eCOURTROOMS

ORDER IN THE CLASSROOM

>> TRAINING FUTURE LAWYERS IN HIGH-TECH COURTROOMS

by Catherine O'Grady

PROFESSOR: WELCOME TO CLASS, EVERYONE. WILL THE STUDENTS SELECTED FOR TODAY'S SIMULATION ON DIRECT EXAMINATION PLEASE TAKE THEIR PROPER SEATS AT THE COUNSEL TABLES? YOU HAVE ONE MINUTE TO GET ORGANIZED, THEN LET'S GET STARTED. >>

THUS BEGINS THE TYPICAL law school clinic or trial advocacy class. We don't lecture very much. Instead, our students participate in simulated exercises that cover a wide range of professional lawyering activities, including client interviewing, fact investigation planning, client counseling, mediation, negotiation, deposition strategies and pretrial and trial techniques. A typical simulation might last 30 minutes. After it ends, the clinic professor will use the rest of the class time to guide the class in a discussion of the simulation just presented. The professor has a number of decisions to make on how best to teach from that simulation. Although some key pedagogic goals can be prepared ahead of class, many of the teacher's goals must be decided as the simulation unfolds—and one can never be sure what will happen during a simulation exercise. This is challenging, exciting, on-the-spot teaching that can be enhanced by state-of-the-art technology.

Both of Arizona's law schools have designed or are currently designing computer-integrated courtrooms that pay special attention to the thing we do best in law school—teach. The article by Winton Woods describes some of the electronic courtroom technologies that lawyers can expect to find in "real" courtrooms, as well as in both of Arizona's law school courtrooms. Unlike a real courtroom, however, a law school courtroom must accommodate the needs of everyone in the room, not just the participants in the "case." A couple of basic things must occur, for example, before students sitting in the audience can learn from simulation-based teaching: They must be able to see the simulation occurring at the front of the classroom, they must be able to hear the simulation as it is occurring, and they must be able to watch the simulation later for reflective review.

At the University of Arizona's Courtroom of the Future, technology aids in presentation in numerous ways:

- Students have no trouble seeing their peers as they participate in an exercise because images are displayed on monitors and on a 10-foot projection screen.
- A stereo sound system distributes audio to the courtroom. Analog video is run through a "scan doubler," which allows it to be compatible with computer SVGA outputs.
- Interface boxes at counsel tables allow participants to plug in notebook computers that then can display to the entire system.
- A Doar Presenter document camera provides the vehicle for digital display of paper documents.
- Finally, a Boeckeler Pointmaker allows for the annotation of images in real time.

The Courtroom of the Future has become the Courtroom of the Here and Now, as reflected by the introduction of the new electronic courtrooms in Arizona's state and federal courts. According to University of Arizona Professor Winton Woods, the Courtroom of the Future project is proud to have been a pioneer in the development of electronic courtrooms, but the Tucson courtroom was designed in the earliest days of electronic courtrooms and is now due for substantial renovation and renewal. Professor Woods hopes that the wonderful courtrooms in the new courthouses in Arizona will encourage change and innovation.

At Arizona State University College of Law, thanks to generous support from John D. ("Chip") Harris, we are designing a new Computer Integrated Courtroom / Classroom.

- It will include a high-quality sound system and custom lighting that will be designed to enhance video recording, review and playback.
- It will shake up the traditional notion that spectators in the gallery have no choice but to look at the backs of the attorneys' heads. By making use of four cameras and the newest split-screen technology, students will be able to view a simulation on a large video projection screen as it is occurring ("live action") from four different perspectives: the judge's perspective, the jury's perspective, the witness's perspective and a wide-angle view.
- Evidence presented to the jury on the document camera will fill the screen, temporarily replacing the live-action shots.
- Professors will be able to control what students see on the screen, and they will be able to retrieve segments of the recorded simulation quickly from videodisc recorders for playback during the review of the simulation.

IT WILL SHAKE UP THE TRADITIONAL NOTION THAT SPECTATORS IN THE GALLERY HAVE NO CHOICE BUT TO LOOK AT THE BACKS OF THE ATTORNEYS' HEADS.

Our design team members, including Dick & Fritsche Architects and Jerry

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Davis of Jeremiah Associates, have been creative in addressing ASU's desire to enhance the courtroom's teaching capabilities. For ASU, this courtroom is an exciting experiment: Very few law schools or educational settings have used split-screen technology to develop this type of educational environment.

