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Fredric I. Lederer

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THE EFFECT OF COURTROOM TECHNOLOGIES ON AND IN APPELLATE PROCEEDINGS AND COURTROOMS*

Fredric I. Lederer**

If you want to win a case, paint the Judge a picture and keep it simple.¹

INTRODUCTION

In deciding appeals, judges weigh the record, the briefs, and the arguments of counsel, mixed well with an independent view of law and policy. Traditionally, the information presented to the court has been written and oral. During oral argument, counsel make their arguments in person to the judges, all of whom are present in the same courtroom. Tradition notwithstanding, our appellate courts now are beginning to experience the effects of the technological age—the age of visual information.

Technology is rapidly becoming a normal facet of many trial courtrooms.² As appellate courts necessarily review the

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** Chancellor Professor of Law and Director, Courtroom 21, College of William & Mary, Marshall-Wythe School of Law. The Courtroom 21 Project, “The Courtroom of the 21st Century,” is an international demonstration, experimental, and educational project sponsored by William & Mary and the National Center for State Courts. The Project seeks to determine how to use appropriate technology to improve the administration of justice in the world’s legal systems. The Law School’s McGlothlin Courtroom is the world’s most technologically advanced trial and appellate courtroom. This article is informed by the trial and appellate experience gained from working in the Courtroom 21 Project. See generally *Courtroom 21* <www.courtroom21.net> (accessed June 21, 2000).

1. *The Quotable Lawyer* 18 (Elizabeth Frost-Knappman & David S. Shrager eds., rev. ed. New Eng. Publg. Assoc., Inc. 1998) (quoting John W. Davis, annual meeting of Scribes, Aug. 21, 1955).

2. See e.g. 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 (1999);

conduct of trials and their results, it is apparent that appellate judges must now review the effects of technology at trial.³ However, legal technology is also changing the nature of appeals themselves.

In one sense the most sweeping change facing the appellate courts is the likely change in the record of trial from text to multi-media, a change that presents at least the possibility of affecting the standard of appellate review.⁴ Yet at the same time technology may also affect appellate practice, as courts consider electronic hyperlinked briefs⁵ and receive appellate argument in the form of electronic, perhaps even multi-media, presentations. Even our expectations about the nature of appellate hearings are likely to change as judges and counsel appear from remote locations by two-way video.⁶

Lawyers have long tried to paint verbal pictures for judges, even in appellate proceedings. In the new evolving age of technology-augmented appeals, those pictures will no longer be figurative, but actual. Let us review the currently available appellate technologies⁷ and their likely consequences.

Fredric I. Lederer, *Technology Comes to the Courtroom, and . . .*, 43 Emory L.J. 1095 (1994) [hereinafter *Technology*].

3. See e.g. *Harrell v. State*, 709 S.2d 1364, 1366 (Fla. 1998) (holding as a matter of first impression that neither federal nor state Confrontation Clauses are violated by admission of trial testimony though the use of a live satellite transmission in cases in which a witness resides in a foreign country and is unable to appear in court), *cert. denied*, 525 U.S. 903 (1998).

4. In this issue, see the article by Robert C. Owen and Melissa Mather, *Thawing Out the "Cold Record": Some Thoughts on How Videotaped Records May Affect Traditional Standards of Deference on Direct and Collateral Review*, 2 J. App. Prac. & Process 405 (2000).

5. The topic of hyperlinked briefs is addressed later in this issue by Marilyn Devin, *CD-ROM Briefs: Are We There Yet?* 2 J. App. Prac. & Process 377 (2000).

6. Two appellate judges discuss their experiences with videoconferenced oral arguments in this issue. See Stephen J. McEwen, Jr., *TV or Not TV: The Telecast of Appellate Arguments in Pennsylvania*, 2 J. App. Prac. & Process 405 (2000); Edward Toussaint, *Minnesota Court of Appeals Hears Oral Argument via Interactive Teleconferencing Technology*, 2 J. App. Prac. & Process 395 (2000).

7. This article addresses only those technologies that go directly to appellate practice. It does not include, for example, those assistive technologies that would help judges, counsel, or others who might benefit from technological help because of difficulties in seeing, hearing, moving, speaking, or the like. Readers interested in this area should contact the Courtroom 21 Project's Assistant Director for Assistive Technologies.

I. THE CASE BELOW—THE COURT RECORD

The traditional court record consists of a paper text transcript with the necessary supporting exhibits and ancillary papers. Prepared either by a stenographic or voicewriter reporter,⁸ or by a transcriber from an audio or audio/video recording, the traditional text transcript has met with comfortable acceptance by judges and lawyers alike. Depending upon the size of the case, the transcript usually is reasonably portable and has the great virtue of being accessible without special equipment. Indeed, it is “random-access”; users may open it to any page immediately. Of course, finding a particular passage in a transcript can be problematic. Lawyers have the primary initial responsibility to direct the judges’ attention to the appropriate parts of the transcript. Ordinarily, it is for the lawyers to search the transcript for error, which is not to deny that there are many appellate courts and judges who go beyond the lawyer’s record citations and who sometimes independently search the record for error.

Text transcripts present, of course, only a small part of what actually happened at trial. Neither voice nor image is present, and their absence can be extraordinarily misleading. Even when described in the record, witness gestures and demeanor often are inadequately set forth in text.⁹ Voice

8. The voicewriter reporter is better known by the term “stenomask reporter.”

9.

By their nature, video records display the very matters ordinarily invisible to written transcripts: body movements, facial gestures, vocal intonations, and the like. These movements may prove essential to understanding the impact of information not reflected on the written record. In one well-known case, the judge apparently expressed his disbelief at the alibi testimony of a witness by shaking his head and silently turning his chair away from the jury. Such extremes are not necessary to raise the question of silent judicial communication. Every time the judge makes a movement—each time she knits her brow, yawns, rolls her eyes, scratches her head—it is at some level interpreted as a commentary on the testimony of the witness. That commentary becomes particularly intense because it is, in the main, subliminal.

