on how the

in defense counsel's firm was quoted as saying, "[The plaintiff's counsel] made a gift to the judges. Like a beautiful magnifying glass: But there's an advantage to this magnifying glass. It only shows side of the case. There is no such animal as a slight advantage in litigation." *Id.* See, In the Commissioner's Opposition to Berg's Motion for Leave to File Hypertext Briefs at 1, *In re Berg*, (Fed. Cir. 1997) (No. 97-1367). The Defendant claimed, "To allow only one party to file a hypertext brief would remove. . . procedural symmetry." *Id.* Further, the Defendant argued that requiring him to file a CD-ROM brief would substantially increase the cost and burden of his case. *Id.* The defendant stated that he does not have equipment to compile a CD-ROM brief. *Id.*

169. See *Moy*, *supra* note 23, at 79. The author raises concerns that because the cost of preparing a CD-ROM brief is so much more than preparing the traditional paper brief, it is not fair to give the litigants who can afford this format this "persuasive power" over those who cannot afford a CD-ROM brief. *Id.*

170. See interview with Solano, *supra* note 70.

171. See *Duffy*, *supra* note 9, at 1.

172. See interview with Solano, *supra* note 70. The enormous storage capacity of the CD-ROM allowed plenty of space to store multiple examples of the material that would have been banned under the Communications Decency Act. *Id.*

173. See *Duffy*, *supra* note 9, at 1. The interactive multimedia format of the CD-ROM brief allowed the court to view the examples as if it was viewing the material on the actual Internet. *Id.*

174. See interview with Solano, *supra* note 70.

175. See *First Cyberbrief Submitted to the U.S. Supreme Court*, ADAM CONTI'S INTERNET LAW OFFICE, Mar. 10, 1997, at 1. The author states that even a short glimpse of the brief underscores the potential impact such a presentation can make. *Id.*

court reaches its opinions,¹⁷⁶ it is not known what impact the CD-ROM brief had on the Justices holding that the Act was unconstitutional.¹⁷⁷ It cannot even be said with any certainty that all the Justices used the CD-ROM brief.¹⁷⁸ The Court, however, did cite one example contained in the CD-ROM brief suggesting that the Justices, or at least their law clerks, may have viewed the CD.¹⁷⁹

2. *Yukiyo v. Shiro Watanabe*

In *Yukiyo*, the defendant was successful in his argument to strike the CD-ROM brief filed by the plaintiff.¹⁸⁰ The defendant claimed he was prejudiced by the brief because he did not have the necessary equipment to view it.¹⁸¹ The defendant had to contact another lawyer to view the disc, thereby, incurring additional expense and burden.¹⁸² The court held the defendant must be able to view all documents related to the case and it was up to the party filing the CD-ROM brief to determine that the other side could view the CD-ROM brief ahead of time.¹⁸³ Therefore, the

176. See MARVELL, *supra* note 115, at 7-9. Judicial secrecy is protected at all costs. *Id.* at 7-8. Judges must be comfortable that their discussions concerning decisions are kept confidential in order to promote a free exchange of ideas and criticism. *Id.* at 8. However, there are other reasons for judges maintaining their internal decision-making process. *Id.* Judges fear that if someone outside the court was to get a hold of a decision in advance, they could use it for financial profit. *Id.* Judges also fear that if attorneys know which judge will be writing a particular opinion, they would try to influence that judge. *Id.* Also, judges want to avoid public criticism of their process for reaching case decisions. *Id.*

177. See Interview with Solano, *supra* note 70.

178. See *id.* The clerks were anxious to receive the CD-ROM brief. *Id.* See also Tony Mauro, *Internal Conflict on Internet Case*, LEGAL TIMES, Mar. 1997, at 8. The clerk's office told the lawyers submitting the CD-ROM brief that they would ensure that the justices had all the necessary hardware and software to utilize the CD-ROM. *Id.* The author doubts the technical competence of the justices, referencing a 1996 picture of Justice David Souter's office that showed he did not have a personal computer. *Id.*