Because Arizona's two law school courtrooms have made teaching a top priority, these educational courtrooms are an ideal place to provide training for both students and lawyers on the latest electronic courtroom technologies. The following articles by Superior Court judges and by Winton Woods highlight the need for all lawyers to seek training in a computer-integrated courtroom. At both ASU and UA law schools, we look forward to graduating new lawyers who have received training in these environments, and we hope we will soon be assisting seasoned lawyers by providing the training they will need to practice law in these courtrooms.

Catherine O'Grady is a Professor of Law and Director of Clinical Programs at the Arizona State University College of Law. Professor O'Grady is serving as co-chair, with Professor Winton Woods, of the Maricopa County Superior Courts Electronic-Courtroom Training Committee.

DIGITAL COURTROOMS

>> THE VIEW FROM THE BENCH

by Hon. Michael A. Yarnell, Joseph B. Heilman and Robert D. Myers

EVERY TRIAL is about communication—communication with the jury, the judge, the witness, the opposition and the public. Maricopa County Superior Court conducts more than 1,550 jury trials each year. An exchange similar to the following occurs in jury trials regularly:

Lawyer 1: Your Honor, may the witness step down to the chart?
Judge: She may. Bailiff, will you please move the easel so the jury may see?
Lawyer 1: Can the jury see?
Juror 4: Could you move it closer?
Lawyer 1: How's this?
Juror 4: It's OK.
Lawyer 2: Your Honor, may I move to the jury box to see?
Judge: You may.
Lawyer 1: Ms. Witness, will you draw a sketch of where you were standing during the events?

Witness: This marker doesn't work.
Judge: Bailiff, please get the witness a marker.
Witness: That's better. This is not to scale. I'm really not very good at drawing. Here is an outline of the intersection. This way is north—or is it south? Here is the red car. Here is the green car. Right here, that's where I was standing.
Lawyer 1: Could you just mark that spot with your initials? You may resume the stand. Now tell us what you saw.

… Time passes as the examination continues …

Lawyer 1: Let me show you Exhibit One in evidence. Is that a photograph of the red car after the collision at the scene?
Witness: Yes.
Lawyer 1: Your Honor, may I publish Exhibit One to the jury?
Judge: You may.
Spectator: [mumbled] Sure wish I could see what is going on.

and so it goes –

This traditional process of trial communication is often difficult to follow and always very time-consuming. For today's jurors, raised on sound bites and MTV, such presentations, at their best, are only stultifying.[1] Computer-integrated courtrooms, like Maricopa County's e-courtrooms, provide a bright promise for change. With the courtroom installation of a document camera; a witness pointing device (telestrator); and flat-screen display for every two jurors, the witness, the judge and counsel; and a video display for the public, consider the following exchange:

Lawyer 1: Ms. Witness, I direct your attention to the intersection diagram on your screen and that of the jurors and opposing counsel. Is that diagram reasonably accurate?
Witness: Yes.
Lawyer 1: Please take the light pin pointer and place it on the screen where you were standing. OK, please place an "X" and your initials there. Your honor, may we save this image for later use with other witnesses?
Judge: You may.
Lawyer 1: Is this picture on everyone's screen, Exhibit One in Evidence, an accurate representation of the red car after the collision?
Witness: It is.

Examples of better communication and time savings from e-courtroom technology are not limited to the display of diagrams, exhibits and witness input. Lawyers routinely will be able to go where now only a few dare to tread. The use of PowerPoint slide presentations of key points to the jury during opening and closing arguments will become common. Although frightening to some, the transition from the traditional use of the hand-written (or preprinted) chart to a digital visual display is relatively simple and straightforward. Lawyers—and judges—will find that the preparation of PowerPoint slides is no more diffi-

cult than typing e-mail or simple word processing documents. Lawyers will be able to bring their own laptops to court, plug into the network and display their previously prepared slides. Those without laptops will be able to bring a disk and use the computer at the rostrum to read the images.

