

The Courtroom As a Stop On the Information Superhighway⁽¹⁾

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"The Information Superhighway" is customarily taken to be a summary expression for our increasing ability to electronically transfer information quickly and easily throughout the world. In a larger sense, however, it symbolizes the information age. The courtroom is a place of adjudication, but it is also an information hub. Outside information is assembled, sorted, and brought into the courtroom for presentation. Once presented, various theories of interpretation are argued to the fact finder who then analyzes the data according to prescribed rules (determined by the judge through research, analysis, and interpretation), and determines a verdict and result. That result, often with collateral consequences, is then transmitted throughout the legal system as necessary. The courtroom is thus the center of a complex system of information exchange and management. The increasing use of technology in courtrooms and the advent of high technology courtrooms suggest that we consider how courtrooms might best be viewed in the age of the information superhighway. The administration of justice is clearly compatible with the "highway," but how will or should the two interact?

This essay reflects the experiences and insights gained through four years of managing the Courtroom 21 Project from its birth to its pending maturity.

A joint project of the College of William & Mary in Virginia and the National Center for State Courts, Courtroom 21, located in the Law School's McGlothlin Courtroom, is an international demonstration and experimental courtroom that is continually upgraded. Courtroom 21 uses commercially available technology to determine how technology can best be used to improve the different components of the legal system, given that that system is entirely dependent upon human beings. The Courtroom 21 Project seeks to serve as a central location for the international exchange of information concerning the use and consequences of legal technology, particularly technology affecting litigation and the courts.

Fredric I. Lederer and Sam Solomon, *Courtroom Technology - An Introduction To An Onrushing Future, Proceedings of the Fifth Court Technology Conference* (National Center for State Courts, September, 1997)(CD-Rom).

Having initially concentrated on the court record and evidence presentation, including live remote testimony, we have now expanded the project's scope to information management, including electronic filing, case management, and questions of public access to court information. At the same time we are

increasingly concentrating on the linkage between lawyer and law firm, and the court and courtroom. The status of the Project and access to what we hope in 1998 to be a comprehensive international reference source for courtroom technology can be found at www.courtroom21.net.

Until recently, few courtrooms had significant amounts of technology permanently installed. Instead, most technology was introduced on an ad hoc, case-by-case basis. That is now changing. It is possible that as many as fifty true high technology courtrooms will exist world-wide by the beginning of 1998. They will be characterized by high technology court record systems, technology based evidence presentation, and, increasingly, access to outside information, whether via video conferencing or through computer networks. Technology will surely become a feature of our courtrooms. As Justice Olsson and Ian Rohde note in their article, *Courts and the Information Superhighway*, elsewhere in this issue, in referring to court adoption of technology generally, "The real question is not *whether* these changes will need to take place, but *how rapidly* the courts will be compelled to accommodate them." (Emphasis in the original). The late Chief Justice Burger opined:

Ideas, ideals and great conceptions are vital to a system of justice, but it must have more than that--there must be delivery and execution. Concepts of justice must have hands and feet or they remain sterile abstractions. The hands and feet we need are efficient means and methods to carry out justice in the shortest possible time and at the lowest possible cost

Chief Justice Warren E. Burger, Address to the American Bar Association as reported in *Vital Speeches*, October 1, 1972, and reprinted in David Shrager & Elizabeth Frost (ed), *The Quotable Lawyer* 159 (1986).

In years to come it may be that we will use virtual courtrooms, ones without physical presence, and which exist only as Internet-type meeting places for disembodied individuals and electronic data exchange. This may even prove highly efficient and economical - but it will not be the same legal system we prize today. Whether such a system could incorporate the same humanity and values that exist today and whether virtual judges, and especially juries, would yield similar or superior verdicts to those that are currently delivered are fascinating questions to ponder. Those and similar issues must be left for later consideration, however, as such a legal system is not likely in the mid-term future. What then does the present and immediate future hold?

