JERITT

The Judicial Education Reference, Information and Technical Transfer Project

Preparing Organizations for Distance Learning Technologies

JERITT Monograph Twelve

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Preparing Organizations for Distance Learning Technologies was developed under Grant No. SJI-91-008 from the State Justice Institute. Points of view expressed herein are those of the JERITT Project and do not necessarily represent the official position or policies of the State Justice Institute.

The JERITT Project is cosponsored by the National Association of State Judicial Educators and the School of Criminal Justice at Michigan State University.

Preparing Organizations for Distance Learning Technologies

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2002
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AUTHORS' NOTE

We were approached by the Executive Director of JERITT to write a monograph on distance learning initiatives for the courts about two years ago. Our immediate response was "*We do not know enough yet. We are not ready. Please ask us again in a couple of years!*" At that time, we felt we did not know enough to write a paper of that magnitude for the court system. Ray, whose education technology expertise is well documented, was new to the National Center for State Courts, and Mary Ann, with her strong adult learning history, was new to distance learning. We both had much to learn and much to learn together—we needed to grow into a team mentality such that our work would inform each other's contributions.

When we were invited a second time by JERITT, in the spring of 2002, to write the monograph, we accepted. We still do not claim to know it all, by any means, but we have learned more than we anticipated during these past two years, and we welcome the opportunity to share with you the fruits of that learning. We are honored by the invitation.

Until the fall of 2001, Mary Ann served the National Center for State Courts (NCSC) as the Director of Distance Learning for the Institute for Court Management (ICM). At the same time, Ray became the Director of the Education and Technology Center. It was during this time that distance learning initiatives found direction, and together we forged a distance learning presence at NCSC. Neither of us could have succeeded alone. One of the many values of a team, the synergy that propels movement, is perhaps the most exciting and rewarding. We found that synergy in our respect for each other's strengths, and it became our ground swell for creative development and hard work. We experimented with various forms of distance education—videoconferences, live Internet program design, and later, asynchronous, on-demand program development. We succeeded enough to be thrilled by our endeavors, and we failed enough to be humbled by the enormousness of the undertaking.

While this monograph is not about distance learning efforts at NCSC, the majority of new learning that we report comes from our conjoint work at that institution. Occasionally, throughout the paper, we reference these projects. We do so to explain a course of action or to articulate a process that helped to crystallize a new direction. We wish to express our gratitude for the wide latitude and support NCSC afforded us during this developmental phase. The newly constructed Education Technology Center became the locus of much experimental activity.

We have come to know many educators and education technology specialists across the country during these years who are building infrastructures and designing curricula in their own state courts. We continue to grow together. To this end, we include anecdotes, submitted by respected colleagues, at the beginning of some sections. Their words speak volumes, and their voices and efforts are critical to the national success of distance learning initiatives for the courts. We would like to recognize the following for their contributions: Pam Castaldi, Instructional Media Specialist, New Mexico Judicial Education Center; Hon. Peter Evans, West Palm Beach, Florida; Ingo Keilitz, Ph.D., lecturer, writer, and court

consultant, Williamsburg, VA; Don Reinhart, instructor/facilitator, On-line Campus University of Phoenix; Kit Thornton, Esq., Deputy Director for Technology, West Virginia Supreme Court of Appeals.

In addition, JERITT has solicited information from all the state administrative offices of the courts regarding their distance learning efforts and/or plans. These important summaries are included in the appendix of this monograph.

We are most grateful to Dr. Maureen Conner for her interest in this topic, her belief in our skills, and her confidence in our abilities to describe such intricate processes in writing. Her ongoing support, incisive critique, and regular affirmation have been fuel for the project. Marge Forslin, the capable copy editor at JERITT, has tirelessly read and reread our manuscript, checked our sources, and generally helped shape this tome into a readable manuscript. We send thanks in abundance.

Lastly, it is our greatest desire that by reading this monograph you will be inspired to create your own distance learning team. Opportunities abound to work together in a national effort to educate and train the hundreds of thousands of state court staff more economically and strategically than ever before. Yet, we are aware that this paper cannot serve as a distance learning "manual" because the field changes too quickly. What is innovative and ahead of its time as we write may well be commonplace to you when you read these words. Instead, we invite you to build on the lists we provide, add your own stories, form your own lessons, develop your own strategies, and fine tune the emerging technologies for your organization's specific needs. In this way, you will find the joy that we have found in this work. If, in two years, you commission JERITT to sponsor a second monograph on distance learning, to include all the advances these years will bring, national synergy will not be far behind!

Mary Ann Massey and Raymond Foster

INTRODUCTION

Over the past two years, the National Center for State Courts has attempted to develop a distance learning capability. For the most part, this effort has been a trial and error process focused on the delivery of educational programs to court personnel on a national basis. The process has created, in effect, a distance learning laboratory, where new technologies are tried and tested based on the available resources and capabilities of the organization. While many organizations have gone through a similar process, ours was done in hopes of assisting other court organizations in implementing distance learning programs. This self-serving goal would, we hoped, serve the greater good of creating a distance learning culture in which the court community could share educational resources more efficiently and affordably. We undertook this effort with great enthusiasm and naiveté, and we remain enthusiastic, but no longer naive. What we faced, others will face, in this medium that changes as technology evolves and that is threatened by increased workloads, shrinking budgets, and limited imaginations.

The one constant of our work has been the firm belief that failing to utilize distance learning technologies would be a costly mistake. Access to training by court personnel is a key component in improving the public's access to and attitudes about justice. As courts provide better, more current, more accurate, and vital information for their customers, the public's perception of the court system will reflect a greater respect for the functions of justice. Distance learning can serve well to educate personnel, but most of the court system decision makers are not sure what distance learning exactly is nor how it should be implemented. Although many say they like the idea, they may be quite unsure about it, and, in fact, dislike what implementing it might entail. Distance learning is thought by some to be a tool requiring fewer resources and less staff time to develop than is required for traditional education and training programs. It seems like it should be easier and cheaper, but, as the saying goes, "Faster, cheaper, better: which two would you like?" While distance learning may offer long-term economies, ***savings*** will accrue only to organizations willing to provide the research and development money to develop archives of reusable programs and build the infrastructure capable of creating distance learning programs efficiently. The key word is ***savings***, not ***profits***. Most well-conceived and well-executed programs may result in cost savings, but the additional funds for development are difficult to find in an environment of shrinking budgets and personnel. Distance learning will require more planning, more resources, and more time for development and implementation than traditional face-to-face education or training programs. Is it worth the extra investment, increased workload, and longer development time? Yes, but only if it is done with careful planning, a clear understanding of the audience, and well-defined goals. When financial considerations define success, this must be clearly stated. Profits from distance learning may be difficult to achieve, but reduced travel costs and increased access to education and training may not. What is possible may not be acceptable. Understanding both is important.

This monograph has five chapters. In the Chapter 1, we chart the course, placing distance learning in the context of a world becoming Internet savvy. In Chapter 2, we

describe the different types of distance learning systems, and explore, in more depth, those with which we have personal experience. In Chapter 3, we describe the value of the team concept and its specific implications for the success of distance learning endeavors. The nature of the distance learning team and its complex functioning are outlined. Chapter 4 relates early distance learning experiences of participants and faculty. It includes anecdotes, as well as our own thoughts, about how to prepare for distance learning and an outline of skills needed. In the chapter, we draw a virtual picture of the distance learning classroom and invite readers to envision it in their own setting. We close with Chapter 5, Distance Learning Readiness Check. It is a summary of what we have put forward in the monograph and can serve as a checklist for building a strong foundation for a distance learning program.

Finally, Appendix A is a sample videoconference timeline and Appendix B contains reports from six states and the District of Columbia in response to a JERITT questionnaire on conducting distance learning programs. Their experiences and information could be useful to other groups or states considering offering distance learning.

What we offer in this monograph is a description of efforts, some successful, some not, that began the process of building distance learning programs. The process continues and evolves, as building successful programs must. We hope these experiences may be instructive to others searching for effective ways to deliver education programs in a challenging environment. At the very least, it is an affirmation of the belief that distance learning programs and technologies can provide opportunities to reach new audiences in powerful and effective ways. The path is not always easy, but the goal is worthwhile. We encourage courts to start the journey.

CHAPTER 1

Charting a Course

Distance Learning—A Natural Evolution

Knowledge workers, those who manage information and knowledge in the workplace of the twenty-first century, are educated and reeducated as new demands for innovation and efficiency drive markets. This emphasis on lifelong learning is reflected by participation in adult learning activities, which, according to the National Center for Educational Statistics, "increased from 38 percent of those in the population age 18 and above in 1991, to 48 percent in 1999."[1] The need to learn about new technologies, workplace procedures, organizational tools, and computer programs increased. No longer would skills learned in secondary and post-secondary education programs suffice. Those workers who adapted their skills to new and improved ways of doing business accrued the highest value.

Like other private and public sector organizations, the courts are also faced with problems requiring more competent, well-educated employees. Increasing caseloads, a more litigious population, and complex legal issues demand a competent, well-trained, and adaptable work force. In this environment, it is hard to imagine a more compelling time to develop distance learning capabilities. The cost and security of travel for training are questionable expenses. They are scrutinized closely and readily slashed. Delivery capabilities are maturing in terms of ease of use and development time. Bandwidth and connectivity are increasingly available and more affordable; industry hardware and encoding standards have been adopted, and staff technical skills are steadily on the rise. The demand for high-speed Internet access is rapidly expanding, and the Federal Communications Commission (FCC) reports, "that the number of consumer users of high-speed Internet access grew 51% from Jan.1, 2001 to June 30, 2001."[2] Each of these advances eases development hurdles in the distance learning process.

The courts are not alone in seizing this opportunity. The percentage of organizations using the Internet for training purposes grew from 3 percent in 1996 to 38 percent in 1999.[3] An International Data Corporation survey predicted that Web-based training would grow by more than 900 percent between 1999 and 2003.[4] Colleges and universities have been at the vanguard of this growth with 8 percent of all undergraduates participating in distance

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[1] *NCES Fast Facts: Adult Learning*. Retrieved August 2, 2002, from National Center for Education Statistics Web site: http://nces.ed.gov/fastfacts/display.asp?id=89

[2] *Satellite Internet Forum Overview*. Retrieved August 2, 2002, from ACT (Advanced Communication Technologies) Conferences Web site: http://www.actconferences.com/sif2002/overview.htm

[3] American Society for Training and Development. 2001. *State of the Industry Report 2001*. Alexandria, VA.

[4] Web Training Explodes. *Business Week Online*, May 22, 2002. Retrieved September 19, 2002, from http://www.businessweek.com/technology/content/0005/dm0522.htm

education at the institution in which they were enrolled in the 1999–2000 academic year.[5] Corporations have estimated that they save 50–70 percent when they replace instructor-led training with electronic content delivery.[6] The question about e-learning or distance learning is no longer "Why?" but rather "Why not?"

A joint study by the American Society for Training and Development and the Masie Center (The Technology and Learning Think Tank) surveyed nearly 30 courses at 16 companies in the United States and over 700 learners to ascertain the relationship between organizational efforts to market and motivate participation in the classes and actual satisfaction with technology as a means of providing the learning.[7] They found that successful "e-learning courses are those that are well advertised and championed, and those for which ample completion time and support are provided during work hours."[8] Managers and supervisors played a strong role as supporters of e-learning courses. If the e-learning has meaning for the organization, it will take on meaning for the employee. If it is tied to promotions, can support workplace objectives and career opportunities, holds value equal to face-to-face courses, and has local technical support, outcomes are predictable. E-learning will succeed.

An article in the United States Distance Learning Association (USDLA) Journal in January 2002 identified important factors that might predict learner engagement in Web-based classes. They asked the questions, "Who comes?" and "For what?" expecting to confirm prior studies' conclusions that learning styles are significant factors for those who choose (or not) Web-based distance learning. "...[I]t was somewhat surprising to discover that a student's predominant learning style did not predict any of the three required indices of student engagement in Web learning. This appears to fly in the face of the plethora of literature and popular belief that students can be classified into a predominant learning style, which, in turn, is closely linked to a particular format of teaching and learning. Instead, the findings and conclusions of this study seem to support the conviction of Draves (2001) that the key criteria for student success may simply be motivation and desire to do well in a Web course."[9]

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[5] National Center for Educational Statistics, 2002. *Special Analysis 2002*. Retrieved September 19, 2002, http://nces.ed.gov/programs/coe/2002/analyses/nontraditional/sa05.asp

[6] *Corporate E-Learning: Exploring a New Frontier*. Volume 2, Issue 10. Retrieved in April 2002 from the Research sections of the W.R. Hambrecht & Co. Web site: http://www.wrhambrecht.com/research/coverage/elearning/ir/ir_explore.html

[7] ASTD, The Masie Center. 2001. E-Learning: "If We Build It, Will They Come?" Executive Summary *American Society for Training and Development and The Masie Center Report*, June 2001. Retrieved October 19, 2002, from http://www.astd.org/virtual_community/research/pdf/844-16110pdf.pdf

[8] Ibid., p. 1.

[9] Moan, Eugene R. and Mary I. Dereshiwsky. Identifying Factors that Predict Student Engagement in Web-based Coursework. *USDLA Journal* 16, no. 1 (January) 2002. Retrieved August 8, 2002, from the Resources: Journal: Past Issues section of the United States Distance Learning Association Web site: http://www.usdla.org/html/journal/JAN02_Issue/index.html. [Moan and Dereshiwsky cite Draves as "Draves, W.A. (2000). LearningontheNet. River Falls, WI: Learning Resources Network." Note: The citation date in the on-line version is out of sync with the date in its text. —ED.]

Looking Back

Our sense of what distance learning is should not ignore the incremental steps and accepted technologies that have become an almost invisible means of delivering education programs. Surely, the first book was a distance learning project, albeit an unintended one. It contained information formatted, dare we say "packaged," in such a way that it could be delivered to a distant audience, a primary element of any distance learning program. It is instructive to remember the opposition to early, revolutionary ways of delivering information. At each step of the way, new programs, hardware, or media have overcome impediments to emerge as useful, functional, and successful. Self-study courses, filmstrips, videotapes, interactive bar-coded laser discs, CD-ROMs, and the Internet all faced opposition to their use as teaching tools, but each found a particular niche where it could be effective. In most cases, this was as a supplement to the face-to-face classroom model.

However, as programs and technologies became more robust, sometimes they were no longer considered supplements to, but substitutes for, face-to-face instruction. They became a threat to the classroom model, and people wondered how a machine, a software program, could replace a live instructor. Where would the humanity be in the learning process? Would we turn out automatons, incapable of reacting to human beings? Some fear this may be prophetic. They would argue that a generation of children already raised in front of a television has learned all the wrong things. Moreover, if that is the case, what is to become of the next generation raised on the Internet, an even more enormous information machine? While some of these questions remain unanswered, it is clear that these distance learning devices—TV, computers, Internet—*will* teach us. What they teach us and how they teach us remain the only issues.