In a case with only a few exhibits, display by way of the document camera will be as easy and natural as using overhead slides—all without the current hassle of projector, screen and dimming lights. In a case with many exhibits, third-party services are easily available to digitize exhibits with bar coding to allow fast, accurate and easy recall of the images for display to witnesses and the jury. The court or court staff will retain push-button control over when an exhibit is placed on the jury screens. Through vendor-purchased software, lawyers will be able to display exhibits with the stroke of a wand over a bar code. Portions of displayed document exhibits may be highlighted easily, enlarged and emphasized for witnesses and the jury.

THE GOLDEN RING OF COMPUTER-INTEGRATED COURTROOMS IS SAVING SCARCE TRIAL TIME.

Jurors get a better view with their own monitors.

The new Maricopa County e-courtrooms are equipped with digital video, digital sound and real-time court reporting capabilities. These combined court record technologies offer much promise of a better, more timely and more cost-effective trial record. Lawyers and parties will be able to obtain a digital copy of the voice-activated multichannel video for a nominal cost each day. That video record will not be transcribed, will have automatic time-stamp indexing and may have additional manual indexing created during trial. The parties must request certified transcription of the video if necessary for appeal or other purposes. A copy of the daily video record will be available to lawyers for a cost that is much lower than that of a daily transcript.

Although trial lawyers understandably may be anxious over the prospect of entering an e-courtroom, training will be available. The court's E-Courtroom Committee, through its education / training workgroup co-chaired by law school Professors Winton Woods and Cathy O'Grady, is spearheading a bench / bar effort to provide such training. Professor O'Grady is in the process of designing and building a technology-equipped courtroom for the Arizona State University College of Law. Professor Woods built and has managed the University of Arizona Law School's Courtroom of the Future. The E-Courtroom Committee is developing recommendations for the training of lawyers and their staff by the court, by the bar association's continuing legal education programs and by private vendors. There will be plenty of simple but comprehensive educational programs available for trial lawyers, both experienced or novice.

E-courtroom staff, with the exception of the court reporter, will remain identical to present staffing levels. Each division will have a judicial assistant, a bailiff and a clerk. However, the staff's courtroom activities will be enlarged with the addition of full e-compatible workstations for the bailiff and the clerk. In addition, the bailiff will assume primary responsibility for overseeing the functionality of the equipment on a daily basis. This responsibility will be enhanced by the assignment of a full-time on-call technician from the court's Judicial Information Systems Division.

Funding constraints prevent staffing of the Maricopa County e-courtrooms with full-time court reporters. Lawyers may request a court reporter for any proceeding and, under current rules, the court must provide one. However, in superior court, unlike federal district court, real-time capable court reporters are in short supply.[2] When arrangements can be made for the presence of a real-time reporter, new horizons open for the lawyers, the parties and the judge. The streaming real-time words as spoken appear on the screens of the judges and lawyers. With third-party software like LiveNote, each lawyer and the judge easily can mark portions of the transcript, instantly categorizing by subject matter for later retrieval and review. The judge and lawyers can search the entire transcript instantly as the trial proceeds. Questions about whether something was said become trivial. Organization of witness testimony and facts in evidence for motions during trial, closing arguments and posttrial motions becomes not only possible, but fast and easy.

Though not available yet, the possibility of an "instant multimedia record" is now conceivable. Imagine a CD-ROM cut at the end of each trial day containing compressed video, audio and real-time (closed-captioned) rough draft text. The CD-ROM will contain display and search software, allowing the user to word search the record and click to play back video, sound and scrolling text.

There are other major capabilities of the Maricopa County Superior Court e-courtrooms. Each lawyer's table will have a high-speed direct connection to the Internet. The lawyer, with the appropriate laptop and network card, will be able to communicate directly with her own office and any Internet-available service (such as Lexis or Westlaw). There will be one "roll around" videoconferencing unit for each four courtrooms. For the first time in Maricopa County, remote video witness testimony will become a reality. However, the

full integration of the videoconferencing capability into the courtroom display and record technology is a work in progress.

The Maricopa County Superior Court is diligently pursuing the goal of maintaining a completely "open architecture" environment by providing hardware and software that is fully compatible with whatever hardware or software the parties use in presenting their case. To this end, purchase of equipment and/or materials of a "proprietary" nature that will interface only with other products manufactured by the same entity is being minimized.

