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THE POTENTIAL USE OF COURTROOM TECHNOLOGY IN MAJOR TERRORISM CASES

Fredric I. Lederer*

§ 1-10.00 INTRODUCTION

The 1993 World Trade Center bombing, the Lockerbie Pan Am Flight 103 bombing, the Oklahoma Federal Courthouse bombing, September 11th, the Washington Sniper murders, and all too many more; the names and images that they evoke are well known. In the post-September 11th world, both foreign and domestic terrorism are especially real. Periodic changes in the national threat-level color by the new terrorism-deterrent Department of Homeland Security are now a national reality. Notwithstanding our pain, frustration, and anger, however, we have agreed on one fundamental tenet when we apprehend the suspected perpetrators of these outrages — we try them.

In the nation that perhaps best characterizes the expression “the rule of law,” and for which nearly every issue of importance ultimately can become a question of constitutional law, trials for apprehended alleged perpetrators of terrorism may seem self-evident.¹ They are by no means necessarily easy, however.² This Article examines the potential use of modern courtroom technology to enhance the trials of alleged terrorists. In doing so, it seeks to consider some of the significant technological, legal, and policy issues involved, and to make appropriate recommendations for the technologically assisted trials of major terrorism cases.

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¹ Indeed, the distinct military commission procedures promulgated for the trials of those held in Guantanamo have been highly controversial. *See, e.g.,* Kevin J. Barry, *Military Commissions: Trying American Justice*, ARMY LAW., Nov. 2003, at 1; *see also* *Gherebi v. Bush*, No. 03:55785, 2003 U.S. App. LEXIS 25625 (9th Cir. Dec. 18, 2003) (stating that federal district courts have habeas jurisdiction over Guantanamo detainees).

² *E.g.,* *United States v. Moussaoui*, Crim. No. 01-455-A (E.D. Va. 2003), *available at* <http://notablecases.vaed.uscourts.gov/1:01-cr-00455/Index.html>. The *Moussaoui* case (in which the defendant represented himself for a substantial period of time) has been characterized by a continuing dispute between the defendant and the prosecution over access to classified information and access to potential witnesses held in isolation by the government. *See, e.g.,* *United States v. Moussaoui*, Crim. No. 01-455-A, op. order (E.D. Va. Oct. 2, 2003), *available at* <http://notablecases.vaed.uscourts.gov/1:01-cr-00455/docs/69264/0.pdf> (rejecting dismissal of the case as a remedy for the government's refusal to provide access to information and witnesses, and substituting other sanctions).

At the outset, there are preliminary matters that ought to be addressed. What are “terrorism” trials and how, if at all, do they differ from trials in other types of cases? Why should we be especially concerned with terrorism cases as distinguished from other types of criminal trials?

§ 1-11.00 “TERRORISM”

From the public’s perspective, “terrorism” no doubt often seems to be simply intentional violent criminal conduct intended to frighten society profoundly. Various federal statutes and administrative regulations define forms of terroristic conduct in a more formal way.³ The U.S. Code, for example, defines “international terrorism” as criminal “violent acts or acts dangerous to human life” that:

- (B) appear to be intended —
 - (I) to intimidate or coerce a civilian population;
 - (ii) to influence the policy of a government by intimidation or coercion; or
 - (iii) to affect the conduct of a government by mass destruction, assassination or kidnapping; and
- (C) occur primarily outside the territorial jurisdiction of the United States, or transcend national boundaries in terms of the means by which they are accomplished, the persons they appear intended to intimidate or coerce, or the locale in which their perpetrators operate or seek asylum.⁴

Somewhat more broadly, the Code, under “Acts of terrorism transcending national boundaries,” defines a “Federal crime of terrorism” as “an offense that is calculated to influence or affect the conduct of government by intimidation or coercion, or to retaliate against government conduct”⁵ and that violates any one of a large number of enumerated crimes.⁶ Other federal terrorism-related statutes exist, including a number that do not necessarily formally define terrorism.⁷ State statutes may be

³ *E.g.*, 18 U.S.C. §§ 2332, 2339 (2003).

⁴ *Id.* § 2331(1).

⁵ 18 U.S.C. § 2332b(g)(5)(A) (2000).

⁶ *Id.* § 2332b(g)(5)(B) (including those related to killing or other acts of personal violence, hostage taking, destruction of aircraft or aircraft facilities, weapons of mass destruction, sabotage of nuclear facilities, or destruction of interstate or hazardous liquid pipeline facilities).

⁷ *E.g.*, *id.* § 2332a (use of certain weapons of mass destruction); *id.* § 2332d (financial transactions); *id.* § 2332f (bombing of places of public use, government facilities, public transportation systems and infrastructure facilities); *id.* § 2339 (harboring or concealing terrorists); *id.* § 2339A (providing material support to terrorists); *id.* § 2339B (providing

applicable as well. The recent case of Washington Sniper Lee Boyd Malvo involved a count charging Malvo with murder “in the commission of an act of terrorism as defined in Section 18.2-46.4 of the Code of Virginia.”⁸ Section 18.2-46.4 declares that an “‘*Act of terrorism*’ means an act of violence . . . committed with the intent to (i) intimidate the civilian population at large; or (ii) influence the conduct or activities of the government of the United States, a state or locality through intimidation.”⁹

Our national human experience would allow one to conclude that most acts of terrorism are acts of violence intended to inspire sufficient fear in a population so as to assist individuals, organizations, quasi-states, and nations in their attempted accomplishment of political, social, or religious goals. At its heart, terrorism is societal blackmail by violence. The question can then be asked, are terrorism trials distinct in some meaningful fashion from other forms of criminal trials?

§ 1-12.00 Terrorism Trials

On one level, terrorism trials are functionally identical to other types of criminal cases. With the exception of the special military commissions created by the President,¹⁰ the same courts are involved, using the same personnel who operate under the same rules of procedure and evidence. Some terrorism trials are highly complex and involve great public interest; and so do other forms of trials, including everything from murder to corporate wrongdoing. Yet, on another level, there are arguably important differences.

material support or resources to designated foreign terrorist organizations); *id.* § 2339C (prohibitions against the financing of terrorism). See generally NORMAN ABRAMS, ANTI-TERRORISM AND CRIMINAL ENFORCEMENT 34–80 (2003).

⁸ True Bill of the Grand Jurors, *Commonwealth v. Malvo* (Va. Cir. 2003), available at <http://www.co.fairfax.va.us/courts/cases/pdf/indictment.pdf>.

⁹ VA. CODE ANN. § 18.2-46.4 (Michie 2003).

¹⁰ Military Order of November 13, 2001: Detention, Treatment, and Trial of Certain Non-Citizens in the War Against Terrorism, 66 Fed. Reg. 57,833 (Nov. 16, 2001) (also known as “President’s Military Order”). In lieu of either the Federal or Military Rules of Evidence, the Commission’s evidentiary standard is basic: “[E]vidence shall be admitted if . . . the evidence would have probative value to a reasonable person.” U.S. DEP’T OF DEF., MILITARY COMM’N ORDER NO. 1, at ¶ 6(D)(1) (Mar. 21, 2002) [hereinafter MCO No. 1]; see also Fredric L. Borch, III, *Why Military Commissions Are the Proper Forum and Why Terrorists Will Have “Full and Fair” Trials: A Rebuttal to Military Commissions: Trying American Justice*, ARMY LAW., Nov. 2003, at 10, 13 (noting that hearsay evidence is admissible “[u]nder the ICC [International Criminal Court] rules, and at the International Criminal Tribunal for the Former Yugoslavia”).

Most of our outright major terrorism cases¹¹ have involved substantial (or potential) loss of life, lengthy¹² and complicated trials¹³ characterized by unusually heavy security concerns, and the interests of numerous relatives of those killed or injured. Cases involving non-U.S. defendants invoke significant foreign interest or involvement. Noted high-technology trial lawyer Sam Guiberson observed that terrorism trials are especially demanding in their analytical complexity, often requiring highly sophisticated data analysis on the part of the defense.¹⁴ To the extent that defendants have well-resourced potential allies elsewhere, not only can there be physical security risks, but counsel and court could face data security threats rivaling information warfare concerns. The need for foreign evidence, including the potential testimony of persons outside the United States, may be substantial. In short, terrorism cases are likely to be difficult, with unusually demanding evidentiary requirements. Indeed, the potential evidentiary demands are one of the reasons why the military commissions were created, along with their unique “probative value” evidentiary requirement that eliminates hearsay restrictions.¹⁵ And as the *Moussaoui* case has shown, protection of classified information or access to it can be critical.¹⁶

In large part, however, it is the subject matter of terrorism cases that distinguishes them. By their very nature, acts of terrorism threaten large numbers of people¹⁷ and, as we discovered on September 11th, potentially our entire nation.

¹¹ As distinct from cases involving financing or otherwise assisting terrorists or terrorist actions. Because terrorist acts require financial support, financial cases can be crucial and complex.

¹² The numerous trials that grew out of the World Trade Center bombing in the early 1990s were lengthy. None were shorter than four months, and the longest was nearly nine months long. *E.g.*, Joseph P. Fried, *Sheik Sentenced To Life in Prison in Bombing Plot*, N.Y. TIMES, Jan. 18, 1996, A1 (discussing the nine-month trial); N.R. Kleinfeld, *The Reaction: Convictions Greeted With Jubilation and Big Sighs*, N.Y. TIMES, Mar. 5, 1994, § 1, at 29 (discussing the five-month trial).

¹³ In refusing to dismiss the prosecution in *United States v. Moussaoui*, the judge cited the “unprecedented investment of both human and material resources in this case.” *United States v. Moussaoui*, Crim. No. 01-455-A, op. order (E.D. Va. Oct. 2, 2003) at 5. The first World Trade Center bombing case used a pool of 5,000 potential jurors to select the final panel. *See* Ralph Blumenthal, *Pool of Jurors Is Whittled Down in the World Trade Center Bombing Trial*, N.Y. TIMES, Sept. 23, 1993, at B4.

¹⁴ Telephone Interview with Sam Guiberson, Esquire (Dec. 22, 2003) [hereinafter Guiberson Interview].

¹⁵ *See, e.g.*, Borch, *supra* note 10 at 10–13.

¹⁶ *See* *Moussaoui*, Crim. No. 01-455-A, at 4–5.

¹⁷ We can further distinguish between those terrorism cases that fit the classic federal model (i.e., those that have a policy intent) and those that have as their primary goal the infliction of pain and fear on many people (with or without personal gain). The Washington Sniper perpetrators, for example, successfully intended to cause fear in the region and to affect the daily lives of the people living there, but had no general political or religious

Although our population may be personally affected by, or interested in, the results of any number of civil or criminal cases,¹⁸ terrorism cases can be directly personal in an extraordinary fashion. Any one of us could be a passenger or victim of a hijacked aircraft, a victim of anthrax, or an accidental victim of a terrorist bombing. The public not only wants justice, it wants to be sure that the right people have been convicted, lest the dangerous remain free to strike again.¹⁹

Via the media, the public has a substantial interest in understanding the nature of an act of terrorism and how it was planned and accomplished. In the absence of a comprehensive, fairly and competently tried case, with equitable representation on each side, to paraphrase Mr. Guiberson: “[Y]ou generate another cottage-conspiracy industry.”²⁰ The rest of the world also has an interest, especially when non-U.S. citizens are involved. The world looks at our trials and uses them as vehicles to determine whether we measure up to our claims for civic probity, or whether they reflect the bias and injustice of which our enemies complain.

agenda. See, e.g., David Johnston & Fox Butterfield, *The Hunt for a Sniper: The Speculation; Hints, But No Evidence of Terrorism*, N.Y. TIMES, Oct. 17, 2002, at A27. Although the “Washington Sniper” perpetrators affected the daily lives of nearly everyone in the greater Washington D.C. metropolitan area, it was soon apparent that their murders were not linked to a greater purpose. In short, the people were in fear, but only of a limited threat with reasonably clear constraints. The federal statutory terrorism definition far more easily fits the “war on terrorism” in which the terrorist threat has an unknown but potentially enormous reach and consequence. We cannot forget, however, that the potential use of weapons of mass destruction such as the anthrax attacks of the post-September 11th period, show how even a single person without any policy intent can accomplish horrendous terroristic acts of national or worldwide consequence.

¹⁸ “Seventy million Americans watched Simpson’s preliminary hearing on television.” Peter Arenella, *Foreword: O.J. Lessons to People v. Simpson: Perspectives on the Implications for the Criminal Justice System*, 69 S. CAL. L. REV. 1233, 1252 (1996) (citing Laurie L. Levenson, *Media Madness or Civics 101?*, 26 UWLA L. REV. 57, 58 & n.5 (1955)). The issue here, however, is not public interest; it is public involvement. Few Americans had perceived themselves as being at risk if the killer in the Simpson case went unidentified or unpunished. Terrorism yields a different conclusion. At the time of this Article, the media reported that Air France cancelled flights to and from Los Angeles because of possible terrorist threats, combat aircraft again patrolled the skies over major cities, and security was vastly heightened nationwide as the result of the enhancement of the Department of Homeland Security’s terrorism-threat level to “orange.” See, e.g., Edmund L. Andrews & Craig S. Smith, *French Find No Flight-Terror Tie, But American Suspicions Remain*, N.Y. TIMES, Dec. 26, 2003, at A1. Few people can escape the feeling that their freedom of movement, if not their very lives, is involved.

¹⁹ This can be a very real interest for any individual threatened by a criminal act of any type. However, terrorism is distinct as it inspires both personal and collective fear on the part of large numbers of people — people who cannot necessarily avoid further risk of harm by changing their own individual lifestyle or movements.

²⁰ Guiberson Interview, *supra* note 14 (speaking of the consequences of a case in which the defense is substantially disadvantaged compared to the prosecution).

§ 1-13.00 *The Importance of Terrorism Trials*

Terrorism trials are qualitatively different from most other trials. The way that we conduct them is, for much of the world, a window into our nation's values. Internally, the degree of fairness accorded those accused of such horrendous acts or goals communicates to our own people the degree to which we respect our legal system. It signals our support for the constitutional protections upon which our system is based when we are most strongly tempted to dispense with them for the sake of expediency. The war on terrorism is a war of many fronts. Because terrorism is *per se* criminal, those captured in the pursuit of the war are subject to trial, and the trials themselves are part of the war against terrorism. For some it may prove ironic that in the war of ideas that constitute the core of our campaign against terrorism, one of our greatest weapons is not the certainty of our conviction, but rather the certainty and perception at home and abroad of an efficient and fair trial characterized by traditional American due process.

Judge James E. Baker²¹ has noted that Alexander Hamilton wrote in *The Federalist* that:

Safety from external danger is the most powerful director of national conduct. . . . The violent destruction of life and property incident to war, the continual effort and alarm attendant on a state of continual danger, will compel nations the most attached to liberty to resort for repose and security to institutions which have a tendency to destroy their civilian and political rights. To be more safe, they at length become willing to run the risk of being less free.²²

But, as Judge Baker also observed, "the Constitution was not designed to fail, to safeguard our security at the expense of our freedom, or celebrate freedom at the expense of security. It is designed to underpin and protect us *and* our way of life."²³ Our terrorism cases must embody due process.

At the same time, however, it is not enough to supply due process. We must also provide efficient and speedy adjudication. Necessary delay *can* communicate due process; certainly undue haste suggests its absence. However, for most lay people, delay suggests inability, complexity, or evidentiary difficulty that implies weakness in the prosecution, the political administration, the legal system, or more. Accordingly, our multifaceted war on terrorism requires (to the degree possible)

²¹ James E. Baker, United States Court of Appeals for the Armed Forces.

²² James E. Baker, *National Security Process and a Lawyer's Duty: Remarks to the Senior Judge Advocate Symposium*, 173 MIL. L. REV. 124, 133 (2002) (citing THE FEDERALIST NO. 8 (Alexander Hamilton) (Clinton Rossiter ed., 1961)).

²³ *Id.* at 133-34.

speedy, efficient, clear, accurate, and fair trials. The world must see American justice as the epitome of accuracy, fairness, and efficiency. Our trials must send the world a message that the guilty will be convicted with a combination of expedition and fairness — a unique message of American competence and moral strength. In doing so, we must help the world see how and why these acts were committed so that no one can hide from the truth. Courtroom technology can help us achieve these goals.

§ 1-14.00 *The Courtroom 21 Laboratory Trials*

The goal of this Article is to explore the potential use of courtroom technology to assist in the trials of terrorism cases. In doing so, this Article will review the possible technologies both in the abstract and, to the degree practical, from the perspective of their actual use in terrorism or related cases. One special aid in this process is a review throughout this Article of aspects of the Courtroom 21 Laboratory Trials.

