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THE CASE FOR DISC-BASED LITIGATION: TECHNOLOGY AND THE CYBER COURTROOM

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INTRODUCTION

In a number of recent high-profile cases, CD-ROM and laser disc presentation devices have drawn significant attention. One recent example is the double murder trial of O.J. Simpson[1] in which Judge Ito has allowed the prosecution and defense to present evidence to the court and the jury with some of the most advanced courtroom technology available. However, these high technology devices are not within the standard practice tool chest of most litigators and have received substantial criticism.

Critics of CD-ROM and laser disc technologies attack their use on two grounds. First, they argue that CD-ROM and laser disc devices are ineffective, because they reduce the determination of already complex, serious issues into a confusing, multimedia circus-like atmosphere. Second, opponents blame such high-technology presentation tools for accelerating the deterioration of the trial system's integrity. Some claim that CD-ROM and laser disc presentation devices, because of their advanced graphics and sound capabilities, detract from what little public legitimacy remains in the trial system. In sum, critics believe that CD-ROM and laser disc technology practically portend the doom of the venerable U.S. court system.

A widely-held belief of the American public—technophobes and technophiles alike—is that jurors are the key to determining the facts in legal disputes. Accordingly, popular wisdom holds that jurors decide the facts and judges apply the law. The reasons for making jurors the finders of fact are twofold. First, jurors are the best reflection of the public sentiment and of human understanding and thus can most fairly decide the facts. Second, jurors represent the public's support of the judicial system and acknowledge the social contract, thereby legitimizing the decisions

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1. People v. Simpson, No. BA 097211 (Cal. App. Dep't Super. Ct. filed June 13, 1994).

made in the courtroom and the entire decision-making process. Under either rationale, the more involved the jurors are in deciding the facts of the case, the better the resulting decisions will be.

The aim of this Note is to demonstrate that the normative goal of juror participation can be furthered with the use of high-technology presentation devices. Together, juror participation and the use of technology are consistent with the evolution of an effective judicial system. Towards this aim, this Note attempts to clear away most of the proverbial smoke obfuscating the positive and negative perceptions of CD-ROM and laser disc presentation devices (hereinafter referred to as Disc-Based Litigation Technology ("DLT") presentation devices[2]).

To acquaint the reader with DLT, Part I below explains what DLT presentation devices are and discusses the aesthetic and logistical advantages and disadvantages of using them at trial. With these DLT capabilities in mind, Part II explores some of the purported implications of allowing DLT devices into the courtroom and specifically examines DLT's ability to alter the traditional allocation of power among the presiding judge and attorneys. To illustrate its points, this part relies heavily upon three highly publicized cases—*People v. Mitchell,*[3] *In re Exxon Valdez*,[4] and *Intel v. AMD*.[5] Part II concludes that judges will lose little, if any, of their courtroom power to technology-toting attorneys and that attorneys will find their skills further scrutinized in DLT trials.

To understand how the courts might incorporate DLT in allowing attorneys to present evidence, Part III briefly explains how the Federal Rules of Evidence (the "Rules"), which serve as the model for most states' evidence codes, would address the adoption of other new technologies by laying out a thumbnail sketch of the traditional Rules analysis of evidence. This part reviews the few federal cases that have specifically addressed the admissibility of computer-generated animations—one of the most powerful uses for DLT—to demonstrate how the traditional analysis evaluates the use of new technology. In hopes of undermining the hegemony of the traditional Rules analysis, Part IV

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2. While there are competing systems of laser disc and compact disc - read only memory platforms, for consistency and clarity, this Note will refer to this entire set of devices as DLT devices or DLT presentation devices. Presentations made with such devices will be referred to as DLT presentations.

3. No. A057609 (Cal. App. Dep't Super. Ct. decided Feb. 19, 1992) as discussed in Mark I. Pinsky, *Jury Out on High-Tech Courtroom*, L.A. TIMES, Dec. 17, 1993, at A1.

4. No. A 89-095 CIV (D. Alaska decided Sept. 16, 1994).

5. Intel Corp. v. Advanced Micro Devices, Inc., No. C-90-20237 (N.D. Ca. decided Mar. 11, 1994).

embraces the normative goal of jury participation in fact finding and proffers a non-traditional interpretation of the Rules. This non-traditional interpretation indicates that the Rules can be used to enable jurors to play a greater role in making decisions about what evidence can go into their final factual determinations. With the recognition of this greater role, the federal courts can take advantage of the synergistic inter-relationship between DLT presentations and the Rules, both to satisfy the normative objective of encouraging greater and more meaningful juror involvement and to further the purposes of the Rules.

I. DLT: BACKGROUND AND ATTRIBUTES

A. What Is a CD-ROM or Laser Disc Presentation Device?

CD-ROM (compact disc - read only memory) is available in standard music CD players, computer desktop CD-ROM drives, and various multimedia platforms. All CD-ROM presentation devices share the same core CD technology, which can be coupled with various combinations of data creation, data recall, data presentation, and data enhancement features. The same is true of laser disc technology, which is most familiar to readers from its use in laser disc players that show movies, much like a VCR, but with higher quality. A very low-level CD-ROM or laser disc presentation device might simply include a desktop computer with an appropriate disc drive,[6] a desktop monitor, and a standard input keyboard. The user might obtain prepackaged CD-ROM or laser disc data from popular content providers, such as Encyclopedia Britannica, recall the appropriate data by typing commands on the keyboard, and then view the data on the attached monitor.

The devices most commonly associated with high publicity trials are not so rudimentary. Instead of relying on the data already assembled on a prepackaged disc, the advanced user will create a disc by scanning still photographs, maps, and charts, inputting images from VCR and higher quality video sources, and downloading vast files of text-based correspon-

6. This Note will refer to laser discs and CDs collectively as "discs," and to laser disc players and CD drives collectively as "disc drives." These terms should not be confused with the standard computer peripherals of hard disk drives and floppy disk drives, nor the hard and floppy disks associated with each. These disks and disk drives do not use laser technology to read data, and they have read-write capabilities currently unavailable commercially in disc formats.

dence, contracts, letters of understanding, cases, and briefs.[7] A single disc can store up to 15,000 pages of standard litigation information.[8] For cases that scrutinize the cause or outcome of a specific sequence of events, like a collision, a car accident, or a plane explosion, some advanced users will hire outside litigation consultants or engineers to produce video re-enactments, or even computer-generated animations of the crucial scenes. These allow viewers to see enhanced video images of what court experts believe took place.

For recalling the particular data desired, a rudimentary user might have to type in a command on a keyboard and select files from a directory, but the advanced user has the ability to organize better his or her data library. The method currently preferred for recalling particular data is a "light pen" bar-code scanner—like those found in the local supermarket. When the data is entered onto the disc, the creator assigns a unique bar-code number to that particular piece of evidence, whether it is a document, a map, or a video. Later, when the attorney wishes to recall that evidence, he or she can simply scan in the bar code. Most litigators find it helpful to prepare bar-code stickers that they can attach directly on their courtroom arguments. During an oral presentation, the speaker can gracefully intersperse oration with the graphical presentation of evidence, simply by scanning the bar code mid-sentence. This technique can be used to display the evidence nearly instantaneously, timed to correspond with the end of the talented orator's point for maximum impact.

Arranging the presentation of graphical evidence can involve a lone computer monitor, or more appropriately, the installation of numerous monitors or projection screens in the courtroom to ensure that everyone has an unimpeded view. The most elaborate display system would include one monitor for the petitioner (or prosecutor), one for the respondent (or defendant), one for the judge, one for the court clerk, and many more for the jurors.

Once the evidence is displayed, some additional operations can be performed to enlarge, highlight,[9] duplicate, or compare evidence.[10] If

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7. Adam Feuerstein, *CD-ROM Makes Debut in Georgia Courtroom*, ATLANTA BUS. CHRON., Nov. 11, 1994, at 13A ("[A] high-resolution scanner hooked up to a computer . . . can scan up to 3,000 pages a day, storing the images onto a CD-ROM. Each page is scanned as a graphic image, so that it appears exactly as it does on the original.").

8. *Id. See also* Brian Finnerty, *Computer's Automation O.J. Trial Will Offer Public Glimpse of High-Tech Evidence Handling*, INVESTOR'S BUS. DAILY, Sept. 16, 1994, at A3.

9. "Once they call up a document . . . on the big screen, they can highlight any part

two versions of a document exist, they can be presented side-by-side for simultaneous comparison. If one passage of a contract is especially important, highlighting or enlargement may be appropriate. With the optimal combination of customized data, on-demand recall, quality display methods, and handy enhancement operations, a litigator can be well-positioned to capture jury members' interests and persuade them of his or her position.

B. Benefits Driving DLT Usage

The driving force behind the use of DLT devices is their believed power to persuade juries. Some of this purported power flows from the aesthetically pleasing presentation medium itself, while the remainder emanates from a set of logistical attributes of the DLT system. Of course, the success of those using DLT may vary depending on the skills of the attorney, but that issue will be more fully addressed in part II, which covers DLT's impact on the courtroom dynamic.