179. See Interview with Solano, *supra* note 70.

180. See *Yukio, Ltd. v. Shiro Watanabe*, 111 F.3d 883, 887 (Fed. Cir. 1997). *But cf.* Dan Goodin, *Hypertext Brief Just Too Darn Newfangled for S.F. Firm*, THE RECORDER, Apr. 1997, at 4. The author states that defendant's counsel is not going to want to brag about his winning the motion to strike the CD-ROM brief because he did not have the equipment to view the brief. *Id.* The author claims, by today's standards, this is a "rare admission." *Id.* The defense lawyer in *Yukiyo*, "has since upgraded his computer so that he can read such briefs." *Id.* The defense lawyer stated, "I've made my living off of high technology for the last 40 years. I don't want my 15 minutes of fame to be as the guy who froze the growth of technology at the point of the quill pen." *Id.* See generally Mark Grossman, *Software Advice from the Trenches*, BROWARD DAILY BUS. REV., July 25, 1997, at B1. Typewriters are no longer the standard office equipment for law offices. *Id.* The minimum system that today's law offices are purchasing is a Pentium 200MMX, thirty-two megabytes of RAM, and a two-gigabyte hard drive. *Id.*

181. See *Yukiyo*, 111 F.3d at 885.

182. *Id.*

183. See *id.* at 886.

court further held the CD-ROM brief did prejudice the defendant.¹⁸⁴ Prejudice to the other side is a predominant consideration in rejecting a CD-ROM brief.¹⁸⁵ The opinion in *Yukiyo* suggests that the court will weigh the issue of prejudice heavily. This consideration should dispel the critics' concerns.

3. *In re Berg*

In *Berg*, the plaintiff appealed an administrative decision of the Patent and Trademark Office.¹⁸⁶ In order to enhance the presentation of his case, the plaintiff filed a motion for leave to submit a CD-ROM brief along with the conventional brief.¹⁸⁷ The defendant filed an opposition motion on the grounds that the defendant did not have the equipment to compile his own CD-ROM brief.¹⁸⁸ To require a "non-consenting party" to prepare this type of brief would place an unfair burden on the party.¹⁸⁹ The defendant further argued that allowing only one side to submit such a brief would remove "procedural symmetry."¹⁹⁰

Despite the defendant's argument, the court granted the plaintiff's motion to file the CD-ROM brief.¹⁹¹ In its opinion, the court held that the defendant had the necessary equipment to view the brief and the

184. *Id.* "[B]ecause the [plaintiff] failed to seek the leave of this court and the consent of [defendant] to file the CD-ROM brief, and because the filing of the brief prejudices [defendant], the motion to strike is granted." *Id.*

185. *Id.* "[P]rejudice to another party could be an important factor in denying leave." *Id.*

186. See Brief for Appellant at 1, *In re Berg*, (Fed. Cir. 1997)(Appeal No. 97-1367).

187. See Stapleton, *supra* note 18, at 2. The lawyers for the plaintiff filed the hypertext brief because the client was willing to pay the additional costs and because they believed the CD-ROM format would enhance their case. *Id.*

188. See Commissioner's Opposition to Berg's Motion for Leave to File Hypertext Briefs at 1, *In re Berg*, (Fed. Cir.) (Appeal No. 97-1367).

189. See Commissioner's Opposition to Berg's Motion for Leave to File Hypertext Briefs at 1, *In re Berg*, (Fed. Cir.) (Appeal No. 97-1367). "To require a non-consenting party to file a hypertext brief without good reason would significantly increase the costs and the burden on the non-consenting party." *Id.*

190. *Id.* "The filings of both parties' main briefs are governed by the same rules of this Court and the Federal Rules of Appellate Procedure. . . *Berg* has offered no reason to deviate from the present requirements. To allow only one party to file a hypertext brief would remove this procedural symmetry." *Id.* See also, Appellant's Motion For Leave To Submit Hypertext Briefs In Addition To Conventional Briefs And Proposed Order at 3, *In re Berg* (Fed. Cir.) (Appeal No. 97-1367). In his motion to submit the hypertext brief, the defendant gave the following reasons for submitting the brief: "(1) that it is abundantly obvious that we will all have to get used to working with hypertext briefs in the next few years, (2) that it would be a good idea to "get our feet wet" on cases such as this one, [the case does not have a large record] and (3) that it would be advantageous for the court to experiment with different versions of hypertext briefs before issuing a new rule governing hypertext briefs." *Id.*

191. See *In re Berg* 43 U.S.P.Q. 1703,1704 (Fed. Cir. 1997).

court would not require the defendant to file his own CD-ROM brief.¹⁹² The court further held that the defendant's argument concerning "procedural symmetry" did not outweigh the benefits of the CD-ROM brief and, therefore, held that the defendant "would not be unduly prejudiced by the brief."¹⁹³ However, if the defendant was unable to view the brief the court may have rejected the CD-ROM brief.¹⁹⁴ This opinion supports the courts' unwillingness to accept CD-ROM briefs if it prejudices the other party, thus, further dispelling the critics fears.¹⁹⁵