William & Mary Law School is the home of the Courtroom 21 Project, a joint project of William & Mary Law School and the National Center for State Courts. The Project's primary external mission is "To improve the world's legal systems through the appropriate use of technology." To accomplish this, the Project conducts frequent legal technology demonstrations and discussions each week, hosting jurists, lawyers, law faculty, court administrators, technologists, architects and others from throughout the world. The Project is the world center for courtroom technology empirical and legal research, is heavily involved in judicial and lawyer education and training, and provides technology augmented courtroom design consulting services. The Project is best known for the Law School's McGlothlin Courtroom, the hub of the Project, which is the world's most technologically advanced trial and appellate courtroom.²⁴

Each year with the assistance of the many Courtroom 21 participating companies and organizations such as the Federal Judicial Center, and students from the law school's Legal Technology Seminar and, now, Technology-Augmented Trial Advocacy Course, the Courtroom 21 Project tries a one-day experimental trial (the Lab Trial). The Project creates a case that is either based upon a real case or one that could occur. An invited U.S. district judge presides while a community

²⁴ WILLIAM & MARY CLASS OF 2006 STUDENT ORIENTATION NOTEBOOK § 3 (2003). See generally Fredric I. Lederer, *The Courtroom 21 Project: Creating the Courtroom of the Twenty-First Century*, A.B.A. JUDGES' J., Winter 2004, at 43.

jury sits as fact-finder. The Courtroom 21 Project uses the Lab Trial as a unique experimental vehicle. The Courtroom 21 Project tried simulated terrorism-related cases in 2001 and 2003.

United States v. Linsor was an experiment tried in April, 2001, six months before September 11th. *Linsor* was an aircraft-destruction and murder case in which the defendant, a U.S. national living in England, was part of a cell that placed a bomb aboard a U.S. Air Force aircraft in England. The bomb destroyed the plane over London, directly in the path of an oncoming civilian jetliner. The jetliner was consequently also destroyed, causing terrible destruction in the city below. The defendant was charged with violations of Title 18 of the U.S. Code, Sections 32²⁵ and 2332(a).²⁶ The Honorable James Rosenbaum, United States District Judge for the District of Minnesota, presided.

United States v. Stanhope was tried in April, 2003. Created with the assistance of the Counterterrorism Section of the Department of Justice, *Stanhope* involved the prosecution of an American citizen for attempting to help finance an al Qaeda attack in the United States in violation of Section 2339B.²⁷ The Honorable James Spencer, United States District Judge for the Eastern District of Virginia, presided.

Linsor and *Stanhope* served as experimental vehicles for the use of courtroom technology in terrorism cases. As such, they will be especially valuable in our technology discussion. At the same time, other nonterrorism-related Courtroom 21 Lab Trials can also be useful, especially the April 2002, trial of *United States v. NewLife MedTech* (a homicide prosecution of a medical start-up company presided over by the Honorable Nancy Gertner, United States District Judge for the District of Massachusetts). The case involved the world's first-known use of holographic and immersive reality evidence.

Based upon oral surveys of the technologies and our Courtroom 21 experience, the technologies of greatest interest in terrorism cases included those related to pretrial case preparation, remote appearances, court record, counsel communications, evidence/information presentation, jury deliberations, and appeals.²⁸

²⁵ 18 U.S.C. § 32 (2003) (destruction of aircraft or aircraft facilities).

²⁶ 18 U.S.C. § 2332(a) (2003) (criminal penalties for homicide, pursuant to Chapter 113B, Terrorism).

²⁷ 18 U.S.C. § 2339B (2003) (providing material support or resources to designated foreign terrorist organizations).

²⁸ Other technologies, notably assistive technologies that help those trial participants who would benefit from technological help in moving, hearing, seeing, or communicating, may also apply. See, e.g., Mark Potok, *McVeigh Trial Off to Dramatic Start Both Sides Concentrate on Details*, USA TODAY, Apr. 25, 1997, at 3A ("The prosecutor, who has multiple sclerosis, spoke from his wheelchair at an electronically lowered podium."). These are important technologies, ones that Courtroom 21 has a special interest in, to the point of having created a special assisted litigator's podium for the high-technology lawyer in a

§ 2-10.00 THE TECHNOLOGIES IN GENERAL

Technology, including courtroom technology, does not exist in a vacuum. A comprehensive discussion of the potential value of courtroom technology requires consideration of the technology itself, its method of employment, its human effects, current legal and practical constraints, and the technology's potential specific and systemic advantages and disadvantages, particularly if any applicable legal restrictions were to be varied. The material that follows addresses legal technologies of special interest to terrorism prosecutions. It does not attempt to be a detailed discussion of legal or courtroom technologies.²⁹

§ 2-20.00 *Pretrial Preparation*

§ 2-21.00 In General

Major terrorism cases are potentially highly complex. Thousands of physical or electronic documents or files may be involved, along with testimony in varied forms from hundreds of people. Because terrorism cases ought to be tried as speedily as possible once the accused has been formally charged, it is especially

wheelchair. However, despite their general importance there does not appear to be terrorism-specific reasons to discuss these technologies. Interpretation technology may apply but is pragmatically unlikely to be necessary. Although interpretation is frequently required in the trials of terrorists with foreign connections, remote audio interpretation technology, which connects the courtroom to a remote human interpreter, is unlikely given the absence of visual cues, and we can assume that ordinarily in-court, court-qualified interpreters will be used. Having noted that, recent developments in technology-aided interpretation permit interpretation via two-way videoconferencing (essential for sign language interpretation), and such interpretation could be especially useful in the event of an unforeseen need, including the unexpected unavailability of an interpreter.

Courthouse and courtroom security are concerns that are clearly applicable to terrorism cases. *See, e.g.,* Camille Bains, *B.C. Officials Reveal High-Tech, High-Security Courtroom for Air India Trial*, CAN. PRESS, Aug. 16, 2002.

A high-tech, high-security courtroom built especially for the Air India trial already has lawyers lining up to use it before the biggest trial in Canadian history is set to begin next spring. . . . Features of the \$7.2 million courtroom at the Vancouver Law Courts include three portable tent-like, bullet-proof enclosures that seat two accused each.

However, for reasons of space, physical and data security are outside the scope of this Article.

²⁹ *See* DEANNE C. SIEMER ET AL., *EFFECTIVE USE OF COURTROOM TECHNOLOGY: A JUDGES'S GUIDE TO PRETRIAL AND TRIAL* (2002); *see generally* Fredric I. Lederer, *Courtroom Technology: For Trial Lawyers, The Future is Now*, 19 CRIM. JUST. 1, 14 (2004); 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).

important that persons involved in the pretrial investigative and trial preparation phases recognize that should the case go to trial, some of the material collected in those phases may later have to be presented in court as evidence. This recognition may be less useful in terrorism cases than in many other more traditional prosecutions as there may be little or no distinction in many terrorism cases between “law enforcement” investigation and preliminary pretrial prosecutorial preparation given the degree that prosecutors are part of the pretrial investigatory stage. To the extent that prosecutors are actively involved in the pretrial preaccusation investigation,³⁰ the dividing line between investigation and prosecution may be thin at best. Should this be so, efficient prosecution requires an unusually early agreement with law enforcement and intelligence personnel on the data components of the case.

The initial challenge is the creation of the case — the collection, organization, and analysis of the data. The prosecution has a substantial advantage: it has the assistance of law enforcement and intelligence personnel,³¹ all of whom are hopefully cooperative and supportive. In a major case of great political importance, the human and technological resources available to a U.S. Attorney are effectively unlimited.³² At least theoretically, the prosecution should receive from law enforcement and the intelligence agencies³³ the raw data, the analysis that accompanies it, and the human assistance of those knowledgeable about the case. The prosecution’s chief task would then be to master the case, structure it for trial, and prepare the evidence needed for victory. Reality is not quite so simplistic, of course. Counsel likely will have to obtain information not previously supplied, identify holes in the case, locate and obtain appropriate evidence, comply with constitutional disclosure³⁴ and defense discovery requirements,³⁵ and more.

Although the defense has the great advantage of not having to prove an affirmative case beyond a reasonable doubt, in a complex case it must understand

³⁰ This is a commendable fact of life today in many types of criminal cases. Early prosecutorial involvement ought to moot legal errors that would otherwise only be detected when it is too late to do anything about them.

³¹ These personnel are likely to be using data mining software and forensic computer software such as EnCase during the investigation phase.

³² It is by no means clear that this is true for the military commissions that appear to have a potentially massive caseload.

³³ These agencies may have been involved in the investigation from a very early period, thus easing or even eliminating the traditional transition from investigation to prosecution.

³⁴ See, e.g., *United States v. Bagley*, 473 U.S. 667 (1985) (holding that evidence withheld by government is material only if there is a reasonable probability that disclosure would have changed the outcome of the proceedings); *United States v. Agurs*, 427 U.S. 97 (1976) (prosecutor’s failure to disclose murder victim’s record to defense did not deprive defendant of a fair trial).

³⁵ E.g., FED. R. CRIM. P. 16 (pertaining to discovery and inspection).

the prosecution's data in order to respond to it. There can be "thousands or millions of data points."³⁶

§ 2-22.00 Data Structuring and Analysis

The pretrial process ought to consist of the creation of a master database linking all known relevant information. All information which might be of later importance must be obtained and indexed electronically. Physical documents should be scanned, preferably with optical character recognition,³⁷ so that they can be searched electronically. Current software using a form of artificial intelligence allows the automated analysis of scanned documents to recognize and retrieve important data.³⁸ Litigation support software can complete custom data forms using such extracted information.³⁹

New technology⁴⁰ now permits the text searching of digital audio, whether alone or connected to video. Accordingly, the audio component of any wiretaps, interrogations, depositions, interviews and the like can be converted to digital audio, if it was not in digital form to begin with, and thus made searchable. All digital data can be linked to the master database; thus permitting highly useful data mining.

Access to the case information is not enough; it needs to be structured. Depending upon the case, data can be "mapped" or charted graphically, whether in chronological or other forms, allowing for visual understanding of key parts of the case. Critically, the same type of display may also be highly useful during opening statements or closing arguments.

³⁶ Guiberson Interview, *supra* note 14 (noting also that the mass of data can obscure important evidence). The *New Jersey Law Journal* reported in 1997 that "the McVeigh defense team has more than 28,000 FBI interviews to pore over, about 500 laboratory reports with differing conclusions to weigh, and thousands of hours of surveillance tapes to view — all products of a criminal investigation conducted by hundreds, if not thousands, of FBI agents." Robert Schmidt, *A Spare-No-Expense Defense for McVeigh*, 148 N.J. L.J., Apr. 7, 1997, at 16.

³⁷ Scanning is the process of making an electronic image of a document, photograph, chart, and such. The result is a computer file that can be displayed by computer programs. Should counsel wish to be able to search imaged documents for specific text (potentially as is done in Lexis or Westlaw searches), the scanned images must then go through optical character recognition (OCR). In OCR, a computer program processes each individual letter in order to convert it to its equivalent in electronic text. In effect, OCR programs convert pictures of words to text. OCR is desirable so that counsel can search documents; however, it is unnecessary if the only goal is to display the image of documents in court.

³⁸ See Sythetix by Syngence, at <http://www.syngence.com/synthetix.asp>.

³⁹ See Syndex by Syngence, at <http://www.syngence.com/syndex.asp>.

⁴⁰ Available through NEXIDIA (formerly "Fast-Talk Communications"), at <http://www.nexidia.com>.

The key to efficient use of investigative work during trial is not so much the capturing of information which might otherwise be lost (for example videotaping an interrogation) but the recognition that a later conversion of data from one set of computer programs to another may be at best difficult and expensive, especially if proprietary programs are used initially. Advanced planning is critical. Prosecution compliance with defense data discovery requirements, for example, can be difficult depending upon the data format used and whether care has been taken to protect attorney-client, work product, and classified information privileges.⁴¹

§ 2-23.00 Virtual Reality

Virtual reality is an often overused expression that is most often employed to describe one form or another of computer graphical re-creation of a given location.⁴² In its more basic form, virtual reality gives the user the ability to move through an accurate image of a place as displayed on a computer monitor. For example, as the user employs a mouse, keyboard, or other control device, the user effectively can

⁴¹ Defense discovery requests have sometimes resulted in prosecution data not readily readable by the defense. A recent joint working committee of the Administrative Office of the United States Court and Department of Justice has recommended in the area of discovery that:

Absent significant justification, during the discovery process there should be no degradation of electronic data from the state in which that information is originally received by a party. For example, to the extent that a party gets discoverable information from a third party in electronic form, the party should produce the information in that same form when requested to do so.

JOINT ADMIN. OFFICE, U.S. DEP'T OF JUSTICE, WORKING GROUP ON ELECTRONIC TECHNOLOGY IN THE CRIMINAL JUSTICE SYSTEM ¶ IV.B.(2) (2003), *available at* http://www.uscourts.gov/newsroom/report_w_app.pdf.

Insofar as data conversion is concerned, the working group recommends:

Absent significant justification, a party that converts discoverable information into an electronic form, or manipulates or organizes discoverable information that is in an electronic form, should make such products available to an opposing party, assuming that the work product or other privilege is not applicable to those products, and subject to any cost-sharing arrangements to which the parties may agree or the court may direct.

Id. at ¶ IV.B.3.a(3) (recommending also the use of “commercially available software”).

And:

Absent significant justification, a party that converts discoverable information into an electronic form, or manipulates or organizes discoverable information that is in an electronic form, should make every effort to do so in [a] manner that makes it possible to make such products available to an opposing party — perhaps in a redacted or other form — without implicating the work product or other privilege.

Id. at ¶ IV.B.3.b.(3)(a).

⁴² See, e.g., *infra* note 45.

walk through a building. When using the mouse to turn, the screen image reacts accordingly and displays what the person would actually have seen if they had made that turn in the actual building. Virtual reality technology may aid in the investigation and pretrial preparation of a case.⁴³ In the “Bloody Sunday” inquiry into the killing of fourteen people by security forces during a 1972 civil rights march in Londonderry in Northern Ireland,⁴⁴ inquiry staff have used a two-dimensional recreation of 1972 Londonderry⁴⁵ to assist witnesses in illustrating their testimony:

The virtual reality representation recreates the whole of the Bogside area of Derry, much of which has undergone extensive reconstruction since 1972. The user can select the scene today, in 1972 or as it may have looked today if the reconstruction had not occurred. With a choice of 80 locations, the user can look around 360 degrees, zoom in and out or choose to walk through the scene. On selection of the latter, ‘stepping stones’ are used as an aid to navigation. At each point the angle of view is remembered by the system when switching between the representations.

Oral evidence as to location and movement can be recorded on the virtual reality system. Any particular scene can be saved and exported to a mark-up system so that the witness can draw on the images or the line of direction indicated.⁴⁶

The Bloody Sunday virtual reality system allows a witness to illustrate his or her testimony by “walking” through the re-creation of the city, as displayed on a two-dimensional screen.

The next generation of this technology is “immersive virtual reality.” In immersive virtual reality a witness is placed within a three-dimension virtual recreation — and becomes part of the re-creation; the witness can physically walk about it. Rather than controlling an image displayed on a screen, the witness is in the recreation, which then reacts to the actual physical movements of the witness. The witness wears a computer-linked set of goggles that transmits to the wearer’s eyes what the witness would actually see if he or she were to be physically present in the computer recreated room or location. A computer tracks the physical actions

⁴³ Cf. David Lore, *Bombing Opened Portal to Engineers Virtual Reality Assists Building Design*, COLUMBUS DISPATCH, Apr. 4, 1997, at 1B (describing how an Ohio State student created a virtual model of the Murrah Federal Building in Oklahoma City after its bombing).

⁴⁴ See generally The Bloody Sunday Inquiry, at <http://www.bloody-sunday-inquiry.org.uk/index.htm> (last visited Dec. 25, 2003).

⁴⁵ The Bloody Sunday Inquiry, Technology in use, at <http://www.bloody-sunday-inquiry.org.uk/index2.asp?p=7> [hereinafter Bloody Sunday Technology].