The aesthetic advantages of DLT presentations are crucial in the post-television culture of the 1990s. This is in part because people expect a higher level of sensational elaboration in any method of communication: weather forecasts must have three-dimensional images of oncoming cloud fronts (not just simple black and white satellite images); movies must have exorbitantly grotesque aliens, science fiction creatures from the deep, or at least fantastical explosion scenes; and recreational video games must sound and look real (not just have bouncing balls and removable bricks). Since this type of fanfare is associated with all forms of blockbuster entertainment, one could make a colorable case that the use of dynamic color, graphics, sound, and excitement is necessary in important communication to the American public. Even if this presentation style alone does not necessarily imply importance to all viewers (jurors), there is an aesthetic benefit in that most Americans are very comfortable with receiving information through television and video

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of the document using the same sort of pen that John Madden uses on NFL football," remarked Scott Neeley, marketing director for inVzn Development Corp. James Coates, *Ito's Courtroom Goes High-Tech—Computer Firms Turn Trial into Marketing Forum*, SAN ANTONIO EXPRESS-NEWS, Feb. 12, 1995, *available in* WESTLAW, 1995 WL 5544558.

10. Finnerty, *supra* note 8, at A3 ("Then the lawyers will be able to manipulate the images, for example, drawing a circle around part of a DNA model, or blowing up a color photograph. Two documents can be pulled up side-by-side for comparison.").

media. DLT devices now bring this aesthetic power and format from the rec-room into the courtroom.

If nothing else, the aesthetic format of DLT presentations will encourage greater concentration and information retention by jurors. As Judge Richard P. Hathaway of Wayne County (Detroit), Michigan, confessed, "We are a TV society now . . . . If [the jurors] can use their eyes and their ears, they're going to remember more and they're going to pay attention in a better fashion."[11] Some studies even suggest that after twelve hours, people remember only about 10% of the information they receive through listening. However, retention rates rise up to 65% and 85% if the information is presented in a format that involves simultaneous listening and seeing.[12]

An additional aesthetic benefit of DLT presentations is the increased clarity of communication. Because the displayed materials are often computer-enhanced and can be created readily from professional layouts, their information tends to be in a crisp format that juries can easily grasp. This, in turn, likely enhances the jurors' ability to concentrate on the discrete decision at hand.

Aside from these simple aesthetic benefits of DLT, there are numerous more complex benefits that combine aesthetics and logistics. Foremost on the list of these benefits is improved organization. The DLT system forces attorneys to place all of their relevant documents and exhibits in one place—namely the disc. In the office, an attorney will not have to dig out the Bates number for a hidden document, crawl into the storage room, and sift through files to find that crucial correspondence. Ideally, long beforehand, the attorney will have scanned the appropriate documents onto disc.

The organizational blessings of DLT only increase as trial day approaches and arrives. Instead of carting boxes of documents to and from court each day and fumbling through the exhibits in front of impatient jurors and judges, the technologically savvy attorney will have a handful of discs to place in a computer disc drive.[13] Even the flip

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11. Debra Hartman, *Stop the Paper Shuffle Now: Document Imaging in the Courtroom has arrived: Litigators in Wayne County Use Imaging Technology to Condense Trial Exhibits*, MICH. LAW. WKLY., June 7, 1993, at S1B.

12. Christopher Wolf & Steven B. Fabrizio, *Give Tech a Trial Run: Computers, Video Can Provide an Edge in Court*, N.Y. L.J., Apr. 25, 1994, at S1.

13. Hartman, *supra* note 11, at S1B (Larry Hamilton, a proponent of CD systems, praised the compactness of the medium, saying, "We were dealing with three 10-foot tall stacks of paper that we reduced to two CDs.").

charts, VCRs, and video cassettes can be eliminated once the attorney constructs his or her own trial-ready disc. Gone will be the days of flipping back and forth between charts or fast-forwarding and rewinding in search of a crucial video scene. Litigation teams will be better prepared and more efficient with courtroom time.

Jurors enjoy some of DLT's logistical benefits as well. They can feel more relaxed when viewing a DLT presentation as opposed to a traditional presentation. The latter method of presentation can often annoy jurors by allowing only one person at a time to see and hold a piece of documentary evidence. Instead of straining to see the exhibit being held by the witness in the box and daydreaming when the exhibit is being passed around, each juror can comfortably view the evidence at the same time attorneys, witnesses, and fellow jurors view the evidence. The DLT system thereby also eliminates the rustling of papers that accompanies the passing out of a stack of documents to each juror and puts the control of the evidence completely in the hands of the attorney. Witnesses will not become lost in long documents of minute text with dozens of pages that look exactly the same, and jurors will not flip back or ahead to points the attorney wants to cover strategically in a particular order. An attorney who can thus orchestrate and hold the undivided attention of the entire court can guarantee his or her client a more favorable decision-making process and outcome.

At first, one might think that the logistical benefits of DLT presentations are just the next logical step up from standard documents, pictures, sound recordings, movies, and videos. However, the benefits of DLT extend far and above those of other presentation methods.

DLT devices have a power that the other media each do not: the ability to recall multimedia evidence at any frequency, with multiple sensory messages, including sound and sight, in a non-predetermined order. Of course, the critical reader will argue that paper text documents and simple photographs seem to share some of the benefits of DLT presentations. After all, paper documents and photos similarly allow attorneys to unfold their presentations in any order they find attractive at trial. If an individual litigator believes that document A created a poor impression on the jury instead of a good impression, he or she can skip document B, which really contained the same unfavorably received material, and move right along to photograph C, which attacks the issue in question from an entirely different and perhaps more promising angle. Nevertheless, traditional documents, despite their non-predetermined nature, still remain tedious to sort, carry, and shuffle through at trial, and

snapshots are certainly never as exciting to jurors as animated pictures. Because of their crispness and versatility in presentations, DLT versions of the same material are preferable to their traditional counterparts.

Slides, movies, and videos all are rigidly predetermined in sequence and thus do not afford the same flexibility as DLT. To change the order of slides in the middle of final argument, for example, though theoretically possible, is cumbersome and highly irritating to the judge and jurors. Cassette tapes—of both video and audio material—suffer from the same weakness: Once the final editing is complete, any deviation from the chosen sequence can only detract from the presentation to the jurors. In both cases, reshuffling the slides or rewinding and fast-forwarding a tape numerous times might unconsciously swing the jurors to disfavor the presentation. This again raises the fear that the jury might decide more by overall presentation as opposed to overall content.

DLT presentation devices provide all the dynamic benefits of motion pictures with sound, but also have all the benefits of non-predetermined sequencing attributable to paper documents and still photographs. The skilled attorney with a DLT device can smoothly show photograph A, then video clip J, and audio sequence K, without the jury ever knowing or minding that he or she skipped slides B through F, charts G and H, and cartoon I. Furthermore, the attorney can switch from text documents to photographs to video clips without rolling in multiple screens, projectors, or files, and without wasting the court's time and patience, or the jurors' attention, by switching among presentation machines.

Clearly, DLT as a whole provides litigating attorneys with all the benefits of the more traditional visual presentation devices and few of the associated pitfalls. An attorney who uses either type of presentation device can equally claim that the evidentiary presentation is truthful, because he or she will be able to say, "As you, the jurors, saw with your own eyes . . . ." Yet, perhaps far beyond the benefits of standard discrete video techniques, the DLT presentation subtly channels the jurors' senses to incorporate visual material as a whole. This makes the attorney more likely to sway them to decide what they saw was the entire actual sequence of events.

The holistic approach of the DLT presentation can serve defense and offense equally well. An attorney using the DLT system will be able to integrate smoothly all types of media to demonstrate that a particular witness' story is filled with inconsistent events. In the *Exxon* trial, a combination of video clips from executives' appearances on the evening news, textual quotations from company correspondence, and sound cuts

from a company spokesperson on a morning television interview did much more than impeach witnesses; it showed the company's and executives' expressions, demeanor, attitudes, body language, and preparedness in light much more unforgiving than the live stand, since there was no room for retakes or recovery once the CD evidence was admitted.[14]

Proponents of DLT argue that it can hold the key to the ultimate logistical benefit of judicial economy. With DLT, attorneys will be able to perform their job better, courts will be able to reduce their docket loads, and clients will pay less for litigation billing time. For example, Judge Kevin W. Midlam of the San Diego County Superior Court attributes a DLT system with shaving about seven trial days off one of his cases; he further believes that if both parties had employed the technology, much more time could have been saved.[15] Some advocates of DLT presentations believe that a fifty-percent reduction in court time could occur.[16] With convenience and savings like these, courts and clients should be even more eager to have DLT trials.

Despite these benefits, there are those who staunchly oppose the use of DLT presentations, especially when DLT is coupled with computer-generated re-enactments or simulations.

C. Disadvantages of DLT Usage

Some attorneys claim that DLT presentation technology creates an unwarranted level of credibility for its content. One disgruntled attorney complains that "the very word 'computer' carries a public image of infinitesimal precision."[17] Another attorney who disfavors the use of video presentations argues that "[a]ny time you don't have a live person there to examine, it's going to have a negative effect, because the jury can't really observe their demeanor, their behavior, their reaction."[18] Of course, there could be an equally valid concern that jurors will think the technology is too slick and expensive, and that it restricts their access to

14. Brian O'Neill, Address at Professor Charles R. Nesson's Harvard Law School Evidence Course (Jan. 12, 1995).

15. Pinsky, *supra* note 3.

16. *See, e.g.*, Finnerty, *supra* note 8, at A3; Pinsky, *supra* note 3.

17. Dennis O. Riordan, Brief for Appellant, People v. Mitchell, *quoted in* Pinsky, *supra* note 3.

18. *Id.* (quoting Milton Grimes, representing Rodney King in his civil lawsuit against the City of Los Angeles).

the "real" evidence. Some jurors might be put off by DLT to the point of favoring the apparent economic underdog in the suit. Each of these disadvantages notably seems to hinge on the jurors' false perception of the technology itself more than the evidence presented via the technology.