Our recent history demonstrates a ready acceptance, almost a rush, to embrace new technology. Unfortunately, this rush frequently made distance learning seem like the technology flavor-of-the-day. The exuberance of the "dot com" gold rush in the late 1990s and early 2000s infected every aspect of technology, and the e-learning and distance learning segments were no exception. Educational organizations throughout the world invested in the promise of expanding their reach and profiting from distance learning. Their efforts were ineffective, and many have been abandoned. New York University (NYU) invested nearly $25 million in its on-line project, *NYUonline*, only to drop it after two years.[10]

Other well-known universities have closed down or scaled back their on-line offerings, and the gush of venture capital has slowed to a trickle, from $482 million in 2000 to $17 million in the first quarter of 2002. These conspicuous failures should instruct distance learning efforts but not discourage them. [11]

While many academic institutions may not have had rewarding experiences using distance learning, business organizations have been more successful in implementing

[10] Hafner, Katie. 2002. Lessons Learned at Dot-Com U. *New York Times*, May 2, 2002, Technology Section. Retrieved August 5, 2002, from http://www.nytimes.com/2002/05/02/technology/circuits/02DIST.html ?pagewanted=2&ei=1&en=aced54caf86e44aa&ex=1021780620

[11] Ibid.

distance learning and e-learning, because their programs are typically based on more narrowly defined, internal training goals. The audience is well understood in business organizations, and the technology infrastructure is in place. In other words, the three fundamental elements of good curriculum planning are defined and understood—what needs to be taught, who needs to be taught, and how it will be taught. Using these concepts in broader education markets will ensure a more successful implementation of distance learning technologies. Navigating the road to an effective distance learning implementation is like any other endeavor that involves organizational commitment; it should be undertaken carefully and systematically with an eye to all of the available options.

Terms and Technologies

The distance learning and e-learning landscape is littered with technological terms that can be confusing and are often bantered about without a complete understanding of their meanings and implications. Some of the terms are so new that confusion reigns regarding even their correct spelling. Most organizations, nonetheless, agree on some fundamental concepts. The American Society for Training and Development (ASTD) defines distance education, i.e., *distance learning*, as an "Educational situation in which the instructor and students are separated by time, location, or both."[12] The USDLA defines distance learning as "the acquisition of knowledge and skills through mediated information and instruction."[13] The recent introduction and use of the term "e-learning" attests to the growing recognition and proliferation of "e" (electronic) products and services, including an on-line and hard copy magazine entitled *e-learning*[14] and a number of Internet sites using some form of the banner e-learning. The term generally defines any educational program using computer networks for delivery, but, for the purposes of this monograph, the terms "e-learning" and "distance learning" both encompass a broad range of electronically assisted educational delivery mechanisms. The most useful and common include audioconferencing, videoconferencing, and live (synchronous) and on-demand (asynchronous) Web options. All these will be covered in detail in later sections with greater attention paid to those we suggest as providing the greatest number of viable options for court organizations.

The First Steps

Any organization, including a court organization, must prepare itself to implement distance learning programs. Although how to implement and use distance learning technologies will vary from one organization to another, the more it can be recognized and

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[12] Kaplan-Leiserson, Eva, comp. *E-Learning Glossary*. Alexandria, VA: American Society of Training and Development. Retrieved August 5, 2002, from http://www.learningcircuits.org/glossary.html#D

[13] *Research Info and Statistics*. Retrieved August 5, 2002, from the Resources section of the United States Distance Learning Association's Web site: http://www.usdla.org/html/aboutUs/researchInfo.htm

[14] *e-learning Magazine.* Retrieved August 5, 2002, from the e-learning Web site: http://www.elearningmag.com/elearning/issue/issueDetail.jsp?id=1211

defined as a *process*, the more likely it is to succeed. How then to begin? Certainly, one begins with an open mind and a clear eye on the objective.

Ask and answer startup questions. It is best for both you and the organization to start with small steps and the right questions.

(1) Who is the audience?

(2) What do they want to learn?

Traditional methods of surveying the audience may provide an answer. Telephone and e-mails can be effective, as can on-line distribution of questionnaires and direct mail—any or all can be used. Responses can be formal or informal, electronic, or hand-written, but they must be counted and analyzed. Although this method is not guaranteed to determine program topics that will succeed, the chances of success will be increased—audience buy-in is more likely, and a first step for building a constituency has been taken.

An open mind when reviewing audience responses to these questions is critical. What the audience wants may not be what you are prepared to teach, or may not be what you thought would be appropriate topics.

(3) Can you be flexible and develop the curriculum the audience wants?

(4) Will the required faculty be available?

These and other questions must be answered before proceeding. Never promise what you cannot deliver. Better to drop an idea and start in a new direction, especially if it is in a direction suggested by the audience survey.

When the decision to include a topic in an educational program has been made and the audience identified, the next questions need to be asked.

(5) What technology is most appropriate to deliver this program?

(6) What technology does the organization already support?

If distance learning is determined to be a good way to deliver this program, you will need to ask the following.

(7) Do your organization and audience have the ability to use the technology and access the program?

(8) Will training on the technology be required?

(9) Who will do this training?

(10) Will the training be a component of the course?

Experience has shown that new distance learning programs cannot be undertaken successfully without some audience orientation and training. The training might be as simple as pointing out good telephone etiquette or as complex as diagnosing a network firewall. Anticipating, understanding, and addressing these issues in the orientation and training will make content preparation and delivery of the program easier. Participants will be more comfortable, and a successful program more likely.

Tell participants what they need to know. While this may seem obvious, it often is overlooked in the process of program development. Define the technological skills needed to be a successful participant in the program. If possible, offer to assist those who are unsure of their skills. Provide clear, concisely written, and preferably illustrated instructions. Having this information available in multiple formats such as formatted e-mail, fax sheet, and Web site pages is critical. Staff time and expertise will be required to create, format, and deliver this information. It must be available well in advance of the program delivery dates, and a ***human*** must be responsible for following up on any unanswered questions or misunderstood directions. The human element is critical. Someone must be responsible for contacting the participants-to-be in a timely and informative way. Failure to provide this component of the program is likely to undermine subsequent distance learning efforts. A customer lost for one program is not likely to return for a repeat failure. The goal should be to make the technology as transparent as possible. Success with the technology breeds confidence and permits participants to focus on the content rather than the mode of delivery. Everyone knows what it feels like to be *lost* in the technology, fumbling to use it properly. Participants are not likely to take part in future distance learning classes after such an experience. To improve the chances for success, test the process ahead of time on yourself and a few volunteers. Observe and learn what the common mistakes are; then, prepare participants so they can avoid them.

Anticipating and assisting with technology problems the participants may experience goes hand in hand with defining and understanding the staff skills and technological capabilities required for program delivery. What baseline skills can be expected of the curriculum or content developers, and what specialized skills will the members of the technology department need? A skills assessment instrument can be used to obtain an overview of the staff members' existing skills. Such an assessment should be general in nature and focus on basic computer software and hardware skills. Every effort should be made to minimize any perceived threat in the use of a skills assessment test. Understanding the current level of the staff's skills forms the basis for staff training in support of a distance learning or e-learning environment. It can also support the need for ongoing skills development for staff members through a continuing distance learning program.

Find out what staff members already know. The following is a sample of a basic technology skills assessment survey that might be used for this purpose.

Basic Technology Skills Assessment

Skill	None	Minimal	Familiar	Competent	Expert
Microsoft Windows					
How would you characterize your skill with Windows?					
Can you do the following?	**Yes**	**No**			
Create a shortcut to a file or folder.					
Find a file whose whereabouts are unknown.					
View file and folder properties.					
Use clipboard, edit, and paste capabilities.					
Use the "Open With" command.					
Shift between open programs without using the task bar.					
Capture the screen as an image.					
Skill	**None**	**Minimal**	**Familiar**	**Competent**	**Expert**
Microsoft Word					
How would you characterize your skill with Word?					
Can you do the following?	**Yes**	**No**			
Convert a Word document to a Rich Text document.					
Create and format a table in a Word document.					
Import an image file into a Word document.					
Lay out text and images together.					
Group or ungroup objects.					
Insert a hyperlink.					
Create headers or footers in a Word document.					
Use the "Track Changes" function in Word.					
Use the "Mail Merge" function in Word.					
Create and format columns.					
Modify margins and page layout.					
Use bullets and outline notation.					
Put lists of information in order.					
Skill	**None**	**Minimal**	**Familiar**	**Competent**	**Expert**
Microsoft PowerPoint					
How would you characterize your skill with PowerPoint?					
Can you do the following?	**Yes**	**No**			
Format bullets and text.					
Change background colors.					
Insert a text block.					
Insert graphics, audio and video files.					
Add animation to slides.					
Insert a hyperlink.					
Save as GIF files.					
Import slides from one presentation to another.					
Import old presentations into a new PowerPoint presentation.					
Edit the Master Slide.					
Align graphics and text.					
Lighten or darken an image.					
Group or ungroup objects.					
Assign text to drawing objects.					
Skill	**None**	**Minimal**	**Familiar**	**Competent**	**Expert**
Internet					
How would you characterize your skill with the Internet?					
Can you do the following?	**Yes**	**No**			
Download an image from the internet.					
Do an advanced search.					
Find and install browser plug-ins.					

Survey continues on next page.

Survey continued from previous page.

Skill	None	Minimal	Familiar	Competent	Expert
PhotoEditor – PhotoDraw – PhotoShop					
How would you characterize your skill with graphics editing software?					
Can you do the following?	**Yes**	**No**			
Resize images.					
Save as different file formats.					
Use compression schemes for file formats.					
Adjust contrast/balance.					
Create transparent backgrounds.					
Group images and text.					

Technological skills that are unavailable in the surveyed group must be found in other departments, or taught to interested and qualified staff. Without technology skills or partners within the organization, it is impossible to develop successful distance learning programs.

Where in the organization can the skills or partners be found? The skills of people in the Information Technology (IT) or the Management Information System (MIS) Departments are generally those needed to support successful distance learning programs. People who work successfully in either of those departments should have the required competency in computer software and hardware, the ability to configure and connect electronic systems, and an understanding of the relationship between media development and formatting as it applies to electronic networks. The capacity and configuration of the organizational network will be fundamental in creating distance learning capabilities. Early and frequent discussions with the IT or MIS departments about the technology needs for distance learning will open the lines of communication and begin the process of building the relationship that permits collaboration on distance learning projects.

How should the distance learning discussion be framed? Obviously, such a discussion must start with the premise that the organization is committed to the delivery of distance learning programs using the networks and capabilities that exist within the organization. Management must demonstrate support for this premise. Assuming such support exists, a subsequent dialogue between the judicial branch educators interested in having a distance learning program and people in the IT or MIS departments should ensue. Questions for that discussion include the following: How much MIS or IT time and what capabilities are needed to support a distance learning program? Do those departments have staff members available who would logically support this effort? How much time would those staff members be able to contribute to such an effort? What types of programs are being considered? Do the organization's networks have bandwidth capabilities that will support the programs? Has that bandwidth requirement been quantified? Can MIS or IT staff help in defining these requirements? The answers to these questions may not be obvious at the beginning of the dialogue, but the initiation of the discussion is the important step. Insist on it early in the development process. Problems resolved during this dialogue will build the foundation for the continuing relationship necessary throughout the process.

Building the Coalition

The time required to initiate and work through a discussion among the judicial branch educators and the IT and/or MIS departments should not be underestimated. Each of the decision points must be worked through with the appropriate decision-makers. Their understanding and buy-in will be required in order to develop the programs. Resistance often abounds, and, while internal marketing is not the focus of distance learning program development, it is a necessary component. Although the ultimate customers for distance learning and e-learning may not be in the departments that will support the technology, developing the capabilities of the IT or MIS staff members will nonetheless serve those departments very well. This can be a strong selling point for the program. What IT director would not be interested in a program that provides her or him with a powerful tool to train staff members on new software, hardware, or network configurations? Similarly, can the human resources department use distance learning opportunities to train new staff, notify staff of changes in tax reporting requirements, or implement new leave policies? Understanding the usefulness of the tool wins converts for both the internal as well as the external customers. The more useful this capacity is seen to be, and the more internal advocates it has, the more likely it is that the entire effort will succeed.

Make the case both internally and externally, and the distance learning "sell" is far more likely to succeed. Every division and department is a potential customer, and none should be overlooked in the process of implementing a distance learning or e-learning program. Creating strategic alliances within the organization is critical to success.

External partners can be equally valuable in the distance learning equation. Often specialized skills, needed only infrequently, can be acquired through contracts for specific projects. A Java script programmer needed to create a Web component can be contracted on a project basis. This arrangement creates an external pool of talent that can be called upon for projects on an *as needed* basis. Local resources may include facilities, hardware, personnel, and networks that can be part of both the creation and delivery of distance learning programs.

While each of the preceding components is important, ***one of the most critical elements in developing a distance learning capacity is the support and commitment of senior management.*** Working with individual departments, such as IT and MIS, will always be subject to review and scrutiny by management. Lacking management's support, no sustainable organization-wide distance learning capacity can be built. How then to solicit their support? The first principle is to understand the goal of the project and be able to articulate the steps to reach it. This does not mean understanding all the minute details of the technology, networks, hardware, and software. It does mean understanding the fundamental concepts of distance learning technologies and how they converge with the basics of the organization's program development in general—the previously defined *who*, *what*, and *how* of the educational program.

Some failure is inevitable. With management's support should come a commitment that small failures will not doom the effort. Everyone should understand that risk taking and

failure are part of the process. Without failure, there will be no progress, and no success, but it is best to avoid failures on politically charged efforts with high visibility for the organization and the audience. Experiment with smaller efforts first, perhaps on an internal audience, before scheduling the high-profile program that will be scrutinized by management, learners, board members, and other important constituents. Learn what works and what does not while the stakes are low, not when the continued existence of the program depends on the smoothest performance.

Be clear about the definition of success. If *profit* defines success, make sure everyone has the same understanding of how profitability will be determined. In the court environment, success is more likely to be determined by the positive cost-benefit ratio of a better-trained employee. How will this measurement be determined? Can productivity be increased by using distance learning or e-learning education and training programs? The questions are not easy to answer, but posing them fosters an understanding of the purpose and expectations of distance learning programs.

The next chapter gives an overview of many of the major types of distance learning on the market today. The focus is specifically on modes of distance learning with which we have found some success and for which we can attest to the problems and the possibilities for the courts. This italicized anecdote and others throughout the monograph shed light on distance learning in the court environment.

An Alien's Tale, or The Judge Who Fell to Earth

A million years ago, well, maybe more, in the days before e-mail, on-line chat, eBay, net surfing, and closing arguments presented in PowerPoint, a young, technically challenged lawyer in West Palm Beach, Florida, was looking for a way to organize his office, establish standardized monthly billing procedures, increase income, and decrease overhead.