⁴⁶ *Id.*

of the witness and reacts to them as if the witness were physically present in the virtual location. Courtroom participants see what the witness sees via projection on courtroom screens. To the witness, it actually seems as if he or she has been physically transported to the virtual environment.⁴⁷ What is a courtroom to jurors and observers may appear to the witness to be an outdoor plaza filled with statues, trees, and a fountain. It can be disconcerting to see the witness detour past an empty section of floor, which to the witness appears to be a tree. First used in a courtroom context in the 2002 Courtroom 21 Lab Trial of *United States v. NewLife MedTech*,⁴⁸ immersive virtual reality allows event witnesses to demonstrate past actions almost as if we have been given a window on the past. In our use we discovered that a critical defense witness, a nurse, who had testified to how she had seen a surgeon conduct a key part of an operation had actually been unable to see the surgeon's hands or wrists, thus totally discrediting her testimony. Although



⁴⁷ With the critical caveat that current technology cannot yet economically recreate photographic reality, instead, high-end computer graphics are used so that there is at present no chance of confusing the virtual reality with true reality. Notwithstanding this, virtual reality can seem "real" indeed to the participant. I first used this system personally at an August, 2001, Federal Judicial Center Conference (conducted with the support of the Courtroom 21 Project). I found myself reacting emotionally to what I intellectually knew to be nonexistent. Walking over a raging fire twenty or more feet below the virtual reality wooden plank across which I was all too hesitantly walking brought forth very real feelings, even though I was actually walking across a room's carpeted floor.

⁴⁸ The immersive reality reconstruction was created by faculty and students at the University of California at Santa Barbara, with the support of the Federal Judicial Center.

virtual reality technologies can be highly effective in the courtroom, as demonstrated in *United States v. NewLife MedTech*, they may be even more useful in the investigative and pretrial preparation phases when experts are trying to reconstruct what actually happened. It is in one sense an ideal form of modeling.⁴⁹

§ 2-24.00 Multimedia Interrogations and Interviews

Early decisions in the investigation stage can ease or complicate the trial preparation stage. This is especially true when interviews and interrogations are conducted. If these are videotaped when conducted, the audio portion can be transcribed⁵⁰ so as to yield an electronically searchable transcript. The electronic text can also be added to the digitalized video so as to create a multimedia deposition-like depiction of the interrogation or interview. As the fact-finder sees and hears the person being questioned, the fact-finder can also follow the transcript as it runs either below or above the image or scrolls by on the side.⁵¹ In the Courtroom 21 Lab Trial *United States v. Linsor*, the prosecution utilized such a multimedia transcript of a simulated FBI interrogation of an arrested terrorist. The combination of audio, video, and scrolling text appeared highly persuasive.⁵²

⁴⁹ It also has the same problems one encounters in creating any model — the model is only as good as the information used to construct it.

⁵⁰ This can be done at the interrogation via a real-time court reporter. However, as circumstances can readily foreclose concurrent use of a reporter as a reasonable option, later transcription may be unavoidable.

⁵¹ This presupposes that there is no question about what was said as distinguished from the classic attempt to assist a jury in its interpretation of a garbled wiretap. In such a case, the text component ought to be objectionable as either violative of the “best evidence rule” (see FED. R. EVID. 1001 (1), (3) (covering a “recording”)), or unfairly prejudicial (see, for example, FED. R. EVID. 403). In the event of a substantial dispute, the traditional attempt to supply a transcript simply as an “aid to understanding,” (see, for example *United States v. Hughes*, 895 F.2d 1135, 1147 & n. 22 (6th Cir. 1990) (permitting the transcript as only an aid is within the sound discretion of the court after the court has personally made an independent determination of the accuracy of the transcript by comparing the recording with the transcript)) ought to be unlikely to be successful given the persuasive nature of a multimedia transcript.

⁵² Of course, videotaping the taking of a statement can also be a substantial factor in showing the statement to have complied with all due process and other legal requirements. See, e.g., *Stephan v. State*, 711 P.2d 1156, 1158 (Alaska 1985) (requiring taping of custodial interrogations in formal detention locations); TEX. CRIM. PROC. CODE ANN. art. 38.22, § 3 (a)(1) (requiring electronic recording of custodial interrogation to enter that statement against the accused for impeachment purposes). The admissibility and reliability of statements can be substantial questions at any time. They may be especially problematic when individuals are questioned with national security concerns in the balance, or when interrogations are conducted by foreign authorities not bound by United States law. In the 2003 Lab Trial of *United States v. Stanhope*, a witness portraying a law-enforcement agent of another nation

§ 2-25.00 Special Requirements for Counsel?

It is impossible to avoid noting that proper pretrial preparation for some terrorism cases is, or should be, unusually data and technology dependent.⁵³ Such a conclusion impels sobering requirements. Counsel for all parties must have access to the necessary technologies and the ability to use them properly. We can likely assume that few terrorist defendants are likely to be able to personally afford retained counsel⁵⁴ or to hire outside expert assistance, so the potential, if not certainty, of a massive imbalance in representation seems clear.⁵⁵ Although counsel imbalance is all too often a feature of our adversary system which, outside the armed forces, has a minimal competence requirement for criminal defense attorneys,⁵⁶ the imbalance may be especially troublesome here.

Courtroom 21 experience and the information that we have gathered in the ten years of the Project's formal existence leads us to conclude that with instruction, most trial lawyers can obtain at least basic adequacy in the use of evidence-presentation technologies for trial. It is by no means clear that this is true for the data-intensive pretrial preparation phase that may require a specialized understanding of the nature and potential uses of computer databases and other technologies.

If this is correct, terrorism cases in particular may demand counsel with special technology qualifications; qualifications not customarily held by either federal assistant public defenders or Criminal Justice Act-appointed counsel.⁵⁷ One possible solution to this is to draw defense counsel from a nationwide panel of technology-competent counsel.⁵⁸ The reader may question the desirability of

spent some time attempting to assure the court that an interrogation she had conducted of a witness complied with all of her nation's legal requirements, aggressively trying to avoid defense counsel's showing that those standards were at sharp variance with those of the United States.

⁵³ This is not unique, of course, to terrorism cases. However, if the speedy and fair adjudication of terrorism cases are to be a special priority, the need to cope with technology-dependent data storage and use may be a special need for these cases.

⁵⁴ The expenses of a major trial are immense. Absent funding from an institution, it seems improbable that many people, including suicide bombers, would have sufficient wealth to retain adequate private counsel.

⁵⁵ Mr. Guiberson argues that our current system creates a massive imbalance in counsels' ability to interpret the evidence. Guiberson Interview, *supra* note 14 (Dec. 22, 2003).

⁵⁶ See, e.g., *United States v. Cronin*, 466 U.S. 648 (1984) (holding that a real estate lawyer who had never before tried a case did not supply ineffective assistance of counsel in a \$9.4 million mail fraud "check kiting" scheme).

⁵⁷ The Federal Public Defenders' offices have access to federal technology experts who assist in case preparation and trial.

⁵⁸ Guiberson Interview, *supra* note 14 (stating that local counsel inexperienced in megatrials and with technology are at the mercy of local technology entrepreneurs who may lack appropriate expertise).

treating terrorism cases specially; after all, we have a compelling need for better lawyers in many other types of cases, including many more mundane capital cases. The best response to such a legitimate criticism is that because of their impact on foreign public opinion, terrorism cases are indeed special in this regard. Fair and expeditious terrorism trials will not themselves win the hearts and minds of those abroad who question our society and its philosophic underpinnings, but they can help, and perhaps more importantly, they can surely hurt if they are seen simply as show trials working their way to a predetermined outcome.

§ 2-30.00 Trial

§ 2-31.00 Public Access to the Trial Proceedings

A criminal defendant has a Sixth Amendment right to a public trial.⁵⁹ One of the traditional reasons for such a trial is to ensure that the public is satisfied that the verdict is accurate and the sentence just.⁶⁰ Because the perceived international fairness of a terrorism trial is itself a part of our war against terrorism, it is especially important that we afford the world the greatest possible understanding of the trial and its evidence. On the one hand, this suggests that the trial presentation on both sides be as comprehensible as possible, a matter which will be addressed in the evidence presentation discussion. It also suggests that the trial process itself should be as transparent or at least as available to the public as may be possible.⁶¹

In those terrorism trials in which the survivors and the families of victims were numerous,⁶² many courts have provided overflow seating via remote audio/video to another room in the courthouse⁶³ or to a remote viewing location in another city.⁶⁴

⁵⁹ See U.S. CONST. amend. VI; see also *Richmond Newspapers, Inc. v. Virginia*, 448 U.S. 555 (1980) (holding that a criminal trial must be open to the public).

⁶⁰ *Richmond Newspapers*, 448 U.S. at 556.

⁶¹ This may be equally important for surviving victims and the families of the deceased.

⁶² “3,000 or so people identified officially as victims, survivors, and relatives [of the Oklahoma City bombing]” Arnold Hamilton, *Oklahoma Bomb Survivors to View Telecast of Trial*, DALLAS MORNING NEWS, Mar. 23, 1997, at 47A.

⁶³ This was done in the 2003 Chesapeake, Virginia trial, *Commonwealth v. Malvo*, No. 102888 (Va Cir. Ct. May 6, 2003) (discussing details during Courtroom 21 pretrial site inspection visit).

⁶⁴ Note that remote viewing by victims and their families was initially prohibited by the trial judge in the *McVeigh* case pursuant to the prohibition in the Federal Rules of Criminal Procedure in broadcasting trials.

The federal court system long had a rule that prohibited cameras from its courtrooms. The provision that made possible the closed-circuit telecast was included in the Anti-Terrorism and Effective Death Penalty Act, signed into law by the president last April. It requires the federal court system to permit such

However important victims and their survivors — and they *are* important — are from a national perspective, the key issue may be the availability of terrorism-trial proceedings to the greater national and international audience. If we are to show clearly the facts of the case for the doubters; if we are to show the world the nature of our legal system and the culture it supports, we *must* be able to show our terrorism trials to the world. This policy judgment wars with a tradition of privacy, at least insofar as the federal courts are concerned,⁶⁵ given their prohibition on “cameras in the courtroom.”⁶⁶ Further, it runs the risk of providing a public forum for incendiary views.

Following the practice adopted by other courts dealing with important cases, many courts hearing terrorism trials publish key documents, potentially including evidentiary exhibits, to the World Wide Web for public access.⁶⁷ At the very least, this makes available to the general public legal documents including indictments and motion papers. However, more can be done.

It is easily possible to publish to the Web in real time the verbatim transcript⁶⁸ of the court proceedings. Ringtail Solutions helped pioneer this area by Web publishing not only the transcript, but also associated documents.⁶⁹ In past Lab Trials, including the *Linsor* and *Stanhope* experimental terrorism trials, the Courtroom 21 Project published to the Web a comprehensive multimedia transcript consisting of live audio and video, the draft real-time transcript, and documentary evidence. The goal should be to make available to the world the entire trial without news media editing. Setting aside any discussion of the unavoidable bias that can

broadcasts if a trial is moved more than 350 miles from its original location. But it sharply restricts who can view the proceedings in such a setting, giving federal judges the discretion to decide who has a “compelling” enough interest to attend and who would be unable to do so “by reason of the inconvenience and expense caused by the change of venue.”

Id.; see also Paul G. Cassell & Robert F. Hoyt, *The Tale of Victims' Rights*, 147 N.J. L.J., 1997; Hamilton, *supra* note 62.

⁶⁵ See, e.g., Editorial, *McVeigh Trial Too Secret*, USA TODAY, Apr. 24, 1997, at 12A.

⁶⁶ See discussion of FED. R. CRIM. P. 53 *infra* notes 72–73 and accompanying text.

⁶⁷ See, e.g., U.S. Dist. Court E. Dist. of Va., *United States v. Moussaoui*, at <http://notablecases.vaed.uscourts.gov/1:01-cr-00455/Index.html> (last visited Apr. 9, 2004); Fairfax County Virginia, at http://www.co.fairfax.va.us/courts/cases/malvo_other.htm (last visited Apr. 9, 2004) (posting Malvo sniper case documents).

⁶⁸ Ordinarily, this would be a rough first draft. However, via the assistance of a “scopist,” a real-time court reporter’s transcript can be published in accurate form with only a small delay in transmission.

⁶⁹ See, e.g., Adam Creed, *Australian Gas Crisis Inquiry Publishes Live Transcripts*, NEWSBYTESNEWSNETWORK, Dec. 22, 1998 (“The Longford Royal Commission inquiry into the gas explosion in the Australian state of Victoria, which claimed two lives and left the entire state without any gas supply for two weeks, will provide real time transcripts of the proceedings from a Web site.”).

arise from having to edit a trial into audio or sound bites, overseas news coverage of an American trial may be especially vulnerable to journalistic bias. Internet publication permits those with access to the Web to draw their own conclusions as to the truth of what is happening at trial. Today's Web publication technology works incredibly well and the technology to accomplish it is now simple and relatively straightforward.⁷⁰

Trial coverage may be constrained, however, by the potential use of classified information,⁷¹ and in U.S. district courts, the prohibition by the Federal Rules of Criminal Procedure on "broadcasting of judicial proceedings from the courtroom."⁷² Although intended to ban cameras in the courtroom, the full extent of the federal prohibition is unclear. The notes of the Federal Rules Advisory Committee on the 2002 amendments suggest a potentially expansive interpretation.⁷³

Past federal trial real-time text transcripts have been published to the Web⁷⁴ despite the potentially broad nature of the prohibition. A multi-media transcript,

⁷⁰ In addition to the available Ringtail Solutions applications, the Courtroom 21 Project uses Sonic Foundry's MediaStream Live and in the 2004 Lab Trial used a combination approach assisted by Courtroom Connect and BXT Video.

⁷¹ Classified Information may close trial in any event.

⁷² "Except as otherwise provided by a statute or these rules, the court must not permit the taking of photographs in the courtroom during judicial proceedings or the broadcasting of judicial proceedings from the courtroom." FED. R. CRIM. P. 53. However, "forty-eight (48) other States have some form of audio-visual coverage in the courtroom and thirty-seven (37) televise trials." *People v. Boss*, 701 N.Y.S.2d 891, 894-95 (N.Y. Sup. Ct. 2000).

⁷³ The language of Rule 53 has been amended as part of the general restyling of the Criminal Rules to make them more easily understood and to make style and terminology consistent throughout the rules. These changes are intended to be stylistic only, except as noted below

Although the word "radio" has been deleted from the rule, the Committee does not believe that the amendment is a substantive change but rather one that accords with judicial interpretation applying the current rule to other forms of broadcasting and functionally equivalent means. *See, e.g., United States v. Hastings*, 695 F.2d 1278, 1279, n. 5 (11th Cir. 1983) (television proceedings prohibited); *United States v. McVeigh*, 931 F. Supp. 753 (D. Colo. 1996) (release of tape recordings of proceedings prohibited). Given modern technology capabilities, the Committee believed that a more generalized reference to "broadcasting" is appropriate.

COMM. ON RULES OF PRACTICE AND PROCEDURE, JUDICIAL CONFERENCE OF THE UNITED STATES, REPORT OF THE ADVISORY COMM. ON CRIM. RULES 159, available at <http://www.uscourts.gov/rules/Reports/CR05-2001.pdf>.

⁷⁴ Official court reporter Marilyn Sanchez twice daily published to the Web the real-time transcript of the U.S. district court trial of Arizona governor Fife Symington. *Nation's Most Advanced Courtroom Gets Workout*, LEGAL INTELLIGENCER, Oct. 6, 1997 (Supp.), at 3. Similarly, electronic transcripts were made available twice daily in the McVeigh Oklahoma Federal Courthouse bombing trial. *See Bringing Computers Into the Courtroom*, USA TODAY, Apr. 21, 1997, at 4D.

however, includes live audio and video and is far more likely to be construed as prohibited, even if traditional television is not involved, and the court is in full control of its own, unedited feed.

Should the federal ban on broadcasting extend to Web publication, the public interest in exposing to the world the details of terrorism cases should cause a reexamination of the ban. One must concede that if any of the other traditional concerns are valid, for example, grandstanding by lawyers and the use of testimony by defendants as a public forum,⁷⁵ then these problems are at least as likely to occur in terrorism cases as in other types of trials. However, what may well be a compelling public interest and indeed a national security interest should dictate the exception. At the same time, terrorism cases may raise other traditional concerns to a new level. Does the visible testimony of a key witness in a terrorism case place that witness at substantially elevated risk of attack or murder, or does it make substantially more likely the discovery of new evidence, including new witnesses?

It is worth noting as well that so long as we have large numbers of casualties, we are likely to have to arrange special remote viewing facilities for injured victims and family members, a cost which might well be eliminated or at least minimized if the public were able to view the entire trial using the court's own technology.⁷⁶

The key question, of course, is how technology can best be used to enhance terrorism trials. Because major terrorism cases are likely to rely heavily on foreign participants in varied capacities, it may be that videoconferencing is or will be the defining technology for terrorism trials.