The golden ring of computer-integrated courtrooms is saving scarce trial time and delivering better communication. In a county with a rapidly growing population of more than three million people, the pressing need for additional judicial resources will continue to escalate. An improvement in "the just, speedy and inexpensive determination of every action"[3] can come only through the combined efforts of increased efficiency and additional resources. As the bench and bar take this first small step into twenty-first century courtroom litigation, many questions remain to be answered, and many problems remain to be solved. The implementation of technology in our courtrooms is an adventure just beginning. Progress cannot be achieved without the continued efforts and cooperation of the bar, the bench and the court's funding sources. Maricopa County's Superior Court judges invite and welcome the active participation of all members of the State Bar in these efforts.[4]

The authors are all judges of Maricopa County Superior Court.

ENDNOTES

1. As a Jimmy Buffett song title indicates, *I have a PBS mind in an MTV world.*
2. The starting salary for Maricopa County Superior Court reporters is $37,500. Federal district court reporters start at $52,475.
3. Rule 1, ARIZ.R.CIV.PROC.
4. Please send your comments and suggestions to Judge Yarnell, Chairperson, E-Courtroom Committee, at myarnell@superiorcourt.maricopa.gov.

FIRMS TAKE COURTROOMS TO THE NEXT LEVEL

>> ARIZONA TECHNOLOGY LEADERSHIP

by Winton Woods

LAST FALL, I spent several weeks providing electronic trial support in a document-intensive case being tried in the new federal courthouse in Tucson. The courtroom we used had the same basic electronic configuration as the new federal courthouse in Phoenix and the soon-to-come-online e-courtrooms in the Maricopa County courthouse. By the end of the year, we can expect to have 30 to 40 electronically supported courtrooms in Arizona. I am sure that on a per-lawyer basis we are leading the nation in availability of courtroom technology in cases small and large. I am also sure that every trial lawyer in the state will have an opportunity to use these new courtrooms whether they initiate their use or not. "If you build it they will come" is as true in litigation as it is in baseball. If you don't use electronic support, your opponent will—to the detriment of you and your client. Many of us have waited a decade for the arrival of this new day. Now it is here. We are at the end of the beginning—finally!

The Courtroom Equipment

Most of the courtrooms feature large high-resolution, thin-screened monitors at counsel table, the jury box, the witness stand, the stations for the courtroom deputies and court reporter and, of course, the bench. Most courtrooms will allow images to be projected onto a large screen, as well. In our federal case in Tucson, we were able to plug our Dell 5000 laptop computer into the distribution system as if it were a simple monitor. The courtroom deputy has a push-button control box at her station that allows her to distribute the signal from each counsel table to the monitor system. She also has a switch that allows documents to be viewed for foundation before they are published to the jury. The monitors are very high-quality, and it is easy to read documents and view video and other kinds of images.

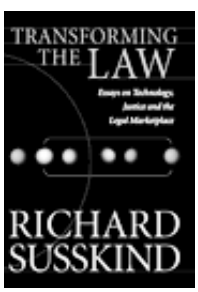
In the center of the courtroom facing the bench is a console containing a document camera (also known as a video presenter) and a Boeckeler Pointmaker video annotation device. Paper documents can be displayed on the video presenter quite easily. Annotation of those documents can be done with an ordinary highlighter, a pencil or even a finger. Three-dimensional objects also can be displayed effectively using the video presenter, which is really just a high-resolution video camera mounted like an overhead projector.

Finally, a high-quality sound system provides for very accurate rendition of the proceedings by the real-time court reporter. The court reporter's real-time output can be delivered to a laptop computer at counsel table. The feed provides a basis for attorney notation on the real-time transcript that is captured by a variety of software programs, such as LiveNote.

There is one important variation in the Maricopa County e-courtrooms. There, it is contemplated that there will be no official court reporter—real-time or otherwise. Instead, the record will be captured through the use of a high-level audiovisual recording system. The Jefferson Audiovisual System (JAVS) produces instantaneous digital recording of audio and video information. Multiple cameras placed in the courtroom are activated by the sound of the voice of a witness, the judge or one of the lawyers. The digital JAVS system is too new to evaluate accurately, but it is expected to provide a highly accurate transcript at lower cost. Readbacks of testimony will become actual playbacks of the audio and video. If a record is required for review, transcription of the recorded events can be done significantly less expensively than the cost of a court reporter's transcript. Sometime in the not too distant future we can expect that the digital record will be made into a fully searchable "transcript," which will be sent to the reviewing court in digital form rather than paper form. The JAVS system is designed to implement such digital transcripts at lower cost than the present paper-based system.