C. THE FUTURE OF CD-ROM BRIEFS

As the courts become more willing to accept the benefits that technology, such as CD-ROM briefs, can bring, it will be difficult for lawyers to find excuses for why they are not yet computer-literate.¹⁹⁶ For example, when the courts began issuing orders by facsimile, an attorney could not tell the court he was too poor to afford a facsimile machine.¹⁹⁷ This same reasoning will apply to the use of computer technology; especially since computer technology is encroaching into all aspects of our everyday lives at an increasingly fervent pace. Further, attorneys are representing technically savvy clients everyday. It will become harder for lawyers to argue the benefits of technological advancements on behalf of their clients in court, while arguing against such advancements within their own field.¹⁹⁸

For now, the courts are sensitive to the less technically savvy litigators and poorer litigants.¹⁹⁹ However, the courts are searching for solutions to correct these disparities, as opposed to excuses to preserve them, in an effort to keep moving forward with bringing technology into

192. *Id.*

193. *Id.*

194. *Id.* "The Commissioner [defendant] does not argue that the [Patent and Trademark Office] lacks the equipment necessary to view a counterpart brief." *Id.*

195. *See Berg*, 43 U.S.P.Q. at 1704. ("As stated in *Yukio*, the court encourages the filing of CD-ROM briefs, provided that the opposing party will not be prejudiced by such a filing.")

196. *See Mecham*, *supra* note 109, at v (1997). The Administrator of the United States Courts has stated that the benefits technology can bring the court system, including "the judiciary, lawyers and the public seem profound and irresistible." *Id.*

197. *See* interview with Solano, *supra* note 70.

198. *Id.* *See also* Labgold & Bell, *supra* note 70, at B8.

199. *See Yukio, Ltd. v. Shiro Wantanabe*, 111 F.3d 883, 886 (Fed. Cir. 1997). The court based its decision to strike the CD-ROM in *Yukio* on the fact that defense counsel did not have the necessary computer equipment to view the CD-ROM brief and because the defendant had to incur additional expense by hiring another attorney to view the brief for him. *Id.*

the courtroom.²⁰⁰

There are some solutions to the issues of attorneys not being able to afford the equipment, or not having the knowledge to prepare a CD-ROM brief. One solution is to outsource the brief to a printer capable of generating a CD-ROM brief.²⁰¹ Another solution is to have the courts make the equipment available to pro bono litigants or have pro bono deals with vendors.²⁰² Attorneys can also rent the equipment necessary for viewing and compiling CD-ROM briefs.²⁰³

The litigators who are ready to submit CD-ROM briefs to the courts have not been deterred by the critics' fears. In fact, the attorneys who filed the CD-ROM briefs in *Yukiyo*, *Reno*, and *Berg* are already working on, or have already filed, CD-ROM briefs in other cases. Nor has the courts' undertaking to find innovative ways to improve judicial efficiency been sidetracked due to such claims of prejudice and unfairness. The Second Circuit Court of Appeals has been promoting the use of CD-ROM technology for the past year among United States Attorneys, federal public defenders, and litigators in its jurisdiction. Although both sides must agree to the CD-ROM filing, the Second Circuit reiterated that it intends to not only permit such filings, but will encourage them.²⁰⁴ It will not be long before CD-ROM brief filings are commonplace.²⁰⁵

200. See Mecham, *supra* note 109, at 32. A primary concern for the Administrator of the United States Courts is that everyone must have access to the court system when electronic filing is implemented. *Id.*

201. See interview with Gholz, *supra* note 70. Mr. Gholz believes that for printers to stay in business in today's market, they will have to offer services beyond the traditional printing services. *Id.* See also Hall, *supra* note 25, at 81. For organizations that do not want to record CDs in-house, there are all kinds of production houses and service organizations that can do the job. *Id.*

202. See interview with Solano, *supra* note 70.

203. See Tobey-Smith, *supra* note 52, at S7. Ms. Tobey-Smith reports that renting equipment for the paperless trial is inexpensive. *Id.*