§ 2-32.00 Remote Appearances

Trials of foreign terrorists or of those connected with foreign terrorists can be expected to require evidence from abroad. Depending upon the nature of the foreign involvement, foreign legal and technical assistance may also be necessary. In some cases, resort to foreign courts may be helpful or necessary as well. Modern communications provide nearly instantaneous data transmission. Trial work, however, traditionally has required physical presence. That need no longer be true, given the nature of modern videoconferencing.

⁷⁵ See, e.g., Paul M. Barrett & Margaret A. Jacobs, *How McVeigh's Trial, For All its Complexity, Proceeded so Rapidly*, WALL ST. J., June 3, 1997, at A1.

⁷⁶ In the *McVeigh* case, the remote viewing facility appears to have involved substantial cost:

Federal prosecutors last year estimated that it would cost about \$175,000 to purchase the equipment necessary to provide the closed-circuit telecast and about \$1,500 a month for the fiber-optic feeds carrying the signals.

Hamilton, *supra* note 62.

§ 2-32.10 *The Technology*

Modern videoconferencing uses either ISDN (integrated services digital networks), which can be thought of as high-bandwidth telephone lines, or IP (Internet protocol) data connections. New high-end commercial-level equipment customarily has both connection capabilities. In its most basic form, a single location-to-location connection (“point-to-point”) exists at each end of a camera, microphone, visual display (such as a TV screen), and the “codec” (the videoconferencing hardware).⁷⁷ Each end’s equipment must be connected to either an internet connection (preferably broadband) or the ISDN connections.

Understanding the technology is not as important as understanding its implications. Modern quality videoconferencing⁷⁸ presents a high-quality image, fully synchronized with the audio.⁷⁹ Subject to the availability of the communication lines, equipment can be highly portable. Commercial standard videoconferencing does not use satellite technology and thus does not need to originate in a television studio.

High-end videoconferencing equipment permits the concurrent transmission of computer images, whether of digital documents or of PowerPoint or similar electronic slides. In such a case, the video is displayed on one screen and the computer data on another.⁸⁰ Absent such features, document cameras⁸¹ or fax technology may be used for expeditious two-way document viewing. Videoconferencing is especially useful for administrative meetings or nonadversarial interviews. It can be highly effective, however, for courtroom use as well.

Although it is readily possible to use portable videoconferencing in courtrooms, an increasing number of courtrooms now have permanently installed systems. Recent Federal Judicial Center survey data shows that seventy-five U.S. district courts have videoconferencing equipment and that 154 federal courtrooms have

⁷⁷ “Multi-point” connections are possible, customarily with the use of a “master control unit” (MCU) or the use of commercial “bridging” services. The Courtroom 21 Project is unique with the potential capability of hosting five independent concurrent video conferences in William & Mary’s McGlothlin Courtroom.

⁷⁸ As opposed to low-cost computer-based conferencing that often has video in a small window with the image sometimes at low resolution or an inadequate frame rate resulting in movements.

⁷⁹ A person’s voice is fully coordinated with lip movements.

⁸⁰ In William & Mary’s courtroom, a remote witness would appear on a large screen behind the witness stand while the data being discussed by the witness would be shown to the jury on their individual flat-screen monitors.

⁸¹ These are television cameras that show a picture of any document or object placed below their lenses.

permanently installed videoconferencing.⁸² Most state or federal courtroom systems have a single display device, often located behind the witness stand⁸³ with a number of cameras that will telecast to the remote location what is happening in the courtroom.

The Courtroom 21 Project has conducted pioneering experimental work in this area for many years. William & Mary Law School's McGlothlin Courtroom is unique. At any one time, the courtroom has a minimum of six television cameras feeding multiple images to its control circuitry. A remote participant can observe a single camera image, subject to adjustment by a Courtroom 21 camera operator, or, by using the "Multimedia Telesys 5+1," see five pictures-in-picture from five different cameras with a large visual window showing the person then speaking. The large window changes automatically by computer control based upon whichever microphone is activated by a speaker. Because the McGlothlin Courtroom has multiple display options, all controlled by the most advanced matrix and touch-screen switching ever installed in a courtroom, the location of the image of a remote person is subject to court control, with the actual location ordinarily being subject to the reasons for that person's appearance. In other words, remote witnesses customarily appear behind the witness stand, remote judges behind the bench, remote counsel at counsel table or standing in or near the courtroom well, and the like.

Videoconferencing customarily works well from a technological perspective. Its pragmatic and legal utility has long been controversial, however.⁸⁴ Insofar as the Courtroom 21 Project has been able to ascertain, remote appearances appear to be treated by the courtroom participants just as if those persons were physically in the courtroom. Two separate scientifically controlled experiments conducted over two academic years under the supervision of William & Mary psychology professor Kelly Shaver demonstrated that in civil personal-injury jury trials in which damage verdicts relied upon the testimony of medical experts, there were no statistically significant differences in the verdicts, whether the experts were physically in the courtroom or elsewhere, at least so long as witness images were displayed life-size behind the witness stand and the witness was subject to cross-examination under oath.⁸⁵ Years of noncontrolled experiments in criminal Lab Trials suggest that the same result applies to merits witnesses in criminal cases.

⁸² ELIZABETH C. WIGGINS ET AL., FEDERAL JUDICIAL CENTER SURVEY ON COURTROOM TECHNOLOGY (Draft edition Aug. 2003).

⁸³ This is per Courtroom-21-recommended protocol developed as a result of the experiments supervised by Professor Shaver, discussed *infra* note 85 and accompanying text.

⁸⁴ See discussion *infra* § 2-32.30.

⁸⁵ The experiments were conducted with these conditions fixed. We do not know what the consequences would be if they were to be varied. As a result, our courtroom designs err on the side of safety by following the design protocol used in the experiments. At the same time, we prefer this methodology as a matter of policy. We believe that technology should be as invisible as possible and should not alter traditional trial practice if possible. Having a remote witness appear where the in-court witness sits appears intuitively desirable.

Even if the William & Mary results are confirmed in other experiments, however, there are questions for which we have no answer. Likely the most important of these concern the willingness of witnesses to lie when testifying remotely. We do not know whether the psychological separation from the courtroom that unavoidably accompanies remote testimony affects the willingness to lie. One of the reasons used to justify remote testimony by abused young children after all is the need to insulate them from the fear that can accompany being in the same courtroom with the defendant. Does the same removal affect other witnesses, and if so, how?⁸⁶ Would “confronting” a remote witness with an immediately present high-resolution image of the defendant while the witness testifies counteract any effects of the physical absence? In short, the use of video conferencing for remote court appearances, particularly for remote-witness testimony, raises human and thus potential legal issues not yet resolved. Although these issues are likely critical for remote-witness testimony, they do not necessarily affect other forms of remote participants.

§ 2-32.20 Remote Lawyers, Judges, and Courts

Most trial courtroom use of videoconferencing to date has involved remote witnesses. However, Courtroom 21 experiments have made substantial use of the technology for other trial participants. One of the most interesting, but perhaps of little real-world value, is the use of videoconferencing to permit the remote appearances of lawyers at the trial on the merits. The 2001 experimental terrorism Courtroom 21 Lab Trial, *United States v. Linsor*, involved a bombing of a U.S. military aircraft in England. We assumed a substantial amount of cooperation from United Kingdom officials, so much so that it made sense for a British barrister acting for the prosecution to conduct the direct examination of a key government witness,⁸⁷ having filed an appropriate motion with the court to permit his appearance.⁸⁸ British barrister Jeremy Barnett appeared remotely from Leeds⁸⁹ in a forty-inch diagonal, flat-screen plasma display placed on the prosecution table, and conducted an outstanding direct and redirect of the defendant’s primary accomplice. His examination was both professional and successful; the videoconferencing nature of the examination seemed to have no adverse consequence.⁹⁰ Although we consider Mr. Barnett’s examination as a successful

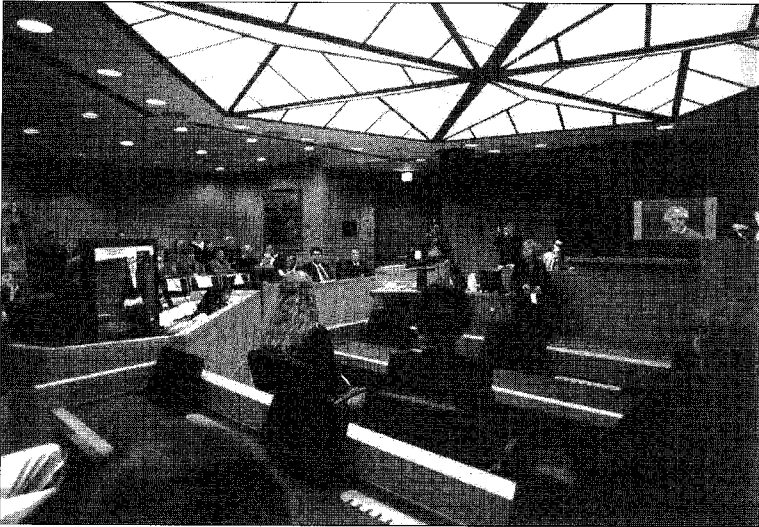
⁸⁶ Note that although physical absence from the courtroom *might* make it easier psychologically to lie, such an ease does not necessarily mean that a witness *would* lie.

⁸⁷ The witness who appeared remotely from Canberra, as will be discussed *infra*.

⁸⁸ And we sidestepped for experimental purposes his appointment as a non-U.S. citizen Assistant United States Attorney.

⁸⁹ One of the Courtroom 21 Project’s affiliated foreign institutions is the University of Leeds with its Court21 Project.

⁹⁰ Except that a brief recess was necessary when the remote location in Leeds needed to be evacuated after a fire alarm.



proof of concept, in the ordinary case it seems self-evident that counsel will wish to be in the courtroom, even if examining a remote witness. This may be subject to change as society increasingly accommodates itself to burgeoning technology, but it seems highly improbable that counsel for either the prosecution or defense would risk a remote examination of an important witness. There is one caveat, however. In an age of terrorism in which aircraft can be unexpectedly grounded for indefinite periods, remote examination could prove to be the only way in which a lawyer may be able to appear, and such an appearance may be far superior to having substitute counsel pick up the examination at the last moment.

Perhaps the most straightforward use of the technology is to permit judges or counsel to appear remotely for motion or other arguments. In 1999, the Courtroom 21 Project demonstrated for CBS News how a judge could preside remotely from the Oregon District Court over a jury trial in Williamsburg. In two U.S. federal appeals cases, *United States v. Salazar*⁹¹ and *United States v. Rockwood*,⁹² judges of the United States Court of Appeals for the Armed Forces appeared remotely as part of the court's hearing of actual cases in the McGlathlin Courtroom — a practice that has also been used in one form or another in at least the Second, Tenth, and D.C. Circuits.⁹³

⁹¹ 44 M.J. 464 (C.A.A.F. 1996).

⁹² 52 M.J. 98 (C.A.A.F. 1999).

⁹³ See Mark Pazniokas, *Video Justice Is Catching On In Legal Circles: Camera-Conferencing Is "Just Like Being There," Lawyers Say*, HARTFORD COURANT, May 7, 1997, at A3 (discussing Second Circuit); Robin Topping, *Hearings Linked By Videoconferencing*, NEWSDAY, Apr. 23, 1997, at A29 (discussing Second Circuit); *Videoconferencing Links Federal Courts and Public*, THE THIRD BRANCH, June 1998, available at <http://www.uscourts.gov/ttb/jun98ttb/video.html>.

The ability to provide remote legal hearings may be of special value in terrorism cases if we assume that at least sometimes urgency may impel hearings when judge or counsel is outside the jurisdiction. Videoconferencing is superior to telephone-conferenced hearings for the simple reason that the visual component yields valuable demeanor "evidence" of the judge's reaction to counsel's argument and, should testimonial evidence need to be presented, is likely critical in light of the real demeanor evidence to be evaluated. Indeed, legal matters could be addressed entirely via videoconferencing⁹⁴ so that such matters could be resolved expeditiously even if counsel or judge or all concerned were elsewhere.⁹⁵ Presumably, such a hearing would need to be made available to the public to ensure compliance with the public's need to know, but this could be done by ensuring that the public could hear and see the videoconferenced hearing in an appropriate courtroom.⁹⁶ There ought to be no legal impediments to this type of hearing, but the real issue, of course, is whether any of this is practically useful. That question cannot be answered at this time. I believe that we will actually have to see whether the option for remote legal hearings is pragmatically useful. Key questions will concern the types of legal issues that arise in cases, their urgency, the amount of time that key legal participants, judge or counsel, are physically unavailable but available remotely, and the nature of the legal hearings to be held. The availability of the technology for this purpose is not to suggest that it *must* be used, but only that in the right circumstances it *could* be used, thus contributing to efficient case management and eliminating unnecessary delay. There could be times, however, when there are no meaningful alternatives to remote hearings.

In the 2003 Courtroom 21 Lab Trial, *United States v. Stanhope*, the prosecution was faced with a case-determinative proof problem. The defendant had been indicted for trying to finance an al Qaeda strike in the United States. She had sent a valuable oil painting to Dubai where it had been sold to an Australian art collector for a substantial sum of gold. The gold was effectively converted to U.S. dollars and transmitted through the Hawala money-transfer system to Cairo, then to Beirut,

⁹⁴ Likely videoconferencing with electronic document access via Internet.

⁹⁵ This would require counsel and judge access to videoconferencing. Insofar as we are aware, all U.S. Attorney offices have videoconferencing. Although it is likely that far fewer defense counsel have similar access, a growing number of law firms have been acquiring the technology, enough so that William & Mary provides videoconferenced placement interviews for its students. In addition, there are a very large number of commercial vendors of videoconferencing services.

⁹⁶ This is the theory behind the Michigan "cybercourt." Not yet functioning, but statutorily enacted, the court, a non-jury civil tribunal based on the Courtroom 21 Project, can hold hearings without any of its participants physically present in its courtroom. See Lucille M. Ponte, *The Michigan Cyber Court: A Bold Experiment in the Development of the First Public Virtual Courthouse*, 4 N.C.J.L. & TECH. 51 (2002); Julia Scheeres, *Cybercourts Set for Tech Trials*, WIRED NEWS, Jan. 12, 2002, at 1.

and from Beirut to London, and then Berlin. In Berlin, the money was conveyed to the United States to buy a minority interest in an American firm so as to support al Qaeda operatives. The prosecution was able to trace the funds back to Dubai and the painting to Dubai from the United States. However, in the absence of the art collector, who had disappeared, the prosecution could not connect the painting and the money. The art collector, however, had sought legal advice from his Australian solicitor (lawyer) while they were both in London and had fully communicated all of the necessary evidentiary details to the lawyer. If the prosecution could obtain the testimony of the lawyer, the art collector's statement would be admissible as a declaration against interest under Federal Rule of Evidence 804(b)(3).⁹⁷ The lawyer claimed the attorney-client privilege under Australian, British,⁹⁸ and United States law, however.⁹⁹

With the lawyer in a U.S. district court courtroom, the Federal Rules of Evidence would have applied, likely without any application of foreign law, as the law of the forum ordinarily governs privileges.¹⁰⁰ However, we assumed that we were unable to extradite the lawyer, either as a legal or practical matter.¹⁰¹ Without the ability to compel testimony in the United States, we were left with the need to comply with foreign law. The Australian lawyer would testify if the Australian and British courts determined that he could do so without violating his duty as a lawyer. Accordingly, we held the first known three-court concurrent hearing. Using the Courtroom 21 Tandberg videoconferencing systems, the courtroom was connected to Queensland, Australia, and Leeds, England. The prosecution argued Australian law to Australia, English law to England, and the Federal Rules of Evidence to the presiding judge in Williamsburg, the Honorable James Spencer, U.S. District Judge for the Eastern District of Virginia. After all three courts ruled seriatim that the respective national privilege did not apply (using what amounted to a crime/fraud exception), in Queensland the lawyer was directed to testify and did so remotely to Williamsburg. Although the probability of such a hearing in the near future seems unlikely, it is indeed possible, and videoconferencing appears to be the most useful way of accommodating the varied practical, legal, and political issues involved. In *Stanhope*, no judge sat outside his or her own court, let alone nation. Although the time zones were extremely bothersome, especially for our Australian colleagues, the hearing was far more efficient than any other mechanism that we could envision.

⁹⁷ "A statement . . . so far contrary to the declarant's . . . interest, or . . . subject[s] the declarants to civil or criminal liability" is a hearsay exception. FED. R. EVID. 804(b)(3).