As fate would have it, this young lawyer had done something dangerous. He had actually read a few articles on emerging innovations in office management. He had read something about a thing called a personal computer. The prophets of business and technology were touting this new thing as something that had a solution for everyone's problems. It promised automated tasks without the high cost of labor. It was a quick, easy, cheap fix for all that ails a person. The search began. After studying the market, a selection was made.

Well, I could go on and on about how the selection was made, why it was made, and all the details of what happened. Suffice it to say that this young lawyer was one of three people in the English-speaking world who decided that, of the different formats offered, the one offered by IBM, with some operating system called DOS, was not where the future was. He along with the other two people decided that the operating system of the future was something called CP/M, so a purchase was made. Within minutes, the company that sold the computer closed down its operation and stopped all support. The lawyer was left with a

$10,000 investment, no support, and 10,000,000 pages of instruction manuals. Not being one to give up easily, especially where $10,000 was involved, he dug in, read all the manuals, studied the instructions, pushed buttons, typed Ctrl/any key you can imagine, and made sixteen zillion mistakes before the computer did something. It whirred, it hummed, it clanked and screamed aloud, and it PRINTED SOMETHING, albeit onto a printer that had to be set up in a separate building in the next county in order to comply with local noise ordinances, but it PRINTED. He was hooked.

The dinosaurs and CP/M became extinct, and the lawyer became a judge. After he was a judge for a while, someone somewhere got the idea that maybe the judge could actually teach other judges at a Continuing Judicial Education Seminar. He was trained. He learned about transparencies; the machine called an overhead projector became part of his vocabulary. He was given an opportunity to present materials at a conference. He prepared, he studied, he rehearsed, and he flopped. The material was good, the citations correct, but the transparencies stunk. He had simply copied some typewritten pages onto them. No one could read them, they were uninteresting, and they did not reinforce and support the material. They were too crowded. It did not matter that he had graduated summa cum laude from undergraduate school. It was irrelevant that he had earned a great LSAT score. No one cared that he had published many articles showcasing his great grasp of legal concepts. The message was not received by the would-be learners. He swore, "Never again."

He fell back to his old love, the computer. He learned how to prepare great transparencies—full color, complete with graphics and bold lettering. They grabbed the attention of participants. They assisted in helping learners to remember and learn. He started getting great reviews. The day came when he saw a PowerPoint presentation. The teaching and technology escalated. Transitions were added. Bulleted lists, animation, sound, and multimedia came to judicial education. The learners learned. They sat in their chairs in the fancy conference facilities and soaked up knowledge presented in an entertaining, attention grabbing, high-tech manner.

The next step was inevitable. It became a reality when the sun, the stars, the moons all were in perfect alignment, and somehow this now technologically ambitious judge was invited to attend a joint program of the National Center for State Courts and the National Judicial College. The program was intended to train judicial educators in something called distance learning.

The judge went to this program. He learned. He was inspired. The future of judicial education will be grand. Every judge will have the training he or she needs at his or her fingertips—content on-demand. Educational utopia had been achieved. The judicial masses will be excited, motivated, and committed.

He returned home. The judge went to the next conference and planning session for his state's judicial education program. He waited for the chance to make his pitch for his state to embrace this training method as another way to improve judges' knowledge and skill.

He was surprised. He was shocked. The reception was not one of excitement, but of fear. Fear of technology. Fear of loss of quality. Fear of losing nice trips to nice hotels for education meetings. Fear of actually having to turn on the computers sitting on their desks took hold.

Days and weeks passed, and finally the next meeting of judges took place. It was time to confront the fears and problems. It was time to get permission to proceed with such an educational project for his state. The problem was HOW TO GET THEM TO BUY INTO IT?

The judge, the author of this anecdote, identified five tendencies judges have that needed to be addressed before this method of information delivery and training would be accepted.

1. ***Fear of Technology.*** *Judges are not of the cyber, MTV, on-line, electronic information era. They are dinosaurs. They went to law school when libraries had books that you actually had to go around collecting, reading, and using. They were in school in the days when the tables in the library were covered with Volumes of F.2d, F. Supp and a few Gilbert outlines, not the study tables of today's high tech generation, covered with laptops, wireless modems, and trackballs.*

I addressed this by setting up a demonstration. This was a select demonstration on a one-on-one basis. We visited some course sites that I had access to. I showed them in a hands-on manner what was involved and how easy it would be. It helped.

2. ***Desire for books or other materials to keep as reference items.*** *I was able to show that even more content is available on-line. Articles, outlines, graphics, forms, and handouts could all be easily downloaded and accessed and were readily available.*

3. ***Fear of loss of contact with other judges.*** *Seminars give judges a needed opportunity to network and share. However, the opportunity is of limited duration and generally does not continue on a regular basis. Distance learning and Internet-type communication tools provide a way to continue this sharing experience long beyond the time of a normal seminar.*

4. ***Fear of loss of nice conferences when the legislature cuts funding.*** *There were a few who thought that those in the legislature, who approve funding for this third branch of government, somehow did not know that computers, distance learning, or the Internet exist. They also somehow thought that if judges did not participate in distance learning, the funding for nice conferences would be safe. This is simply not realistic. If budgets are cut, it is going to have a lot more to do with other economic and political factors. On the other hand, distance learning can be used as a tool to help maintain current levels of funding. The legislature, to the extent that they care about these educational issues, must be shown that distance learning is not a substitute for, but a supplement to, live education programs. There is value in personal, real time contact. Certainly, no one is suggesting that a well-educated and well-trained judiciary will flourish without the traditional, local, real time education. There is value in those personal exchanges that cannot be matched in a "distance"*

environment. However, distance learning can add, supplement, and increase the level of training and education available to the judiciary. Imagine a course that continues for months after a live meeting. Judges can work on more intense, detailed, and advanced materials over a period of time in a relaxed manner. Ideas that were exchanged in real time at the conference can be augmented and supplemented later in a distance learning environment. Real time conferences will not disappear because of distance learning. The quality of our education and training can only be enhanced. This is the message that judges need to hear and understand.

5. The last problem in getting judges to buy into this type of learning is simply the ***"I am already too busy and do not need something new to complicate my existence"*** *syndrome. This can be overcome by a good dose of the "This will not complicate your life but will make it easier" message. Education can be available on demand when needed. Education about how distance learning can ease the burden of work will help sell the concept.*

I have now approached many of the judges in my state who are involved in the delivery of training to our state judges. Initial opposition has given way to a cautious approach, "Well, let's try it a bit and see how it goes." We will be presenting some courses soon in a distance learning environment. It may not be a complete curriculum, but it is a start. I know this will be a part of our future. I am now optimistic that my state will not let it slide by. Distance learning will soon be coming to a laptop near you.

Author: Hon. Peter Evans, West Palm Beach, Florida

Chapter 2

Eight Distance Learning Technologies

The Labyrinthine Challenge of Distance Learning

Ludwig Boltzmann [Einstein contemporary, first to apply probability theory to physics] was very much on my mind as I contemplated the lessons I learned in setting up our distance learning projects at the West Virginia Supreme Court. Consider, if you will, the list of things that must go right—completely right—for a video-conferencing training event to accomplish its mission to make the students smarter—about the subject you wish to teach—than they were before the session. Here is the short list.

At least three major machines (and thousands of dependant submachines) must act in a predictable manner, making thousands of tiny decisions a second. The operators of the machines must be alert, knowledgeable, and not prone to panic. The instructors must be adept in using the medium, and aware of its advantages and disadvantages. The materials to be taught must be effective, up-to-date, and distributed. The students must be motivated, brought to the broadcast, and accommodated.

As you can see, this is Murphy's (of Murphy's Law) happy hunting ground.

Consider a recent project completed by my team. The assignment involved teaching judges the latest developments in admissibility of expert testimony. Five sites in five states were involved. Sixty judges in various sites in our state sat, in mental conditions ranging from enthusiastic to glacial reluctance, before the cathode altar of techno-enlightenment.

All was in readiness—tests had been run with professional dispatch, and we flipped the metaphorical switch, eagerly anticipating the righteous applause of the newly enlightened cyber-judiciary.

Then it all went to Hell.

First came the technical problems. The connections wouldn't, the bridge didn't, the audio wasn't, and the contacts weren't. My dauntless engineer, Fletch Adkins, swung into action, while I threatened the network provider with apocalyptic consequences. All was soon restored. A little jerky, a little laggy, but serviceable.

Next on the pharaonic plague list was the plague of remote operators. Despite training and a series of test runs beforehand, at least half of the receiving sites were sitting deaf due to an inability to adjust a volume control, or enjoying Hendrix-esque levels of audio feedback as a result of putting their microphones directly in front of the speakers.

Finally, all was solved from the merely technical point of view. Amid snickers from some of the more technophobic jurists, we could see, converse, transmit, and receive the packets of ambrosial education from the font of technology.

In addition, the content stunk.

The presentation was awful—largely useless to the jurists, and they knew it. We were getting excellent reception of crud. Of course, this being the age of communication, we sometimes forget that we must have something worthwhile to say.

So, on the balance, is it worth the money, the stress, and the occasional pratfall?

You bet your life.

You see, in that one conference, the judges saw what we are capable of doing. They went away convinced that the future had arrived and, once the bugs were extinguished, that the tool would be immensely useful. They were already generating ideas (a process we facilitated after the presentation) and anticipating the legal issues involved. Our educational staff began ginning up ideas for future presentations. Our system went, in one day, from a hypothetical curiosity to part of the future's mental furniture—a necessity and an enzyme for educational creativity.

We also were able to shake out the bugs in our technical and human operating systems. The next conference went off without a hitch—gliding into the future of education like a well-educated swan on the bright pond of connectivity.

The technology made something very important happen. We have saved over $25 million in transport costs since we started using this system. In a state this size, that buys a lot of cyber-doohickeys, digital-whatnots, or ATM switches. And you will get smarter, too. And not just from what appears on the screen.

Sometimes you get smarter when it does not.

Author: Kit Thornton, Esq., Deputy Director for Technology, West Virginia Supreme Court of Appeals

In recent years, the technologies available for distance learning programs have become more diverse and more sophisticated. Each month finds improved versions of technology available or entirely new software and hardware useful for distance learning. Any organization considering distance learning has an array of options to consider as tools to reach its audience. The decision to use a particular technology will be unique to each organization and the audience it is trying to reach. All of the available options should be considered, even some of the older technologies, which can often be used in tandem with other, newer modes of delivery. The following section reviews options courts can and do use today. Each method has strengths and weaknesses. Distance learning technologies continually strive to balance faculty-participant interaction, substantive learning, and

availability and convenience in the e-learning environment. Understanding the options, skills, and technology supporting distance learning programs is the first step in making informed decisions about them. Following is an overview and evaluation of some distance learning technologies that can be useful to the courts. It is not an exhaustive list, but rather one based on experience with the technologies, research, and collective wisdom of other users.

Teleconferencing: Telephone Conferencing (Audio Only)

Teleconferencing is simply using telephone conferencing to connect people in order to create an interactive training environment. Teleconference training has been used for many years by the American Bar Association for Continuing Legal Education[15] and by others. The training can be supplemented with materials that are posted on the Internet, pre-mailed, or faxed to participants. To join the training, participants must know the teleconference identification code and password. This allows the organization that is providing the training to control access.

Teleconferences can be stand-alone training—one-hour program updates on subjects already generally understood by the participants. They are also useful for structured responses and team building that supplements other types of training. For example, the University of Phoenix uses teleconference training to promote class discussion in addition to their Internet-based training. Audio from the session can easily be recorded and provided to students on audiocassette tape or CD, or via the Internet. Participants missing the teleconference can review this record, and transcribed copies can provide a printed record of the conversation. Teleconferencing can also be used, in conjunction with delivery mechanisms such as NetMeeting and other on-line management programs, to enhance an educational program. This many-to-many communication tool can also be used as part of a satellite broadcast, which is most frequently a one-to-many delivery mode. Participants in the satellite broadcast can ask questions and talk to one another over the teleconference connection, a capability that does not exist in the satellite component of the program.

Teleconferencing is a reliable and affordable technology that is available to virtually everyone. Current telephone technology permits the *hosting* organization to set up the conference call, provide numeric password codes, and open the *bridge* without outside assistance. These capabilities offer much greater control over the timing and access to teleconferences, making the technology more useful where speed, cost, and reliability are key delivery factors. Teleconferencing has its own set of challenges. Table 1 identifies the perceptions and realities related to teleconferencing.

[15] *ABA Connection*. Retrieved August 5, 2002, from the American Bar Association, Center for Continuing Legal Education Web site: http://www.abanet.org/cle/connection.html

Table 1
Teleconferencing (Telephone, Audio Only): Perceptions and Reality

Perception	Reality
Everyone knows how to use the telephone.	Yes, but…they do not necessarily know how to use the telephone as a teleconference participant. (See below.)
Everyone has access to a phone.	Yes, but…is it in a space that has enough privacy to conduct a long conversation without constant interruptions? Is the phone isolated from loud noises and hallway traffic?
All phones are equal.	Not true. Is it a hands-free phone? Does the speaker have volume adjustment? Does it have mute capability? Does the phone system time-out a call if it is put on hold for a few minutes?
Teleconferencing is a very affordable tool.	It can be when compared to other technologies. Line charges of 13 cents per minute (The National Center for State Courts' negotiated rate, based on 9,000 minutes a month usage) for 15 participants in a 90-minute program is $175. That is affordable.

Bottom Line: Teleconferencing

Teleconferencing is a reliable and efficient tool that should be a part of every organization's delivery mechanisms. Teleconferencing can be used as a stand-alone tool, but it also is frequently included as a component of other distance learning programs to increase their effectiveness. It is often overlooked, however, for more glitzy technologies. Organizations often misuse teleconferencing due to assumptions about the audience and the technology. One frequent misuse is the failure to have concise information about the format for a teleconferencing call available for all potential participants. The corollary to this statement is the assumption that everyone will read and follow these directions if they are posted in a timely and easily accessible format. Thoughtful planning can avoid some of the most frequent problems encountered in a teleconference. No planning can circumvent uncivil participants who will neither read nor follow any directions.

Resource Web Sites and Guidebooks

Perhaps the easiest and quickest distance learning system that can be developed is a resource Web site. An excellent example of such a Web site has been created by the Judicial Studies Board for England and Wales.[16] This Web site contains all manner of materials including benchbooks, lectures, committee minutes, and handbooks. These types of sites are

[16] *Judicial Studies Board*. Retrieved August 5, 2002, from the Web site: http://www.jsboard.co.uk

usually easy to create since much of the material already exists and is stored in word processing documents that can either be posted in original format for downloading or converted to Internet formats such as HTML (hypertext markup language) or PDF (portable document format) for on-line reading.