Lederer, *Technology*, *supra* n. 2, at 1112 nn. 64, 65 (citing *State v. Barron*, 465 S.W.2d 523, 527 (Mo. 1971); LaDoris H. Cordell & Florence O. Keller, *Pay No Attention to the Woman Behind the Bench: Musings of a Trial Court Judge*, 68 Ind. L.J. 1199, 1206 (1993)).

See also *State v. Jenkins*, 445 S.E.2d 622, 624-25 (N.C. App. 1994); Rochelle L. Shoretz, Student Author, Note, *Let the Record Show: Modifying Appellate Review Procedures for Errors of Prejudicial Nonverbal Communication by Trial Judges*, 95

intonations are absent, and except for word choice, all witnesses “sound” alike in the text transcript. As Judge Denson, United States District Judge for the Eastern District of North Carolina, observed:

A recent film, “My Cousin Vinnie [sic],” made this point. When accused of a homicide, a character incredulously questioned “I killed (the victim)?” The typed transcript of this remark became a confession: “I killed (the victim).” Although the transcript was completely accurate in reporting the words said, it was totally inaccurate in conveying the message of the speaker because it did not report the intonation.¹⁰

Can there be any wonder that appellate courts defer to judicial findings of fact below where the trial judge was able to observe the demeanor of the witnesses?¹¹ We take it for granted that demeanor evidence unavailable to a reviewing court is important to the fact-finder. At the same time, however, lawyer and judicial misconduct can be shielded by text.

A number of years ago the Courtroom 21 Project presented a short demonstration. Counsel in a simulated condemnation case was examining an expert witness. Had there been a formal text transcript, it would have reflected the following:

Witness: Accordingly, based upon the sale of the other three beach parcels, I concluded that the fair market value of the land in question was 5.4 million dollars.

Counsel: May it please the Court; Your Honor, I apologize, but I’m afraid that you may have missed the testimony. You seemed to be dozing.

Judge: Dozing, Counsel? Certainly not. I was only resting my eyes. Continue.

Counsel: Yes, Sir.

What really happened was portrayed on the videotape. As the witness testified, the camera image of the judge showed him slumped back in his chair with his eyes closed. Clearly shaken and uncertain, counsel paused and cautiously advised the judge that he seemed to be dozing. On tape, the judge started suddenly,

Colum. L. Rev. 1273, 1285 (1995).

10. *Riley v. Murdock*, 156 F.R.D. 130, 131 n. 3 (E.D.N.C. 1994).

11. *See e.g.* Fed. R. Civ. P. 52(a) (2000).

came to life, made his remarks about resting his eyes, and then smoothly collapsed back into the chair with closed eyes and a somnolent face.

Would the absence of videotape prevent counsel from presenting the complete occurrence on appeal? Of course not.¹² But, and it is an important “but,” a comprehensive audio and video depiction of trial events eliminates in most cases later debates about what happened.¹³ Ruling upon an issue connected to the proposed taking of a videotaped deposition, the United States District Court for the Eastern District of North Carolina opined:

[T]he finder of fact must assess the credibility of deposition testimony. Standard jury instructions inform jurors that in assessing testimony they may consider, *inter alia*, a witness's demeanor while testifying because it is common knowledge that facial expressions often reveal the veracity of the speaker. A video deposition, unlike a typed transcript, allows a trial jury to consider the demeanor of a witness while testifying. If, as plaintiff contends, the deponent was evasive, a video deposition would make this much more apparent than would a typed transcript because it would show, for example, delays in responses, which the transcript would not. Further, a video deposition is more likely than a transcript to expose any coaching by counsel, such as by notes, gestures, or whispered instructions inaudible to a court reporter.

The video deposition is allowed because it is a superior method of conveying to the fact finder the full message of the witness in a manner that assists the fact finder in assessing credibility¹⁴

If video depositions are so valuable at the trial level, a layperson likely would conclude that appellate courts ordinarily

12. See *e.g.* Shoretz, *supra* n. 9, at 1282-86 (citing cases, most based presumably upon written transcripts or supplemental materials such as affidavits).

13. See generally William E. Hewitt, *Videotaped Trial Records: Evaluation and Guide* (1990). As we know from a number of high-profile cases, videotape evidence is not necessarily conclusive. Even if we capture the critical event clearly, behavior can be susceptible to alternative interpretation, and a given occurrence need not tell us anything about its causation.

14. *Riley*, 156 F.R.D. at 131 (footnote omitted).

use electronic trial records. The actuality, of course, is far different; text is the norm.

Ironically, a large number of court transcripts begin life as audio or audio/video recordings. Electronic recording includes both multi-channel analog recording on cassette tapes and digital recording, which records multi-channel audio from the courtroom microphones on computer hard disks with subsequent back-up to CD media, high-density tape, or cassette. Audio/video recording can be accomplished using a single fixed camera image or a multi-frame picture that includes four or more separate camera images.¹⁵ Voice-activated cameras ordinarily select the image shown. Properly installed and operated,¹⁶ audio/video recording yields the most accurate memorialization of what happens in court. There is, however, a distinction between “capturing the record” and the subsequent use of that record.

As of 1993, only eight states permitted non-transcribed videotaped records on appeal.¹⁷ Of these states, Kentucky is well known for its expansive use of non-transcribed videotape records.¹⁸ Anecdotal reports indicate, however, that a large

15. These recordings ordinarily show images of key courtroom players—judge, witnesses, examining counsel, and perhaps a small image of the entire courtroom. The Courtroom 21 Multi-media Telesys System permits eight images, six of which are on screen at any one time. The advantage of a multi-image picture is that one is unlikely to miss a key facial or other gesture just because the voice-activated camera was not activated.

16. Audio/video recording is *not* as easy as it sounds. In our experience courtroom audio is perhaps the most difficult courtroom technology, especially in a high-technology facility that uses video-conferencing and high-technology court record systems. Audio-system problems are far from unknown.