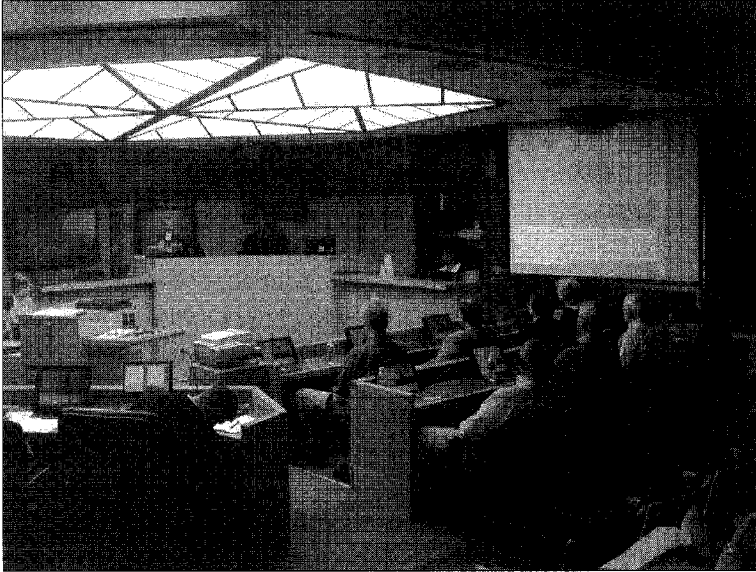
⁹⁸ The Queensland, Australia lawyer was also a British solicitor and the communication occurred in London.

⁹⁹ For U.S. law, see FED. R. EVID. 501.

¹⁰⁰ *See id.*

¹⁰¹ The United States does have evidence-gathering treaties with many nations, and this assumption was not necessarily legally correct. It may have been correct, however, as a practical political matter, depending upon circumstances.

As we increasingly are forced to deal with courts abroad, particularly the courts of allied nations, hearings similar to the one we held in *Stanhope* may be highly desirable.



§ 2-32.30 Remote-Witness Testimony

§ 2-32.31 In general

The most widespread and accepted use of videoconferencing in the courtroom is remote-witness testimony. Authorized in federal civil cases by Federal Rule of Civil Procedure 43(a),¹⁰² remote testimony has been used in state and federal courts in the United States,¹⁰³ courts abroad, especially in Australia,¹⁰⁴ and has seen

¹⁰² Which 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.

FED. R. CIV. P. 43(a).

¹⁰³ See, e.g., *United States v. Gigante*, 971 F.Supp. 755 (E.D. N.Y. 1977); *Harrell v. State*, 709 So.2d 1364 (Fla. 1998).

¹⁰⁴ See, e.g., Chief Justice M.E.J. Black, *A Court-Based National Videoconferencing Network for Taking Evidence and Aiding in Administration, Presentation During the First*

successful use in the International Criminal Tribunal for the Former Yugoslavia.¹⁰⁵ Its use in American criminal cases, however, has been especially controversial.¹⁰⁶ The potential value of remote testimony in terrorism cases impels an examination of some of the legal concerns surrounding it.

The classic use of remote-witness testimony in a criminal case is the government's use of such testimony against the defendant. In *United States v. Linsor*, the 2003 Courtroom 21 Lab Trial, the prosecution presented the testimony of its chief witness, the former accomplice of the terrorism defendant, live from Canberra, Australia. The witness was deemed unavailable because authorities considered it unsafe for him to travel to the United States. The witness, a member of the terrorist cell, was deemed a major escape or suicide risk as well as the probable target of a potentially suicidal terrorist rescue attack or, in view of his agreement to cooperate with the government, an assassination attempt. The testimony was probative and conclusive. If presented in a real case, could such testimony be lawful in light of the Sixth Amendment right of confrontation and other legal and policy concerns?

Ironically, although *Linsor* may best raise the legal issues attendant to the "normal" proposed use of remote testimony, it is also misleading for one to infer that only the prosecution has such an interest. That is not necessarily so as *Commonwealth v. Malvo*¹⁰⁷ showed, and a discussion of *Malvo* will serve to introduce some of the *Linsor* issues.

§ 2-32.32 Remote-Defense Testimony

Malvo was the capital trial of the younger of the two "Washington snipers." Charged with murder "in the commission or attempted commission of an act of

Worldwide Common Law Judiciary Conference (May 29, 1995).

¹⁰⁵ See Honorable David Hunt, Information Technology in an International Criminal Court, Videotape Presentation at the Third Australian Institute of Judicial Technology for Justice Conference (on file with the Courtroom 21 Project) (David Hunt is from the International Criminal Tribunal for the Former Yugoslavia); see also Sanja Kutnjak Ivkovic, *Justice by the International Criminal Tribunal for the Former Yugoslavia*, 37 STAN. J. INT'L L. 255, 286 ("The ICTY in the *Tadic* case, for example . . . provided eleven witnesses with the opportunity to testify via videoconferencing from a location in the former Yugoslavia . . .").

¹⁰⁶ Richard D. Friedman, *Remote Testimony*, 35 U. MICH. J.L. REFORM 695 (2002); Lynn Helland, *Remote Testimony — A Prosecutor's Perspective*, 35 U. MICH. J.L. REFORM 719 (2002); Michael D. Roth, Comment, *Laissez-Faire Videoconferencing: Remote Witness Testimony and Adversarial Truth*, 48 UCLA L. REV. 185 (2000).

¹⁰⁷ No. 102888, 2003 Va. Cir. LEXIS 188; No. CR03-3089-91 (Va. Cir. Ct. Nov. 2003); see generally <http://www.co.fairfax.va.us/courts/cases/malvocase.htm>. Note that the *Malvo* case began in Fairfax County, Virginia, but venue was changed to Chesapeake. Pursuant to Virginia law, the Fairfax court and prosecution retained responsibility for the case even though it was physically tried in Chesapeake.

terrorism," Malvo's prospects for a favorable verdict were dim. The evidence against him was overwhelming. In addition to attempting to counter the prosecution's case-in-chief on the merits, the defense needed to present especially probative evidence on capital sentencing if it was to avoid a death sentence.¹⁰⁸ The defense sought to call a very large number of witnesses. Early in the case the trial judge suggested that many of the witnesses might best testify via videoconferencing. The defense adopted the judge's suggestion and formally proposed the taking of testimony from twenty-five or more witnesses. The witnesses were to be located primarily in Antigua, Jamaica, Washington State, and Louisiana. Most, but not all, would be mitigation sentencing witnesses, and a number would replace the defense proposed use of videotaped deposition/statement evidence previously opposed by the prosecution. The Fairfax Circuit Court is a Courtroom 21 Court Affiliate,¹⁰⁹ and the Clerk's Office appointed the Courtroom 21 Project to serve as Executive Agent to determine the feasibility of remote testimony and, should the court so order it, to implement it.

The initial Courtroom 21 actions proceeded on two concurrent tracks — determining whether such testimony was technologically, logistically, and financially possible, and whether foreign testimony could be lawfully obtained. The first concern, although highly time consuming, was straightforward and eventually yielded a determination of practicality¹¹⁰ and financial savings. The second proved to be quite interesting. Because the Antigua and Jamaica witnesses were not in the United States, obtaining permission for them to testify was a diplomatic matter. As the Office of International Affairs of the Department of Justice's Criminal Division assists only prosecutors in obtaining evidence abroad in support of our Mutual Legal Assistance Treaties, we were left to other devices to obtain that testimony, even though we were seeking the evidence on behalf of the court in the interest of expediting trial and lowering its cost to the taxpayer. We contacted and obtained

¹⁰⁸ Malvo was convicted; the jury recommended life imprisonment without parole and a \$100,000 fine.

¹⁰⁹ This court is one of a growing number of state, federal, and non-U.S. courts and agencies supported by the Courtroom 21 Project in their effort to use courtroom and related technology efficiently.

¹¹⁰ Remote locations were located in federal court facilities in the United States and potentially adequate commercial facilities were located in Antigua and Jamaica. Courtroom 21 Deputy Director for Courtroom Design and Technology Martin Gruen and I surveyed the Chesapeake Courthouse and determined what would need to be done to implement videoconferencing in the courtroom. We determined a probable minimum cost savings of \$12,539.26 over the cost of transporting to Virginia those witnesses able to travel, a financial savings that did not address the fact that a number of potential witnesses, including Malvo's mother, were not necessarily able to travel to testify. Letter from Chancellor Professor of Law & Director, Courtroom 21, Fredric I. Lederer to The Honorable Jane Marum Roush, Fairfax Circuit Court (Oct. 15, 2003), available at http://www.co.fairfax.va.us/courts/cases/pdf/r_101603other.pdf.

support from the State Department, which was prepared to obtain permission from the foreign governments involved, and if necessary, to ensure the presence of a consular officer when the testimony was taken. The issue of where the oath was to be administered was raised by State Department representatives, an issue for which we had no adequate answer. We could potentially have had the oath administered remotely from Virginia, or a consular official could have administered it in the originating location or both. Because the evidence was to be presented by the defense, we assumed that the oath issues, however important, would in actuality be moot as the defense would be unable to assert error should the case go to appeal.¹¹¹ Whether the testimony would be lawful under Virginia law was not a matter within our concern, although it may well have proven the determinative issue.

On October 16, 2003, I testified in Fairfax Circuit Court and reported that with appropriate caveats, remote testimony appeared highly feasible and would yield a substantial cost-savings over in-person testimony. The prosecution opposed the defense request. The judge then ruled against the defense request for remote testimony stating, among other matters, that she would not grant the motion over government objection.

Upon reflection, I believe that the *Malvo* case illustrates some of the critical issues raised by remote testimony in criminal cases generally. The threshold issue is its very legality. Ordinarily, debate about the legality of remote testimony centers on its constitutionality under the Sixth Amendment. That issue is moot if the court is estopped by statute from permitting the testimony.¹¹² A review of Virginia's statutory law suggests that there is no affirmative statutory authority for such testimony. Such law as has been enacted could reasonably be read to prohibit it.¹¹³ Accordingly, remote testimony for any criminal case, terrorism or not, is dependent *at the very least* upon the absence of a prohibitive statute or rule. Without such legal authority the issue is at least left to the court's discretion. Far better would be

¹¹¹ A matter that is clearly very different from the possibility of prosecution testimony.

¹¹² Although such a statute may raise compulsory process issues.

¹¹³ See VA. CODE ANN. § 19.2-3.1 (Michie 2000) (stating standards for personal appearance by two-way electronic video and audio communication) ("Where an appearance is required or permitted before a magistrate, intake officer or, *prior to trial*, before a judge, the appearance may be by . . . use of two-way electronic video and audio communication.") (emphasis added); VA. CODE ANN. § 17.1-513.2 (Michie 2003) (stating standards for use of telephonic communication systems or electronic video and audio communication systems to conduct hearing) ("[I]n any *civil proceeding* . . . the court may, in its discretion, conduct any hearing using . . . an electronic audio and video communication system to provide for the appearance of any parties and witnesses.") (emphasis added). The judge's decision not to permit the remote testimony in large part because of the government's opposition raises an interesting question. As the court failed to specify its reasons in greater detail it is unclear whether the decision was based on policy or equitable grounds or whether it had considered any potential legal error as moot when the request was from the defense and unopposed by the prosecution.

affirmative authority similar either to Federal Rule of Civil Procedure 43(a)¹¹⁴ or the more comprehensive authority found in other jurisdictions such as Victoria, Australia.¹¹⁵ The legality of the witness oath is a matter of consequence. In the absence of treaty, there is no clear way to know whether an oath is legally valid in the sense that a prosecution for perjury may result. Is a crime committed when one perjures oneself in one country while testifying in a trial in another? Whose law has been violated? And, do we care about the probability that a foreign nation would actually prosecute? In the seminal case in this area, *Harrell v. State*,¹¹⁶ the Florida Supreme Court held that the treaty between the United States and Argentina permitted the potential extradition to the United States for trial of Argentine witnesses testifying by two-way satellite against a Florida defendant.¹¹⁷ Note that these questions would arise even if it were the *defense* that was attempting to use remote testimony. Given the usual posture of such evidence attempts, it seems ironic to have the prosecution oppose remote testimony for fear that it could not adequately cross-examine the remote witness, present adequate witness-demeanor to the jury, or be aware of potential witness tampering abroad — claims one ordinarily hears from the defense.¹¹⁸

Before returning to the more usual prosecution attempted use of such evidence, it is worthwhile to briefly examine the one area in which an attempt by the defense to use remote testimony is constitutionally unique, the Constitution's Sixth Amendment Compulsory Process Clause.

The Compulsory Process Clause provides simply: "In all criminal prosecutions, the accused shall enjoy the right . . . to have compulsory process for obtaining witnesses in his favor . . ." ¹¹⁹ In *Chambers v. Mississippi*,¹²⁰ the Supreme Court

¹¹⁴ See *supra* note 102.

¹¹⁵ See Evidence Act of 1958, No. 6246/1958, *amended by* Evidence (Audio Visual and Audio Linking) Act of 1997, No. 4/1997 § 3 (42G) (1997) (Vict. Austl.), *available at* <http://www.dms.dpc.vic.gov.au>.

¹¹⁶ 709 So.2d 1364 (Fla. 1998), *cert. denied*, 525 U.S. 903 (1998).

¹¹⁷ *Id.* at 1371. The Florida Supreme Court opined that perjury was punishable under both Florida and Argentine law. It is not entirely clear that the respective statutes punishing false statements in each jurisdiction necessarily extended to a false statement in Argentina made incident to a criminal trial in another nation.

¹¹⁸ This raises, of course, one of the key questions about such testimony — whether it should ever be used. At the same time, I would note that of the real concerns (witness tampering does not seem to be one — it can take place anywhere), technology can cope with almost all of them. The one critical concern that appears to be beyond our ability to adequately ascertain is, as previously discussed, whether remote testimony is more likely to yield intentionally false testimony. As we seem to be unable to tell, even with in-court witnesses who are telling the truth as they know it and those who are not, we do not even have a baseline for this determination.

¹¹⁹ U.S. CONST. amend. VI.

¹²⁰ 410 U.S. 284 (1973).

held the Clause to be sufficient to override a state prohibition on declarations against interest when on the facts of the case the evidence was probative and necessary. Although it may as yet be premature to argue that *Chambers* gives rise to a generalized right to present probative evidence for a criminal defendant,¹²¹ such a claim is not unreasonable. If remote testimony is sufficiently probative and trustworthy, the defense ought to have a constitutional right to it, even if barred by rule or statute. Indeed, in *Malvo*, the defense argued compulsory process as a grounds for the proposed remote testimony. When the judge asked counsel if he was arguing that the court might have a duty to provide remote testimony from anywhere in the world when otherwise justified, he ducked the question in favor of a response based on the court's likely financial savings. His better answer would have been, "yes." If the defense has a legitimate need for evidence and that evidence is available, in a system that pays for witness travel, there seems to be no reason to reject remote testimony, especially if the result is to either entirely foreclose obtaining the evidence or to present it through the more expensive and less useful means of a deposition.

Proposed defense use of remote testimony is believed to be relatively rare. Given the option, the prosecution likely would be a more frequent user, but the prosecution must also face the Sixth Amendment's Confrontation Clause.

§ 2-32.33 Remote-Prosecution Testimony

As previously noted, the usual intended use of remote testimony in a criminal case is to supply prosecution evidence. One can reasonably assume that this would be the norm for foreign terrorism cases. Given the number of potential witnesses abroad and legal, political, and practical difficulties in obtaining their physical attendance in a U.S. courtroom, it seems probable that remote testimony would be considered a useful option to the prosecution were it available. The complicated nature of major terrorism cases also suggests that there may be need for distant witnesses who are called to testify only very briefly to lay *pro forma* evidentiary foundations. In the *McVeigh* case, for example, "[T]wenty-seven witnesses who testified during the morning session were phone company employees flown in from around the country to authenticate hundreds of pages of phone records, each testifying for only a few minutes. One witness was on the stand for just 50

¹²¹ The Court has been careful not to use *Chambers* as authority in a number of cases that could have been bottomed on it. See, e.g., *Ake v. Oklahoma*, 470 U.S. 68 (1985) (granting defense request for appointment of a psychiatrist or funds to arrange one because meaningful access to justice requires it in a capital murder case). Neither *Chambers* nor compulsory process is cited as a basis for *Ake*.

seconds.¹²² This may better be done by remote testimony which could result in large cost-savings while minimizing the inconvenience caused to the witnesses.

Furthermore, subject to due-process and confrontation concerns, the national security nature of some terrorism cases may require the audio, video, or combined audio/video masking of witnesses. This can be done readily (but openly) when a witness testifies. In *United States v. Stanhope*, for example, Courtroom 21 staff converted the facial image of a remote witness into a blur when the court authorized the prosecution to protect the appearance of the non-U.S. undercover operative.