The key to this technology is access and presentation. Some people like to search for information using text queries. Other people prefer the Yahoo[17] or Google[18] catalog approach that organizes information into broad general categories. This approach can be made very precise and sophisticated with on-line library card catalog and information retrieval systems such as the one at the National Center for State Courts, Knowledge Information Systems Division.[19] Resource Web sites can include media files such as audio and video, but great care should be given when making a decision to use media materials. Media files tend to be large and are challenging to download when the audience has only 56K or slower connections. Recent advances in compression capabilities facilitate the creation of much smaller media files, but they often do so at great sacrifices to quality. The resulting audio and video may be difficult to see or hear. It is best to determine the participants' technology capabilities before using media files as part of a resource Web site. Media-rich resource Web sites can easily be copied to CD-ROM and delivered by mail to participants lacking high-speed networks and fast computers. DVD burners are becoming more affordable, and DVD players are typically part of the hardware of newer, faster computers. These developments make resource Web sites an option both on-line and by mail.

Bottom Line: Resource Web Sites and Guidebooks

In the past, Web content development required computer language programming skills, in addition to writing and graphics capabilities. The availability of Web authoring tools such as GoLive,[20] DreamWeaver,[21] Director,[22] PageMill,[23] FrontPage,[24] and HotDog[25] make Web page creation possible in most computer environments. Complexity, professional appearance, and navigability all remain issues that any organization must face when creating a Web course, but these obstacles are not as formidable as in the past. Using these software tools, most court organizations can create usable Web content for educational purposes.

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[17] *Yahoo.* Retrieved August 7, 2002, from the Web site: http://www.yahoo.com
[18] *Google.* Retrieved August 7, 2002, from the Web site: http://www.google.com
[19] *Welcome to Knowledge and Information Services.* Retrieved August 7, 2002, from the NCSC Knowledge Information Systems Division Web site: http://www.ncsconline.org/D_KIS/index.html
[20] *GoLive.* Retrieved August 7, 2002, from the Web site: http://www.adobe.com/products/golive
[21] *DreamWeaver.* Retrieved August 7, 2002, from the Web site: http://www.macromedia.com/software/dreamweaver
[22] *Director.* Retrieved August 7, 2002, from the Web site: http://www.macromedia.com/software/director
[23] *PageMill.* Retrieved August 7, 2002, from the Web site: http://www.adobe.com/products/pagemill
[24] *FrontPage.* Retrieved August 7, 2002, from the Web site: http://www.microsoft.com/frontpage
[25] *HotDog.* Retrieved August 7, 2002, from the Web site: http://www.sausage.com

Satellite Videoconferencing

Videoconferencing systems have become user-friendly and affordable in recent years. They allow courts, administrative offices of the courts (AOCs), or court organizations to connect with each other in real time for a specified period of time around common topics. Videoconferences can be done with satellite systems, using ISDN lines or through IP (Internet Protocols). **Satellite videoconferences** are typically *one-to-many* programs. These are high-quality, one-way deliveries of program information that do not permit interaction with the faculty over the satellite system. Many satellite videoconference programs use separate audio, fax, or computer connections that permit the receiving audience to interact or question the faculty. Most often, this interaction takes the form of an audioconference call linking all the receiving sites with the presenting site. Using this audio connection, interaction with the faculty can be dynamic, i.e., in real time. Many national organizations such as the Federal Judicial Center, Department of Justice, and the National Institute of Corrections use this method of delivering information to a national and international audience. As with any method of delivery, the complexity of using even two trusted technologies in tandem is more challenging than using just one. The reliability of the phone system, the satellite used for the link, the competence of the technicians, and just as importantly, the capabilities of the faculty and receiving site facilitators are all critical factors in the success of satellite videoconferences.

In discussing videoconferencing, the terms used for "sites" can become confusing, and a short explanation should be helpful. A videoconferencing "site" is the physical place where the video and audio signals are seen and heard by people participating in the videoconference. This can be achieved through the use of LCD (Liquid Crystal Display) projection systems or TV monitors of varying sizes. During satellite videoconferences there is typically a single "sending" or "originating" site from which the presentation or program is sent to the "receiving" sites. Because satellite videoconferencing is normally a one-way communication, these terms easily define the difference between those "presenting" the program and those "receiving" it. The use of ISDN and IP videoconferencing, however, permits full audio and video communication between all of the sites "participating" in the videoconference, blurring the distinctions between the "sending" and "receiving" sites. In this situation, the "sending" or "originating" site can change dynamically during the course of the videoconference, permitting different sites to "present" materials during the videoconference. However, sites cannot communicate simultaneously. Only one site can be *heard* at a time, although all sites may be visible with the use of split screen technology. To confuse matters more, a third-party vendor might be used to connect all of the sites, acting as the bridging service for the program, but remaining almost invisible to the "participating" sites. For the purposes of this discussion, these terms will be used in the following way.

> *Host site:* The site responsible for the primary educational content of the videoconference.

Receiving site: One of potentially many sites, where learners gather to participate in the program. Through the use of various technologies, the "receiving" site may nonetheless at times be the *source* of communication.

Among the videoconferencing technologies, satellites deliver unparalleled video and audio quality over an extremely secure delivery system. It is the only system whose video and audio signals compare with those of broadcast television. In order to achieve this quality, satellite systems typically have broadcast-quality cameras, routers, switches, and audio systems.

Bottom Line: Satellite Videoconferencing

A substantial investment is required to deliver satellite videoconferences. This investment is necessary for purchasing satellite uplink capability and obtaining a license to uplink satellite signals. In addition to the dish and hardware required to support satellite program delivery, trained technicians are needed for video production and equipment maintenance. The receiving sites must have satellite downlink capability to receive an audio or video signal. Building a satellite uplink is prohibitively expensive, but existing uplink and downlink satellite capabilities can often be found in community colleges, local government offices, public access TV facilities, public school systems, and federal agencies. While these sites may be available for shared use, they will likely require expenses for the satellite time, technician salaries, and production equipment. Creating a strategic alliance with one of these organizations can create distance learning opportunities unavailable with existing court capabilities. Still, primary user schedules will take precedence, and programs must be planned well in advance in order to avoid schedule conflicts.

ISDN Videoconferencing

Some videoconference systems, such as that of the National Center for State Courts, use ISDN (Integrated Services Digital Network) technology. This capability is often referred to as VTC (videoteleconferencing), because it uses telephone systems to carry the signal required for the technology. Hardware and software codecs (*co*mpression/*dec*ompression devices that encode audio and video signals) fall under a set of standards set by the ITU (International Telecommunications Union).[26] Standards for ISDN videoconferencing are known as the H.320 standards.[27] Almost all equipment currently being manufactured meets these standards and is therefore capable of communicating with one another. According to an

[26] *International Telecommunications Union (ITU).* Retrieved August 7, 2002, from the Web site: http://www.itu.int/home/index.html

[27] *Overview of the H.320 Video Conferencing Protocol.* Retrieved August 7, 2002, from the Worcester Polytechnic Institute, Electrical and Computer Engineering Department Web site: http://www.ece.wpi.edu/courses/ee535/hwk97/hwk4cd97/bigles/sec01.html

article by Lisa Pierce in *Network World*, March 2002,[28] nearly two-thirds of the codec appliances shipped in 2001 also met the standards for IP videoconferencing known as H.323 and H.324.[29] IP videoconferencing will be explained later, but it is important to note that these hybrid systems allow the user to connect in both an ISDN videoconference as well as an IP videoconference. An in-depth cost comparison of ISDN and IP videoconferencing can be found on-line.[30]

VTCs can be *point-to-point*, the term designated for a program between two sites; or they can be *multipoint*, the term applied to a program with more than two sites. A point-to-point VTC is the easiest and least expensive type of VTC. A multipoint VTC allows participation from multiple sites and requires a different hardware and software configuration. This system permits audio and video communications among all the sites participating in the VTC, a many-to-many technology. Some VTC systems permit unlimited site access, while others limit attending sites to a specific number. The type of VTC equipment used will technically limit the number of sites that can be connected in a multipoint videoteleconference. Experience has also demonstrated that there are practical limitations to the number of sites that can successfully participate in a multipoint VTC. This limitation is caused by the complexity of interacting remotely using a system that has inherent audio or video signal-delay. This delay can be troublesome when the participants and faculty are not prepared and talk "on-top" of one another. Experienced faculty can mediate this problem, and most audiences adjust as they recognize that the interaction is not instantaneous. The voice-activation feature of many ISDN videoteleconferencing systems can contribute to the difficulty of dynamic interactions with a large number of sites. This feature blocks the audio from other sites when audio is activated, even if the audio is an unintentional cough or the dropping of a textbook next to the microphone. These difficulties can be overcome when receiving site facilitators, technical facilitators, and technology are all carefully integrated. Because of these factors, and our experience at the National Center for State Courts delivering distance education using ISDN systems, we limit receiving sites to eight.

The technology for ISDN videoteleconferencing is complex, but current systems are reliable, and, thanks to some standardization efforts by the ITU[31] and others, the VTC systems of different manufacturers are usually compatible. The expanding use of ISDN video-conferencing has led to the development of inexpensive systems that can be purchased in the $2,500–$4,000 range. ISDN line installation (384 kbps) and usage is available from most national carriers for $200–$300 per month. Typical line charges for national ISDN usage range from $40 to $75 per hour. International capabilities vary from country to country with the service unavailable in many third world nations.

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[28] Pierce, Lisa. 2002. Eye on the Carriers: Picture Brightening for Videoconference Services. *Network World*, March 18, 2002. Retrieved August 7, 2002, from the Network World Fusion Web site: http://www.nwfusion.com/columnists/2002/0318eye.html

[29] *Overview of the H.320 Video Conferencing Protocol.*

[30] Perey, Christine. *IP-ISDN Videoconferencing: Total Cost of Ownership Comparison.* Retrieved August 7, 2002, from the White Papers portion of the v2oIP section on the Radvision Web site: www.radvision.com/display.php3?file=../papers/IP-ISDN_VC_TCO_Comparison.html&from=/c_v2oip/c_papers.php3&title=IP-ISDN+Videoconferencing%3Cbr%3ETotal+Cost+of+Ownership+Comparison&name=IP-ISDN_VC_TCO_Comparison.html

[31] *International Telecommunications Union (ITU).*

Many VTC systems have only point-to-point capability because they lack the more sophisticated and expensive hardware or software. A robust and competitive group of vendors is available to provide a bridging service for multipoint VTCs. These vendors should be selected carefully, and detailed discussions should clarify organizational needs. Only experience will tell if the vendor has the technology, expertise, and customer service to facilitate an organization's particular videoconferencing needs. A careful evaluation of the distance learning goals and a clear discussion of the services needed to accomplish these goals lay the foundation for successful videoconferencing programs. Experience has shown that most vendors have excellent technical skills but lack the customer service and communication expertise essential to successful distance learning programs.

The National Center for State Courts uses an ISDN multipoint videoteleconferencing system with an external bridge service provider. We recommend that each site have a two- or three-line connection (4- or 6-channel operation) for the VTC in order to have adequate bandwidth for audio and video. One-line (2-channel, 256 kbps) connections can be used with good audio, but the quality of the video will be inferior to that of a two- or three-line connection. Three-line (6-channel, 384 kbps) connections are required for full-motion video and are highly recommended for participation. Many technical resources are available on the Web for a full discussion of ISDN technology, including a good primer for understanding ISDN.[32]

Suggested ISDN Videoconference Preparations

1. **All sites should *verify* the ISDN line connections to be used for the videotele-conference.** This process ensures that the hardware and software of all receiving sites are compatible with one another as well as with the vendor's bridging system, if one is being used. This process requires a test dial-up connection between the receiving site and the VTC provider. Arrangements for this system test should be facilitated by the host site and involve no fees. ***This verification test should be a requirement to participate in any video-conference.*** It should be scheduled at least three days prior to the program to permit system adjustments as needed. This test usually takes 10–15 minutes and should include a full audio test (levels and controls), as well as an evaluation of the video transfer rates and quality. Once this system test has been completed, no additional tests are necessary for future VTC connections between the receiving sites.

2. **Technical support personnel** should be available for the videoteleconference program as well as any test and practice sessions. The technical support person should be in contact with the program director and have access to all agendas prior to the program date.

3. **The capability to mute and unmute** the microphone system connected to the VTC equipment should be understood and tested. Sites are often asked to mute and unmute their microphones during a program. Volume controls for the microphone should be

[32] *ISDN Basics*. Retrieved August 7, 2002, from the Synapse Web site: www.isdnshop.com/isdn-basics.html

adjusted and tested. If a single, fixed microphone is used, speakers should be prepared to move to the microphone when addressing the VTC participants. If lavaliere microphones are being used, new batteries should be installed and spare batteries available. Whenever possible, backup microphones should be available for emergency use.

4. **Someone familiar with the camera attached to the VTC system should assume operational responsibility.** If the camera system has remote pan, tilt, and zoom functions, the technical director or designee should be prepared to zoom and focus the camera on the appropriate speaker.

   Spokespersons for the participating group should be identified and positioned in the room where camera and microphone controls will allow them to be clearly seen and heard while presenting information during the VTC. The technical director should also be prepared to zoom and focus on visual materials (whiteboard, easel pads, and others) that will be used during the presentation. This requires planning and coordination between the technical facilitator and the program facilitator.

5. **A sign should be used** to identify each receiving site. This sign should be large, neatly lettered, and placed in clearly visible camera range. During multisite VTCs, this sign aids in the quick identification of individual sites and facilitates dialogue during exchanges such as question and answer sessions.

6. **A telephone should be available** in the room or in a connected room. This phone can be used to provide a line of communication separate from the VTC line. In a technical emergency, this phone serves as a link for troubleshooting problems and resolving technical issues without interruption to the videoteleconference program. If possible, this phone should be positioned where it is not visible to the camera and not audible from the microphone used for the program participants. The phone number should be available to both the host site and the bridging service provider if one is used. The technical trouble-line phone numbers for both the bridge service provider and the host site should be available to each receiving site. Competent staff should be available prior to and during the videoconference for each "end" of these phone connections. Failure to have this phone available for technical emergencies severely hampers the ability to troubleshoot and correct problems.

7. Presentation aids, such as **whiteboards** and **easel pads**, should be positioned so they can be clearly seen by the camera. The responsibility for camera moves to show these aids should be worked out in advance of the program. Pens and markers used to write on these boards should be dark and produce broad lines for easy reading through the videoconferencing system.

8. Speakers, faculty, and participants should be made aware that ISDN videotele-conferencing technology has an inherent **signal delay** between each site. This signal delay is minimal but can cause confusion during conversational exchanges. The signal delay often causes speakers from different sites to "talk over" one another,

because they do not wait for a complete response. Speaker and participant awareness of this "signal delay" will help avoid the problem.

9. A **timeline** should be developed for the program and shared with the receiving sites. This **timeline** can be extremely helpful if it is a skeleton outline of the sequence of events anticipated during the program. Time slots, in which audience interaction, video inserts, polling, or question-and-answer segments occur, can be identified, and receiving sites will be prepared to operate efficiently to facilitate these segments. See Appendix A for an example of a **timeline**.

10. During a videoteleconference, a distinction is made between **the host site and receiving sites.** Generally, the host site will be the site responsible for the content delivery. This content may include prepared slides, video, and audio, in addition to the content experts and/or faculty. During question and answer segments, however, the "host" site designation becomes dynamic, switching from site to site as questions are asked and responses made. Technical coordinators should be prepared to make camera adjustments and move speakers for microphone access during these program segments. Timelines or scripting is extremely helpful for these segments of the program.