By far the greatest fear associated with DLT use is the facilitation of computer-generated re-enactments through animation. This medium appears to be the most vulnerable for technological manipulation, because animation is a visual story that includes only the pieces of evidence that the creating party desires and excludes the evidence it wants the jury to believe is unimportant. Through this careful selection, animation has the power of letting each juror see this particular story in almost exactly same way. Instead of twelve interpretations of the evidence, it helps converge the jury toward one single view. The ability to "create reality" intensifies the power of animation by stringing together clips interspersed with video and other evidence to create an integrated portrayal of events that may be both persuasive and misleading. The animator has such power to create an imaginary world from scratch that one expert animation creator has claimed, "I'm God in this situation."[19]

Computer-generated animations served as evidence even before DLT entered the courtroom. Because of this earlier presence, the justice system has already scrutinized the fairness of the computer-generated animation approach—this scrutiny will be reviewed in Part II. The use of DLT presentations has intensified this scrutiny, and rightfully so. With an effective DLT compilation, the jury can see the presentation and begin to believe that this portrayal is the only way the events might have transpired.

A simple hypothetical to demonstrate the power of animation might include the use of computer-generated "morphing" technology. Morphing occurs when a sequence of numerous intermediary images is generated between two still images to show how one of the originals might incrementally convert into the second. An example of morphing would be taking a picture of an ape and a picture of Arnold Schwarzenegger and letting the computer create a set of hundreds of images to span the evolution between the two. Because the morphing program creates ever-so-slight incremental changes to the first original, it appears to become the second original. Together the sequence is so powerful that the motion

19. *Id.* (quoting Alexander Jason, Marin County ballistics expert who produced animation for the Mitchell prosecution).

picture industry has adopted it to show bodies of water taking human shapes, animals turning into people, men turning into women, or vice versa.

It should be clear that the DLT, when coupled with computer-generated animation, holds a power of persuasion far more potent than either standing alone, because the compiled presentation makes it very difficult for jurors or witnesses to extract the portions and assumptions of the presentation that they do not fully believe or accept. Instead of having traditional puzzle pieces of evidence from which they can assemble their own story of "what really happened," modern jurors might be forced to confront the more difficult task of extracting the needle of truthful presentation from the haystack of assumptions and fabrication. Despite the momentous aesthetic and logistical benefits associated with DLT presentations as a tool of persuasion, there are serious concerns associated with their use. The use of DLT in combination with computer-generated animation compilations appears to exacerbate these concerns. An examination of how judges and attorneys have adopted DLT in some particularly noteworthy cases will thus be especially worthwhile at this time.

II. IMPLICATIONS OF DLT IN THE COURTROOM

The aim of this part is to examine how DLT presentations may shift the allocation of power among judges and attorneys. To demonstrate how DLT can actually assist attorneys in obtaining legitimate and favorable verdicts, three high-profile cases—*People v. Mitchell*,[20] *In re Exxon Valdez*,[21] and *Intel v. AMD* [22] —are most instructive. Although some attorneys (and DLT critics) hypothesize that they will be able to use DLT to gain greater control of the courtroom, these cases indicate that if there is a shift in the balance of courtroom power, it is a shift in favor of the judge. As the few recorded opinions addressing computer-generated animation evidence demonstrate, judges can, and ultimately do, use the

20. No. A057609 (Cal. App. Dep't Super. Ct. decided Feb. 19, 1992) *discussed in* Pinsky, supra note 3.

21. No. A 89-095 CIV (D. Alaska decided Sept. 16, 1994).

22. Intel Corp. v. Advanced Micro Devices, Inc., No. C-90-20237 (N.D. Ca. decided Mar. 11, 1994).

Federal Rules of Evidence to exclude or admit DLT evidence, and thus, DLT evidence is limited by this power.

A. The Judge's Ability to Adjudicate and Control the Judicial Process

By far the best sources for accounts of the power of DLT are the attorneys and judges who use DLT systems. Perhaps the most vocal attorney to swear by the DLT system is Brian O'Neill, an environmental lawyer who served as the key counsel for the plaintiff class in the *Exxon Valdez* case.[23] By introducing DLT to his enormous negligence case, O'Neill was the first to use the inVzn system that is currently making headlines in the O.J. Simpson trial.[24] O'Neill is very frank about the power of DLT and attributes a great portion of his $5 billion verdict to his ability to master the technology to his clients' benefit, and to the judge's and opposing counsel's detriment.[25]

O'Neill claims that he gained a subtle advantage over the presiding judge simply because the technology allowed him to exercise some control over the entire trial process.[26] He believes that the judge was impressed by the technology and let down his guard while learning about the new technology.[27] O'Neill thinks that his greater experience with DLT thereby provided him, at least initially, with greater control over the courtroom dynamic than he would have held otherwise.[28]

Second, O'Neill claims that he orchestrated everything down to the placement of the 87-inch high definition monitors in order to put himself at an advantage in the courtroom.[29] In addition to giving multiple monitors to the jury and one to each of the parties, O'Neill gave the judge his own monitor—conveniently placed on his right-hand side.[30] The judge was thereby dependent on the monitor's presentation of evidence and continually had to divert his attention, even if only momentarily, away from the witness box, the jury, and the examining attorney to his left.[31]

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23. *In re* Exxon Valdez, No. A 89-095 CIV.
24. Coates, *supra* note 9.
25. O'Neill, *supra* note 14.
26. *Id.*
27. *Id.*
28. *Id.*
29. *Id.*
30. *Id.*
31. *Id.*

O'Neill claims that this slight diversion can give the artful attorney a chance to move into the "kill zone" to conduct direct and cross examinations right in front of the witness and jurors.[32] A judge who was less distracted by the placement of the monitor might have forbidden the attorney from approaching so close to the witness and jury, knowing that the attorney's mere proximity might allow the attorney to build a more personal, interactive relationship with the witnesses and jurors. This is significant because every trial lawyer believes that his or her relationship with the jurors and witnesses is the key to ultimate victory.

Of course, these maneuverings border on deceitfulness, and thus raise a number of questions concerning both ethics and the abilities of attorneys to take advantage of judges. First, one must wonder whether O'Neill's description is accurate. How much more will a judge overlook an attorney's behavior with DLT in comparison to without DLT? Furthermore, even if the judge lets an attorney move slightly closer to a witness and the jurors during cross-examination, what will be its effect on the case, or even on that witness' testimony? Opposing counsel is likely to have these benefits as well, and, most importantly, assuming that this positioning occurs and has some influence, how much does this differ from the standard tactics that exist without DLT?

While some judges might very well have the proverbial wool pulled over their eyes, this would probably be the exception rather than the rule. Judges would likely refuse to let any one attorney singlehandedly revamp the entire courtroom. As one of the designers of the DLT systems being used in the O.J. Simpson trial, Superior Court Judge George Trammell asserts that "the last thing you want is for the lawyers to come in with their own systems."[33] One hopes that most judges will arrive at this wisdom on their own, or at least heed this advice.

Additionally, many judges may leverage DLT to gain greater control over the courtroom proceedings. This may have been true in *People v. Mitchell*, California's first criminal case to use computer-generated animation as evidence at trial. In that case, Jim Mitchell was accused of killing his brother, Artie, by firing eight gunshots at him.[34] This murder allegedly began when the accused fired at the sleeping Artie, and then

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32. *Id.*

33. Deborah Hastings, *Judge-Designed Computer System Expected to Expedite Simpson Trial*, FORT WORTH STAR-TELEGRAM, Aug. 7, 1994, at 16.

34. Pinsky, *supra* note 3.

pursued and killed the abruptly awoken victim when he tried to escape.[35] A three-minute color animation depicted the prosecution's story, using cartoon-style representations of the people and the interior of the crime-scene building.[36] The final animation was based on a 911 tape, the opinions of acoustics and ballistics experts, the position of the body when it was discovered, and bloodstain patterns.[37] Originally, the defense objected to the prosecution's use of the entire video. However, once the judge approved an edited version, the defense felt there was no alternative but to produce its own version to compete effectively. As the attorney forced into that strategy corner complained, "I had to do it once the judge indicated he was going to let them use it."[38] One can imagine the enormous leverage the presiding judge must have wielded in encouraging the defendant to engage in plea bargaining during the period in which the judge was considering the admissibility of the edited video. Similarly, before ruling on the admissibility of the video, the judge must have held great sway over the prosecution's position. Perhaps the judge believed the guilt of the accused was clear from the start, but was not confident enough in the prosecutor's traditional skills to allow the case to proceed without the animation. In such a situation, the judge would have more power to determine the case's outcome through subtle rulings on admissibility of evidence. Of course the rational alternative in the face of such an insurmountable advantage might well be plea bargaining, whether it is legitimate or coerced.[39]

Judges, however, typically hold great discretionary power in admitting evidence and encouraging parties to compromise or settle, so there is no reason to prohibit the exercise of that power in the context of DLT evidence. The Fourth Circuit, in an unpublished opinion for *Strock v. Southern Farm Bureau Casualty Insurance Co.*,[40] reasserted the Circuit's reliance on the trial judge's discretion in admitting or excluding computer-animated videotape simulations and rejected the appellant's

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35. *Id.*

36. *Id.*

37. *Id.*

38. *Id.* (quoting defense attorney Philip Bourdette: "Unless the defense has their own videotape, based on their versions of what happened, the trial is going to be totally unfair.").