The fundamental question in this area is whether prosecution-proffered remote-witness testimony can or should be received as evidence. Remote testimony has been attacked as an inadequate substitute for in-court physical testimony.¹²³ Concerns range from the already noted issue of the effect of physical absence from the courtroom influencing truth-telling, to the inability to determine demeanor, to the expressed critical need for the witness to face the defendant in open court.¹²⁴ These are important concerns and in light of them, no one to the best of my knowledge has seriously suggested the routine use of remote testimony in criminal cases. What has been suggested is a criminal analog to Federal Rule of Civil Procedure 43(a). When the Advisory Committee on the Federal Rules of Criminal Procedure issued its major rules amendment recommendations in 2002, it recommended that Federal Rule of Criminal Procedure 26 be amended to add proposed Rule 26(b):

In the interest of justice, the court may authorize contemporaneous, two-way video presentation in open court of testimony from a witness who is at a different location if:

- (1) the requesting party establishes exceptional circumstances for such transmission;
- (2) appropriate safeguards for the transmission are used; and
- (3) the witness is unavailable within the meaning of Federal Rule of Evidence 804(a)(4)–(5).¹²⁵

¹²² Michael Fleeman, *McVeigh Phone Trial Retraced; Prosecutors Call 27 to Recount Calls for Explosives, Rental Truck*, PITTSBURGH POST GAZETTE, May 8, 1997, at A8.

¹²³ See *infra* note 136 and accompanying text; see generally Friedman, *supra* note 106, at 695 nn. 1–2.

¹²⁴ See *supra* note 106.

¹²⁵ Statement from the U.S. Supreme Court, to Congress, on the Amendment to the Federal Rules of Criminal Procedure New Rule 26(b), at 7 (Apr. 29, 2002) [hereinafter Supreme Court Statement] (Breyer, J., dissenting), available at <http://www.uscourts.gov/rules/CR-26b.pdf>.

In its notes the committee favorably compares the use of remote testimony to traditional deposition evidence.¹²⁶

In an unusual, although not unprecedented, act,¹²⁷ the Supreme Court, with Justices Breyer and O'Connor dissenting, refused to transmit the proposed Rule to Congress. Instead, Justice Scalia opined:

As we made clear in [*Maryland v.*] *Craig* . . . a purpose of the Confrontation Clause is ordinarily to compel accusers to make their accusations *in the defendant's presence* — which is not equivalent to making them in a room that contains a television set beaming electrons that portray the defendant's image. Virtual confrontation might be sufficient to protect virtual constitutional rights; I doubt whether it is sufficient to protect real ones.¹²⁸

The Court's failure to forward the Rule simply deprived the federal courts of affirmative authorization for remote testimony, leaving district court judges to make case-by-case individual decisions when remote testimony is proposed. The Court's action, however, clearly signals the severe doubts held by many of its members as to the desirability of remote testimony.

It is not my purpose in this Article to attempt to justify the constitutionality of remote testimony per se. From an historical perspective, however, one wonders how Justice Scalia can be so certain as to the meaning of the Confrontation Clause in this area. After all, when the Bill of Rights was written, the framers had really only two alternatives: in-court testimony, or its equivalent via deposition or hearsay. One wonders what they would say when shown what can be accomplished in Courtroom 21's McGlothlin Courtroom, complete with the potential for a close up of the face and body of the testifying witness along with multiple images of the location from where the witness testifies, all while the witness stares at a close up of the defendant. Other courts have reached different conclusions. In *Harrell v. State*,¹²⁹ the Supreme Court of Florida held that neither the state nor federal

¹²⁶ *Id.* at 8. A criminal deposition ordinarily permits the accused to be present in the same room with the witness. *But see United States v. Salim*, 855 F.2d 944, 947–48 (2d Cir. 1988) (stating how in an overseas deposition defendant and counsel were not permitted in same room as witness). This serves one of the basic confrontation interests by ordinarily ensuring that the witness must testify in the defendant's presence. However, in the case of a traditional deposition it deprives the factfinder of the ability to observe the demeanor of the witness while testifying.

¹²⁷ See Friedman, *supra* note 106, at 695 nn.1–2.

¹²⁸ Supreme Court Statement, *supra* note 125, at 2.

¹²⁹ 709 So. 2d 1364 (Fla. 1998), *cert. denied*, 525 U.S. 903 (1998). The federal courts agreed with the Florida Supreme Court's decision and denied Harrell's request for habeas relief. *Harrell v. Butterworth*, 251 F.3d 926 (11th Cir. 2001) (*per curiam*), *cert. denied*, 535

constitutions prohibited remote testimony by the eye-witness victims of the crime when they testified against the defendant by two-way satellite television from Argentina. The court found that sufficient necessity, reliability, and precautions were present and provided guidance for future cases.¹³⁰ I believe that Justice Scalia erred in the nature of the evidentiary comparison made. Remote testimony can be compared to in-court testimony — or to hearsay, and the hearsay comparison is more fruitful at this time.

Although both common law and the Federal Rules of Evidence bar hearsay,¹³¹ both provide substantial exceptions. Some exceptions, such as those found in

U.S. 958 (2002); *see also* *United States v. Gigante*, 166 F.3d 75 (2d Cir. 1999) (holding that the admission of witness testimony via closed-circuit television did not violate the Confrontation Clause), *cert. denied*, 528 U.S. 1114 (2000).

¹³⁰ We are mindful of the possible difficulty in determining when the satellite procedure should be employed. We are also aware of the possibility that such a procedure can be abused. Therefore, we are establishing the following guidelines to aid in making this decision. The determination is not simply a mathematical calculation, based on the number of alleged public policy interests or state interests. Rather, the proper approach for determining when the satellite procedure is appropriate involves a finding similar to that of rule 3.190(j) of the Florida Rules of Criminal Procedure. Rule 3.190(j) provides the circumstances under which and the procedure by which a party can take a deposition to perpetuate testimony for those witnesses that are found to be unavailable. . . .

Thus, in all future criminal cases where one of the parties makes a motion to present testimony via satellite transmission, it is incumbent upon the party bringing the motion to (1) verify or support by the affidavits of credible persons that a prospective witness resides beyond the territorial jurisdiction of the court or may be unable to attend or be prevented from attending a trial or hearing and (2) establish that the witness's testimony is material and necessary to prevent a failure of justice. Upon such a showing, the trial judge shall allow for the satellite procedure.

. . . .

However, some important caveats exist in regards to the oath, cross-examination, and observation of the witness's demeanor. First, an oath is only effective if the witness can be subjected to prosecution for perjury upon making a knowingly false statement. . . . To ensure that the possibility of perjury is not an empty threat for those witnesses that testify via satellite from outside the United States, it must be established that there exists an extradition treaty between the witness's country and the United States, and that such a treaty permits extradition for the crime of perjury.

. . . .

We also acknowledge that possible audio and visual problems can develop with satellite transmission. It is incumbent upon the trial judge to monitor such problems and to halt the procedure if these problems threaten the reliability of the cross-examination or the observation of the witness's demeanor.

Harrell, 709 So. 2d at 1370–72.

¹³¹ *E.g.*, FED. R. EVID. 802.

Federal Rule of Evidence 804(b),¹³² require the declarant to be unavailable; many others, indeed most of the traditional exceptions, apply even if the declarant is available to testify.¹³³ Federal Rule of Evidence 807, the “residual exception,” permits the admission of trustworthy material hearsay when it is “more probative on the point for which it is offered than any other evidence which the proponent can procure through reasonable efforts” and the “general purposes of [the Federal Rules of Evidence] and the interests of justice will best be served by admission”¹³⁴

Let us suppose that in our experimental trial in *Linsor*, our accomplice witness had instead given a prior statement to the Australian police, one that was clearly against the declarant’s interest. If the declarant were unavailable within the meaning of Federal Rule of Evidence 804(a)(5),¹³⁵ under the Federal Rules of

¹³² These include: former testimony, statements under belief of impending death, statements against interest, statements of personal or family history, and forfeiture by wrongdoing.

¹³³ *E.g.*, FED. R. EVID. 803; *see also* FED. R. EVID. 801(d)(2) (statements by party opponent).

¹³⁴ FED. R. EVID. 807.

¹³⁵ The declarant is considered unavailable if absent from the hearings and the declarant’s attendance or testimony is not obtainable by “process or other reasonable means.” FED. R. EVID. 804(a)(5). Professor Friedman notes that if properly interpreted, this also means that a deposition cannot be obtained. Friedman, *supra* note 106, at 711. Because I believe that a deposition is inferior to a *properly conducted* remote examination (which includes visual confrontation), I would use a different unavailability standard and agree with Professor Friedman that the Advisory Committee’s reliance on Federal Rule of Evidence 804 was unfortunate. At the same time, Professor Friedman writes:

If the witness is in foreign custody, the foreign nation may be willing to allow the witness to testify by remote, and otherwise according to ordinary American practice, but unwilling either to allow the witness to be taken to the American courtroom where the case is being tried or to allow the accused, and perhaps counsel, to be brought to where the witness is being held in custody. Similarly, if the accused is being held in custody and the witness is overseas and unwilling to come to the United States, arranging a face-to-face deposition may be difficult. The United States Marshals Service lacks jurisdiction to hold federal detainees on foreign soil and the foreign nation may be unwilling to assume even temporary custody of the accused. On the other hand, a rule that allows remote testimony whenever a foreign government resists face-to-face confrontation gives American authorities the wrong incentive, to treat foreign objections as dispositive rather than to try to negotiate around them. If the foreign government refused to allow the witness to testify altogether, that would not justify using a statement that the witness made to the police in lieu of cross-examined testimony. As with respect to [*United States v.*] *Salim*, [855 F.2d 944 (2d Cir. 1988)] . . . if the foreign government is unwilling to allow a witness to testify according to our standards and the American authorities are unwilling or unable to persuade it to relent, there is a strong argument that it is not the accused who should suffer.

Friedman, *supra* note 106, at 705 n.22 (citations omitted).

Evidence and in most common law states, the hearsay statement, whether in oral or written form, would be admissible at trial. The Supreme Court's 2004 decision in *Crawford v. Washington*¹³⁶ may be problematic. In *Crawford*, the Court, repudiating the rationales of many of its prior cases in the area, held that the Confrontation Clause bars use by the prosecution against a criminal defendant of "testimonial" hearsay. Prior to *Crawford*, the Court's holdings made it clear that even damning hearsay could be admissible against a criminal defendant if that hearsay either stemmed from a "firmly rooted" hearsay exception or was individually reliable.¹³⁷ We must await further decisions to learn the extent, and longevity of *Crawford*. However, to the degree that hearsay evidence is constitutionally admissible against a criminal defendant, live remote testimony under oath with cross-examination is clearly superior. Notably, some hearsay exceptions, such as statements made for medical diagnosis or treatment,¹³⁸ do not even require the declarant's unavailability.

Hearsay by its very definition is not subject to meaningful confrontation. Indeed, that is the fundamental policy behind its historical prohibition. Contrast the admission of hearsay, especially in documentary form, with the ability to cross-examine the declarant under oath in the courtroom via videoconferencing. Surely live, in-court testimony under oath and subject to cross-examination is preferable to hearsay!

Proposed Federal Rule of Criminal Procedure 26(b) would have effectively permitted remote testimony in a situation akin to that covered by Federal Rule of Evidence 807, the residual exception, but with the added requirement that the witness be unavailable.¹³⁹ In the absence of remote testimony, the government is free to use any prior admissible hearsay statements made by the declarant without fear of defense cross-examination. This can hardly be a justifiable result considering the technological alternatives now available.

In ordinary circumstances I would agree with Professor Friedman. However, in a terrorism prosecution, attendant with the difficult diplomatic matters that sometimes apply to international dealings, I would be inclined to authorize allowing the trial judge to make a discretionary decision regarding the use of remote testimony, likely with cautionary instructions in the event of a jury trial.

¹³⁶ 124 S. Ct. 1354 (2004). Strictly speaking, *Crawford* does not affect remote testimony. Further, one can argue that at the very least remote testimony is an intermediate category between hearsay and in-court testimony and unaffected by *Crawford*.

¹³⁷ See *White v. Illinois*, 502 U.S. 346, 356–57 (1991) (finding that spontaneous declarations and statements made for medical diagnosis or treatment are "firmly rooted" hearsay exceptions and thus comport with the Confrontation Clause); see also *Lilly v. Virginia*, 527 U.S. 116, 126–27 (1999) (explaining that statements made against one's own penal interest are inherently trustworthy and thus fall within the "firmly rooted" exception).

¹³⁸ See FED. R. EVID. 803(4).

¹³⁹ See Supreme Court Statement, *supra* note 125, at 7.

However, let us assume for the moment that as a matter of policy the nation chooses not to permit remote prosecution testimony in normal criminal cases. Should this decision extend to terrorism trials? Those of us who are deeply concerned with the protection of our civil liberties would note immediately that the Constitution does not establish differing levels of justice depending upon the nature of the crime. Further, creating “exceptions” runs the real risk that the “exceptions” cannot be sufficiently constrained. Yet, however real these concerns are, I fear that they miss the point. Given sufficient necessity, our nation, and others, have found ways to deal with perceived acute evidentiary problems. Many states have created child-abuse hearsay exceptions¹⁴⁰ because of the perceived need to ensure that probative evidence is available in these important cases. Because the Supreme Court had held that the Confrontation Clause does not prohibit the use of “firmly rooted” hearsay exceptions,¹⁴¹ such exceptions could have before *Crawford*, and may yet meet constitutional muster, especially if a majority of states have enacted similar exceptions. What would prohibit the creation of a “terrorism exception?” Given the current level of national threat, such an exception, should it be sufficiently defined, might well prove both attractive and constitutional. Our experience with the Lab Trial *United States v. Stanhope*, which was entirely dependent on evidence from abroad, would have been extraordinarily difficult to prosecute in real life because of the hearsay rule. Every piece of questionable evidence might have been admitted under a traditionally recognized exception or, certainly, should the judge have used his discretion to do so, the federal residual exception. However, no prosecutor could have reasonably felt safe to so assume, and each judge could react differently. Given such proof problems, it would not be surprising if Congress amended the Federal Rules of Evidence to create such an exception — one that might then be sufficiently adopted by the states, should the Court modify *Crawford*, and thus become “firmly rooted” and perhaps constitutional.

An inability to present reliable evidence expeditiously at trial tends to have systemic consequences, the most likely of which is a “workaround” — a frequently less desirable way of handling such cases.¹⁴² In the area of terrorism, one of the

¹⁴⁰ *E.g.*, 1 EDWARD J. IMWINKELRIED ET AL., *COURTROOM CRIMINAL EVIDENCE* 439 (3d ed. 1998), citing Josephine Bulkley, *Introduction: Background and Overview of Child Sexual Abuse: Law Reforms in the Mid-1980's*, 40 U. MIAMIL. REV. 5, 7 (1985) (evidencing eighteen states with such exceptions at the time of the article).

¹⁴¹ “Firmly rooted” does not necessarily require either age or even conformity with traditional hearsay exceptions. The prior standard of *Ohio v. Roberts*, 448 U.S. 56, 66 (1980) required that for per se compliance the exception must “rest upon . . . solid foundations.” The Court had held that even if the exception per se does not satisfy the Confrontation Clause the specific evidence may as long as there is “adequate ‘indicia of reliability.’” *Id.* But see *Crawford v. Washington*, 124 S.Ct. 1354 (2004) (rejecting the “firmly rooted” and “reliability” rationales).

¹⁴² See John H. Langbein, *Torture and Plea Bargaining*, 46 U. CHI. L. REV. 3 (1978).

reasons why the President created the military commissions was their ability to use an open-ended evidentiary system with minimal limits.¹⁴³

The trials of terrorism cases should be a matter of overriding national importance. The predictable need for witness testimony from abroad justifies the use of remote testimony under carefully controlled circumstances. Given our current ability to use hearsay evidence at trial, the use of modern technology to obtain otherwise unavailable testimony is particularly desirable and should fully comply with due process. Remote testimony *may not* be the same as in-court testimony, but it is far superior to hearsay, and it is with hearsay that we should compare it for the present.