11. The **video screen at receiving sites** typically shows the host site only. Interactive segments, such as question and answer, may use multiple-image screens with the receiving sites seeing the other receiving sites and the host site in multiple insets simultaneously. In most cases, control of the video screen is voice activated (when someone at a receiving site begins to talk, their video signal will automatically be sent to all the sites), so all sites may be asked to mute microphones until they speak. Failure to mute the microphone can often cause problems when unexpected sounds such as coughing or dropping a book activate the video signal and interrupt the speaker from another site.

12. The use of appropriate, prepared **audio or video materials** should be incorporated into the program. This could include video clips, audio clips, PowerPoint slides, computer graphics, and others. Graphics quality, font size, background colors, use of animations, and other aspects of PowerPoint slides should be considered carefully when created for a VTC environment. Poorly created slides may be illegible at the receiving sites and can be extremely disruptive to the VTC environment. Providing hard copies of these materials in advance of the VTC is always advisable, and in case of a video lapse, the VTC can continue using audio only until the video is restored. In addition to the quality of the video and audio materials, coordination, practice, and timing are important to make them an effective part of the presentation.

13. If the host site is using a **bridging system**, all materials, video roll-ins, graphics, program outline, and planned camera shots need to be coordinated with the service provider at least a week prior to delivery.

14. **Faculty** for programs delivered by VTC need a lengthier preparation time, some rehearsal time at the host site, coordination with the technical crew, and regular conversations with the program director. Often, the extra prep time seems unnecessary to seasoned faculty who tend to think that they can do their thing in any setting. Experience has shown that even the best faculty need to plan VTC sessions more tightly; be more scripted than they may otherwise choose; and be thoughtful about their openings, closings, graphics, and PowerPoint presentations. They need to develop thought-provoking, useful exercises to challenge the participants at the receiving sites and engage them in discussions. VTC programs evolve much as a TV production would. Directors at the host site select the camera shots, coordinate with the bridge provider, and communicate with the camera operators. Whichever director (program or technical) serves as the "stage director" coordinates floor movements and reminds faculty to look into the camera lens.

    The more staged the production, the more professional it looks, and, often, the more connected the participants at the receiving sites feel. Faculty need to work closely with the host site program and technical directors to develop the program and prepare it for the VTC modality.

ISDN Videoconference—Receiving Site Program and Technical Facilitators

Trained program and technical facilitators are needed at receiving sites to guide participants during the program. These facilitators should be selected at least one month prior to the program delivery and plan to work closely with the program and technical directors at the host site to prepare materials and participants for a quality experience. The program and technical facilitators should be prepared to address the situations shown in Tables 2 and 3 that pertain to their receiving site.

Table 2
Receiving Site Program Facilitator

Situation	Program Facilitator's Role
Participants need preparation time	Three weeks before the VTC, the receiving site program facilitators should inform participants by fax, e-mail, or regular mail of the time they need to arrive—30 minutes prior to the program. They'll need thirty minutes to become familiar with VTC preparations, review handout materials, and prepare for site exchanges. This communication should apprise participants of any luncheon or post-conference session plans and provide any special program materials that participants need to preview.
Handouts are needed	Prepare a full set of materials for duplication approximately two weeks prior to the program delivery. Have on hand at program.

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Situation	Program Facilitator's Role
Pre-program audio-conference with directors, facilitators, faculty	The two receiving site facilitators (program and technical), the faculty, the overall technical director, and program director connect by audioconference two weeks prior to the program to review the materials, to meet each other, to ascertain issues of importance to each receiving site, and to allow the faculty to instruct them on how to lead exercises or guide a discussion at the site.
Activities with technical facilitator need to be coordinated	The two site facilitators (program and technical) will benefit from meeting each other ahead of time. This way, they can get to know one another before the program, compare notes, and clarify their roles. It is particularly important that facilitators share information ahead of time, but also during the program regarding timelines, scripting, camera shots, and audio functions.
Special guest(s) arrive	Notify the host site as soon as possible when any special guest(s) or resident expert(s) arrive at a receiving site so that the faculty may acknowledge them or invite them to respond to specific questions when appropriate.
Participants and guests may feel anxious	Monitor drinks and snacks, coordinate handout materials, moderate discussions, be the timekeeper, and act as site spokesperson.

Table 3
Receiving Site Technical Facilitator

Situation	Technical Facilitator's Role
Audio is lost	Check to make sure the VTC hardware or software has not turned off the audio connection. Check the speaker connections to ensure that they have not been accidentally disconnected. If a VTC bridging service is being used, call the service for assistance in troubleshooting the problem. If the disruption is caused by network line connections, employees there will most likely be aware of it and already in the process of correcting it.
The picture freezes and audio disconnects	The network connection has been lost. Under typical circumstances, the connection can be restored in 15–30 seconds or faster. Be sure to check that the videoconferencing equipment has been set to automatically accept an incoming call. Most VTC systems have auto recall functions that reconnect when a site is disconnected. If a service provider is being used, the facilitator should contact the provider and coordinate the diagnosis of the problem. An emergency phone number becomes critical in this situation.

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Situation	Technical Facilitator's Role
Audio becomes out-of-sync with the video, or the movements from the host site are extremely jerky	This can be caused by a number of factors related to network speed, network connections, bandwidth problems, line usage loads, packet switching, and/or router problems. Generally it will not last long, unless the host site is unable to maintain a six-channel connection or network traffic continues at a higher-than-normal rate. Some, but not all of these problems could be solved through the VTC hardware and software or by the service provider. The facilitator should aggressively pursue any remedies available, but, if the problem persists, contact the bridge service provider or the phone service provider.
Audio available, but no video signal or a frozen video image	Some of the channel connections may have been dropped. This may be caused by many factors such as those just cited. If a service provider is being used, it may or may not be aware of the problem and should be contacted to pursue a solution. If the problem persists, the call should be disconnected and redialed. Typically, this action will allow for a full multichannel connection.
All receiving sites lose the audio connection	Receiving site technical facilitators will be asked to diagnosis the problem by checking to make sure the microphones have not been muted. They may be asked to check the mute/unmute functions on the microphone(s) and physically verify the connections from the microphones to the VTC system. In coordinating this effort with a service provider, the technical facilitator should assist and advise the technical director and, at the same time, verify their connections.

ISDN Videoconferencing's Strengths and Limitations

Strengths

1. Full audio and video connections with all the receiving sites permit dynamic exchanges among the conference participants and allow for spontaneous conversations.
2. Video teleconferencing can save substantial travel expenses.
3. Commercial videoteleconference sites are available in most areas.
4. Many colleges and universities are willing to rent or share their videoteleconferencing facilities.
5. Presentation formats such as PowerPoint, video, and computer graphics can be readily incorporated.
6. Court employees throughout the country can access nationally recognized faculty.

Limitations

1. Specialized skills and equipment are required.
2. Equipment compatibility must be verified.
3. Preparation time can be lengthy.
4. Scheduling can be difficult when working with colleges and universities.
5. Unavoidable technical problems can disrupt presentations.
6. Requires complex coordination of tasks with faculty, site facilitators, program planners, and technical personnel.

Bottom Line: ISDN Videoconferencing

ISDN videoconferencing is a stable, well-distributed technology that has been in use for many years. Supporting data networks are in place to make it a platform capable of delivering full audio and video connections among multiple sites with good quality. Educational programs that contain slides, prepared video, computer graphics, and document camera images can be delivered to all receiving sites using this technology. ISDN videoconferencing can be merged with IP videoconferencing in a transparent way, and there are multiple, high-quality vendors available to assist with both the technology and content creation. It is competitively priced. When considering distance learning options, it should not be overlooked as an effective, affordable technology available on a national and international scale.

IP Videoconferencing

Recent innovations have made the use of desktop videoconferencing an option for distance learning programs. Using a Web browser and an Internet connection, two computers can be connected with full audio and video capability. Microsoft introduced an early form of desktop videoconferencing in free NetMeeting software bundled as part of the Windows operating system. Advances in compression technology and the availability of increased bandwidth made the use of IP videoconferencing more attractive, and a number of IP videoconferencing options became available. The adoption of an IP videoconferencing standard by the ITU increased equipment compatibility between manufacturers, and so began the convergence that made IP videoconferencing attractive to users. This has become the *de facto* standard for all appliances using IP for videoconferencing.[33]

IP videoconferencing is particularly attractive, because in its simplest form most computer users posess the basic components to participate in this type of videoconference. In addition to a computer with a codec (*co*mpression/*dec*ompression software or hardware), all that is needed are a camera, a microphone and speakers, a user interface, and a monitor. Using these components, two computers can connect, provided one of the computers has a static IP address or an identifiable IP address can be determined for one of the computers.

[33] Kotha, Sam. 2001. *Deploying H.323 Applications in Cisco Networks*. Retrieved on September 19, 2002, from Cisco Systems Web site: http://www.cisco.com/warp/public/cc/pd/iosw/ioft/mmcm/tech/h323_wp.htm

(A thorough explanation of static and dynamic IP addresses is available on-line.)[34] With these components, a point-to-point videoconference can be established with any other compatible videoconferencing user. Connecting three or more computers in an IP videoconferencing mode requires more sophisticated hardware or software components. The addition of a Multipoint Control Unit (MCU) allows multiple computers to be connected for a videoconference. More sophisticated MCUs have options for split-screen presentations with four sites displayed simultaneously in a "Hollywood Squares" configuration. Full motion video (the 30 frames per second, broadcast-TV quality) is challenging in this configuration because of the high bandwidth requirements and very small image size. Audio quality may suffer when connecting multiple sites resulting in static or garbled reception. Many IP systems permit document sharing, and most have the capability to display PowerPoint slides, Word documents, Excel spreadsheets, and other data used in typical desktop computer programs. RealMedia, QuickTime, MediaPlayer, and other media file formats can also be used in this environment, although the quality of the media may be compromised causing poor, jerky, and out-of-sync images.

Universal Serial Bus (USB) plug-and-play units, which consist of a self-contained hardware component with a simple camera, microphone, and codec, can be purchased. They work best when connected to a high-speed data line, preferably one having 384 kbps or better connection. At this speed, full-frame video (30 frames per second) and good audio quality are possible. Organizational networks using local (10 Mbps, i.e., 10 million bits per second) Ethernet systems have a fast backbone of connectivity that can support internal training using IP videoconferencing. However, many court organizations do not have this high-speed connectivity, and their Internet connections are often much slower. The advent and implementation of fast Ethernet (100 Mbps) and 1 Gigabyte (1000 Mbps) Ethernet will make IP videoconferencing a viable option for delivering programs over LANs (Local Area Networks). Even-higher data transmission rates and wireless technologies ensure the future implementation of some type of IP videoconferencing.

While the future of videoconferencing may well be in the IP mode, current limitations make its use for distance learning problematic. In distance learning applications, these systems work best for small group interaction, in which programs do not require highly "produced" presentations. A good example might be intimate conversations in which faculty can respond to participants' questions and lead discussions. The limited size of the video image is restrictive, and multiple viewers at a single computer monitor are not recommended. Attempts to enlarge the video will result in highly pixilated images lacking clarity and detail. Network fluctuations can cause problems that are manifested in jerky images and out-of-sync video and audio. The medium does not offer sophisticated methods for managing audio and video sequencing, but the MCU can be used to designate the site having control of the bridge—allowing that site to generate audio exclusively, and prohibiting audio generation at the other sites. IP videoconferencing will become a more viable option for distance learning programs when increased bandwidth and better compression techniques are more commonly available.

[34] *Static IP address/dynamic IP address*. Retrieved on August 7, 2002, from the WhatIs?com portion of the TechTarget Network of Enterprise IT Web Sites: http://whatis.techtarget.com/definition/0,289893,sid9_gci520967,00.html

Industry leaders in the hardware, software, and network business are predicting broader implementation of IP videoconferencing systems, but current purchases lean toward a hybrid solution allowing both ISDN and IP videoconferencing on the same appliances. [35]

Suggested IP Videoconference Preparations

1. **Provide agendas well in advance of the program.** Any well-organized meeting should have an established agenda, and an IP videoconference program is no different. The IP program agenda should include the name and location of all the participants.
2. **Identify discussion leaders.** Participants expected to lead a discussion area should know their responsibility well in advance.
3. **Provide discussion materials in advance of the program.** Make clear the expectation that all participants should read essential materials in advance in order to contribute to the program.
4. **Do a technology check with each participant.** Prior to the start of the program or meeting, check the audio and video connection of each participant. Technical problems should be resolved before starting the program.
5. **Have a telephone connection available for each participant or site.** In situations where the phone line is being used for a modem connection, ask that the participants have a wireless phone available as a backup. Have each participant provide this phone number prior to the scheduled program.
6. **Faculty should be familiar with the technology.** If a formal presentation is planned, all elements of the presentation should be rehearsed beforehand using an IP videoconferencing system. This rehearsal should be a point-to-point practice session including all slides, media, and documents to be used during the actual presentation. Faculty should understand that technology limitations will change the timing considerably when multiple sites are connected.

IP Videoconferencing's Strengths and Limitations

Strengths

1. Millions of desktop PC systems are in use and can be reached using IP technology.
2. Low-to-moderate hardware and software costs are incurred.
3. No centralized receiving or host site is required.
4. In presentation formats such as PowerPoint, video and computer graphics can be readily incorporated.
5. Individuals can access education and training without leaving the office.

[35] Cochran, Keith. *Videoconferencing Concepts*, part of the TelAbility program to improve the lives of children with disabilities. Retrieved August 7, 2002, from ibiblio: the public's library and digital archive Web site: www.ibiblio.org/kcochran/videos/conceptsRealMedia/intro.html

Limitations

1. Many desktop systems have 56K modem connections with poor video and audio cards.
2. Audio and video quality is inferior to ISDN and satellite videoconferencing.
3. Signal delay can cause confusion if faculty and participants are not aware of the limitation.
4. Large group interaction is not practical.

Bottom Line: IP Videoconferencing

IP videoconferencing is a useful tool for small meetings, informal discussions in small groups, and question-and-answer sessions, but it is difficult to use for formalized education and training programs. The current quality of audio and video makes it very problematic for many end users, and reliability issues with networks create additional technical problems. Few want their highly produced, carefully prepared, media-rich education program presented on a computer screen in a four-by-three inch box that may contain jerky video and out-of-sync audio. Programs delivered on an internal high-speed LAN (Local Area Network) are more viable because the video and audio quality should be much better, and the reliability of the system is not at the mercy of Internet traffic and switching problems. Even so, computer screens are typically not large, and IP videoconferencing will still work best with small groups and less formalized content. The future of IP videoconferencing for distance learning programs remains just that, a promise of better things to come, but not an effective delivery medium today.