39. Reportedly many cases have settled when one side's counsel presents the other with animation intended to serve as demonstrative evidence. *See* Adam C. Nelson, *CD-ROM, Animation, Video Signal the Arrival of the Paperless Office*, N.Y. L.J., May 31, 1994, at 5.

40. 998 F.2d 1010, 1993 WL 279069 (4th Cir. 1993) (unpublished disposition).

proposal of a hard and fast rule concerning their admissibility.[41] Any ability of the judge to control the parties' behavior and the outcome of a DLT case seems similar to that ability already present in traditional cases.

Most judges who have taken the time to familiarize themselves with DLT and who monitor their attorneys' use of the technology appropriately will be none the worse for allowing DLT in their courtrooms. As for attorneys, their advantage over the judge is unclear, as is their advantage over competing counsel—especially when before trial both parties agree to use DLT.

To demonstrate that the outcome of every litigation is to the greatest extent dependent on the abilities of the litigators, one need only look as far as *Exxon* and *Intel v. AMD*, two prominent cases which indicate that the importance of litigation strategy and skill is increased, not decreased, in trials involving DLT. DLT does not replace the skills of the lawyers, it emphasizes their importance. DLT does not assure one side victory, it increases the intensity of competition.

Brian O'Neill agrees that the *Exxon* victory was due in part to his superior capabilities and comfort with the DLT system.[42] He claims that when two lawyers confront each other, DLT makes one of them appear more at ease, more credible, and more knowledgeable.[43] O'Neill shows no restraints in expressing a belief that his skills afforded him a competitive advantage over his opposing counsel.[44] He claims that the contrast between his and the other lawyer's style must have influenced the final verdict: Because O'Neill had no qualms about integrating his oration with DLT evidence, he smoothly interspersed sentences with well timed pauses and swoops of his light pen to call up bar coded exhibits for maximum jury impact.[45] The opposing counsel, however, according to O'Neill, experienced difficulty in interweaving evidence with oration and chose instead to alternate between his presentation and asking an associate to call up the next DLT exhibit.[46] The result was comparatively clunky and poorly timed. Whether O'Neill exaggerates his comparative skill or the importance of his presentation style in persuading jurors is not crucial. What does matter is the significance of DLT in the adversarial

41. *Id.*
42. O'Neill, *supra* note 14.
43. *Id.*
44. *Id.*
45. *Id.*
46. *Id.*

process and the importance of properly utilizing its advantages. In the end, O'Neill's $5 billion verdict is highly persuasive on both these points.

Like the *Exxon* trial, *Intel v. AMD* highlights the impact of well integrated DLT presentation techniques. This case was the long awaited retrial of Intel's copyright claim against rival microprocessor producer AMD. The crucial determination was whether the disputed phrase "microcomputer," used in a 1976 contract, referred to "microcomputer development systems" or to microprocessors—simple computer chips. AMD counsel Terrence McMahon utilized a laser disc-based presentation with a large monitor that showed Intel repeatedly using the terms "microcomputer" and "microprocessor" interchangeably. The system allowed him to compare documents simultaneously, enlarge them to see particular passages, and highlight the damning phrases. McMahon even used quotes from Intel President and CEO Andy Grove to show that Intel interchanged the terms more than once. Grove was pressured to say that he "twice . . . made a mistake."[47]

McMahon, in articulating his winning technological strategy, first credited Legal Video Services for much of the case's success.[48] He also explained the preparation process: "We went back and did computer searches on everything they ever said or wrote on the relevant matters. . . . As a result we were able to cross-examine them on the basis of books and articles they'd written, and statements that had appeared in the Congressional Record and at hearings, that were the opposite of what they stated at trial."[49]

Besides using the system's ability to combine various evidentiary formats into a powerful cross-examination tool, AMD counsel took advantage of the speed and agility of the system. "Closing arguments were limited to two hours and 45 minutes, but we were able to go through 80 pieces of evidence plus the instructions by using the CD-ROM."[50] Intel's presentation was not so technically adept, as it relied on standard blow-ups: "It took a long time, and they were only able to go over about a dozen pieces of evidence."[51] In the end, AMD triumphed

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47. Dave Webb, *AMD's Fate on Trial, Part 2*, ELECTRONIC BUYER'S NEWS, Jan. 17, 1994, at 1, *available in* WESTLAW, 1994 WL 3811290 (internal quotation marks omitted).

48. Bruce Rubenstein, *If at First You Don't Succeed, Try Changing Attorneys: Switch to Litigator Helps AMD beat Intel Second Time Around*, CORP. LEGAL TIMES, Aug. 1994, at 21.

49. *Id.*

50. *Id.*

51. *Id.*

in this dispute, and DLT proved its ability to be powerfully persuasive in the hands of highly skilled counsel.

What the preceding examples have explained is the persuasive presentation power of DLT. However, these examples have not distinguished DLT in a manner that suggests DLT should be treated differently than other presentation technologies. After all, photographs, audio and video cassettes, and movies each experienced periods during which the federal jurisprudential system questioned their evidentiary admissibility and function. The federal courts have demonstrated an ability to embrace those and other new technologies and will certainly face new technological advancements in the future. How might DLT be different?

Because DLT is unique in its general presentation capabilities and in its specific ability to assist jurors in fact-finding, its optimal role in the American trial system merits a more in-depth examination on two fronts. First, to best appreciate the expanded role of DLT, it will be beneficial to conduct a concise analytical review of how the Federal Rules of Evidence deal with the introduction of new technologies. Second, to understand the emphasis on juror fact-finding, an understanding of the traditional judicial interpretation of Articles I and IV of the Rules is appropriate. Together, these two analyses will clarify why DLT is different and deserves special attention in the creation of a judicial system that affords greater powers to jurors.

III. THE APPROACH OF THE FEDERAL RULES OF EVIDENCE TO NEW TECHNOLOGIES BEFORE DLT

An examination of how the Federal Rules of Evidence absorbed other new technologies before DLT will be useful for a number of reasons. First, it will show how the Rules might evolve to encompass a new presentation technology. Second, it can show what standards courts might use to evaluate new presentation technologies. Third, it can help us recognize how much control over both attorneys and jurors the judges actually retain in our system and under the Rules.

The Rules were not originally well equipped to address the creation of new presentation technologies. Historically, the common law rules for evidence struggled with the development of each new presentation medium, from photography, to mechanical and electronic recordings, to

X-rays, and even to motion pictures. After the adoption of the Rules, Congress even had to go back and amend the definition of photographs to explicitly account for video tapes.[52] With such a rough track record, it is not surprising that DLT presents another challenge to the evidentiary process, one that will not be overcome easily through individual and haphazard interpretations.

While the amended Rules appear to allow room for all sorts of new media to enter as evidence, the Rules actually suffer from vagueness. What are the "writings and recordings"[53] that can be admitted in evidence? They are defined loosely as "letters, words, or numbers, or their equivalent, set down by handwriting, typewriting, printing . . . or other form of data compilation."[54] This statutory language creates great uncertainty as to whether new technologies will qualify as evidence.

If a piece of evidence does qualify as a "writing or recording," it must still run the gauntlet of Rules analysis to gain admission to the record. Video tape, now widely accepted, had to survive a tedious analysis; the traditional application of the Rules to an offered video tape would develop something along the lines of the following. First, each media format is not treated under specific guidelines, but rather either falls outside or within the general category of "writings and recordings."[55] Video tape, after the amendment of the Rules, falls under the definition of "photographs,"[56] and, by the transitive property, is a recognized member of the "writings and recordings" category. Theoretically, then, all the rules that apply to photographs should likewise apply to video tapes.

Second, the offered video tape must be authenticated for admission, either on its own or as supporting evidence to an expert's testimony.[57] Part of this scrutiny questions the purpose of the offered evidence —whether the video tape is a fair and accurate representation of what it purports to show, or of an expert's opinion. If the video tape is offered for the truth of the matter it asserts, then it will likely be inadmissible hearsay,[58] unless the offering attorney can admit the evidence under an exception to the hearsay rule or for some alternative purpose.[59]

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52. FED. R. EVID. 1001(2).
53. FED. R. EVID. 1001(1).
54. *Id.*
55. *Id.*
56. FED. R. EVID. 1001(2).
57. FED. R. EVID. 901.
58. FED. R. EVID. 801, 802.
59. FED. R. EVID. 803, 804.

Third, the video tape must be relevant to gain admission,[60] and cannot fall under one of the specific Article IV Rules that labels particular types of evidence inadmissible or irrelevant.[61] These last two hurdles —authentication and relevance—are not especially burdensome. However, after the presiding judge has made an implicit or explicit determination on each of these issues, he or she weighs the probative value of the evidence against "the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence."[62] If the evidence holds probative value that is substantially outweighed by these counterbalancing factors, then it can be excluded, despite its passing all the previous hurdles of admission.[63] This balancing test concludes a quick sketch of how, under the traditional Rules analysis, a court will likely review offered evidence.

Perhaps the most important of these tests, at least for the admission of new technologies that gain entry as "writings and recordings," is the balancing under Rule 403. While most courts should apply Rule 403 very carefully to all aspects of offered evidence, the practical application usually only encompasses the determination as to whether the probative value of the evidence is substantially outweighed by unfair prejudice. Of the few federal courts that have applied Rule 403 to the most controversial of DLT media—computer-generated animations—only one court has issued a formal opinion on that balancing test, and all emphasize prejudice as the key issue in their decisions, ignoring the remaining Rule 403 factors.