For proper operation, the system must, of course, be “on.” Ideally, an electronic reporter would be present. At the least, a trained operator should be involved. At the same time, one must also trust that the judge will not accidentally or intentionally turn the system off.

17. David B. Rothman et al., *State Court Organization 1993* at 23940, Table 31 (Natl. Ctr. for St. Cts. 1995). No more current information is available. Telephone Interview with Bill Hewitt, Senior Staff Associate in the Research Division of the National Center for State Courts (Mar. 20, 2000).

18. See Ky. R. Civ. P. Ann. 98 (LEXIS L. Publg. 2000). Kentucky adopted widespread use of video records after it experienced difficulty with inadequate court reporter coverage, untimely transcripts, and excessive transcript charges. Harv. Univ. Kennedy Sch. Govt. Case Program, *Court Reporting in Kentucky* (A) (C16-91-1035.0 1990). The Kentucky process is discussed at some length in Owen & Mather, *supra* n. 4, at 415-20. See also Frederick K. Grittner, *The Recording on Appeal: Minnesota's Experience with Videotaped*

majority of judges and lawyers are hostile to audio/video records. This may be because, as lawyers and judges, we are used to the written word. It may also stem, however, from the fact that text can be browsed quickly and the transcript opened to any necessary point while audio and videotapes must be viewed in real time.¹⁹ Accordingly, for appellate purposes, most jurisdictions ordinarily require that recordings be turned into text transcripts.²⁰ At first blush, the perceived need for a text transcript would seem to necessarily result in rejection of an audio/video record. The dichotomy is false, however. Modern technology now makes available the combined text-central, multi-media court record.

II. THE NEW COURT RECORD

Computer-assisted transcription uses computerized court reporting equipment to create a computerized version of the stenographic court reporter's record. As the court reporter takes the record with stenotype, the reporter's machine generates both a paper tape and a computer file. The computer file can be output to judicial and litigator courtroom computers so that trial participants can immediately view, and annotate, their own unofficial rough draft trial transcript.²¹ This is realtime

Proceedings, 19 Wm. Mitchell L. Rev. 593, 595-96 nn. 8-13 and accompanying text (1993); Toussaint, *supra* n. 6.

19. "Among other problems, appellate judges found the videotaped records more time consuming and cumbersome: Finding a specific section and pausing was simply too difficult, the conference's two-year study found." Rorie Sherman, *Virtual Venues*, Natl. L.J. 1, 30 (Jan. 10, 1994) (reporting on the federal rejection of videotape records). See also *Foster v. Kassulke*, 898 F.2d 1144 (6th Cir. 1990) (refusing to require state to prepare a written transcript despite claim that 132-hour videotape record of six-week murder trial was so long as to make proper brief preparation impossible). See generally Henry H. Perritt, Jr., *Video Depositions, Transcripts and Trials*, 43 Emory L.J. 1071, 1079 nn. 58-63 and accompanying text (1994).

20. A comparative discussion of electronic recording/reporting and the use of voicewriter or stenographic reporters is outside the scope of this article. It is the position of the Courtroom 21 Project that all of today's technology-augmented court record approaches are valid and that each has its advantages and disadvantages. In evaluating any particular approach in a specific court context, it is critical to distinguish between the record's initial capture and its subsequent transcription or other use. Economies and efficiencies in one area need not be reflected in another. Further, a decision deciding how to make the best record for a specific case inherently considers ethical and pragmatic human factors.

21. A certified transcript results after the reporter's editing.

transcription. Although realtime has been a monopoly of stenographic court reporters, breakthroughs in speech recognition technology now permit voice writing court reporters to create realtime. The reporter repeats everything said in the courtroom into a "silencer," a special mask that muffles the reporter's speech. The reporter's speech is interpreted by a specially trained computer, and realtime transcription results.²² It is realtime that is the key to the new court transcript.

Trial lawyers have used multi-media depositions for some time. When conducting a deposition, counsel videotape the examination, often with concurrent computer-assisted transcription (although this can be added later), and then create an integrated multi-media transcript,²³ usually on a CD-ROM. The deposition record consists of an electronic text transcript with synchronized audio and video that appear when the text is clicked appropriately with the computer mouse. The text can be searched, and the audio and video only appear when wanted. Appropriate exhibits are also made part of the visual part of the disk. A multi-media court record works the same way that a multi-media deposition does.

A comprehensive multi-media appellate court record consists of its primary component, the electronic text, along with the accompanying digitalized audio and video of the entire proceeding, further augmented by the proffered evidentiary exhibits. At present, only the Courtroom 21 Project's McGlothlin Courtroom is known to have the ability to produce a contemporaneous multi-media court record. The problem is a simple one. Digitalized video takes up a great deal of computer storage space, and it is not now feasible to make such a record routinely. This restriction will either vanish or sharply diminish shortly, however, as high capacity second- and third-generation recordable DVD technology comes on the market.

Given inexpensive durable electronic multi-media records, records that could be transmitted by Internet nearly instantaneously to all parties and the appellate court,²⁴ the

22. Although this technology holds enormous promise, at present it is not usually as accurate as realtime stenographic reporting.

23. This transcription can be done concurrently or after the fact.

24. This is a potential aspect of the Ringtail Solutions Courtbook software now installed in the McGlothlin Courtroom.

question becomes how, if at all, such records would affect appellate practice.