§ 2-32.40 Remote Juries

Recently I had occasion to visit the University of Leeds Law School in England. Having been invited to give remarks on the same subject as this article, I was surprised when a noted scholar asked whether technology might help protect jurors from terrorist reprisals. He explained that some had argued for elimination of juries in terrorist cases for fear of terrorist intimidation or reprisal. The right to a jury trial in Northern Ireland has been constrained in the past,¹⁴⁴ and there have been proposals in England to eliminate juries in terrorist cases.¹⁴⁵

My own personal opinion is that limiting or eliminating the right to trial by jury in terrorist cases is ill-advised and, in the United States, unconstitutional. However, a nation with reasonable concerns for the independence and security of jurors might wish to use remote technology. The jury could be placed offsite entirely but with full audio and visual access to the courtroom in what might have to be a one-way view. This could be done easily from a technical standpoint. Whether that would be superior to entirely eliminating the jury and making the elimination visibly obvious is unclear. Those of us who are jury adherents might prefer a remote jury to none at all.

§ 2-33.00 Court Record

Like any other type of serious case, terrorism trials require a verbatim record. If the goal is to supply the judge and counsel with tools that will assist them in trying the case fairly and quickly, as well as expediting any possible appeal, the

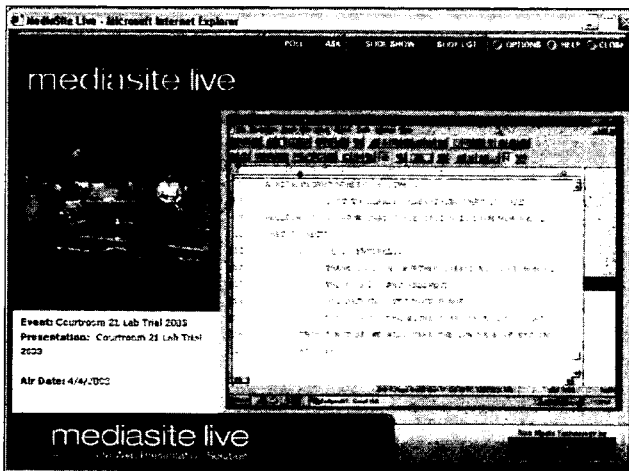
¹⁴³ See *supra* note 10. The military commissions are limited to the trial of non-U.S. citizens.

¹⁴⁴ Stephen Glover, *If the Fear of Terrorists Makes Us Destroy Our Liberties and Freedoms, Al Qaeda Will Have Won*, DAILY MAIL, Feb. 3, 2004, at 10.

¹⁴⁵ See Helena Kennedy, *Comment & Analysis: Take No Comfort in This Warm Blanket of Security: Terrorism is Being Used to Justify a Retreat From Legal Principle*, THE GUARDIAN, Mar. 15, 2004, at 18.

record should consist at minimum of a real-time transcript. This is, as the name suggests, a near instantaneous (done in “real time”) electronic transcript. Available from either a stenographic or voicewriter real-time court reporter,¹⁴⁶ real-time transcripts can be furnished to the judge’s and counsels’ computers, permitting them to make private notes on their own individual transcripts for later use¹⁴⁷ — for example, in cross-examination or preparation of jury instructions. The same transcript can be published electronically, either to the general public or to counsels’ associates or assistants.

As previously discussed, the Courtroom 21 Project publishes a comprehensive multimedia court record, complete with audio, video, real-time transcript, and images of the evidence.¹⁴⁸ If our goal is to communicate to the world the details of any given terrorist case as well as to let individuals see first-hand the fairness of the proceedings, such a transcript may be highly desirable. In federal court, however, it is likely to run afoul of Federal Rule of Criminal Procedure 53, which prohibits the “broadcasting” of the trial.



Multimedia Court Record

¹⁴⁶ Electronic recording could yield a similar result if near-immediate transcription were available, which is not customarily the case. Linking a digital audio or audio/video record with concurrent broadband transmission to a highly skilled transcriptionist who supplies immediate electronic turnaround may yield the equivalent of an in-court real-time court reporter.

¹⁴⁷ LiveNote is a Real Time Transcription application, providing a 'live' transcript of the Inquiry proceedings to the laptop computers used by the various legal teams. The application, as well as receiving and displaying the transcript on the laptop computers, also allows the legal teams to manipulate, annotate and highlight their individual copies, as well as providing sophisticated search and reporting facilities.

Bloody Sunday Technology, *supra* note 45.

¹⁴⁸ See *supra* p. 904.

A court record that includes a real-time transcript and all evidentiary exhibits could be automatically produced electronically so that the court record is available immediately after trial. Subject to appropriate trial court and counsel review, the record could be transmitted electronically to the appellate court, thus eliminating a significant degree of delay and administration.

§ 2-34.00 Counsel Communications

In traditional trial practice, lawyers desiring to communicate with each other or the court, while in the courtroom, customarily do so orally. When counsel wishes to reach colleagues not in the courtroom, counsel customarily use either the telephone during recesses or send messengers. Today, recesses are typically characterized by lawyers urgently using cellphones in court corridors. The Internet now provides a highly useful alternative.

If counsel have Internet access from the counsel table, they would be able to communicate not only with office colleagues and support professionals, but also with experts elsewhere in the world. This can be especially useful if counsel can supply the real-time transcript or, preferably, a multimedia transcript to those from whom assistance may be needed. As most courts do not permit counsel to access the courthouse computer network for security and maintenance reasons, unless counsel has a minimally useful telephone dial-up connection, an alternative approach is necessary. Some courts have installed, or are considering installing, independent wireless networks for counsel access.¹⁴⁹ Others are using the services of Courtroom Connect,¹⁵⁰ a private vendor and Courtroom 21 participating company. Courtroom Connect provides the court with a free wireless network accessible from the courtroom in return for the right to charge counsel for its use.

One of the ongoing difficulties in any major jury trial is the making of detailed evidentiary objections without prejudicing the jury. The usual solutions are sidebar conferences and excusing the jury. Neither are necessarily time efficient. In the 2002 Courtroom 21 Lab Trial, counsel made an evidentiary objection by sending an instant message to the judge and opposing counsel. It proved highly efficient and useful, providing candid discussion without any need for a sidebar or interference with the jury. Although clearly not a substitute for a major legal argument, electronic objection practice can enhance trial efficiency and should be considered for any major terrorism prosecution.

¹⁴⁹ See, e.g., Daniel Girard, *329 Deaths Focus of this Court: High-Tech Home Unveiled for Air India Trial*, TORONTO STAR, Aug. 17, 2002, at A8 (explaining that Vancouver's "Air India" courtroom provided Internet access for thirty-eight lawyers).

¹⁵⁰ www.courtroomconnect.com.

§ 2-35.00 Evidence/Information Presentation

Any discussion of courtroom technology almost always centers on the use of technology to present evidence to the factfinder and to make opening statements and closing arguments. This is the core function of courtroom technology, and major terrorism trials should use the full panoply of presentation technologies.¹⁵¹ This technology is usually referred to as “evidence presentation” technology. The court may have permanently installed technology,¹⁵² portable technology (often on a mobile cart that can be moved into the courtroom for the trial), or both. When counsel wish to use technology not owned by the court, they customarily request permission to obtain it and install it temporarily in the courtroom.

§ 2-35.10 *The Technology in Brief*

Although the intent of this Article is not to review in depth the nature and uses of courtroom technology,¹⁵³ a brief review may be helpful.

Ordinarily, counsel have access to a video document camera that can display images of any document or physical object placed beneath its lens, and to a video distribution system that permits counsel to display images from a notebook computer. Courts following the Courtroom 21 model usually have counsel for all parties use a single high-technology podium,¹⁵⁴ although counsel supported by assistants or vendors may have technical support at counsel table or elsewhere in the courtroom.

Images are customarily displayed to the judge and counsel on individual computer monitors. Depending upon the courtroom, jurors customarily view displayed images on flat-screen LCD monitors, one or more large-screen wall- or ceiling-mounted screens, or both. Senior U.S. District Judge Donald Walter of the U.S. District Court for the Western District of Louisiana reported some years ago

¹⁵¹ See, e.g., *id.*; *The McVeigh Trial: Inside the Courtroom*, ST. PETERSBURG TIMES, Apr. 2, 1997, at 8A.

¹⁵² See WIGGINS ET AL., *supra* note 82.

¹⁵³ For a review of the nature and uses of courtroom technology, see *supra* note 29.

¹⁵⁴ E.g., Girard, *supra* note 149:

Two kilometres of data cable buried beneath the secure floor of the courtroom operate 25 monitors, including ones in the wheelchair-accessible jury box and witness stand.

Those will allow participants to see those speaking and to examine exhibits, controlled by lawyers addressing the court from a station that has a document camera, videotape, compact disc and digital video disc capabilities as well as on-screen illustration.

See generally Ministry of Attorney General, Courtroom 20 — Vancouver Law Courts, at <http://www.ag.gov.bc.ca/courts/court-room20/index.htm> (last visited Jan. 23, 2004).

to members of William & Mary Law School's Legal Technology Seminar that the display of documentary and other evidence on a large screen in his high-technology courtroom was assisting the media in better understanding the cases he was trying, thus giving more accurate reports to the public. Whether evidence is communicated to the press in the courtroom via screens or through special media rooms may be a matter of consequence in the trial of terrorism cases.

Witnesses usually have an individual computer monitor, increasingly likely to be one that is touch-sensitive, allowing the witness to annotate documentary or other evidence electronically. Courtrooms that have videoconferencing capability permanently installed may follow the Courtroom 21 model and install a large flat-screen behind the witness stand for remote testimony. When this is done, it is often equipped with annotation capability as well so that the annotations made by the witness can be seen by the judge and jury while being made. Courtrooms may also have electronic whiteboards that allow witness or counsel to write upon them, including high-technology models that combine displayed computer images with electronic computer control and annotation capability. In the more basic courtroom setup, as used, for example, in the *Malvo* Washington Sniper case in Chesapeake, Virginia, counsel could use a document camera or notebook computer to display images via a projector onto a large screen that dropped from the ceiling.

When counsel wish to use computers to present evidence, or to make opening statements or closing arguments, they may either use PowerPoint or a similar electronic slide-show software, or in major cases, a high-end specialized software package.¹⁵⁵ These programs are usually combined with an electronic database so that the lawyers can display any exhibit on a moment's notice and have full access to all the evidence in the case,¹⁵⁶ including multimedia components. Often counsel or their assistants use bar-code readers to make evidence retrieval and display even faster and easier.¹⁵⁷

¹⁵⁵ Courtroom 21 uses Sanction, Trial Director, and Trial Pro.

¹⁵⁶ Every piece of documentary evidence used by the Inquiry has been uniquely numbered and scanned to ensure that the documents may be quickly and easily displayed in electronic format on the Evidence Display screens located in the various Inquiry premises in Londonderry. These paginated, scanned documents are held in a TrialPro database which allows simple retrieval within seconds, in addition to the enlargement and annotation of the documents if required, using the touchscreen allocated to each barrister. This approach has been shown to reduce the length of document-intensive Inquiries by between 20% and 30%.

Bloody Sunday Technology, *supra* note 45.

¹⁵⁷ Although bar-code readers are used in the Courtroom 21 Project even for minor cases, they are especially important in major trials. Media reports about the planning for the *McVeigh* Oklahoma bombing case included, for example, this description:

Computer technology has become more important in many trials over the past five years. Graphic displays on monitors throughout the courtroom allow attorneys to manage huge volumes of evidence and other documents efficiently,

Computer-created incident recreations have now been used for years, even in criminal cases.¹⁵⁸ Customarily used to illustrate expert testimony, they can give visual dimension to what otherwise might be difficult oral testimony. They can also be used along with other computer-created or computer-displayed graphics in openings and closings.

Cutting-edge technology now permits other potentially useful forms of evidence presentation. In the Courtroom 21 2002 Lab Trial, *United States v. NewLife MedTech*, we used both holographic evidence display¹⁵⁹ and, as previously noted, what is currently the ultimate form in computer re-creation, immersive virtual reality.¹⁶⁰ In an appropriate case, one can imagine the jury using holography to understand the internal mechanics of a bomb, or to depict a location where a bomb was placed, or to determine whether a theory of the case is actually possible, by being placed virtually within a re-created location.

§ 2-35.20 Practicalities

There is general consensus in the legal field that electronically displayed evidence is advantageous. It is believed to enhance the factfinder's understanding and retention, and to yield substantial time savings in case presentation. At the

sometimes with added effect.

Bar-code scanners

While preparing their case, attorneys scan in every piece of evidence and mark each with bar-code technology. As evidence is mentioned in court, the attorney — or a technician — scans the appropriate bar code from a list and that piece of evidence appears on the courtroom monitors.

CD-ROM files

By scanning all documents and other pieces of evidence into CD-ROM files, an entire case can be carried on a few CDs instead of in boxes of paper files.

Each CD typically holds:

15,000 pages

2.5 hours of video

5,000 photos

The McVeigh Trial, *supra* note 151.

Today we are moving to DVD disks with their immensely greater data storage capability. Still, however, all of those disk-stored exhibits are available almost immediately by bar-code scanner retrieval.

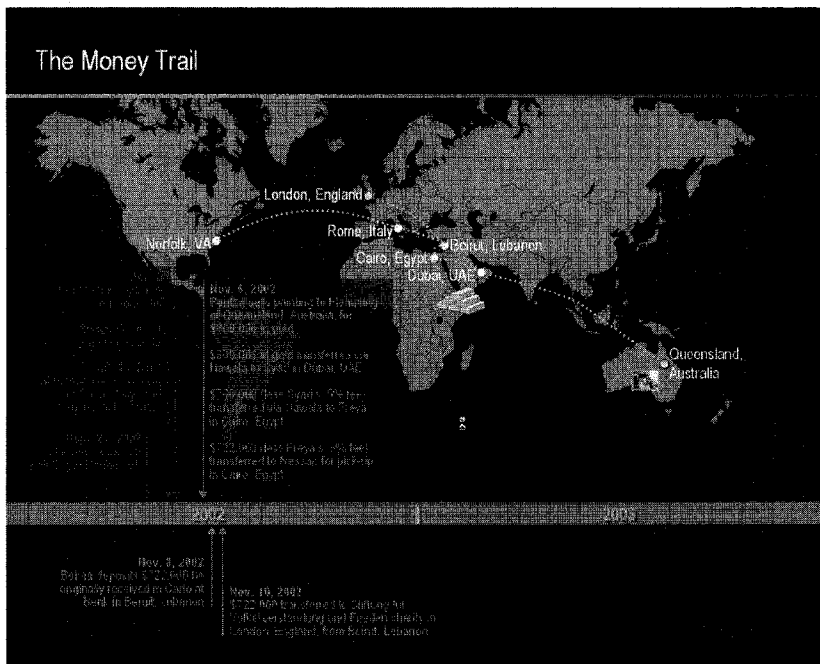
¹⁵⁸ See, e.g., *People v. Mitchell*, No. SC-12462-A (Cal. Ct. App. 1994) (finding use of reconstruction in murder trial was error but harmless); see generally Mary C. Kelly & Jack N. Bernstein, Comment, *Virtual Reality: The Reality of Getting It Admitted*, 13 J. MARSHALL J. COMPUTER & INFO. L. 145 (1994).

¹⁵⁹ The holographic display was used to show jurors the normal human circulatory system so they could better understand expert testimony concerning implantation of a cholesterol-removing stent.

¹⁶⁰ See *supra* § 2-23.00.

same time, modern evidence is increasingly electronic per se, and electronic display is either necessary¹⁶¹ or desirable.

Although trial lawyers have long used demonstrative evidence, most traditional trials are substantially oral. Technology-augmented trials are predominantly visual, which greatly assists those factfinders who are at least in part visual learners. The minimum aspect of evidence-presentation technology is to enable the factfinder to see exhibits such as documents during the related testimony. However, even setting aside multimedia interrogations and such innovative forms of evidence as computer recreations or immersive virtual reality, modern technology provides jurors special assistance in understanding and remembering evidence. *United States v. Stanhope*, our 2003 Lab Trial, is a case in point. As previously discussed, *Stanhope* was the prosecution of a defendant for attempting to fund an al Qaeda strike in the United



¹⁶¹ In light of the number of camcorders, and now even camera-equipped cellphones, concurrent digital images or videotapes of major occurrences are increasingly common. See, e.g., Kevin Johnson, *Bombing Trial Prosecutors Keep Emotions High*, USA TODAY, May 12, 1997, at 3A (“[T]he first full week — a phase largely devoted to attempts at directly tying the defendant to the bomb plot — ended with videotaped news accounts of government veterinarian Brian Espe emerging from the rubble.”). Parenthetically, we should note that the increased emphasis on visual images as evidence makes the traditional objection of unfair prejudice. For example, FED. R. EVID. 403 is especially important.