Pretrial

Law enforcement

The pretrial process begins with the very acquisition of the factual information

which will later become evidence. Initial case information is increasingly electronic in its initial form or can be turned into electronic form via scanning. Once electronic in nature, it can be immediately transmitted, stored, and retrieved giving us a greater degree of information than ever before, albeit coupled with increasing privacy and security concerns. New technologies such as the IPIX 360 degree computer "photobubble" image, by which a computer user can view everything from the vantage point of the camera that recorded the images, suggest that the day may soon be coming when investigating police will immediately capture electronic images of civil or criminal incidents in order to transmit them contemporaneously to police station computer servers for later analysis and, if need be, presentation at trial.

Electronic Filing & Other Forms of External Data Input

The courtroom proper is a small component of the greater courthouse, and the courthouse itself is only one part of the larger litigation system. A case begins formally when pleadings are filed. Other critical steps in the case also require formal filing of documents with the court, with service on other parties. Various United States courts are now implementing electronic filing systems, and LawPlus, West, and LEXIS are marketing powerful systems that not only record notice of such filing, but also perform filing, potentially complete with the entire documents. The parties and their counsel can access critical material electronically from anywhere in the world. In a slightly different vein, both lawyers and members of the public involved in or simply interested in the status of over 40,000 thousand silicon breastplant litigation cases in the United States can access case information via the world-wide-web at <http://www.fjc.gov/BREIMLIT/mdl926.htm>.

This component of information transmission and management is primarily of concern to the "courthouse," including the judge in chambers. However, the judge may also need to consult these records while on the bench in the courtroom, and remote access can be at least useful.

"Electronic filing" necessarily suggests other uses such as case scheduling. Whether conducted through a telephonic voice response system or a pure computer system, a proper docketing system requires individual lawyer, judge, and facilities calendar data access and coordination. Counsel and judge will need to communicate electronically in a fashion that avoids inappropriate ex parte concerns.

Legal research will require access to electronic legal materials, increasingly available easily via commercial databases such as LEXIS and WEST LAW or via web sites maintained by courts and law schools. Counsel can be expected to file motions and supporting briefs, pretrial or trial. Pioneering work in at least one United States appellate case has shown the future. In its appeal before the United States Court of Appeals for the Federal Circuit in *Yukiyo v. Watanabe*, Appeal No. 97-1115, appellant's counsel filed the party's brief on CD-ROM using an Internet browser interface. Every case, statute, and rule cited was in

the form of a hypertext link that when clicked displayed the entire reference. The brief also contained the entire trial record, including its transcript, and an audio-video appendix, that included deposition testimony. In our 1997 experimental trial, *Grivens v. Modern Chemicals Inc.*, Courtroom 21 used similar technology for a motion in limine argued before the court during trial. In our legal system, argument is customarily oral and before the court. With modern communications, there would seem to be little reason why the court could not propound questions to counsel electronically and conduct an e-mail type argument over an extended period. Such a procedure might inspire better responses by counsel.

Meanwhile, counsel and the court will be preparing for trial, should settlement discussions fail. Lawyers increasingly use litigation support systems in which critical material is converted to electronic form via document scanning (with possible optical character recognition for context searching). In the United States, discovery depositions often are taken using a court reporter who produces an electronically searchable transcript, if not a comprehensive multi-media transcript on a searchable CD-Rom. The judge's "case file" too may consist of more than pleadings, copies of formally filed documents, and orders. It may also contain private materials prepared by the judge or the judge's assistants, created or modified elsewhere in the courthouse, at home, or even on the road.

Trial

The court record

The modern court record is now taken in digital form. Whether the record is made in text, via a court reporter's real-time transcript, or in digital audio as in the For-The-Record system, digital information is clearly the preferred manner of record. As in the case of other digital information, a digital record can be easily and inexpensively stored and transmitted. Access to that record by judge and counsel (and perhaps even by a jury during deliberations) is easily possible, including subsequent review by the judge in chambers. In 1997, Courtroom 21 employed the world's first multi-media record system. Technology provided by the TIMARO Company combined the real-time record with synchronized audio and video to permit complete retrieval of the proceeding. Only the soon to be added capacity to insert evidentiary exhibits contemporaneously is necessary to create a truly comprehensive trial record.