III. EFFECT ON APPELLATE PRACTICE

The initial question to be faced is whether appellate results will be affected by having more information as to what happened at trial. In 1990, the National Center for State Courts published a study of the effect of video records on Kentucky appeals. The study concluded that cases involving video records were more likely to be affirmed than those with traditional transcripts.²⁵ In theory this result would be predictable. If trial judges are generally presiding fairly, and if there is more information available about the trials they conduct, then the greater is the probability of affirmance. Obviously a number of questions remain to be answered. Even assuming that the Kentucky results are based upon direct causation without alternative explanation, it is unclear whether that result would hold for other jurisdictions at other times. Further, technology variance cannot be dismissed. Notwithstanding these reasonable concerns, the Kentucky study at least suggests that more information in the trial record does not necessarily yield more reversals.²⁶

A. Appellate Deference To Trial Court Factual Findings

Appellate courts defer to trial court findings of fact because the trial court views witness demeanor.²⁷ In the case of jury trials, appellate deference is further justified by the special role of the jury as the community's fact-finding representative. That

25. James A. Maher, *Do Video Transcripts Affect the Scope of Appellate Review? An Evaluation in the Kentucky Court of Appeals* (Nat'l. Ctr. for St. Cts. 1990).

26. Of course, we ought to care only about accuracy in the trial and appellate practice. Pragmatically, however, multi-media records are unlikely to be adopted if they are perceived as inherently causing "unnecessary" reversals.

27. For example, Federal Rule of Civil Procedure 52(a) (2000) mandates in part:

In all actions tried upon the facts without a jury . . . , the court shall find the facts specially and state separately its conclusions of law thereon . . . 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.

justification does not apply to bench trials. Accordingly, simple logic suggests that if technology permits us to replicate for the appellate court what the trial judge observed, we ought not to persist in such deference. Whether technology is actually an adequate substitute is not quite so clear, however. A multi-media trial record generated by properly installed audio and video systems is likely to accurately reflect for the appellate court what the trial judge heard and saw. Clearly it will not reflect smell or touch, factors which rarely figure in trial court verdicts. Yet many of the judges and lawyers who visit the Courtroom 21 Project voice disquiet about evaluating demeanor via video. With few exceptions, they speak of the perceived ability to evaluate truth-telling when personally close to a witness. They fear that this ability does not function with a video image. These concerns are inherently difficult to deal with. They presume, first, that judges and lawyers actually can accurately perceive non-truth telling when a judge or lawyer is in the physical presence of a witness, and second, that this apparent gestalt talent is non-functional when a witness testifies via video.²⁸ At the risk of committing heresy, I doubt that we actually are very capable of truth-determining. Yet, the perception that we are may result in the rejection of a video transcript as the equivalent of "being there."

If a video record provides an appellate court with the equivalent of a trial *de novo* before the appellate judges, need the nature of an appeal from a bench trial change? Although the expansive nature of a multi-media court record may permit such a change, it would not seem to dictate it. A true *de novo* review would require a complete realtime review of all the evidence, a questionable and ordinarily unnecessary waste of resources and a threat to finality. Most appellate issues, however, are likely to be resolvable after viewing only a small portion of the case below.²⁹ Dealing with the effects of CD-ROM briefs, discussed

28. These complaints are usually voiced about live two-way testimony from remote witnesses via videoconferencing. Such complaints should be even more vocal when dealing with video records.

29. At the same time, if a court is to determine, for example, that error is of no consequence because the admissible evidence proves guilt beyond a reasonable doubt, perhaps the court should review the entire multi-media factual record.

below, Professor Carl Moy voiced concern about the possible impact on the appellate standard of review:

Traditionally, appellate courts are said to defer to the trier of fact due to the trier's greater expertise; the practice is explained largely in terms of a search for decisional correctness. Under this analysis, the greater information the HTML brief places before the court should cause this deference to be lessened.

But deferring to the trier of fact offers other benefits. Deferring promotes finality; when the trier's decision will likely stand, the parties can be expected to move from litigation to more productive activities more quickly. More searching review interrupts this process and encourages the litigants to carry their disputes through appeal. Clearly, the legal system highly values finality and efficiency—even to the point of sacrificing some degree of substantive correctness in the decisions rendered.³⁰

Finality is a critical part of our legal system—review must end at some point. Yet accuracy is also important, and to constrain an appellate court in an appellant's first appeal from having access to potentially determinative information likely would strike our citizenry as scandalous. Efficiency and finality must thus always be balanced by accuracy and public faith in the legal system.

The new multi-media court record will present appellate courts with an opportunity to expand the scope of judicial review in some cases. Whether the technology will compel a change in the nature of review remains to be seen. It would be ironic, however, were courts to attempt to resolve the issues inherent in the new records by insisting on traditional transcript alone. Just as King Canute could not hold back the sea, we cannot stop reliable and useful technology. At the very least we ought to use the technology to resolve those cases in which the appellate issue rests upon a disputed ambiguous matter of record which is easily resolvable by reference to the audio/video recording of trial events.

30. Francis X. Gindhart & Carl R. Moy, *High-Tech Appeals: Can Hypertext Briefs Aid Justice without Changing the System?* 83 ABA J. 78, 79 (1997) (arguing, respectively, the pros and cons of electronic briefs).

B. The "Appellate Record"

The appellate court reviews the actions of the trial court below. No evidence is presented on appeal, and accordingly no true appellate record exists. However, *if* appellate argument is actually valued by the court, it might be useful for the appellate court to make a record of oral argument. Although any form of recording or reporting would be satisfactory, appellate courts would do well to consider realtime reporting. Realtime would not only give the court a transcript of the argument but would also permit contemporaneous publication of the argument to the Internet for the edification of the bar and public.³¹

C. The High-Technology Appellate Brief

Like the court record, the traditional appellate brief ordinarily has been a paper document. Because computer media can store the equivalent of a vast number of paper pages it was only a matter of time before appellate counsel attempted to file briefs in computer format. What one did not necessarily expect in the early days of computer technology was the advent of the "hot-linked" multi-media brief.

Today's high-technology briefs consist not only of the brief's text, but also all referenced law—case, statutory, and rule—as well as the trial transcript, the exhibits, and appropriate ancillary papers. All are available by hyperlinks. One clicks on the hyperlink and is taken immediately to the cited reference. The court, and opposing counsel, has on one disk the equivalent of the traditional brief, the court record, and what can be a surprisingly large law library, all of which can be accessed on a single notebook computer.