204. See interview with Solano, *supra* note 70. Mr. Solano stated that his firm has already filed another CD-ROM brief with a trial court. *Id.* Again, this was not a formal filing. *Id.* The firm also submitted the traditional paper brief along with the CD-ROM brief. *Id.* See *Trial Tech*, *supra* note 57, at 32. The firm that submitted the CD-ROM brief in *Yukiyo* has submitted a second CD-ROM to court. *Id.* See Gholz, *supra* note 70. Mr. Gholz stated that his partners were very impressed with CD-ROM brief and believe "it is the way to go." *Id.* See also Keyko, *supra* note 71, at 22. See also Joanna Glasner, *Second Circuit Unveils Latest Courtroom Tech*, N.Y.L.J., Nov. 10, 1997, at T4. "Second circuit officials are asking attorneys to attempt submissions on CD-ROM, and in October [1998], the court issued an administrative order setting polices for such filings." *Id.*

205. See Leibowitz, *supra* note 168, at B9. See also Newman & Ahmuty, *supra* note 53, at 4. "As more lawyers, judges and clients begin to appreciate the many benefits of this technology, the number of such filings will increase dramatically, especially in high-exposure cases." *Id.*

IV. CONCLUSION

The Information Revolution has infiltrated the legal profession.²⁰⁶ Litigators who have experienced the benefits that technology affords will not be slowed by those who have not.²⁰⁷ It is apparent that the court system echoes this sentiment. The three CD-ROM briefs filed in 1997 with the U.S. Supreme Court, the Patent Office, and the federal courts demonstrate the courts' willingness to embrace the benefits and convenience technology offers in its goal to increase judicial efficiency.²⁰⁸

As evidenced by the holdings in *Yukyio* and *Berg*, the courts are sensitive to the less technically savvy litigators and poorer litigants and are willing to act as gatekeepers to ensure that these litigators and litigants are not prejudiced by those who already possess the skill and money to produce high-tech filings.²⁰⁹ However, as further evidenced in the *Yukyio* and *Berg* opinion, the courts are sending another message that should not be ignored;²¹⁰ the courts are ready to allow technology into the United States judicial system.²¹¹

The cost of computer equipment has dramatically decreased in the last couple of years, while the technological advancements continue to rapidly increase.²¹² Advancements in computer technology make the novice an expert in an increasingly short amount of time.²¹³ Therefore, the courts' sensitivity to the opposing side's arguments in *Yukyio*, such as not having the equipment or skill required to view a CD-ROM brief, may not be valid in future cases. The line between prejudice to the opposing party and the efficiency of CD-ROM briefs is becoming less dis-

206. See *Navigating the 90's; Technology and the Changing Practice of Law*, *supra* note 42, at 31-32.

207. See Mecham, *supra* note 109, at 2 n.3. "According to surveys conducted by the Chicago-Kent Center for Law and Computers, the proportion of attorneys using computers in the 500 largest large firms jumped from seven percent in 1985 to 70 percent in 1993. *Id.* See also Susan D. Kligerman, *Defining Cyberlegaethics for Web-Surfing Paralegals*, THE LEGAL INTELLIGENCER, Aug. 21, 1997, at 6. "Recent bar surveys reveal that only 30 to 40 percent of the attorneys in the private sector and approximately 60 percent of the attorneys in the public sector are cyberliterate." *Id.*

208. See Duffy, *supra* note 9, at 1. The United States Supreme Court agreed to accept, in an unofficial capacity, a CD-ROM brief. *Id.* See also *Yukio, Ltd. v. Shiro Wantanabe* 111 F.3d 883,887 (Fed. Cir. 1997). The opinion in *Yukyio* made it clear that it was not the intention of the court to deter future CD-ROM brief filings. *Id.* See also Order at 2, *In re Berg*, (Fed. Cir.) (Appeal No. 97-1367). Judge Rader, in his decision, stated that CD-ROM brief submissions are "encouraged" by the court. *Id.*

209. See *Yukiyo*, 111 F.3d at 886. The court will not accept a CD-ROM filing if it would prejudice the other party. *Id.*

210. See *Berg*, 43 U.S.P.Q.2d 1703 (Fed. Cir. July 11, 1997).

211. See *id.* The court supports CD-ROM filings. *Id.*

212. See Eng, *supra* note 67, at 160.

213. See Arnst, *supra* note 56, at 145.

tinct.²¹⁴ Thus, smart litigators will follow the courts' lead in viewing technology as a tool to judicial efficiency instead of a weapon against judicial fairness.²¹⁵

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214. See *Berg*, 43 U.S.P.Q.2d at 1703. The court held that the defendant in *Berg* was not prejudiced because they did not have the necessary equipment to prepare their own CD-ROM brief. *Id.*

215. See *Zanders*, *supra* note 92, at 2.