States. The prosecution needed to trace funds across the globe. The evidence was particularly complicated. The money changed forms and currencies, was consistently drawn down through payment of various commissions, and was evidenced through varied documents and oral testimony. With the assistance of a highly skilled certified public accountant and certified fraud examiner from FTI Consulting, the prosecution was able to graphically depict the money flow. As the expert witness testified, he used a very sophisticated PowerPoint presentation to graphically trace the money from location to location on a world map, complete with the size and form of the funds. Meanwhile, a master timeline was shown on the bottom of the presentation along with critical details. Later in his testimony, the expert intercut images of the critical bank documents that showed what was happening to the money. His technologically augmented testimony made clear a highly difficult and complicated series of financial transactions. That element of the *Stanhope* trial is only one example of how modern evidence presentation technology can simplify evidence that otherwise would be very hard for most people to follow. The same technology permits visually based opening statements and closing arguments. Arguably, the opening may be of greater systemic interest, as a technology-augmented visual opening may better prepare a jury to understand the case to come.

Although factfinder comprehension and retention are more important, many find evidence-presentation technology especially desirable because of the amount of trial time that it saves. The Courtroom 21 Project believes that court proceedings in normal trials are likely to show at least twenty-five percent to thirty-three percent time savings.¹⁶² Various jurists have announced far greater savings. Former Chief Judge Michael Hogan of the Oregon District Court, believes that he saved fifty percent of the trial time in one case.¹⁶³ Although these savings come at the cost of enhanced pretrial preparation by counsel, we believe that even counsel experience a net time savings. Trial, in any event, is substantially faster,¹⁶⁴ and this increase

¹⁶² See, e.g., Camille Bains, *B.C. Officials Reveal High-Tech, High-Security Courtroom for Air India Trial*, CAN. PRESS, Aug. 16, 2002 ("The Lockerbie trial cut down, by using this technology, 30 per cent (of [the] time) . . .") (quoting Julian Borkowski, technology coordinator with the British Columbia Attorney General's Office). Unfortunately, we are unaware of any scientifically reliable data. In a Courtroom 21 study conducted two years ago that focused on different matters, data reconstruction from a series of controlled experimental jury trials suggested an approximate savings of ten percent in a simple one-hour trial with fewer than ten documents.

¹⁶³ Michael Hogan, Remarks at the 8th Court Technology Conference, conducted by the National Center for State Courts (Oct. 30, 2003) (incident to participating in the Courtroom 21 Program, *Courtroom Technology for Litigators and Judges—A Pragmatic Perspective*).

¹⁶⁴ The reasons for this include the elimination of counsel walking about the courtroom, the ability of jurors to read exhibits immediately, and a tendency by counsel, possibly reinforced strongly by the court, to ask fewer questions about exhibits when an exhibit is visible to all concerned.

in trial efficiency ought to be routine for all terrorism cases. If nothing else, major terrorism trials are *expensive*,¹⁶⁵ and any otherwise-acceptable solution that allows us to positively affect economies should be considered carefully and, if not barred by other concerns, fully encouraged.

Technologically created or displayed evidence does not ordinarily raise new evidentiary issues.¹⁶⁶ In nearly all circumstances, evidentiary objections are traditional ones — most notably authentication, best evidence, hearsay, and issues of unfair prejudice — but *Daubert v. Merrell Dow Pharmaceuticals, Inc.*¹⁶⁷ scientific-evidence issues are also possible. Although amending the rules of evidence to deal more clearly with technologically related demonstrative evidence may be useful,¹⁶⁸ and promulgating of court rules to ensure early notice of the intent to use computer-derived or displayed evidence is desirable,¹⁶⁹ there are no legal impediments to technologically presented evidence at trial. There are, however, practical concerns.

The two critical practical issues that are consistently raised during Courtroom 21 interactions with lawyers and judges are the availability of the technology and the ability of counsel to use it effectively. Although the federal courts are rapidly moving to what one day may be a 100% permanently installed technology-augmented courtroom inventory, most American courtrooms today lack appropriate technology. Before a terrorism case can benefit from technology, it must be available. At present it is likely that there are enough courtrooms so that a jurisdiction trying a terrorism case will have access to at least one high-tech courtroom to house it, but this conclusion is speculative. If such a courtroom is not available, the prosecution, especially if it is a federal trial, is likely to have access to portable equipment. The defense may not. One would assume that in a criminal case, the government would not be allowed to prohibit defense use of its technology, but this type of uncertainty is unhealthy and should be clarified early in the development of the case. On a more pragmatic level, the real issue ordinarily

¹⁶⁵ According to one article, the pretrial monthly aggregated cost of the defense alone in the *McVeigh* case was more than \$100,000. See Schmidt, *supra* note 36.

¹⁶⁶ See, e.g., Fredric I. Lederer, *The New Courtroom! The Intersection of Evidence and Technology: Some Thoughts on the Evidentiary Aspects of Technologically Presented or Produced Evidence*, 28 SW. U. L. REV. 389 (1999); see also Fred Galves, *Where the Not-So-Wild-Things Are: Computers in the Courtroom, the Federal Rules of Evidence, and the Need for Institutional Reform and More Judicial Acceptance*, 13 HARV. J.L. & TECH. 161 (2000). In practice, immersive virtual reality may raise both substantial authentication and undue prejudice issues, but these are not new concerns.

¹⁶⁷ 509 U.S. 579 (1993) (holding that “general acceptance” of scientific principles is not a prerequisite for the admissibility of scientific evidence, as long as the evidence “rests on a reliable foundation and is relevant to the task at hand”).

¹⁶⁸ See Galves, *supra* note 166, at 261–74.

¹⁶⁹ E.g., MD. R. CIV. P. 2-504.3, Computer-Generated Evidence.

is not the availability of the technology but the ability of counsel to use it — especially if defense counsel do not have their own equipment or access to it. Prosecutors have access to the National Advocacy Center, which has at least basic courtroom technology installed in its courtrooms. The defense is likely to be completely unprepared for technology use unless it has retained counsel with prior expertise or has received specialized training. Counsel who lack true expertise in the use of evidence-presentation technologies are at a substantial disadvantage when opposed by technologically competent counsel. Given the special needs to ensure both the reality and perception of fairness in terrorism cases tried before the world, this disparity is problematic and requires resolution, especially if we wish to require technology use for efficiency and other reasons.

Many lawyers have chosen to offset their technological constraints¹⁷⁰ by the use of technically capable staff or vendors.¹⁷¹ This can be highly effective, but may increase costs. Furthermore, although it is efficient for counsel to leave exhibit creation and hardware operation to others, counsel must still have a sufficient understanding of the technology to be able to decide how to use it and how to cope with the opposition's use. Australia makes use of the "royal commission" model when it becomes necessary to investigate extremely serious and complicated matters.¹⁷² Royal commissions are conducted by an appointed judge who evaluates evidence, often at great length. The current model for most such commissions is for the Commission (court) itself to accumulate, electronically store, and then display the evidence frequently by subcontracting to private technology firms. This is a natural consequence of the fact that an inquiry, rather than a contested adversarial trial, is taking place. However, the same model has been used for trials. Although this model is at variance with the customary American model in which the parties are individually responsible for evidence presentation, it may be a valuable possibility for major terrorism cases.¹⁷³

A problem closely related to counsel's competence is what the court ought to do when an apparent technical problem takes place. This is not a simple matter, if only because the cause of such a problem may be extremely difficult to diagnose, especially quickly, and neither the court nor counsel may have specialized

¹⁷⁰ Or, as Richard Herrmann, Senior Courtroom 21 Legal Advisor, prefers, to free themselves of technical responsibilities.

¹⁷¹ *E.g.*, Schmidt, *supra* note 36 ("And as it prepares for the trial launch, the defense has hired a state-of-the-art litigation support company, a rare luxury for court-appointed counsel.").

¹⁷² From an American perspective this appears to be a cross between a congressional investigation and a grand jury hearing.

¹⁷³ Work product concerns clearly exist, and it may be that counsel would be able to ensure that some exhibits are not available to other parties or are not supplied to the court until needed.

technologists available to resolve the problem.¹⁷⁴ The current tendency is for courts to instruct counsel to proceed without technology. This may not be practical for a major terrorism trial that is itself entirely dependent upon the technology.

§ 2-36.00 Jury Deliberations

When trial is to a jury,¹⁷⁵ the jury must weigh the admitted evidence and reach a verdict. The advent of technology-augmented trials has created a peculiar dichotomy — the jury receives evidence electronically in the courtroom during trial but during deliberations it is restricted mostly to the review of paper and physical exhibits.¹⁷⁶ Ideally, a deliberating jury ought to be able to electronically review evidence that was received at trial in electronic format.¹⁷⁷

In 2001–2002, the Courtroom 21 Project conducted State Justice Institute-sponsored research into the possible use of display technology for jury deliberations. After substantial controlled scientific experimental work, the Project determined that giving the jurors the ability to collectively view the image of a given exhibit at the same time was useful.¹⁷⁸ The Project successfully created a protocol for such usage and successfully confirmed it during actual state and federal trials.¹⁷⁹ Accordingly, we know that it is easily possible for jurors to use display

¹⁷⁴ See Fredric I. Lederer, *High-Tech Trial Lawyers and the Court: Responsibilities, Problems, and Opportunities, An Introduction* (2003), at <http://www.courtroom21.net/articles/index.htm> (on file with author).

¹⁷⁵ E.g., FED. R. CRIM. P. 23(a):

If the defendant is entitled to a jury trial, the trial must be by jury unless:

- (1) the defendant waives a jury trial in writing;
- (2) the government consents; and
- (3) the court approves.

¹⁷⁶ Many courts do provide juries with the ability to review electronic evidence and may have the jury review specific electronic exhibits either in the courtroom or, with court assistance, in the deliberation room on a case-by-case basis. COURTROOM 21 PROJECT, THE USE OF TECHNOLOGY IN THE JURY ROOM TO ENHANCE DELIBERATIONS § 3-11.10 (2002)(reporting survey data), available at <http://www.courtroom21.net/articles/jurytech/report.pdf>. As to what the law permits jurors to consider during deliberations, see *id.* §§ 2-12.00 (regarding federal law), 2-13.00(regarding state law).

¹⁷⁷ Deposition evidence (as distinguished from confession transcripts) in whatever form may be prohibited during deliberations:

With only a few exceptions, the states are split into two major camps that divide over the expressed prohibition on the jury taking depositions into deliberations. While it may not be standard practice for those jurisdictions that have no expressed prohibition to allow depositions in the deliberation room, the permissive language is not present in the actual procedural rules of the minority.

Id. § 2-13.00.

¹⁷⁸ *Id.* §§ 1-10.00, 5-23.60.

¹⁷⁹ *Id.* § 5-40.00.

technology to assist them in their deliberations.¹⁸⁰ We also know that in the real cases used to validate the proposed protocol, the jurors expressed great appreciation for the technology and the ability it gave them to all view a given exhibit at the same time, complete with the ability to annotate or emphasize a perceived key part of the exhibit.¹⁸¹

The Courtroom 21 Protocol included the ability to give deliberating jurors computer and other electronic technology to allow them to retrieve and display for themselves any admitted electronic exhibit. Although this portion of the protocol was not field-tested in real cases, there is no reason to believe that its use in actual cases would be problematic. Accordingly, when a terrorism trial has been substantially tried with courtroom technology, consideration should be given to giving the jurors the ability to review that evidence electronically during deliberations.

§ 2-40.00 Appeals

Although our primary goal should be to try an accused terrorist as fairly and quickly as possible, we ought not to omit consideration of the appellate process. Our public has grown increasingly skeptical of what can be a lengthy appellate process, especially in capital cases. In the eyes of a citizen, it does little good to speedily and fairly convict a defendant only to read for years about the various appellate steps then available. Comprehensive, fair, and speedy appeals are as desirable as trials. Although proper discussion of the potential application of technology to appellate cases is outside the scope of this Article,¹⁸² it is appropriate to point out that proper use of courtroom technology can expedite the appellate process, particularly from an administrative perspective. Use of either a real-time court reporter or a highly efficient transcription service can yield an accurate court transcript at the close of a trial. Linking that transcript to electronic images of all evidentiary exhibits along with the usual legal documents and supporting appendices can create in an automated manner a complete and immediate court record that can then be distributed electronically to all parties as well as to the appellate court. Use of a multi-media transcript in which audio and video are accessible from the electronic text transcript holds out promise for eliminating the types of issues caused by a text transcript which all too often fails to connote laughter or other human reality.

¹⁸⁰ *Id.* § 5-32.81.

¹⁸¹ *Id.* §§ 1-10.00, 5-23.60, 5-33.00. Unfortunately, the experimental design did not allow us to determine whether the use of technology during deliberations hastened verdicts. *Id.* § 7-10.00. What we did determine was that it appeared to enhance the jurors' satisfaction with the process. *Id.* § 5-32.40.

¹⁸² See generally Fredric I. Lederer, *The Effect of Courtroom Technologies on and in Appellate Proceedings and Courtrooms*, 2 J. APP. PRAC. & PROCESS 251 (2000), reprinted at 50 DEFENSE L.J. 773 (2001).

The advent of hypertext-linked appellate briefs, which come complete with all cited legal authorities as well as the court record below, can expedite a judge's comprehension of the issues and enhance the ability to evaluate counsel's arguments.

Although technology can also aid in appellate argument and in judicial resolution of the appellate issues,¹⁸³ it is probable that the single greatest contribution that technology can make in this area is elimination of unnecessary delay, a valuable goal in and of itself.

§ 3-10.00 CONCLUSION

We try those apprehended for terrorism because it is in the nature of American society and our associated legal culture to try criminal offenders, and to try them fairly. Trials as such are unlikely to deter confirmed terrorists from attempting to commit heinous acts.¹⁸⁴ But, properly conducted trials can deliver a message to the world and to those who might in the future be tempted to become terrorists. The heart of that message should be the fundamental decency and fairness of America. Even when faced with the dreadful costs of terrorism and the pain and frustration that accompanies those costs, what makes America special remains. At the same time, we ought to cultivate the expectation that when caught, those alleged to have committed terrorist acts will be tried with such dispatch, such fairness, and with such efficiency and accuracy that there can be little hope for the guilty.¹⁸⁵ Every potential terrorist should have an image of what awaits should a crime be committed and the terrorist survive and be apprehended — that image should be of a unique combination of American fairness, firmness, and modern ingenuity. Technology

¹⁸³ E-mail or other electronic transmission already is helpful to judges who may not have their chambers co-located.

¹⁸⁴ For some, a trial is another way to communicate the terrorist's goals and disdain for the United States. *See generally*, *United States v. Moussaoui*, Crim. No. 01-455-A (E.D. Va. 2003), available at <http://notablecases.vaed.uscourts.gov/1:01-cr-00455/Index.html>. At the same time, one might speculate that for those attracted by the perceived glamour and glory of a terrorist act, a matter-of-fact trial before the world by a highly efficient and obviously fair tribunal might be a deterrent.

¹⁸⁵ Although clearly speculative, it could also be that the knowledge of routine high-technology terrorism trials could actually produce deterrent effects abroad. Given the world's respect for American technical ingenuity, if technology were properly employed in the context of a well-managed case (as distinguished from the O.J. Simpson prosecution, for example) it could be that the image of a high-technology terrorism trial could convey such certainty of the conviction of the guilty as to act as a deterrent for some.

is the “force-multiplier” of the legal system, and courtroom technology can help us achieve our goals. To that end, I recommend that:

- 1) All major terrorism cases be tried using all reasonably appropriate supporting technology with sufficient funding and technological support being afforded all parties;
- 2) That for any given jurisdiction, appropriate rules of procedure be promulgated or amended to permit the use of remote testimony for unavailable witnesses for either party;
- 3) That we work toward using courtroom technology to greatly expedite the appellate process;
- 4) That for any given jurisdiction, appropriate rules of procedure be promulgated or amended to permit the discretionary real-time electronic publication to the World-Wide Web of multi-media court records;
- 5) That juries in major terrorism cases be given full technological support for their deliberations; and
- 6) That we ensure that counsel for both parties in a major terrorist case have the personal knowledge and opportunity for training necessary to ensure their competent and efficient use of technology.

The war against terrorism will never be won by the amazing competence and courage of our armed forces alone — or by our careful antiterrorism efforts at home. At its core is a war for the hearts and minds of the world’s peoples. Although there are many other matters of more urgent priority to be addressed as part of that war, our legal system can be an important component. America captured the imagination and yearning of the world starting with those extraordinary words, “We hold these truths to be self evident, that all men are created equal.” Let the way in which we administer justice to those who seek our destruction prove ultimately to be our best response to their inadequate efforts to destroy one of the great defining pillars of this nation.