The first CD-ROM appellate brief known to be filed by a party³² was filed in *Yukiyo v. Wantanabe*,³³ a patent infringement

31. Some state courts and organizations are currently recording oral argument and publishing it on the World Wide Web. See e.g. Florida Supreme Court, *Gavel to Gavel* <<http://www.wfsu.org/gavel2gavel/>> (accessed June 21, 2000); Wisconsin Supreme Court, *Search for Oral Arguments* <http://www.courts.state.wi.us/WCS/scoa_search.html> (accessed June 21, 2000); Northwestern University, *The Oyez Project* <<http://www.oyez.org/>> (accessed June 21, 2000).

32. See Gindhart & Moy, *supra* n. 30. An unofficial amicus CD-ROM brief (accompanying a traditional paper brief) was filed in *Reno v. American Civil Liberties*

case. Ultimately, after objection by the appellee, the United States Court of Appeals for the Federal Circuit struck the brief "because [Appellant] failed to seek the leave of this court and the consent of [Appellee] to file the CD-ROM brief, and because the filing of the brief prejudices [Appellee]." ³⁴ The Court did accept a CD-ROM brief shortly thereafter, ³⁵ and such briefs are now not uncommon.

The *Yukiyo* brief was especially interesting in that it was a multi-media brief; it contained video illustrating dental matters and an audio/video excerpt from a deposition. Traditional appellate records may contain accompanying videotapes or other forms of multi-media. Notwithstanding this, the *Yukiyo* brief's multi-media material seems striking to every Courtroom 21 visitor who sees it.

On one level, the new electronic briefs can be regarded as simply more efficient and environmentally sound ³⁶ versions of traditional briefs. As Frank Gindhart ³⁷ observed, 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." ³⁸ On another level, they may be regarded as the unavoidable method for providing meaningful appeals from today's increasing number of high technology courtrooms. A paper record is an inadequate mechanism for showing appellate judges what actually happened in technology-augmented trial level litigation.

Union, 520 U.S. 1102 (1997). See generally Joanne M. Snow, Student Author, Comment, *CD-ROM Briefs: Must Today's High Tech Lawyers Wait Until the Playing Field Is Level?* 17 J. Marshall J. Computer & Info. L. 615 (1999).

33. 111 F.3d 883 (Fed. Cir. 1997).

34. *Id.* at 886. The prejudice to the appellee was apparently the lack of computer hardware adequate to view the CD-ROM brief.

35. *In re Berg*, 43 U.S.P.Q. 1703, 1704 (Fed. Cir. 1997) (unpublished opinion).

36. Paper savings are obvious. Not so obvious may be the immense savings in file cabinet storage and the need for physical structures to house them.

37. Mr. Gindhart was responsible for the *Yukiyo* brief. Gindhart & Moy, *supra* n. 30.

38. Francis X. Gindhart, *Documents, Transcripts, Exhibits Are on Hand in Hypertext Briefs*, 217 N.Y. L.J. 5, 10 (Apr. 15, 1997). "The hypertext brief allows a lawyer to present a unified argument, without the judge being distracted by having to dig through reference books or man audio-visual equipment." 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. 17 (May 1997) (quoting Francis X. Gindhart).

The process of creating a CD-ROM brief, especially one without multi-media, is simple. Indeed, both Corel WordPerfect and Microsoft Word include the basic technology to create the necessary hyperlinks. It is the access to the necessary legal authorities that may be problematic. Neither West nor LEXIS/NEXIS may own the cases and statutes, but obtaining easy access to reliable legal authority outside their systems may be troublesome. At the same time, compilation of any necessary exhibits, supporting papers, and the transcript, especially if a paper transcript needs to be scanned, may be especially time-consuming.

In 1997, Professor Moy argued that "the cost [of electronic legal materials] is much higher than that of printed materials. Is it right to build into the appellate review system the ability of wealthy parties to outstrip opponents' persuasive power, through the use of the communication medium itself?"³⁹ This concern may be significant. However, the cost of preparing such a brief has, as Professor Moy anticipated, fallen since 1997. The cost of a contemporary electronic brief is hard to estimate. Like an automobile purchase, the cost depends upon the features chosen. The basic brief with authorities is no longer a significant matter, certainly not in a period in which many home computers can publish their own CD-ROM's. The potential need to scan massive paper transcripts and allied papers can create, however, a very large bill indeed. Should increased efficiency and potentially significant storage savings be halted by resource disparity concerns? The same issue is presented not only by all forms of technology use, but even by the basic availability of counsel in our adversarial legal system.

Electronic briefs must be viewed by computer. At present, that means either desktop or notebook computers. That limitation need not continue. A number of companies are now marketing electronic books, special small self-contained "computers" designed especially to show pages of text. It is not unreasonable to assume that the near or mid-future will bring us a leather-covered portfolio that when opened will show two pages of electronic text, left and right. Indeed, multi-media may prove possible even in such a small "package."

39. Gindhart & Moy, *supra* n. 30.

Of course, electronic briefs bring with them the customary and now classic computer media problem: How long will the briefs last, and will we be able to read them in the future? Contrary to initial estimations, CD-ROMs will not last indefinitely. Although their actual lifetime is subject to debate, it is likely that a CD will not last nearly as long as acid-free paper. Accordingly, courts may have to create long-term storage systems that periodically transfer the electronic briefs' contents to other media.⁴⁰ Of greater importance, however, is the amazing rate of obsolescence of computer equipment. Even if a CD remains fully readable, absent special precautions we may not have the equipment available with which to read it. Consider how difficult it might be for the reader to be able to read a letter stored not so many years ago on a 5 1/4 inch disk; what about accessing the cassette tape backup used by some of the first IBM PCs? Whether by maintaining an inventory of obsolete hardware and operating systems or by migrating data to new contemporary media, a shift from paper briefs or transcripts unavoidably presents long term storage and access problems which require careful planning.