Case presentation

In a British derived adversarial system, counsel will present the case. Whether presented before a judge alone, or to a jury, counsel will make an opening statement, present evidence, and then sum up. Technology is available to augment each of these trial stages and is increasingly being so used. With the exception of technologies such as computer "slide shows" using Corel

Presentations or Microsoft Powerpoint, and image summaries, openings and summations largely use the evidence presented at trial. Accordingly, we will deal primarily with evidence presentation. Electronically based evidence presentation in today's courts could reasonably be said to consist of two different functions: substitutes for in-court evidence and electronic display of otherwise available evidence.

Substitutes for in-court evidence

Although our courts have a strong preference for in-court testimony, the courts increasingly have permitted hearsay evidence. Live, remote, two-way video testimony now provides the courts with an inexpensive mechanism with which to obtain testimony from witnesses who cannot attend trial in the courtroom, such as the infirm or a traumatized child. Remote testimony also obviates the need for otherwise available distant witnesses to testify in person, saving significant time and cost. Australia, England, and the United States have used various forms of video testimony for child witnesses (sometimes using only one-way video without considering whether the psychic distance involved in this testimony would permit two-way video). Australia's federal courts have pioneered the use of remote testimony in civil cases, a practice now permitted in the United States with the December, 1996, revision of Federal Rule of Civil Procedure 43(a), "for good cause shown in compelling circumstances and upon appropriate safeguards." Limited experimentation in Courtroom 21's 1997 Laboratory Trial, in which a compressed civil case was tried using all available technology, indicates that, when done properly, remote testimony is considered by the jury as neither better than nor worse than in-court testimony. By replicating in-court appearance via a life-size image in or near the witness box, we may be able to avoid the need to call experts and other witnesses into the courtroom. At the same time, testimony that might otherwise be presented as hearsay may become available, increasing, one would hope, the accuracy of the proceeding. Note that although current testimony would suggest the use of dedicated high-end video conferencing for trial testimony, web-based streaming video may soon be an adequate substitute.

Electronic display of otherwise available evidence

Technology augmented evidence display usually consists of the visual display of evidence via television and/or computer monitor. Ordinarily presentation equipment consists of document cameras, VCR's, and computers although computer-based white boards may also be used. Document intensive cases have especially lent themselves to the use of computer based media. Scanned from the original paper or other media and placed either on a hard drive or media such as a CD-Rom or now, DVD, the use of electronic visual images of evidence is highly efficient. One of the best examples of such a system was the internationally known Royal Commission Into the New South Wales Police Service, which had electronic access to over three million documents. Computer animations also are increasingly used. Animations are used to educate the fact finder, illustrate expert testimony, and, during argument,

illustrate counsel's view of the case. In rare circumstances the animation may itself constitute a form of scientific evidence when the animation embodies computer processing of data beyond the illustrative function.

Limited Courtroom 21 experimentation confirms anecdotal reports that visually presented evidence substantially increases the speed of case presentation. It takes far less time to show a witness and judge (and, potentially a jury) a document on a computer monitor without moving from counsel's table or podium, than it does via the traditional walk about the courtroom with the physical evidence. We have also concluded that in many cases visual display of evidence before judge or jury during witness questioning eliminates the need for many of the questions that would be asked were the evidence not to be available contemporaneously to the judge and jury. At the same time, jurors greatly prefer visually presented material and do not seem to be overawed when that testimony is presented via technology.

Given modern technology there is no reason why stored documents, or indeed other evidence, need be physically in the courtroom. Given adequate security, the basic data can reside on a server anywhere in the world. Indeed in a related vein, Courtroom 21, located in Virginia in the United States, will by the time this article appears use a LawPlus electronic filing system in which the court's data will reside in a server located in Texas.

Presentation technologies will increasingly be used for the actual presentation of evidence and argument. Although counsel may use these means to increase persuasive effect, judges are apt to encourage them as they ordinarily will increase comprehension and retention, while often decreasing unnecessary time lost to traditional courtroom rituals in the presentation of evidence. Presentation technology does suggest the probable application of a traditional role dichotomy. Counsel ordinarily will seek to maximize persuasive impact of favorable evidence and minimize the impact of unfavorable evidence. The judge, however, should seek to ensure fairness and efficiency to the extent compatible with law and justice. Counsel may thus wish to show document images singly on a large projection TV screen, maximizing dramatic impact, while the judge would prefer a more routine use of smaller monitors. The court may wish to use imaged documents with monitor display before a jury while counsel may strenuously argue for the traditional use of paper document after paper document. Where due process and reasonable discretion on the part of counsel stop, and where unreasonable persuasion - and showmanship- start may increasingly trouble courts in the technological age.