Live (Synchronous) Web Classes

This type of on-line learning system takes advantage of the connectivity available over the Internet, nationally and internationally, for people with an Internet connection over at least a 28.8K modem (preferably 56K modem or higher). It may allow the use of the chat functions of a course management system for conversation, streamed video, or an audio-conferencing bridge system. Some organizations are succeeding with streamed video and audio. Companies such as WebEx,[36] PlaceWare,[37] HorizonLive,[38] Centra,[39] Genesys Conferencing,[40] and Astound,[41] among a growing number of others, have created software programs for this purpose.

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[36] *WebEx.* Retrieved August 7, 2002, from the Web site: http://www.webex.com/home/default.htm or http://www.gentner.com

[37] *PlaceWare.* Retrieved August 7, 2002, from the Web site: http://www.placeware.com/index.cfm

[38] *HorizonLive.* Retrieved August 7, 2002, from the Web site: http://www.horizonlive.com

[39] *Centra.* Retrieved August 7, 2002, from the Web site: http://www.centra.com

[40] *Genesys.* Retrieved August 7, 2002, from the Genesys Conferencing Web site: http://www.genesys.com

[41] *Astound.* Astound is part of Genesys Conferencing. Retrieved August 7, 2002, from the Web site: http://www.astound.com

Live Web classes are a blend of audio teleconferencing with an on-line education management system. Faculty and participants connect in real time over a telephone conferencing call and through a Web address, where the faculty can deliver content using PowerPoint slides or other software applications. Participants access the presentation over the Internet by typing in a Universal Resource Locator (URL) and entering a password. All participants are then also linked through a teleconference call, needing only a phone number and an access code to enter. Using their personal computers, they view the presentation, respond to survey questions, engage in brainstorming sessions, and solve problems jointly during a 75-minute class segment. Faculty can call on participants by name, share presentation rights with them, give a quiz, link to the Internet or one's Web site for information, provide and debrief homework, or collaboratively build a document. The range of activities is limited only by the faculty's ingenuity in thinking about how best to engage the participants around the class materials.

This type of class is useful for presenting modules or brief chapters of learning. It has its greatest value when it is cognitively based, with the classes organized around information presented as *steps*, *how-tos*, or *reasons for*, because such information sharing can readily keep participants engaged even without the familiar face-to-face connection. Lacking a visual connection with the participants requires that faculty reach out with their voices to connect. This is difficult and requires practice. Pictures of the faculty in the PowerPoint show are helpful. When possible, participant pictures can be e-mailed prior to the program and can be included to create a visual connection with the voices on the conference call. When faculty teach two or three points per segment and keep their topic fairly tight, participants can acquire specific skills or chunks of new knowledge immediately. The number of participants in this medium is limited not by the technology but by the ability of faculty to interact successfully with large classes. For practical purposes, such classes may be limited to 15–20, if the faculty expect to have meaningful interaction with the participants.

Faculty are challenged to take on new tasks when teaching in this medium. Old, familiar ways of engaging learners may not work on-line. Faculty will need to take advantage of features of on-line software such as chat, whiteboard, and document sharing, to interact with participants. Also, on-line experts suggest that the usual, bulleted PowerPoint slides are not effective for a live Web class; colors on the screen should change frequently to continually re-engage learners whose eyes can easily wander; graphics need to be creative and outside the box.[42] In fact, PowerPoint presentations must be crafted with Web delivery in mind. Slides used in face-to-face presentations may need to be reformatted or discarded. PowerPoint file sizes for a live Web class should not exceed 250–400Kb, or they will be disruptively slow to appear for participants connected through slow modems. Animations and text click appearances will not function in this medium and should be eliminated. Embedded audio and video files will not work in most on-line programs. Further, more than the visual presentations may need to be adjusted. Hesitations in speech such as "uh, ah, let me, uh, address that point, uh, a bit later," are counterproductive on-line. Voices need to be strong,

[42] Hoffmann, Jennifer. 2000. Crank Up Your Online Presentations. *eLearning 1.0* , September 2000. Retrieved August 7, 2002, from Learning Circuits Web site by American Society for Training & Development (ASTD): http://www.learningcircuits.org/sep2000/sep2000_elearn.html

clear, inviting, and very personable. The experience can be wonderful for faculty who take up this challenge and master the medium.

Consider also that the use of the telephone makes this somewhat like a radio program, whose mantras have always been "no dead air time!" Silence is not golden in a live Web class. Faculty and participants often need coaching in this principle. For Web-based classes to achieve success, participants must offer their comments readily and even ask one another questions. They must share responsibility for the "movement" of the class and the quality of the conversation. With knowledgeable faculty, a variety of activities, relevant group discussion, and thoughtful comments, the classes are engaging, lively, and fun, and deliver specific outcomes effectively.

Team teaching in this environment may be especially useful. The addition of a second "voice" provides variety to the program and permits each faculty "off air" time to adjust to dynamic situations in the environment, correct technical problems, or use the chat area in the software to answer individual questions. Because the medium is Web- and phone-based, all faculty do not have to be in the same location to deliver the program. They do, however, have to be "on the same page." Understanding who is responsible for each segment and the sequence in which they will be presented is critical. Hesitation does not work well on-line.

Preparations for a live Web class typically include a systems check with the on-line software provider to insure that participants' computers and networks can access the program and run the software. Providing instructions for this process is essential. These can be delivered via e-mail or placed on a Web site, or both. It should be clear that participants must have separate lines for both computer and phone connections in order to participate. Included should be unambiguous directions regarding the use of the phone in a Web class environment. It should be pointed out that a hands-free phone, if not a necessity, is much more useful than one that must be held during the entire program. Using the chat function requires both hands for typing, and fatigue can become a factor when participants must hold a phone to their ears for an hour or more. Speakerphones located in a closed office work fine; those located in busy, noisy environments create havoc for other conference participants. Mute buttons are especially useful, but placing a call on "hold" can subject all the conference participants to automated music systems that can bring the conference call to a standstill. In that situation, how *do* you contact the participant to ask them to take the phone off *hold,* when their phone is in use for the audioconference? A separate help line phone should be available during the on-line class to provide technical assistance to avoid prolonged disturbances of the audioconference. This phone should be staffed by someone thoroughly familiar with the software and phone functions. In no case should this be faculty. The technical help number should be included in the e-mail instructions sent prior to the meeting and posted on a Web site, if possible.

Live Interactive Web Class's Strengths and Limitations

Strengths

1. It can be accessed from a desktop computer.
2. It is cost effective.
3. National and international audience participation is possible.
4. Presentations can originate from any location where desktop computing and Internet access is available.

Limitations

1. Presentation format is limited.
2. Faculty preparation can be extensive.
3. Engaging participants in verbal exchanges can be challenging.
4. Participants often fail to understand the limitations of the medium, as they expect full-motion video and audio.

Bottom Line: Live Web Classes

The two technologies required for live Web classes (phone conferencing and computer Internet access) have many elements to recommend them to court organizations. They are reliable, readily accessible, and relatively inexpensive. They do not require added infrastructure before classes can be implemented. High-speed LANs or WANs (Wide Area Networks), although they give live Web classes added punch, are not required. Instruction with small groups on focused topics in short timeframes (75–90 minutes) works best. Assumptions about phone etiquette, types of phones available to participants, general technology familiarity, and computer skills cannot be made. Every technical requirement must be explained in detail (Web sites and e-mail), and pre-class help sessions should be encouraged. Faculty practice and competence with the technology is essential. Understanding and meeting these requirements can make live Web classes an affordable, readily implemented, and effective distance learning tool.

On-Demand (Asynchronous) Web Classes

On-demand classes are training courses available over the Internet that can be accessed 24 hours a day, 7 days a week. They are the computer age's replacement of the old correspondence courses, adding interactive components that were prohibitive previously. The premise of an asynchronous university is delivery of a curriculum on-line, 24/7 for anyone with Internet access. Courses may include soft skills as well as technical learning. They can be broad or narrow in scope. They are for credit, a grade, or for personal satisfaction. Such courses are prevalent in college settings, training centers, and businesses (one of the fastest growing segments of the e-learning market).

The growth of on-line software to create a virtual campus offers unique opportunities for court organizations to access education programs, create their own training programs, or partner with other organizations using these tools. Companies offering such software flourish in a marketplace that has found distance learning a tool of interest to diverse segments of business, government, and education organizations. Advances in broadband technologies and the adoption of platform standards, coupled with a demand for skilled knowledge workers, the high cost of travel, and a growing population of life-long learners have created this environment. Virtual universities can play a role in fulfilling these demands. In many ways, it is a unique niche in the educational market.

- Content can be personalized to fit a single learner or a group of learners.
- Interactive elements are easily incorporated in the delivery mechanism.
- Updating information can be as easy as creating a new Web page.
- Learning is more user-centric than instructor-centric.
- Delivery is easily scalable. More bandwidth can equal more learners.

A large number of companies are competing to sell their solutions for organizations trying to create many sustainable courses without developing all of the crucial tools that participants need to have an interactive on-line experience. Keep in mind that this type of software facilitates the creation and maintenance of on-line universities where hundreds of courses can be created and maintained for thousands of participants in a password-protected environment. Two of the leading software providers in this market are Blackboard[43] and WebCT.[44] Most industry sources agree that together these companies cover over 60 percent of the existing secondary education market using this on-line university model. Both companies have an impressive customer base that includes many of the most prestigious colleges and universities in the world. Both platforms are Web course-management systems using a password-protected system for delivering courses. Both platforms require a dedicated area on a server, or the company will host the software on its server. Both operate on Internet Explorer 5.X or Netscape Communicator 4.X. Most important, both seem to have the essential tools required to develop on-line educational programs.

This format typically features elements that can be very useful to any organization attempting to reach a geographically scattered audience using an Internet-connected computer. Some of the most common features of this type of software are

- Discussion board
- Mail
- Chat
- Whiteboard
- Digital drop box
- Calendar
- Participant evaluation or grade, progress report
- Quizzes, surveys, self-assessment tests
- Participant Web pages
- Document sharing

[43] *Blackboard.* Retrieved August 8, 2002, from the Web site: http://www.blackboard.com
[44] *WebCT.* Retrieved August 8, 2002, from the Web site: http://www.webct.com

Tests and assessment tools are similar in most platforms and usually include formats such as true-false, multiple choice, and fill in the blank. The software normally creates statistical data from the assessment tools, in addition to data on the number of times participants access pages, log into the site, and so on. Student and course management is similar in most programs. Enrollment options and options to assign grades are all managed easily with simple interfaces. A hierarchy of control capabilities allows access to these options and to building course content, adding quizzes, viewing participant information, and so on. Control for these functions is granted based on the abilities and needs of the administrators and faculty for individual courses.

Customization for the look and feel of a site is possible in platforms such as Blackboard and WebCT. Standard templates are often provided, and through the use of these templates, a site can be modified to express an organizational identity. Knowledge of some basic HTML tags facilitates this customization. Some software programs offer customization through a point-and-click method—the most intuitive interface. WebCT provides the greatest capacity to change background and font colors, a feature that will be welcomed by those with both skill and time.

Of course, an on-demand Web class can be much simpler and not involve the use or purchase of programs designed to create an on-line university. This kind of course may be no more than a series of Web pages containing information formatted to guide the participant through a step-by-step education program. While this presentation method lacks the interactive communication elements of the on-line university model, it can be used affordably and effectively to deliver basic education content. By using Web development tools such as Flash, Director, or DreamWeaver, these on-demand Web classes can contain interactive and visual components similar to those found in expensive on-line university programs.

Combining On-Demand Web Classes with Live, Interactive Components

This type of distance learning combines elements of on-demand training with elements of live, interactive on-line training. These programs can be built using Web CT, Blackboard, or any on-line management platform that offers the components noted above. Participants are given the opportunity to "meet live" through an audioconference, perhaps attached to one of the PowerPoint presentations at specific times. If it is a four-week class, perhaps the faculty will choose to meet with the participants once a week for an hour using the telephone and the Web. Hearing a person's voice on the first day of class while viewing that person's profile on-line provides the energy and connectivity to bridge the distance factor. Some faculty also like to use this feature to let participants deliver their own project presentations. Occasionally, comprehending truly difficult concepts requires more in-depth discussion and reflection, which combining these two technologies allows.

Bottom Line: On-Demand Classes

On-demand classes can be most useful to the courts whose training dollars are often slim and training needs are many. Unfortunately, start-up costs may be prohibitive, and annual licensing fees are assessed. These annual fees range from $12,000 to $25,000, and additional costs will be incurred for training, setup, and installation of the program. Of the programs available, WebCT is one of the more robust and useful. This is a subjective judgment. Many platforms have advantages that would recommend them, and disadvantages that would recommend against them, depending on the intended use and technical competence of the staff. As a guideline, organizations with good technical support and in-house skills will find WebCT the most useful tool. Its content organization and site customization tools offer opportunities unavailable in Blackboard and other programs, but these have value only if the organization has the skills to take advantage of them. Another area of strength for WebCT is its assessment capabilities. However, if ease of use is important, or if content developers are expected to shoulder much of the burden of formatting and posting content, Blackboard may be a better choice. For organizations looking for a course management system to implement education and training, WebCT and Blackboard are good places to start, but make sure the decision is made in consultation with both the developers (education staff) and the technical support (MIS/IT) staff. The prospects for long-term success are always higher with assurances of collaborative support from all those needed to maintain an on-line education and training effort. It is an effort well worth the undertaking. (An excellent in-depth, side-by-side comparison of Blackboard and WebCT can be found on-line.)[45]

CD-ROM and DVD-ROM Training

The creation of the CD format in 1980 was followed quickly by the CD-ROM (Compact Disk-Read Only Memory) format in 1984. At that time, digital video interactive (DVI) disks were used in the legal environment. However, due to the cost of both the DVI equipment and the production of the disks, only a few training disks were produced. The CD, a high-density information format, became the *de facto* standard for delivering computer games, software, and multimedia programs. Capable of holding up to 650 MB of data, the CD-ROM is an ideal medium for full-motion video (30 frames per second), high-quality photographic scans, stereo audio, text, and graphics. The ability to record mixed media—text and program files—on the CD-ROM has made it a useful medium for training, software installation, music, and games. CD-ROM drives have become a standard, internal hardware feature in new computers. They are inexpensive, portable, external add-ons to a system. Capable of offering combinations of high-quality video, audio, multimedia, or text, CD-ROMs are a perfect alternative to training books, notebooks, or even on-line programs. With the advent of CD writers and rewritable CDs, the format became an affordable,

[45] Siekmann, Sabine. *Which Web Course Management System is Right for Me? A Comparison of WebCT 3.1 and Blackboard 5.0.* Retrieved August 7, 2002, from the Software Report section of the Computer Assisted Language Instruction Consortium (CALICO) Web site: http://astro.ocis.temple.edu/~jburston/CALICO/review/webct-bb00.htm

multidimensional medium available to anyone with a modest budget, computer capabilities, and technical competence. Known as CD-R (Compact Disc-Recordable) and CD-RW (Compact Disc-Rewritable), these formats permit recording in multiple sessions (CD-R) and writing over data previously recorded (CD-RW). A good explanation of the CD-ROM format can be viewed on-line at two sites.[46]

The latest evolution in CD technology is DVD (the digital versatile disc or digital video disc). Similar in appearance, the two share common traits, but the single-sided, single-layer DVD is capable of storing 4.7 GB (Gigabytes) of data or 7 times the amount of data stored on a single-sided CD. This capacity would fit a two-hour digital movie on a single side of a DVD. DVD players are typically backward compatible with the CD format, and most CDs can be played in a DVD player. Most computers shipped today include a DVD-ROM drive that has read-only capability. However, like its predecessor, the CD, this capability is expanding to include DVD writers. This gives education developers access to a dense storage format that can hold audio, video, animations, multimedia, and text.