The sole federal opinion on the admissibility of computer-generated animations is by District Court Judge David G. Larimer in *Datskow v. Teledyne Continental Motors Aircraft Products*.[64] *Datskow* involved a defendant's objecting to the admission of a computer-generated animation that illustrated an expert witness' theory of where and how an engine fire began, leading to a deadly airplane crash. The judge admitted the computer-generated animations with the additional order "that it be played with the volume turned off, so that the jury could not hear the taped voice-over of the radio communications between the actual aircraft and

60. FED. R. EVID. 402.
61. FED. R. EVID. 404-412.
62. FED. R. EVID. 403.
63. *Id.*
64. 826 F. Supp. 677 (W.D.N.Y. 1993).

the airport control tower"[65] and to "reduce the possibility that the jury might interpret it as a recreation of the accident."[66] The only explanation for Judge Larimer's actions is a fear of the prejudicial nature of the audio track.

The judge's reasoning for deciding to admit the animation after a Rule 403 balancing is unclear. On the one hand, he asserted that "[t]he mere fact that this was an animated video with moving images does not mean that the jury would have been likely to give it more weight than it otherwise would have deserved."[67] However, the judge's order to turn off the volume demonstrates that he had some reservations about letting the jury absorb the entire multimedia presentation. This order seems to undermine, if not refute, the judge's assertion that "[j]urors, exposed as they are to television, the movies, and picture magazines, are fairly sophisticated. With proper instruction, the danger of their overvaluing such proof is slight."[68] For mere consistency, the judge should have allowed the entire presentation and instructed the jury to use it only as a theory of how the accident might have happened, not a factual recreation of what actually happened.

Because he did not allow the entire presentation (animation and voice-over sound), there would have been no advantage in offering a DLT presentation instead of the standard video tape version that was presented; the acknowledged super-power of DLT comes from its combining media into one single persuasive presentation. Instead, the judge issued a ruling in favor of admitting part of the evidence for the review of "sophisticated" jurors. The ruling rings hollow, however, because, by admitting only the video portion of the presentation, the judge really restricted the jury's ability to examine all the relevant evidence and signaled that jurors are really incapable of conducting fact-finding.

Unfortunately, this is the sole reported federal opinion on the issue of admitting computer-generated animations as evidence under Rule 403. All of the three other (yet unreported) federal opinions echo the *Datskow* message that jurors are fundamentally incapable of conducting fact-finding. This common thread is clear despite the variations among them in applying the Rule 403 balancing test. One of the cases, *Racz v.*

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65. *Id.* at 685.

66. *Id.*

67. *Id.*

68. *Id.* (quoting 1 J. WEINSTEIN & M. BERGER, WEINSTEIN'S EVIDENCE ¶ 403[5] at 403-88 (1992 ed.) (footnotes omitted)).

Merryman Trucking,[69] is an unofficial opinion that contradicts the superficial ruling of *Datskow* but reaffirms its foundational philosophies. In *Racz*, a plaintiff's motion to exclude a computer animation of an automobile accident under Rule 403 was upheld because the danger of unfair prejudice to the plaintiff outweighed whatever relevance such evidence may have had.[70] To substantiate that rejection of the presentation, the judge relied upon the saying that "seeing is believing" and discounted the jury members' abilities to separate the visual expressions of data and opinions:

> Because the expert's conclusion would be graphically depicted in a moving and animated form, the viewing of the computer simulation might more readily lead the jury to accept the data and premises underlying the defendant's expert's opinion, and, therefore, to give more weight to such opinion than it might if the jury were forced to evaluate the expert's conclusions in the light of the testimony of all the witnesses, as generally occurs in such cases.[71]

Another federal district court opinion on the admissibility of computer-generated animations, *Rockwell Graphic Systems v. DEV Industries*,[72] is also in harmony with the *Datskow* philosophy. The underlying facts of *Rockwell* consisted of the misappropriation of some intellectual property concerned with printing presses.[73] After DEV sought to bar the use of a computer-generated video tape because of its erroneous, prejudicial, and misleading presentation, Rockwell altered the animation tape to address some of these accusations.[74] In a brief statement, the court found that "Rockwell's alterations are sufficient to avoid confusion of the jury and prejudice to defendants."[75] Here the court did not need to argue whether the jurors were sophisticated, because the parties themselves made the tape "safe" for their viewing.

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69. Civ. A. No. 92-3404, 1994 WL 124857 (E.D. Pa. Apr. 4, 1994).
70. *Id.* at *5.
71. *Id.*
72. No. 84 C 6746, 1992 WL 330356 (N.D. Ill. Nov. 4, 1992).
73. *Id.*
74. *Id.* at *1.
75. *Id.*

The final federal opinion on the admissibility of computer-animated video tape simulation is an unpublished *per curiam* disposition of the U.S. Court of Appeals for the Fourth Circuit. *Strock v. Southern Farm Bureau Casualty Insurance Co.*[76] involved the admission of a computer animation to support an expert's testimony as to which portion of a house's damage was caused by Hurricane Hugo's wind and which portion was caused by the associated flooding.[77] In response to the trial judge's admitting the evidence, the defendant-appellant urged the appellate court to adopt a hard and fast rule concerning the admissibility of computer-animated video tape simulations.[78] The court declined to do so, choosing instead to "rely on the sound discretion of trial judges who are in the best position to consider the relevancy of offered evidence and to weigh its probative value against its potential prejudicial effect."[79]

While there exists little case law on the admissibility of computer-generated animations, a pattern emerges from even these few opinions; trial judges have great discretion in determining what evidence is admissible and sometimes can decide if the evidence is even relevant. The only limit on their power to exclude evidence under Rule 403 is the degree to which they self-impose a standard to measure whether jurors are sophisticated enough to view the evidence clearly. While each of the judges may have drawn that line differently, each applied it with the same force. Rule 403, at least under present applications, highlights the tension between allowing judges to decide what is relevant or irrelevant and expecting jurors to find facts effectively. Furthermore, the judges have applied Rule 403 in a way more limited than intended, by using only the prejudicial factor, as opposed to all six factors actually listed in Rule 403, and they are doing so in a clandestine manner, through mostly unpublished opinions.

This review of the application of the Rules makes it clear that DLT's introduction will not permit attorneys to gain power in the courtroom. Instead, DLT will intensify competition between attorneys and increase the discretionary powers of judges to the detriment of juror participation. The obvious question from this review of the Rules and its application to new technologies, especially to the powerful DLT medium of computer-generated animations, is whether judges or juries are the better authorities

76. 998 F.2d 1010, 1993 WL 279069 (4th Cir. 1993) (unpublished disposition).
77. *Id.*, 1993 WL 279069, at **1.
78. *Id.*
79. *Id.*

to decide the relevance of offered evidence. The following part will suggest that, under one interpretation of the Rules, jurors, not judges, should hold this authority and can more efficiently and competently make these decisions.

IV. JUROR PARTICIPATION AS A NORMATIVE OBJECTIVE

Since becoming effective in 1975, the Federal Rules of Evidence have governed federal court evidence procedure and served as a model for the majority of state evidence codes. As such, the Rules serve as the best touchstone for evaluating whether allowing judges to control the use of DLT presentation devices is in the best interests of consonant evidentiary procedure.

Because the Rules were created in the 1970s, those who drafted and enacted them did so without considering the role of DLT. Instead, these same people hoped to create a framework for the application of a general set of rules that would be flexible enough to handle new developments in the law of evidence that might arise in the future. The authors of the Rules listed five distinct objectives: (1) fairness, (2) efficiency, (3) growth and development of the law of evidence, (4) truth, and (5) justice.[80] Any use of DLT must further these five objectives. Therefore, to determine how well DLT integrates with the Rules, one must first become familiar with the Rules through a fundamental interpretation of its language in light of a normative framework proposed by this Note. Second, one must observe how this interpretation applies to the roles of jurors and judges.

A. The Roles of Jurors and Judges

This Note relies on the fundamental assumption that, as a normative goal, jurors are supposed to conduct fact-finding as citizen participants in the judicial process. This implies that if the current system of the federal courts could support additional responsibilities for jurors in their fact-finding role, it should adopt such measures to the extent feasible.

The importance of the role of jurors extends beyond simple fact-finding within the courtroom; jurors also play an important role on an institutional level by validating the judicial system, its procedures, and its

80. FED. R. EVID. 102.

decisions. Without jurors, the judicial process would be perceived as little more than an oligopoly of judges sitting upon high, imposing their beliefs upon the general population.

This part presents a statutory interpretation of the Rules that demonstrates how jurors can play an increased role within the structure of the Rules in determining the relevance of offered evidence. This determination is clearly linked with the assignment of credibility and weight in the finding of facts. Under the traditional interpretation of the Rules, jurors do not decide relevancy issues, judges do. This is contrary to the normative goal of juror participation, as well as completely unnecessary and costly. Therefore, this part will show that the Rules can support an alternative interpretation that argues for increased juror participation in weighing the relevance of offered evidence in federal cases.

This interpretation, which focuses mostly on Articles I and IV of the Rules, explains how the role of the judge in the evidentiary trial process should be more like that of an umpire and less like that of a filter between the jury and the attorneys presenting their respective cases. Each of the Rules within Articles I and IV suggests that this interpretation is not only reasonable, but is now feasible with the evolution of advanced trial presentation technology, specifically DLT.