Traditionally courtroom evidence has been evidence accumulated before trial, the admissibility of which may have even been ruled upon by the judge before its formal presentation. In limited circumstances, however, just as constantly updated legal sources which are available via computer are increasingly relied upon, given cases might rely for some agreed upon data on web sites, instantly accessible from the courtroom. This might in special cases amount to a slight expansion of the doctrine of judicial notice of facts which are readily verified.

Post Trial

One of today's continuing difficulties is the entry and dissemination of the court's orders and judgments. Although the court's entry of judgment is simple, adequate dissemination to all the agencies and individuals who must receive that information, record it, and act on it is difficult, especially on a national level. Only electronic data entry and distribution can obviate the expensive and inefficient multiple keystrokes now needed - and the frequent failure to supply the right, correct, information, to the correct recipient. Orders are now being filed electronically with automatic service to counsel, and at least one Australian service by Internet has been reported.

Appeals

In the United States, appeals consist of the submission of briefs followed, in many but not all cases, by short oral argument. Courts are increasingly experimenting with remote judicial or lawyer appearances to decrease the cost and inconvenience of argument. The Courtroom 21 Project conducted the most technologically sophisticated appeal known when in March, 1996, in *United States v. Salazar*, a five judge court sat in Williamsburg with two of the judges, located in two different states, appearing concurrently in different televisions. A real-time record was made of the case and amicus counsel augmented their argument electronically. Now, with Internet- type briefs, in which counsel and judge can instantly access law as well as the evidence presented below, appeals may become more technologically based than most jurists may now conceive. Actually, there is no reason why a complete virtual appeal could not be argued.

Conclusion: The Courtroom and the "Information Superhighway"

As the world increasingly adapts to a world of information which can flow instantly upon demand we are faced with the question of deciding the degree to which we will use that highway in the crucial process of legal adjudication. Although much of today's courtroom technology is limited to information exchange within the courtroom, the potential - and increasing actuality - for use of information from numerous different locations before, at, and after trial suggest that the courtroom is already becoming a stop on the true information superhighway. If we define the "superhighway" as only a synonym for electronically based information management and presentation there can be no doubt whatsoever.

The real question facing us is what type of "stop" the courtroom will be. It should be apparent that the administration of justice is potentially compatible with the "highway." As actually illustrated in present courtrooms, technology *can* make justice more accurate, faster, less expensive, and less burdensome

than traditional practices. The mere fact that science and technology *permit* a given practice, however, does not mean that the legal system should *adopt* it. There can be little doubt that technology will permit more efficient and inexpensive proceedings. At the same time, it is also clear that increased technology use at least will suggest significant departures from traditional custom and practice. We will continue to face the dilemma of deciding which practices are important both to justice and the perception of justice and which no longer merit retention. We should encourage those aspects of the Highway's technology that will enhance justice and administration. At the same time we must recognize that justice rather than speed is the goal and be careful that we do not accidentally make efficiency our objective. We must also keep note of human values and human behavior. At some point, too expeditious a proceeding may discourage settlement; easy dissemination of information may make it more difficult to retrieve and correct erroneous multiple data entries; and our citizens might reject as cold, unfeeling, and unfair remote data and testimony. At the same time we must recognize that in the Information Age the public increasingly will want to take advantage of the easy access to information the Highway provides. To what extent must or should we bar live coverage of trials and court information in an age in which extraordinarily inexpensive technology permits immediate web access to multi-media data at all times?

The question is not whether the courtroom, and indeed all of the legal system, is or should be on the Information Highway; it is and will increasingly be so. Those who refuse to recognize this will not only fail those to whom we are responsible, but will abdicate their ability to choose our direction and speed on the Highway. Those few who proceed in an enthusiastic yet unthinking fashion risk crashing the vehicle of justice. Our goal then is simple, albeit difficult: as we begin a road trip of unprecedented dimensions we must not only map the roadway but also create the very traffic rules and customs needed as we cruise down the speeding Information SuperHighway.

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Reform, The Australian Journal of Law Reform (in press)

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