DVDs and CD-ROMs can effectively deliver educational content in combination with other programs, or to persons working alone with a computer. However, CD-ROM can also deliver video and other high-density content as part of an interactive, distance learning class. The skills for producing CD-ROM or DVD-ROM training are again similar to on-demand training, except that the producer can potentially have better control of what the student can see or do. This is because the application programs and the training can be combined on one read-only disk. Thus, it is possible to run only the software needed for the training and protect the application software from piracy. CD or DVD training systems are actually not much different from Web-based training, except they allow a much greater use of video for presentation. Today, many training CD-ROMs are available. Although primarily for computer technical training, they are also used for training in human resources, language, elementary education, reading, and safety.

Many software applications are available for the creation of interactive CD-ROMs, but the standard is Macromedia Director. Priced at approximately $1,000, it has all of the necessary tools to convert text, audio, video, and multimedia files into interactive CD-ROM programs. CD products created using Director are written as executable (.exe) files. These files require no specific software application on the user's computer to run and can be used in a CD-ROM drive. They have the added advantage of not being able to be copied, therefore protecting the material from piracy and duplication. Courts looking to create interactive DVD or CD-ROM programs also have the option of turning to one of the many vendors who provide this service. Offered in many layers, this service can simply be the conversion of a PowerPoint presentation to a CD, or the full-blown development of an interactive presentation that incorporates produced video, audio, animation, and text. Presentations created and recorded in-house can readily be updated with new information, but mass

[46] *Storage/CD-ROM*. Retrieved August 7, 2002, from the Guides: Storage section of the PC Technology Guide Web site: http://www.pctechguide.com/08cd-rom.htm; and
CD Writing. Retrieved August 7, 2002, from Technology section of the Web Publishing Projects using Information and Communications Technology Web site: http://www.europict.org/pic_cdw0.html

distribution requires additional duplication and mailing expenses. Duplication in quantity can be extremely affordable with costs as little as $1.25 per disc.

CD-ROM and DVD Training's Strengths and Limitations

Strengths

1. Available from the desktop computer (with CD-ROM or DVD drive)
2. Almost all court employees will have access to a CD-ROM or DVD player
3. Available anytime
4. Cost effective, hardware is affordable and compatible with most PCs
5. High-quality audio and video
6. Interactive programs are possible
7. Elements of most court education and training topics can be incorporated on a CD-ROM or DVD
8. A large volume of information can be made available
9. Existing text and graphics can be readily converted to these formats

Limitations

1. Sophisticated programs can be expensive to produce and distribute
2. Static material, once burned into the CD-ROM, cannot be updated, only replaced
3. A user's slow PC may affect the quality of the training
4. No interaction with live faculty

Bottom Line: CD-ROM and DVD

DVD drives are just now being purchased as part of new computer laptop and desktop systems in many courts. Therefore, it likely will be several years before DVD drives are widely available in the court systems. Despite this slow implementation, CD and DVD-ROM technologies offer a current and future training opportunity that should not be ignored. Development and duplication costs can be minimal for a simple disc, yet it can contain rich media content that may not be accessible through other distance learning technologies. In-house skills are often available, and employees are capable of doing much of the development work, while tasks that are more complex can be outsourced to create a professional look. If nothing else, CDs (and DVDs as they become available) can save paper and mailing costs, if they are used as substitutes for educational notebooks, course outlines, and supplemental reading materials. Entire texts or portions of texts can be printed from CDs as needed. When resources and capabilities permit, CDs can be a viable stand-alone training tool or an element of face-to-face or on-line education programs. Existing education and training texts and notebooks, if they exist in digital form, can easily be reformatted, enriched, and then *burned* to a CD or CDs. Hyperlinks, audio files, and graphics can be included with minimal investment and existing technology capability. Sometimes overlooked as a distance learning tool, CDs and DVDs should be revisited in light of new, affordable software and hardware.

The Blended Solution: Some or All of the Above

All of the distance learning technologies described in this chapter can be used for stand-alone programs, but they are more likely to be used as components in a broader educational effort. The recognition of limitations and weaknesses of each technology makes preparing a distance learning program more effective. It allows the developer to take advantage of the most useful tools for the audience, content, capabilities, resources, and time available. Making the mistake of focusing on one technology or delivery mode ignores the reality of the audience. Good face-to-face teaching techniques take advantage of all of the available instructional tools. Lectures, group discussions, videotapes, audiotapes, handouts, graphics, charts, textbooks, and so on, are all useful tools in the face-to-face environment. They are components that can be drawn upon to create a lively learning experience. So too with distance learning technologies, no single method of delivery is appropriate for all styles of learning and types of content. A combination of tools, chosen according to participant needs, will provide the best, most creative learning environment for the greatest number of participants. With so many options, choosing wisely and formatting content effectively are the greatest challenges.

CHAPTER 3

The Team Concept

An early and critical understanding regarding distance learning is the recognition that it is a team endeavor. Many organizations will have a distance learning champion, someone who believes passionately that distance learning can be used dynamically and effectively to extend their reach. While this is an essential foundation to distance learning development, a range of organizational, technical, and facilities tools, as well as writing, graphics, and audiovisual skills, will be needed to start the development of distance learning programs. Failure to recognize and nurture this team concept will hamper the effectiveness of any distance learning effort.

Seven key aspects of successful teams are noted by Suzanne Willis Zoglio, Ph.D., in *Seven Keys to Building Great Workteams,* found on the Internet.[47] These keys include commitment, contribution, communication, cooperation, change management, conflict management, and connections. Each key component highlights a significant and challenging area that the distance learning team works through on the path to synergy.

Consider the following scenario. It is 8:00 a.m., only one hour before the start of a three-hour VTC using ISDN lines—two faculty will lead a session for eight receiving sites. The technical director and staff have been in the office since 7:00 a.m. and in communication with the external bridging company since 7:30 a.m. The program director checks off last-minute details on the timeline. The props are in place; the make-up specialist has arrived and awaits the arrival of the faculty, who are just now entering the building; and hard copies of the program have been duplicated for people serving as the production staff that day. Two camera people, overseen by technical staff, are checking camera angles and locking in preset angles as planned. The technical director and the bridge director call all eight sites, one at a time, to test for sound and video connections and quality, and they check for last-minute needs. The eight receiving site program facilitators confirm that participant notebooks were received, announce special guests, set up an easel pad for questions and comments, and prepare to be receiving site hosts. The sound works, the cameras work, and it is time for site program facilitators to greet their guests. At the host site, the technical staff members work up to the last minute rechecking camera angles and sound with the receiving site technical facilitators. Someone calls out, "Thirty minutes!" The program director keeps track of time, answers some last-minute questions from the faculty, asks them to sign release forms, and helps them deal with pre-program jitters. A light in the ceiling burns out and is quickly replaced, although the furniture had to be moved to make room for the ladder. It must be replaced "just so." Water is poured, make-up applied, last-minute additions to the program are agreed to by all in charge, and stations taken. The technical director works a camera along with the other two camera operators; the program director moves to the computer for posting discussion questions and comments from all receiving sites, and prepares to assist the

[47] Zoglio, Suzanne Willis. *7 Keys to Building Great Workteams.* Retrieved August 8, 2002, from the Articles section of the Teambuilding, Inc. Web site: http://www.teambuildinginc.com/article_7keys_zoglio.htm

faculty from the sidelines. Keeping eyes on the camera lens rather than the large screen is not intuitive. The faculty need reminders! The technical staff continues the conversation with the bridging company, coordinating last-minute details. Headsets allow the technical director, program director, camera crew, and those in the control room to communicate throughout the program. All video clips are marked and ready to go, PowerPoint slides are cued, and a multimedia opening is ready to play. "Show time; quiet on the set." The opening plays out. The program director welcomes all sites and introduces the faculty, who are seated on stools in a prearranged stage set. It is 9:05 a.m.

Such is the scene for a complex videoconference for which the distance learning team has been preparing for approximately three months. Not all videoconferences require this much preparation and detail, but many do. This scenario is offered to demonstrate the need for all distance learning team members to be on the same page, to be confident in each other's work, and to be ready to handle problems seamlessly.

The team that worked the videoconference just described had been developing rapport and integrating their skills for over a year in general, and especially through the last three months of preparation for this program. They knew each other's styles, pressure points, and special gifts. It takes time for teams to congeal and develop this level of trust. The faculty are included on the team, but they participate usually just for the final three months before the program. Once faculty are identified, a topic chosen, and dates set, the key members of the distance learning team begin a series of teleconferences to establish the tasks and timelines. They come to know each person's role in the event. Sometimes, after one of these discussions, in the interest of strengthening the program, even something as substantial as the modality chosen for the program may be changed.

To choose an appropriate distance learning modality for an education program, all of the distance learning team members involved in its development and delivery process must speak, or at least understand, the same language. They all need to recognize the unique characteristics and requirements the distance learning options hold for them, and contribute to the selection decision.

Each team member needs to understand the roles and tasks of the other team members to be able to contribute appropriately in the planning stages. Initially, all should collaboratively develop the parameters and goals for the organization's distance learning efforts, the scope of specific programs, and the individual program objectives. Next, all must have at least a general comprehension of the content and an awareness of the skills the participants or learners may bring, the faculty's styles and processes, and the technology used to deliver the program. These are major keys to success.

Team Members

Team development starts with a decision about the type, or types, of technology to be used. The size of the team depends on the vision of the organization, its budget, the extent of

training that the organization conducts via distance learning, and other existing resources. The team takes shape under that wide umbrella. The distance learning team should consist of members who are multifunctional and capable of understanding other team members' functions. For example, the technical director should understand curriculum development without having to monitor all of the elements. Technical coordination alone can be complex and time consuming for some distance learning programs. The more robust the program, the more the technical director choreographs the technical components. The same principle holds true for other team members. The program director should be familiar with the technologies as well as the content of the program. He or she should at least understand the functions of the bridging company without overriding the company's responsibility for them. A large team may not be necessary, but a minimum of two is required—the program director (who also coordinates the overall project) and the technical director.

A third, critical role needed on the team is that of media specialist. If necessary, whichever director has the best abilities could add this to their functions, but preferably a third person can be recruited. The role of media specialist is one in which the technical and program designs meet—this person must be skilled in using computer software to produce materials that are both technologically viable for electronic distribution and educationally effective. The two-person, three-role configuration is a bare-bones team. For some projects, others need to be trained and available to help where needed, for example, to monitor a Web class, operate a camera for a VTC, or sit at the technical help desk.

Program Director

All distance learning team members are pivotal to the success of the project, but the program director, also often known as the project director, is the one person responsible for being in touch with *all* other distance learning team members (for VTC or live Web programs). The program director confirms the topic and faculty, and trains the faculty in the distance learning modality that seems most appropriate for the delivery of the content. The program director reviews and critiques content and graphic development and coordinates with the technical director for all hardware and software components and timelines. The program director recruits the receiving site program and technical facilitators needed for VTCs, trains the program facilitators to host the program at the receiving site, and coordinates a teleconference among the program and technical directors, all receiving site facilitators, and faculty prior to presentation day. The program director manages the timelines for the distance learning team, and solicits and trains participants on the technologies involved. Sometimes marketing becomes an added component of this position as well.

The program director needs to understand the technologies, be able to speak about them to all team members from their own perspectives, coach participants, and be a savvy adult learner such that he or she is able to critique curriculum, understand the needs of the faculty, and support the site program facilitators who will, in turn, support the participants during the program. The program director's skills cover a broad range of knowledge and perspectives. Such breadth is central to success, even more so for distance learning than for face-to-face program development.

The program and technical director share responsibility equally and work collaboratively on the project. The technical director stays abreast of all the information the project director gathers, yet is not hampered by the management tasks. These two people form the core of the team. To the degree that they can speak each other's language, share a vision for the expansion of distance learning, and work collaboratively, the team is solid and will generate the synergy needed for the tough times.

Technical Director

Ideally, the technical director should be a generalist with a broad understanding of computers and networks, graphics, audio and video, voice and data communications, and programming. One of the most valuable skills for the technical director to have has nothing to do with technology; it is the ability to communicate effectively with both technical and nontechnical staff in language that is unambiguous. Second is the ability to understand the wide range of requirements for the creation and delivery of a distance learning program. With this knowledge, he or she can orchestrate the process, identify the tasks and skills required to create the program, recognize capable staff or contractors, understand the timing for the process, and judge which technology is best suited to the proposed program. The technical director may need to write HTML, edit audio or video, run a camera, dial each site in a videoconference, reduce the file size of a graphic, and so on. While the technical director often is not personally responsible for each of these tasks, knowing what tasks need to be done, which tasks are associated with each technology, when they must be completed in the program development process, and who can be relied on to capably do so is critical. Process and project management are the lifeblood of distance learning, and the technical director must be a master of both. A simple understanding of distance learning technologies will not suffice.

The Role of Media Specialist

The program director, the technical director, or a third person needs to function on the team as the media specialist. The media specialist should be familiar with and use competently as many technical tools as possible, with Web competence a necessity for Web-based programs. If the organization's programs lean heavily toward videoconferencing, the person serving as the media specialist must be familiar with video and audio configurations, editing, and formatting. More advanced deliveries will necessitate familiarity with nonlinear editing systems for both audio and video. Traditional production skills such as lighting, camera operation, and sound recording are assets that are useful for almost all distance learning. Skills using a digital camera and manipulating images with editing software such as PhotoShop are requirements for anyone serving the media specialist. For Web-based distance learning, testing new Web delivery software and products is a necessity, and the media specialist leads this effort. Curiosity, interest, and facility in investigating can help keep programs vital and current in an environment in which change is measured in months, not years. Every member of the distance learning team should share some of this responsibility,

but whoever serves as the media specialist leads the effort and works with faculty to ensure that their materials are appropriate and effective in the distance learning environment.

Receiving Site Team Members for a Videoconference

The core team members and roles have just been described, but in addition to the core team, a two-member receiving site team is critical for a successful videoconference. Each site must have a technical facilitator, someone who knows the hardware and software, works the microphones and cameras in the room, and troubleshoots should the system go down for a minute or some similar mishap occur. When dealing with technology, mishaps do occur, but they only become crises when trained technical facilitators are not available.