On another level, the new briefs may hold transformative possibilities. It is not so much that a CD-ROM or otherwise formatted electronic brief⁴¹ provides enhanced efficiency and ease of information access, but it also permits *visual* argument.

D. Visual Argument

As Daniel Webster observed, "The power of clear statement is the great power at the bar."⁴² In an appellate context, counsel are arguing facts, law, and policy. Ordinarily, the "facts" are the case facts as reflected by the court record. Law, on the other hand, primarily should be the law reflected in

40. This could include a continuing migration via the ongoing process of replacement of a court's servers.

41. With adequate access there is no reason why the brief could not reside solely on the Internet.

42. Fred R. Shapiro, *The Oxford Dictionary of American Legal Quotations* 10 (Oxford U. Press 1993) (quoting *Letter to R.M. Blatchford*, 1849, reprinted in Peter Harvey, *Reminiscences and Anecdotes of Daniel Webster* 118 (1878)).

the appellate briefs, but need not be. How best should counsel present clear statements?

Although traditional appellate argument is entirely oral, when people are presented with both aural and visual matter concurrently they better understand and remember its content. When arguing law, it may be helpful for counsel, or the court, to accompany oral presentation with the visual image of the authority argued. In the Courtroom 21 Project's McGlothlin Courtroom, as well as in many of the other high technology courtrooms, counsel simply uses Westlaw, Lexis/Nexis, CD-ROM-based legal authority, or a CD-ROM brief as the source of authority. The court views the display on the judge's LCD monitors. The court may reply in kind, displaying the judge's view of the law to counsel at counsel's podium. This interactive exchange of law holds promise for eliminating confusion or mis-citation. At the same time, our experience has been that only counsel or judges highly comfortable with computer use can or will use it effectively. Always concerned about the limited time available for oral argument, our experience is that counsel are loathe to risk loss of time by inefficiently searching for authority. Clearly, using an electronic brief can be a great help. The hyperlinked brief presents counsel with an already prepared "menu" of authorities ready at an instant's need.

The question of arguing law somewhat begs the question. If counsel can argue law visually, what of the rest of the case? In February, 1999, the United States Court of Appeals for the Armed Forces heard the case of *United States v. Rockwood*⁴³ in the McGlothlin Courtroom. *Rockwood* is instructive. At present it remains the most technologically sophisticated appeal known to have taken place anywhere in the world. Ramsey Clark argued for the appellant. Counsel for the United States Army Government Appellate Division argued for the appellee. Five William & Mary law students, acting as amicus curiae, filed an electronic CD-ROM brief,⁴⁴ the court's first, and two of the student counsel argued. Amicus counsel presented their arguments visually. The primary amicus argument was presented using a computer slide show that contained counsel's

43. 52 M.J. 98 (Armed Forces App. 1999).

44. The brief was electronically assembled by realLegal.com, formerly known as PubNETics. See realLegal.com <<http://www.reallegal.com>> (accessed June 21, 2000).

talking points, key quotes from legal authority, and a photograph illustrating policy concerns. Counsel also displayed a critical portion of the CD-ROM brief to the judges as well.⁴⁵ In short, an appellate argument was presented much as a trial court opening or closing might be. To equate trial and appellate argument is novel and perhaps heretical. Is it also troublesome?

Observers of the high technology amicus argument in *Rockwood* were divided on the impact of the visual presentation. Although some thought highly of it in general, a few thought that at least the key text points presented by computer slide show may have been distracting. It is unclear whether this conclusion goes directly to the visually presented argument or perhaps reflects discomfort with a departure from appellate norms. The ultimate question, of course, is how an argument strikes the court. Chief Judge Susan Crawford was a member of the *Rockwood* panel. She thought it "helpful to have visual material," and further stated that amicus counsel "Bill Ruhling's [materials] were helpful."⁴⁶ In the Court's usual practice, she observed, "[C]ounsel usually approach the bench with visual material; in *Rockwood* technology saved time."

Ultimately, the key questions are the same that have always accompanied appellate argument: from the court's perspective, "Is the argument helpful to the court?" and from the lawyer's, "Does it help persuade the court?" Absent formal study in the appellate context we cannot be sure that visual, multi-media argument consistently is helpful to either judge or counsel. However, both subjective anecdotal experience and concededly tangential studies suggest the probability that it is.⁴⁷ Ultimately,

45. Of the five judges, one appeared by two-way video conferencing. A realtime stenographic court transcript was made during the hearing, and the arguments were published live over the Internet via LegalSpan. The world had access to concurrent audio, video, and briefly, the realtime transcript.

46. Interview by Senior Advisor Francis Gilligan with Chief Judge Susan J. Crawford, United States Court of Appeals for the Armed Forces (Mar. 29, 2000).

47. Recently, a study funded by 3M and *Presentations* magazine investigated the utility of multi-media presentations as compared with overheads or text alone. Although the scenarios and study subjects chosen were entirely distinct from appellate judges evaluating oral argument in the context of text briefs, the results are at least interesting. In general, subjects receiving multi-media presentations were substantially more likely to remember and comprehend the facts presented and reported a higher degree of persuasion than with text alone. Tad Simons, *Multimedia or Bust*, *Presentations* 41-50 (Feb. 2000).

as at trial, visual argument is a tool that should be available in the appellate hearing when useful.

E. Remote Appearances by Judges and Counsel

Modern video-conferencing permits easy and inexpensive two-way interactive video appearances. Remote first appearances have become routine in many jurisdictions, and many state and federal courts have had remote witness appearances.⁴⁸ The Federal Rules of Civil Procedure expressly permit such appearances when appropriate,⁴⁹ and the Florida Supreme Court has even sustained a criminal conviction in which the complaining witnesses testified live from Argentina.⁵⁰ The appellate courts have seen the greatest use, however, of remote judges and lawyers.