B. Article I Rules

This interpretation relies on an initial examination of Rule 104, which, according to its title, deals with "Preliminary Questions"—specifically those of general admissibility. Under Rule 104(a), the court has the power to decide preliminary questions about witness qualifications, privileges, and the admissibility of evidence, subject to the provisions of Rule 104(b).[81]

Rule 104(b) explains that the judge has the power to admit evidence that might not ultimately turn out not to be relevant, because its relevancy

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81. Rule 104(a) provides:

> Questions of admissibility generally. Preliminary questions concerning the qualification of a person to be a witness, the existence of a privilege, or the admissibility of evidence shall be determined by the court, subject to the provisions of subdivision (b). In making its determination it is not bound by the rules of evidence except those with respect to privileges.

FED. R. EVID. 104(a).

is conditioned on a fact that has not yet been decided by the jury.[82] To understand the rule, it is important to recognize that it speaks of two sets of evidence: (1) the offered evidence that has its relevancy conditioned on fact and (2) supporting evidence that has the power to make the existence of the conditional fact more or less likely. Rule 104(b) permits the judge to admit the first set of evidence, which is potentially irrelevant, "upon" the introduction of the second set of supporting factual evidence that will enable a reasonable jury to decide that the conditional fact may exist. Thus, an important aspect of this Rule is that it permits the introduction of evidence whose relevancy is conditioned on fact, even though the jury may never reach a determination that the conditional fact exists. Consequently, a situation might arise in which the offered evidence is admitted but is not relevant. This might occur because, though the jury has enough supporting evidence to decide reasonably that the conditional fact exists, the jury finds instead that it does not exist and the offered evidence is by definition irrelevant. In practice, the jury has seen this irrelevant evidence and can use it anyway to make its ultimate decisions.

Rule 104(b) alternatively allows the judge to admit the evidence "subject to" the introduction of the supporting evidence. This alternative turns out to look quite similar to admitting evidence "upon" the introduction of supporting evidence, but it might actually be an even more permissive construction for letting irrelevant evidence reach the jury. This is because the admission of evidence "subject to" the introduction of supporting evidence means that the evidence conditioned on a finding of fact may be admitted before the establishment of even a reasonable basis for finding that conditional fact. In that case, the jury will certainly see potentially irrelevant evidence. Although the evidence later will be discarded when it becomes clear that the proponent of the evidence can not produce evidence sufficient to support finding the conditional fact, the jury will have already seen and incorporated the first set of irrelevant evidence. These two mechanisms for introducing evidence whose relevance is conditioned on fact seem to constitute the most likely construction of Rule 104(b), because there appears no other reason for

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82. "Relevancy conditioned on fact. When the relevancy of evidence depends upon the fulfillment of a condition of fact, the court shall admit it upon, or subject to, the introduction of evidence sufficient to support a finding of the fulfillment of the condition." FED. R. EVID. 104(b).

mentioning two methods ("upon" and "subject to") for admitting such evidence.

A reading of Rules 104(a) and 104(b) together does not present a basis for having judges decide matters concerning relevancy. Judges merely determine witness qualifications, the existence of privileges, and the ultimate admissibility of evidence under Rule 104(a). Through Rule 104(b), judges seem to be able to admit evidence either at least temporarily, or more likely permanently, so long as a reasonable jury could find the requisite factual foundation for its relevancy. As to determinations of relevancy, Rule 104(a) seems to ignore the judge's role in that determination and explicitly limits the judge to decisions of admissibility.

While Rule 104(a) has a statement that the judge, in making his or her decision, "is not bound by the rules of evidence except [by] those with respect to privileges,"[83] it surely does not mean that the judge can eviscerate the entire jury system or even usurp the ability to decide relevancy, because relevancy appears to fall within the powers of the jury under Rule 104(b). If by this reading of Rules 104(a) and (b) the court has only the authority to decide whether the jury might find the conditional fact, then whenever there is no question of conditional fact, the judge has a minimal role to fulfill. In that case, the jury directly can decide the relevancy of particular evidence and thus determine the weight it should accord to evidence in the jury deliberations and final decisions. This idea finds firm support in Rule 104(e), which explains how Rule 104 "does not limit the right of a party to introduce before the jury evidence relevant to weight or credibility."[84]

Rule 104(c) does not detract from this interpretation.[85] Rule 104(c) merely provides that the admissibility of confessions is decided outside the hearing of the jury. While the first sentence of Rule 104(c) appears to limit this situation strictly to confessions, the second sentence of Rule 104(c) embraces similar treatment for some other special situations in which the accused is a witness. Strikingly, Rule 104 contains no language that either grants judges the authority to decide direct issues of relevance or forbids jurors from hearing and deciding the relevance of

83. FED. R. EVID. 104(a).

84. FED. R. EVID. 104(e).

85. "*Hearing of jury.* Hearings on the admissibility of confessions shall in all cases be conducted out of the hearing of the jury. Hearings on other preliminary matters shall be so conducted when the interests of justice require, or when an accused is a witness and so requests." FED. R. EVID. 104(c).

evidence. This suggests that a strong case exists for leaving the jury the power to decide the ultimate relevance of any admissible evidence.

Rule 105 further supports this construction of the jury's power to decide the relevance of evidence under Rule 104(b). Once evidence is deemed admissible by the judge under Rule 104(a), and the jury is to decide the relevance of the evidence for their own fact-finding under Rule 104(e), Rule 105 permits the judge to instruct the jury not to use the evidence for fact-finding purposes for which it is not admissible.[86] Rule 105 contains no limitations on the jury's ability to use its own thinking to decide how relevant the evidence might be for admissible purposes. So, while the judge may admit evidence for purposes of elements X, Y, and Z, but not A, B, and C, the jury may determine that the evidence is most relevant to X, less relevant to Y, not relevant to Z, and to any degree relevant to A, B, or C. While the jury should not decide ultimate or preliminary admissibility—a decision which would involve an understanding and large knowledge-base of legal precedent—the jury certainly can decide how relevant particular evidence is to the establishment of particular facts.

The argument that jurors need to be told what evidence is relevant contradicts the entire jury concept. Although there are two camps that disagree whether jury instructions are ineffectual for limiting admissibility, because of the potential for jury nullification, these two camps are not likely to disagree on the impracticality of instructing jurors not to find particular admitted evidence more or less relevant. Both camps would recognize that jury instructions limiting relevance are much less likely to work. While one might have some rational basis for hoping that jurors would adhere to instructions not to use particular evidence in their final determinations as to the fulfillment of a particular fact, no one could ever expect to instruct jurors to weigh particular evidence as more or less relevant to particular facts. Decisions of admissibility may be out of the jurors' expertise, but decisions about relevance are synonymous with the weighing of the evidence, which is exactly the function of jurors.

Rule 103 also suggests that the power to decide issues of relevance is not best delegated solely to judges. Rule 103, entitled "Rulings on Evidence," places limits on rulings concerning the exclusion or admission

86. "Limited Admissibility. When evidence which is admissible as to one party or for one purpose but not admissible as to another party or for another purpose is admitted, the court, upon request, shall restrict the evidence to its proper scope and instruct the jury accordingly." FED. R. EVID. 105.

of evidence (specifically Rules 103(a)[87] and 103(c)[88]), but does not mention any limits on rulings concerning the relevance of evidence. The reason why there are no portions dealing with rulings on relevance is because there are no such rulings—these decisions should be left to the jury, from which there are no "erroneous rulings."

If one were persistent in resisting this analysis, one might be able to argue that under the first portion of Rule 103(b)—"The court may add any other or further statement which shows the character of the evidence . . ."—the court could take the liberty of indicating its disposition as to the relevancy "character" of the evidence being ruled upon or admitted as an advisory function for the jury. This argument seems illogical since the record of offer and ruling would seemingly aim to memorialize those rulings that are within the court's power under Rule 103. Rule 103(b) does not appear to establish any new authority for additional rulings, but is merely a means of documenting the established types of rulings on the record. Nevertheless, the determination of the character of the evidence, though logically stretched, appears to be entirely feasible.

Others resisting this interpretation of the Rules might try to suggest that Rule 103(c) absolutely forbids jurors from hearing any offers of evidence, but this is completely untrue, and is inconsistent with Rule 104. Rule 103(c) cannot be read to eliminate all situations in which inadmissible evidence might be suggested to the jury, because Rule 103(c) itself limits its application merely "to the extent practicable." Courts should not be unwavering in their enforcement of a rule that, by its own language, concedes limitations in its application. This limiting language suggests that numerous factors need to be balanced in determining

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87. Rule 103(a) states:

> Effect of erroneous ruling. Error may not be predicated upon *a ruling which admits or excludes evidence* unless a substantial right of the party is affected, and
> (1) Objection. In case *the ruling is one admitting evidence*, a timely objection or motion to strike appears of record, stating the specific ground of objection, if the specific ground was not apparent from the context; or
> (2) Offer of proof. In case *the ruling is one excluding evidence*, the substance of the evidence was made known to the court by offer or was apparent from the context within which questions were asked.

FED. R. EVID. 103(a) (emphasis added).

88. "Hearings of jury. In jury cases, proceedings shall be conducted, to the extent practicable, so as to prevent *inadmissible evidence* from being suggested to the jury by any means, such as making statements or offers of proof or asking questions in the hearing of the jury." FED. R. EVID. 103(c) (emphasis added).

whether the application of Rule 103 is or is not practicable. Although the language of Rule 103(c) indicates that the court should engage in a balancing of various factors, it certainly fails to identify these factors within its terms.