I believe that the use of digital video to preserve the trial record will drive other

the practitioner's toolbox



Transforming the Law: Essays on Technology, Justice and the Legal Marketplace **by Richard Susskind**
Oxford University Press, 2001
240 pages, $29.95 (paperback) (ISBN 0-19829-922-2)
Available at: 1-800-451-7556 or http://www.oup-usa.org

This book shows how and why information technology is altering and will continue to alter the practice of law and the administration of justice. For this paperback edition, Susskind added a new preface to describe probable technology developments. The author believes that to ensure a stake in the legal system of the future, lawyers must adapt their working practices. But he argues that technology vastly improves legal services for the public; if some lawyers cannot provide them, many others will.

Among other things, Susskind explores:

- virtual courtrooms
- a national legal network for hundreds of thousands of users
- legal advice for nonlawyers through the next generation of television
- legal diagnostic systems on the World Wide Web
- the role for government in taking the justice system into the information society

changes and a much broader use of digital video. For example, capturing and storing depositions on digital video may reduce cost dramatically and provide a better product. Modern software allows for the synchronization of text-based transcripts with the digital video and that, in turn, enables full-text searching of the video images. In those cases in which the primary purpose of a deposition is to preserve testimony or simply develop basic information, the cost of preserving the testimony in video alone can create savings of 50 percent or more.

One final innovation deserves mention. Many of the new courtrooms will have a smart board, which is designed to replace the drawing pad or chalkboard we have used for eons. The smart board captures the lawyers' notes as digital images, which can then be distributed over the monitors. In many courtrooms, the chalkboard is difficult to position in a way that allows it to be seen by everybody; the smart board obviates that problem, and the Boeckler PointMaker has a chalkboard function built in that can be invoked with the click of a button.

Case Preparation in the E-Courtrooms

Lawyers need not do anything different to try a case in the e-courtrooms. The video presenter is very easy to use and requires no technology skills. You simply place a document or object under the camera, and it is displayed through the monitor system. I was amazed at the ease with which lawyers who claim to abhor courtroom technology find themselves comfortable and effective using the document presenter. One big advantage is that publication to the jury occurs at the same time the judge and lawyers are viewing the admitted document. I predict that we all will become very comfortable using the evidence presenters. Of course, lawyers may still want to use trial boards and other kinds of demonstrative evidence, and there is nothing in the e-courtrooms to prevent their use. Indeed, the effective supplementation of digital images will become one of the key elements of litigation planning.

You may want to do much more, however. For example, a lawyer can put all of her documents on her computer hard drive in the form of digital image files. Those files can be retrieved using simple basic software built into the Windows platform or more sophisticated trial presentation programs like Visionary, Sanction or Trial Director. Use of modern OCR technology allows for full-text search over the scanned document database. Scanning of documents can be done in your office using modestly priced office scanners (but I usually recommend that you outsource your scanning). Various vendors will Bates stamp, scan and code your documents for a modest fee. The scanned documents can then be put into a variety of databases that will allow you to search and sort those documents.

Training Lawyers in Courtrooms

Lawyers and paralegals also may want to receive training in the use of e-courtrooms. Lex Solutio Corp. (a company in which the author works) has just opened a new training facility where training in the most-used software and courtroom hardware will be offered. InData in Gilbert also has just introduced a new facility where you can be trained in the use of the Trial Director software. The Maricopa County Superior Court will offer a variety of introductions to their courtrooms and, of course, the Courtroom of the Future Project at the University of Arizona and the new Ryan C. Harris Computer Integrated Courtroom at ASU will continue to train students and provide CLE-oriented programs for lawyers (see Cathy O'Grady's accompanying article). Last but not least, one day of the Trial Practice Section's program at CLE by the Sea will be devoted to an introduction to the new e-courtrooms.

Conclusion

We are moving into the new century on a tsunami. I am hopeful that the new e-courtrooms with which we are blessed will make trials more effective and less expensive. Once again, we in Arizona find ourselves leading the nation in the development and implementation of trial technology. We are up to the challenge. We have built it; now, let them come.

Professor Winton Woods is the Director of the Courtroom of the Future Project at the University of Arizona. In his private capacity he is also General Counsel and Director of Education for Lex Solutio Corp., a national litigation support firm based in Phoenix.