Several federal courts, including the United States Courts of Appeals for the Second, Tenth, and District of Columbia Circuits, have used videoconferencing for remote judicial appearances.⁵¹ The United States Court of Appeals for the Second Circuit⁵² provides remote locations for counsel appearances. The court first experimented with live, remote video oral argument in October, 1996. The court then formally adopted remote video oral argument in the spring of 1997 and established video links in four locations (Albany, Mineola, and Rochester, New York and Hartford, Connecticut). Because the Second Circuit encompasses New York, Connecticut, and Vermont, and sits in Manhattan, the advent of remote oral

48. For a detailed description of the use of teleconferencing in the Minnesota Court of Appeals, see Toussaint, *supra* n. 6.

49. Federal Rule of Civil Procedure 43(a) (2000) provides:

In every trial, the testimony of witnesses shall be taken in open court, unless a federal law, these rules, the Federal Rules of Evidence, or other rules adopted by the Supreme Court provide otherwise. The court may, for good cause shown in compelling circumstances and upon appropriate safeguards, permit presentation of testimony in open court by contemporaneous transmission from a different location.

50. *Harrell v. State*, 709 S.2d 1364, 1367 (Fla. 1998), *cert. denied*, 525 U.S. 903 (1998).

51. *Videoconferencing Links Federal Courts and Public*, 30 Third Branch 6-8 (June 1998).

52. The Tenth and District of Columbia Circuits also use videoconferencing for remote appearances. *Id.*

argument has proved to be a significant benefit to attorneys who previously had to travel all day for a ten-minute argument before the court. The circuit executive has noted that the judges do not feel there is an advantage to personal appearances in court.

In March 1996, the Courtroom 21 Project hosted a videoconferencing argument before the United States Court of Appeals for the Armed Forces. The court heard *United States v. Salazar*⁵³ in the McGlothlin Courtroom, with two of its five judges appearing by separate videoconferencing systems. One remote judge appeared to the left of the physically present judges and the other to the right. Both appeared life-sized with "head and shoulders" showing.

The Armed Forces Court of Appeals also convened in 1999 in the McGlothlin Courtroom for oral argument in *Rockwood*.⁵⁴ This time one of the five judges appeared remotely. At least as far as the Courtroom 21 hearings are concerned, remote judicial appearances not only worked, but were highly effective.⁵⁵

There is every reason to believe that remote appearances in appellate cases will increase in number. Appellate hearings arguably lack the need for public attendance and participation that may attend trials. Oral argument is highly constrained, and appellate courts are often significant distances from the advocates. The judges may reside and have their offices far from the appellate hearing. Indeed, many intermediate appellate courts ride circuit in an effort to compensate for distance. Why can we not use video conferencing both for oral argument and judicial conference?⁵⁶

53. 44 M.J. 464 (Armed Forces App. 1996).

54. 52 M.J. 98 (Armed Forces App. 1999).

55. Interestingly, in reference to the *Salazar* case, Senior Judge Everett, appearing from North Carolina, later opined that he thought that he may have been more reticent than usual in his questioning of counsel. As an observer in the courtroom, I was struck by the number of questions propounded by Judge Everett. It *may* be that Judge Everett's perception was affected by the use of videoconferencing. If so, it suggests that we ought to be concerned about perception, as well as reality, in the use of remote appearances.

56. The opinion of the Supreme Court of Florida, affirming a conviction based upon the remote testimony of the complainants, is germane:

Our Court is mindful of the importance of today's decision. Yet, we are also mindful that our society, and indeed the world, is in the midst of the Information Age. Computers are the norm in American households and businesses; an infinite amount of information is available at our fingertips through the Internet; and satellite technology allows us to travel the world without ever leaving our living rooms.

The availability of remote appearances and the potential need to review multi-media court records and electronic briefs and to receive visually presented law and argument necessarily raise the question, how will these technologies affect our appellate courtrooms?⁵⁷

The legal profession has also benefitted from these technological innovations. Legal research that once took hours or days is now available in seconds through computer and Internet databases. Clients can reach their attorneys anywhere in the world through the use of cellular and video innovations. The list goes on and on.

Indeed, our very own Court takes pride in the recent technological advancements that have been made. Oral arguments before the Court are broadcast live via satellite throughout the state. These same arguments can be viewed online, along with the parties' briefs. The Florida Supreme Court Website has received worldwide acclaim for opening up the courthouse doors to the general public. All of these steps provide greater access to the judicial system, which in turn increases public trust and awareness.

That being said, it becomes quite clear that the courtrooms of this state cannot sit idly by, in a cocoon of yesteryear, while society and technology race towards the next millennium. Fortunately, the courtrooms of this state have not been idle, nor are they speeding at a reckless pace. Recent changes in the courtroom have included the use of audiotape stenographers as well as video transmission of first appearances, arraignments, and appellate oral arguments, just to name a few.

We recognize that there are generally costs associated with change. Nevertheless, technological changes in the courtroom cannot come at the expense of the basic individual rights and freedoms secured by our constitutions. We are confident that the procedure approved today, when properly administered, will advance both the access to and the efficiency of the justice system, without compromising the expectation of the safeguards that are secured to criminal defendants.

Our nation's Constitution is a living document that has stood the test of time and change. This point is exemplified by the fact that our Constitution is still viable today—some two hundred-plus years after our country's birth. There was no way the founders of this nation could have foreseen the innovations that would take place throughout our country's lifetime—changes that, up to this point, have included advances in communication, electricity, train, airplane, and automobile transportation, and even space exploration. Nor can we predict today the changes yet to come. But we can say with certainty that our Constitution, as well as this great nation, can endure any future changes while at the same time ensuring that individual rights and liberties will be upheld.

Harrell v. State, 709 S.2d 1364, 1372 (Fla. 1998), *cert. denied*, 525 U.S. 903 (1998).

57. Much of the technology discussed above need not be used in the courtroom alone. Judges, for example, ordinarily review the record and read briefs in places other than the courtroom. Judges would be well served by technology that would permit them to consult electronic materials easily without the necessity for bulky and sometimes awkward computers. In the spring of 2000 the Courtroom 21 Project initiated an effort to encourage private commercial development of superior alternatives.