One could logically surmise that a predominant factor of concern would seem to be Rule 103(c)'s interest in discouraging the presentation of unnecessary amounts of evidence to the jury, especially if that evidence later will be inadmissible. This factor would emphasize the saving of time and the avoidance of the complications associated with issuing Rule 105 limiting instructions. Beyond this purported savings could be even greater efficiencies. The need to conduct the charade of parading jurors in and out during portions of the trial would be reduced, and fewer secretive conferences at the judge's bench would be required. As for the other factors to balance under Rule 103(c), the most sensible source for finding them would be Rule 102, which explains the purpose and method of construing the Rules. Indeed, efficiency is one of Rule 102's objectives, but it is not alone, for fairness, growth and development of the law of evidence, truth, and justice all are equally important goals. Though sometimes shielding the jury from offers of evidence might be practicable, further analysis would be necessary on the part of judges, especially those using DLT. Admittedly, Rule 103 does not direct judges to find the objectives of Rule 102 and use them as the factors for determining whether the jury's exclusion is practicable, but Rule 102 directly precedes Rule 103 and is the most sensible source for the balancing factors. Just because Rule 103 does not put the factors at judges' fingertips does not mean that they should be absolved of this balancing responsibility.

Another, even more convincing, reason that Rule 103(c) can not be read to serve as a ban on offering evidence in the presence of jurors is that such a reading would be entirely inconsistent in light of Rule 104(b). Rule 104(b), as discussed above, allows jurors to hear evidence that might ultimately be inadmissible, but was preliminarily admitted "upon, or subject to, the introduction of evidence sufficient to support a finding of the fulfillment of the condition of [admissibility]."[89] Taken together, the text of the Rules provides no concrete reasons why jurors should not have the power to decide issues of relevance.

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89. FED. R. EVID. 104(b).

Compromising this controversial approach and the traditional approach, these Article I Rules could also be read to permit a party to make an initial presentation of evidence to the judge in the absence of the jury in order to have the judge make a preliminary ruling as to admissibility (especially with the guidance of the Article IV Rules to be discussed below). Once the judge admits this evidence, especially under Rule 103(b), the jury can then decide upon its relevance without invoking substantial concern for Rule 103(c), which would still depend on a careful balancing of the five factors of Rule 102. To better understand this middle ground, an explanation of the Article IV Rules would be most instructive.

C. Article IV Rules

The Article IV Rules (Rules 401, 402, and 403) support the proposed alternative interpretation of the Rules, and further indicate that jurors decide issues of relevance, while judges decide issues of admissibility —not issues of relevance.

Rule 401 favors the interpretation that jurors are empowered to decide issues of relevance. Titled "Definition of 'Relevant Evidence,'" Rule 401 defines relevant evidence as "evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence."[90] The people best equipped to make this type of decision are the fact finders—the jurors. The "tendency to make the existence of any fact that is of consequence to the determination of the action more or less probable"[91] resembles a charge to discern the credibility and weight of the evidence. If the credibility is greater than zero, and the weight given to that evidence is greater than zero, that evidence would be relevant. Jurors assign weights and credibility, thus jurors automatically decide relevance. Any judge trying to decide relevance on behalf of the jury necessarily would be second-guessing the jurors' decision of whether the evidence was "relevant."[92]

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90. FED. R. EVID. 401.

91. *Id.*

92. Although one could make an analogy between the traditional relevancy determination and a judge's ability to decide a motion for summary judgment, the analogy is not really that helpful. First, a judge's seemingly more expansive ability to end a trial because of a failure to state a claim sufficiently is a question predominantly of law and gives the greatest deference to a nonmoving party. The traditional relevance ruling, in contrast,

Rule 402 also supports the interpretation that jury members possess the power to decide issues of relevance.[93] Traditional interpretations of Rule 402 have imposed an artificial meaning on the order of the words, a meaning that would have been more clearly enunciated if it were the Rule's true purpose. The traditional reading of the first sentence of Rule 402 goes something like this: "All relevant evidence is admissible" means that someone must determine whether the offered evidence is relevant before it is admitted. Since the judge decides admissibility under Rule 104(a), the judge must also be the "someone" who decides the relevancy beforehand. The same logic is often similarly applied to the second sentence of Rule 402, to require the judge to decide that "[e]vidence that is not relevant is not admissible" means that judges decide the relevance of evidence in order to exclude evidence.

Instead, the proper reading of these passages, which is especially clear in light of the previous Article I Rules discussed above, is that the judge makes a preliminary determination to admit evidence under Rule 104(b) either "upon, or subject to" the production of adequate evidence to make the actual or factual foundation of relevancy reasonable. Once the "preliminary question" of admissibility is resolved by the judge, the jury can either find that the evidence is or is not relevant under Rule 401.

The judge should merely act as the umpire to admit or keep the evidence that the jurors find relevant, and to exclude the evidence that they find not to be relevant. That Rule 402 only deals with the judge's power to effect the will of the jurors who determine relevance is made clearer by reading the rule in its entirety, recognizing that it states what is admissible, not what is relevant, and permits exclusion only by the authority of the Constitution, Congress, or pertinent rules including the Rules.

No further mention is made to actual applications of determining relevancy within Article IV. Only mentioned are the judge's additional duties as an umpire to throw out offered evidence based on its admissibil-

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does not necessarily give the opposing party the same deference, either in the ruling or on review. Second, a jury is necessarily going to determine relevance and has the best capability to do so, just as the judge has the best capability to determine if a claim is stated sufficiently. The judge relies on his or her previous legal knowledge base to make the summary judgment decisions, while a jury only relies on his or her life experiences to decide the issues of fact and needs no particular judicial experience to exercise that decision.

93. "All relevant evidence is admissible, except as otherwise provided by the Constitution of the United States, by Act of Congress, by these rules, or by other rules prescribed by the Supreme Court pursuant to statutory authority. Evidence which is not relevant is not admissible." FED. R. EVID. 402.

ity, and the specific standards under which bright-line rules are established for the admissibility and relevance of particular types of evidence. These rules strongly suggest that Congress deemed the categories of admissibility and relevance important enough to make their boundaries clear to judges and the public alike. Individual courts thus do not need to determine whether a reasonable jury could find some particular types of evidence relevant,[94] or whether a judge should find a particular type of evidence admissible under Rule 403.[95]

For example, Rule 403 allows exclusion of evidence that has been found relevant "if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence."[96] A judge can exercise his or her power to exclude evidence that is relevant and otherwise admissible if it meets this Rule 403 test, which has generally been referred to as the "prejudicial versus probative" test. Relevant evidence that is otherwise admissible can still be excluded "if its probative value is substantially outweighed by the danger of unfair prejudice." This at least demonstrates that someone must decide the relevance of evidence that clears the bright-line-rule hurdles of Rules 408 through 412 before the judge can rule on the admissibility of the offered evidence. It appears that a plausible argument can be made that only after the jurors or the Article IV Rules have spoken to the relevance of a particular item of evidence need the judge ultimately rule on its admissibility.[97]

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94. *See, e.g.*, FED. R. EVID. 406 ("Evidence of the habit of a person or of the routine practice of an organization . . . is relevant to prove that the conduct of the person or organization on a particular occasion was in conformity with the habit or routine practice.").

95. *See, e.g.*, FED. R. EVID. 404(a) (evidence of a person's character is generally not admissible); FED. R. EVID. 404(b) (evidence of other crimes, wrongs, or acts isgenerally not admissible); FED. R. EVID. 407 (evidence of subsequent remedial measures is generally not admissible to prove negligence or culpable conduct). *See also* FED. R. EVID. 408-412.

96. FED. R. EVID. 403.

97. Some will undoubtedly point to Rule 403 as grounds for refuting the possible application of the proposed approach to evidentiary procedure. However, while Rule 403 holds some power to detract from this Note's argument, it is certainly not a "trump card" of any sort. The language of Rule 403 lists six factors—(1) danger of unfair prejudice, (2) confusion on the issues, (3) misleading the jury, (4) undue delay, (5) waste of time, and (6) needless presentation of cumulative evidence—that must be balanced against the probative value of the relevant evidence in order to determine if evidence of questionable relevance should be excluded, despite its having passed the hurdles of Rules 404 through 412. For example, evidence that is cumulative in nature but would greatly reduce the confusion of some particular issues might tip the balance of the Rule 403 test to permit the evidence to survive a motion to exclude.

In its six factors, Rule 403 thus reemphasizes the importance of judicial economy and

The above interpretation of the Rules is consistent with the important role of the jury in American jurisprudence, as embodied in the United States Constitution. For example, Article III establishes the "judicial Power of the United States"[98] but leaves much of the framework for its application in the hands of Congress. One part of the system that is not left to chance is the mandate of Article III, section 2, clause 3, which states that "[t]he Trial of all Crimes, except in Cases of Impeachment; shall be by Jury."[99] The Sixth Amendment further declares that "[i]n all criminal prosecutions, the accused shall enjoy the right to a speedy and public trial, by an impartial jury."[100] The Seventh Amendment also emphasizes the importance of the role of the jury: "In Suits at common law, . . . the right of trial by jury shall be preserved, and no fact tried by a jury shall be otherwise re-examined in any Court of the United States . . . ."[101]

While the Constitution, as a foundational document, cannot hope to explain each detail of its plan, it can reserve aspects of its plan for particular power-holders. The last two Amendments of the Bill of Rights seem to do just that. The Ninth Amendment states: "The enumeration in the Constitution of certain rights shall not be construed to deny or disparage others retained by the people."[102] The Tenth Amendment

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ethical litigation. Both of these ideals are also addressed in at least two, if not four, objectives of Rule 102. If any of the Rules are to serve as a "trump card," Rule 102 would be the most likely candidate. Yet the flexibility of the balance of Rule 102's objectives, when coupled with the flexibility of Rule 403's language, leaves room for a wide range of interpretations, including that proposed within this Note. This is not to say that the concern about prejudicial evidence is not substantial, nor that it should be ignored, but more that the unfair prejudice of concern in Rule 403 might be of the sort that undermines the entire trial, rather than affecting one particular offer and submission of evidence.