III. THE HIGH TECHNOLOGY APPELLATE COURTROOM

Form usually follows function. Our appellate courtrooms reflect their function. A large multi-judge bench faces the courtroom well and the lectern from which the advocate argues. Other than staff positions, the remainder of the courtroom is usually devoted to the gallery. Technology need not affect the traditional courtroom design or appearance.

In order for appellate judges to view a visual court record, consult an electronic brief, or receive visual argument, the judges need immediate access to computer monitors. Current Courtroom 21 designs suggest built-in individual LCD monitors installed vertically at a small angle before each judge. Appellate counsel will need the ability to present a technology-augmented argument. This requirement dictates the need for a courtroom infrastructure that will accept electronic information and distribute it to the court. That infrastructure should include a high technology lectern, similar to the Courtroom 21 Litigator's Podium.⁵⁸ The Litigator's Podium includes a VCR and supports a document camera for non-computer based material.⁵⁹ The document camera would permit visual display of individual physical pages of briefs, the court record, or other images. The podium also includes a connection for a notebook computer, the lawyer's source for high technology multimedia, and includes a built-in LCD monitor. In the appellate context, the most important use for that monitor is to display to counsel visual material presented by the judges.⁶⁰ None of this requires changes to the courtroom proper.

A. The Effect of Remote Appearances

Remote appearances present interesting questions of human interaction and policy. If remote appearances are to be used, the

58. DOAR Communications, Inc.'s well-known DEPS (Digital Evidence Presentation Systems) is similar.

59. If the court is prepared to accept, and perhaps even encourage, the use of visual presentation it should be prepared to permit low technology tools as well.

60. Electronically, the court needs a switching system that can cope with competing images when more than one judge seeks to display differing material to counsel at the same time.

court must decide whether it wishes to duplicate to the extent possible the physical courtroom setting. If so, remote participants should be made to appear as if they were actually present—at least to the extent to which that is reasonably possible. This approach, currently favored by the Courtroom 21 Project, is intended to avoid discomfort on the part of court and counsel. There are two primary ways in which remote appearances take place: Counsel appears in the courtroom while one or more judges appear remotely, or one or more judges appear in the courtroom while counsel appears remotely.

In the first scenario, each remote judge is presented in the courtroom via a separate life-size image behind the appellate bench.⁶¹ Counsel experiences a multi-judge court nearly identical to the traditional one. In the second scenario the appellate courtroom receives argument from remote counsel. The lawyer is presented in the courtroom via a large plasma screen in the podium location. The judges in the courtroom thus experience counsel as if she or he were physically present. This approach is preferable to supplying the judges with individual bench monitors. If the judges use such monitors they are likely to be looking down at them; if so, remote counsel will not see the judges' faces directly, but rather an image of the judge looking down. Remote counsel should see three distinct images of the courtroom judges⁶² so that counsel's appellate experience is similar to normal argument.⁶³ At the same time, remote counsel must be able to see opposing counsel's argument as well.⁶⁴

61. Duplication of the normal physical appellate courtroom experience is not required for technological reasons. Indeed, the easiest way in which to present remote judges is to use a single screen with a switching system that ensures that whenever a remote judge asks a question, the judge's image then appears on the screen. Although highly efficient, this approach robs counsel of the often critical appearance of other remote judges. What lawyer wouldn't wish to know of amusement or irritation caused by counsel's argued position? A split screen image that shows all remote judges at all times is clearly preferable. In light of the enhanced fashion in which we portray judges and hence the majesty of the law, however, we suspect that separate full size images will prove preferable.

62. In the alternative, if the images of one or more judges are not originating in the courtroom, remote counsel should see their physical location.

63. This does not require three screens. However, as is done in the Second Circuit in order to cope with the judges' positions behind a large bench, combining three separate television images may not give an ideal result.

64. This would not seem to require special appearance efforts.

B. A Virtual Appellate Courtroom?

It becomes almost immediately apparent that if we can have remote judges and remote counsel, we may not need the courtroom at all. Indeed, it would not be difficult to move the entire appellate argument to the World Wide Web. Each participant would see and hear all the others as appropriate. The personnel of the Courtroom 21 Project believe that this could be done today. Accordingly, in one sense modern courtroom technology *can* change the appellate courtroom—it can eliminate it wholesale.

The courtroom is the very center of the legal system. The long American tradition of substantial courthouse architecture recognizes the people's need to give justice a pride of place and to enshrine it in physical form. The complex nature of courthouses is outside the scope of this article, but it is apparent that moving trials from the local courthouse to the virtual world would raise enormous questions of both law and public policy. A trial is not, however, an appeal. Indeed, our stark time constraints on appellate oral argument suggest that we give it only limited importance. It is by no means clear that the public would care in the least if at least ordinary appellate arguments occurred outside a courthouse, especially if the public were given full electronic access to them.

IV. CONCLUSION

Appellate courts do not exist in a vacuum. Appellate courts will be forced to adopt the technology necessary to adequately review the case below, if only because they review the actions of trial courts, courts that increasingly are hosting technology-augmented litigation. Multi-media text-central electronic court records will provide appellate courts with unprecedented information in order to better review proceedings below. At the same time, many of the technologies that are changing trial practice lend themselves to appellate practice. Whether through the highly efficient timesaving electronic brief or the visually augmented appellate argument, courtroom technologies may enrich appellate practice. The nature of appellate practice stands on the brink of change. Visually based argument alone would be

a significant departure from traditional practice. At the same time, however, the massive time and cost savings to court and counsel inherent in remote appearances presents the possibility of moving oral argument from the physical courtroom to the virtual world. The basics of appellate practice have existed unchanged for generations. We must now expect significant changes to occur. Our traditional assumptions about the nature of appellate practice and the courtrooms in which it takes place surely will not outlast the twenty-first century.