This approach is respectable for two prominent reasons. First, each of the other variables of the Rule 403 test can only be weighed in relation to the entire record on the submission of evidence. Whether something is a waste of time, needlessly cumulative, confusing, misleading, or dilatory can best be determined in the context of the entire trial. The factor of unfair prejudice should also be examined in this light, not as a barrier to each individual piece of evidence offered, but rather as a question as to whether evidence, if allowed to survive a motion to exclude, will permeate and destroy the very judicial process of the trial. Second, because judges often only account for the prejudice of a particular item of evidence, they have irresponsibly skirted the spirit of the Rules, and encroached on the role of the jury, indirectly detracting from the legitimacy of the trial process. If there is room for various interpretations, it would be better to err in allowing juries to see purportedly prejudicial evidence than have judges maintain a clandestine system of jurisprudence.

98. U.S. CONST. art. III, § 1.

99. U.S. CONST. art. III, § 2, cl. 3.

100. U.S. CONST. amend. VI.

101. U.S. CONST. amend. VII.

102. U.S. CONST. amend. IX.

strengthens this mandate by declaring: "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people."[103] Reading these passages together indicates assertively that the States or the people of the United States hold the powers not specifically established or delegated within the Constitution. Since States do not have a role as jurors in the Federal Courts, it becomes apparent that the people of the United States should retain as much power as not specifically prescribed by constitutional authority.[104]

When these constitutional principles are applied in parallel with the above interpretation of the Rules, they crystallize the jury's role as one including the decision as to the relevance of evidence. Given these recast roles of the jurors and judges, there appears to be only one standard under which a judge can clearly determine whether DLT presentations are inadmissible: Rule 403.

V. HOW DLT SHOULD CHANGE OUR FEDERAL COURT SYSTEM

As we observed in Part III, judges have manipulated the language of Rule 403 to reduce its six factors conveniently into a simple "prejudicial versus probative" test. The functional effect appears to be that judges have used this abbreviated test to usurp power from the jurors, an effect made easier because jurors are most often one-time participants in the judicial system, while the judges participate daily in trials. Unfortunately, this usurpation has gone unnoticed for quite some time with great costs, but the accelerated deterioration of the legitimacy of the court system has made the costs increasingly obvious.

Past inadequate technology forced the traditional method of examination of all offered exhibits of evidence by the jurors and the judge. It would have been unfair and unmanageable to have the jurors dicker among themselves to decide the relevance of particular exhibits offered in evidence. The development of DLT provides an opportunity for courts to take a new approach in applying the Rules, which will be more consistent with their purpose. The new approach will eliminate many of

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103. U.S. CONST. amend. X.

104. The state courts might present another story, of course, but those courts lie outside the scope of this argument.

the existing inefficiencies and promises a more fair and just determination of the facts.

Under this proposed approach, parties first conduct traditional pretrial discovery. Immediately after discovery, however, judges conduct hearings on a number of matters covered under the Article IV Rules and Rule 104(b). Judges apply the bright-line tests of Rules 404 through 412 and determine the admissibility of all evidence that is dependent on conditional facts under Rule 104(b). After this filtering step is complete, the evidence that survives these rulings is placed onto a single disc for use with DLT. During this third step, the judge can exercise his or her discretion to attach comments concerning the character of each submission of evidence as permitted by Rule 103(b). In this step, the judge can admittedly influence the jurors' decisions on relevance by suggesting that a reasonable juror would or would not find one exhibit relevant, but the judge would not have the ultimate power to skew the record by his own determinations of relevance or to mislead the jury—two fears which are really left unaddressed by the current standards of discretion and appellate review.

With the judge's statements fresh in their minds, the jurors can hear opening arguments and begin the fourth step of reviewing the offered evidence through one of two methods. Under the first method, they can jointly take the single copy of the disc and review it in isolation. After they reach a consensus or majority view on each offered item, they can report back to the court on their determinations of relevance. Under the second method, they can each take a copy of the disc and review its contents, and report back to the court their individual findings, which the jury foreman or judge will tally. If a majority of jurors believe that an item is relevant, then it is eligible for admission, otherwise the judge rejects and excludes the offered evidence. In this fourth step, jurors have absorbed much of the record and will be well prepared to observe the actual trial.

Once this preliminary record is established, the more traditional portion of the trial resumes. Instead of conducting direct examinations, which can be submitted as video depositions on DLT media, the focus of the trial in step five will be primarily on the cross-examination of the witnesses. In this way, DLT usage actually will make personal testimony more important, not less important. Witnesses will have to confront their previously captured testimony and risk facing any inconsistencies. After each side has completed cross-examination, they will have an opportunity to present closing arguments in step six, during which they will be limited

to making references only to the admitted relevant evidence on the established record. The attorneys will be forced to be concise in their DLT presentations, but they will have the opportunity to tie together, in their closing remarks, all the evidence that is already on the approved final version of the disc. In the last step of this proposal, step eight, the judge will present the jury instructions, and the jury will deliberate and deliver their final decision. In this structure cases will reach determinations of truth and mete out justice much more quickly than ever before.

Aside from its potential speed, the proposed trial approach holds a number of other subordinate benefits. First, because of its quick procedures, this system should be able to take the greatest advantage of the benefits of DLT to more quickly clear the dockets of the overloaded court system. Judges and jurors will spend less time being inefficient and more time making decisions. Furthermore, attorneys will spend less unnecessary time in court. Finally, when attorneys, judges, and jurors are communicating, they will do it in a more organized, concise, and effective manner.

Second, if the use of DLT introduces savings on such a scale as expected, federal courts should be able to provide parties with access to public DLT facilities in the courthouse. This will assure a sufficiently level playing field, and alleviate the worries concerning lawyers using the technology unfairly to their advantage as discussed in part II.

As a third added benefit, this proposed method holds the potential to spawn a reexamination of the jury system to make it more inclusive of all walks of life and to represent better the public at large. Currently, popular wisdom holds that persons with above average intelligence are systematically weeded out from serving as jurors, in part because of the potential time commitment. Lawyers, doctors and businesspersons who are currently more likely to be excluded from jury duty—purportedly because of the onerous daytime and worktime commitments jury duty would impose upon them—will now be able to participate on juries because of their ability to review the offered evidence on their own time once the parties have compiled their discs. The total time jurors must spend in the actual courtroom after discovery could be reduced drastically by implementing step four, which allows jurors to review DLT evidence. The opening arguments, cross examinations, closing arguments, jury instructions, and deliberations are the only necessary components that rely upon the convening of "court."

The greatest benefit from this proposed approach is the clearer alignment of evidentiary courtroom practice with the purpose of the Rules

as set forth in Rule 102. Not only will the proposal likely promote various efficiencies, but it will also have a greater chance of finding truth—because the judge will not artificially remove evidence that the jury could find relevant—and a greater chance to deliver justice, as the jury's findings will be accorded more legitimacy. The fairness of having jurors decide the issues of relevance is overwhelming since, currently, at least in the video animation cases, judges have decided relevance in some fictional role as oracle of the people. Now the true fact finders will be able to assess the credibility and weight of evidence in determinations of relevance. Furthermore, much less time will be wasted during direct examinations on litigators' posturing and tactical courtroom positioning—behavior that is probably more prejudicial to juror decisions and the entire judicial process than any individual offer of evidence.

Most importantly, the embracing of DLT technology to the fullest extent feasible makes sense for the rational growth and development of the law of evidence. To do otherwise will force the judicial system to ignore a technology that will be prevalent in nearly all other aspects of human life. If left unaddressed, this inconsistency, especially if coupled with the perceived increasing trickery and artifice of litigation, will further delegitimize the judicial establishment. The gap between the judicial construct and the real world might reach such an unbearable level that jury nullification could become the norm rather than the exception. The combined adoption of DLT and implementation of this Note's novel interpretation of the Rules arguably will advance the purpose of the Rules most effectively, will promote the normative goal of increased juror participation in courtroom decision making, and will likely work to restore judicial legitimacy. Therefore, this combination should be given serious consideration by all interested in the future of jurisprudence and the Federal Rules of Evidence. For those who reject this interpretation, they too will have to recognize that, in the not too distant future, as technology and evidentiary procedure develop through a symbiotic relationship, the judiciary will rely more heavily on jurors to discern the truth quickly, intelligently, efficiently, and fairly. Unless the federal courts adapt their interpretation and application of the Rules to this spirit of embracing DLT, they will be caught off-guard by the next generation of technology. Even if adoption of this technology is not expected to be an imminent reality, the Cyber Courtroom is already closer and more effective than the authors of the Rules could have ever imagined.