The receiving site technical facilitators work closely with the receiving site program facilitators. The receiving site program facilitators act as hosts for the participants, compile the handouts, oversee room setup, facilitate group discussions, and work with the program director at the host site to orchestrate a compelling program with no surprises. Receiving site program facilitators should "meet" via teleconference with the faculty one week prior to the scheduled program to discuss the instructional outline. The faculty prepares them to lead a receiving site group exercise, speak for the group when called on, and solicit demographics. Receiving site program facilitators are asked to seek out and announce special guests. They manage breaks and report the needs of the site participants to the faculty or overall program director. Sometimes this role is divided among several people locally. A trained facilitator may be brought in to lead the group discussions, while someone else is assigned to coordinate the program.

The receiving site technical and program facilitators share responsibility for smooth running of the program locally. As remote members of the team, they receive scripts and timelines, and keep abreast of changes to the program. They are pivotal at the receiving sites.

Special Roles for Team Members during Live Web Programs

Participants at their computers become sole-person receiving sites for a live Web class. At the host site, the program and technical director, or the program director and media specialist, if one is available, can carry the management of the program. Yet, at both the host and receiving sites, considerable new learning and preparation need to occur.

Consider the following scenario. It is 2:40 p.m. The technical director or media specialist has "opened" the Web class so that participants may enter. The program director sits at a "help desk" ready to answer questions or try to resolve problems with participants. All participants have received instructions for entering class sent several days prior to the event. They were invited to work with their technology departments to check the configurations of their computers for compatibility and given a toll free number and access code for the teleconference. With a class of 20 who have not attended such programs before, problems are likely to emerge. It is the program director's job to eliminate as many of these

problems as possible prior to class. At 2:50 p.m., a caller notes that he cannot figure out how to enter the class. "What am I doing wrong?" he asks. After some dialogue, it is ascertained that he needs to refresh his screen so that the *join now* button appears. Another caller says that she cannot get into the audio teleconference. A quick call to the Web hosting company reveals that national lines were overloaded. Would she please hang up and dial in again in three minutes? All should be well...and it is. At 2:55 p.m., the faculty member "arrives" in the virtual classroom. His countenance fills the screen with a welcome note to participants. The technical director or media specialist monitors all those who enter, mutes their mikes if sound is interruptive at their sites, and troubleshoots for the faculty member during the session. Sometimes, the technical director or media specialist gives a brief introduction to the medium at the very beginning of class. At 3:02 p.m., most participants are present. The program director leaves the help desk, joins the class, and introduces the faculty member who is five states away. After some nervous beginnings, the faculty member finds his comfort zone, the participants begin to understand how it works, and the first poll is taken. All figure out how to register their votes and join in a spontaneous discussion on the results, a sure sign that the class is going well!

Participants must be acclimated to the live Web class environment prior to attending class so that they are prepared to take an active role and benefit from what it offers. *Web socialization* is the term we use to describe this process, because learning in a "live" Web setting is like entering a new culture. One has to find his or her way around, learn the dos and don'ts, adapt to new rules, and manipulate new tools. Web socialization includes learning how to stay "present" without being able to see the faculty or other participants. Participants must learn to "see," i.e., pick up cues, from the faculty and other participants in new ways. It is on-the-spot training! Awareness that live Web classes will demand new skills prepares participants to take an active role.

The program director and technical director or media specialist do well to be available to all participants prior to the program through demonstrations, phone calls, clearly written e-mailed instructions for attending a program, and for last-minute troubleshooting. Information posted on a Web site can provide participants with clear and concise directions to prepare them for this distance learning environment.

Special Roles for Team Members during On-Demand Web Classes

We mention at several places in this monograph that it is necessary to have a distance learning team member staff the help desk. For an on-demand Web class, a class that can be accessed at *any* hour during the day or night, help needs to be available in several forms. Frequently asked questions (FAQs) and responses published on the Web site can provide help in the middle of the night; live telephone help during the day can solve problems and reduce confusion about using some aspect of the medium; and periodic demonstrations will allow participants to learn about the system in an informal manner. A single, special telephone number should be assigned to the help desk, even if several people are responsible for managing that service. Those serving in the role of help desk staff need special training

and should be familiar enough with the technology to answer the most common questions. They should also know when to refer a difficult question to an appropriate team member.

If an on-demand Web class is semester-long, its development is ongoing. If it is a brief, four-week program, materials are developed prior to the sessions and posted with the education management (computer) company such as Blackboard or WebCT. In either case, faculty will work closely with whoever is serving as the media specialist to develop comprehensive materials, including PowerPoint slides, polls, discussion boards, private chat sections, a grading system, and personal e-mails. The distance learning team oversees development of the class, but it also facilitates learning among faculty along the way. Throughout the class, or even following its conclusion, a help desk person or other distance learning team member will help participants who forget their passwords or do not remember how to submit a paper or view a video clip. Finally, as part of the class, faculty often request the use of another distance learning medium to debrief an assignment better, present reports, or engage in an energized dialogue. On-demand Web team members may be called upon to support tools normally used for live Web classes, or a videoconference may be convened to precede or end a brief class. Multiple media options provide variety in the learning experience and challenges for the distance learning team.

Incorporating Strategic Partners as Team Members

Filling all team roles from within an organization may not be possible due to limited personnel and other resources, but this should not stop distance learning efforts. Rather, we suggest that court organizations brainstorm creatively and form collaborations to ensure success in their distance learning ventures. Strategic partners frequently are available and can help state courts establish a foundation in distance learning for their constituents. Local universities and community colleges may be willing to share their videoconferencing systems. These systems may operate statewide, be very affordable, and have equipment and trained staff already in place. And, since Web program development is available globally, national or international team members can be recruited.

National and State Organizations with Distance Learning Experience

Some organizations, such as the National Center for State Courts, the National Judicial College, and administrative offices of courts in several states, have conducted distance learning programs, and their experience and information could be useful to other groups or states considering offering distance learning. (See Appendix B for reports from six states and the District of Columbia on lessons learned.) These distance-learning savvy organizations already have developed infrastructure, experimented with program design and delivery, and know a lot about what could work for a court system. For established fees, they could host and perhaps coordinate live video and/or audio programs as well as on-demand programs. They could also offer distance learning programs developed for national education and training in the court system.

Regional Distance Learning Teams

Distance learning teams formed regionally would allow courts to share resources to enhance product development. The infrastructures (hardware or software systems) can be housed locally, the graphics designed anywhere, and the content developers and Web administrators scattered across the region. With a national network, like that in the state judicial branch education system, such collaborations are not only plausible but opportune. JERITT hosts a judicial distance learning forum, i.e., a threaded discussion group (or Web board), in which members can raise questions, solicit help, review program development, and, of course, share resources or form their distance learning team. Distance learning development sessions could be added to national conference agendas on a regular basis to provide forums for interested staff to explore the possibilities of co-building some programs. The time has come for these discussions to be many and frequent.

Networking for mutual gain is particularly useful for on-demand program development and delivery. The medium lends itself to a boundary-less system. Passwords and Web site addresses provide opportunities for everyone to post materials. Because the evolution of an excellent on-demand program requires many skill sets and potentially many dollars, shared resources may hasten developments that might otherwise take six months to a year to build.

Outside Consultants

If state courts have staff that could be allocated to distance learning endeavors, but little money and no one to *lead* a project, they might consider engaging an outside consulting team to take the project lead. Such a decision would be wise if program development is infrequent and not worth the cost of a full-time staff person. These consultants could work with selected staff for a specified time (approximately three months) to oversee all layers of preparation for the successful delivery of a program. They can identify faculty, select the medium for delivery, train the faculty and participants in the modality, and coordinate the event. In some situations, just a technical consultant might be engaged. He or she could oversee the communications between the education and technology departments; select, integrate, and teach usage of appropriate technologies; and manage the program on delivery day. In other words, outside consultants could organize an event or series of events. They can work off-site with regular e-mail and telephone access to administrative liaisons, and work effectively with the faculty and participants. They can even subcontract to produce video clips, graphics, images, titles, and animation. This is a worthy investment if it allows an organization to enter the distance learning arena.

Another option is to use outside consultants to set up a training session (three to five days) for single or multiple state teams. Such training allows managers and staff to learn how to set up and run their own programs, work with the equipment, collaborate with one another, and develop synergy. The training should cover multiple topics, including videoconferencing, live and on-demand Web staffing, and program development. A model agenda for this type

of training was used by the National Center for State Courts and the National Judicial College for training delivered in December 2001 in Reno, Nevada, through funding from the State Justice Institute.

Partnering with Vendors

Vendors may offer special opportunities for *partnering* when they provide a unique skill set or access to a useful technology. Partnering with a vendor is usually based on payment for services that are otherwise too expensive or impractical for the organization to provide internally.

A good example of this type of partnering is the use of a service provider for multi-point videoconferences. Multipoint videoconferencing hardware is very expensive and requires skilled technical personnel for operation. Maintaining this capability internally usually is not cost effective, especially if it is used infrequently. By purchasing a less expensive, point-to-point videoconferencing system and using a vendor to provide the multipoint connections, significant savings can be achieved. Successful videoconferences will hinge on this vendor's competence, so significant care must be taken in choosing the vendor and developing a good working relationship.

Closing Thoughts

Suzanne Willis Zoglio concludes her on-line teambuilding article with the following. "To compete effectively, leaders must fashion a network of skilled employees who support each other in the achievement of corporate goals and the delivery of seamless service."[48]

Consider the distance learning team's relationship to other departments in the organization. For the distance learning team to grow, it must be integrated into the regular workings of the organization. All departments will benefit from knowing what they do, how they do it, and for whom they provide services. The whole organization must support and use the distance learning team's skills for this effort to succeed. The more all staff members come to know what is possible, the more they can sing its praises at business meetings. (Enthusiastic distance learning users can provide the best marketing.) They can begin to use the service for some half- or full-day meetings that would otherwise be financially prohibitive. Periodically, a distance learning team may want to write an e-mail to the entire staff, set up demonstration days, or invite others to open classes. They may want to report on successes and suggest ways distance learning can be used by others within the organization for dissemination of materials, meetings, and live events.

[48] See note 45 above.

CHAPTER 4

The Distance Learning Environment— Classroom, Faculty, and Participants

Part 1: The Distance Learning Classroom

The "Eyes" Have It!

Whether I was in high school or graduate school, eye contact with the teacher was very important. At the least, it was powerful. My experiences may be similar to yours.

I focused on the teacher in class. And the teacher, with those piercing, penetrating eyes, focused on me from time to time. It could be compelling and mesmerizing at times. I would follow those eyes everywhere, taking in every word. I developed the skill of looking like I was paying attention when, in reality, I was reviewing a date or planning the night's attire. Oh, I would still follow the eyes and look like I was interested, but I had no idea what was being said. Then it happened. The teacher asked a question. I knew it was a question by the change in his or her voice. Immediately, I left my reverie and returned my attention to the class. I had looked so attentive that the teacher was now phrasing a question about the lecture of the last ten minutes while looking right into my eyes. Oh, no! I could not hide. Thinking quickly, I attempted the next best thing; I averted my eyes. Maybe, just maybe, by not looking at the teacher, I could avoid getting called on. Sometimes it even worked...then again...

When the teacher was engrossed in the topic and wanted to engage those in the class who could fuel it with their energy, he or she seemed to know to pass over me. The teacher would find those whose body language shouted out, "Call on me! Call on me!"

In what other ways do we figuratively avert our eyes in the e-classroom? Most likely, we are quiet. We do not talk, type, or point with the mouse. When the instructor asks what we think, we freeze. Complete deadly silence. But how can a class succeed if the learners make themselves invisible? In a traditional classroom, no matter what we do, we are visible. We can feel the power of the eyes on us or the body looming over us. We can observe others on fire with ideas waiting to express them. In the e-classroom, we must develop new ways to be aware, new eyes to follow virtual discussions, and new ways to pick up clues from the class to form our questions and comments. We can listen to others and read their chat messages, but minus the familiar visual cues, what can help hold our attention? Internal motivation. It is a powerful energy source. We are in class because we choose to be. We want to learn, to share, and to grow professionally. "Call on me! I have something to add here!"

Author: Mary Ann Massey, Ed.D., partner in Lifelong Distance Learning Associates

"We Could Be Anywhere!"

Bob signed in from California. Mary, Kevin, and Sylvia all came from different parts of New York State. Kim Lee from Singapore made it before class started, along with Billy from Australia and Carol from Toronto. Before the class ended, ten more e-learners arrived from seven different states, and no one ever left the place where they initiated their participation. The faculty led the class from Williamsburg. Some participants e-mailed their pictures and profiles to the faculty a week before class, committed to reading a case study prior to the first class, and agreed to complete all assignments outside of class, the three 75-minute sessions scheduled for this program. In addition, they agreed to participate in role-plays, complete surveys, and brainstorm with the group when asked.

Neither the participants nor the faculty were first-timers. All had taken at least one live Web class during the year. All wanted to work with the renowned faculty selected to guide them through this domestic violence class. They were prepared, they were motivated, and they had accessed much background reading on the e-university Web site and had studied the profiles of other class members. Now, they were excited. Some of the participants were recognized internationally on the subject. All had more to learn. This was their chosen medium for learning.

Author: Mary Ann Massey, Ed.D., reporting on an ICM class in 2001

Think about the opening anecdote, "*The Eyes Have It.*" What kind of presence do you put forth in class, any class? Are you an involved participant, eager to read and report on your reading, eager to listen to others' comments? If this is your style, you will find your place readily in a distance learning class. If, in a face-to-face setting, you tend to avert your eyes and let others lead, you may have to work a little harder to find a comfort zone in the new setting. Your ability to be invisible may keep you on the outskirts of the class, and you may miss some critical exchanges that otherwise would be possible—if you added your own expertise or asked questions.

Yet, many people are more prepared for distance learning than they realize. They regularly use e-mail systems at work or home and may have used chat rooms for topical discussions. Some search the Internet with search engines, using a mouse in a Web browser to point, click, and "press" *next* buttons. The computer with its access to the Web has revolutionized our learning management.

Consider the second anecdote, *"We Could Be Anywhere!"* The *title* comes from a visit with a family member who had not traveled much. On her first trip to an exotic setting, she found many elements similar to those in locations familiar to her, and she took in everything. Driving along a scenic route, she shouted out excitedly, "Look! This is like home. We could be anywhere!" Immediately, she relaxed and opened to the adventures ahead. Although we substituted fictitious names, the anecdote above reflects one of the live Web classes about domestic violence conducted at the National Center for State Courts in 2001. Participants joined the class from many different time zones and from many different

professions—law enforcement, social work, and court administration. Despite those differences, their common interest in the topic strengthened their large group discussions.

The distance learning *classroom* varies depending on the modality chosen. For videoconferences using ISDN lines or satellite hook-ups, participants will be in an education technology classroom or studio. For both live and on-demand Web classes, participants can be at home, in the office, at a friend's house, or using a laptop in a hotel, provided the bandwidth allows. With distance learning, opportunities abound for ease in learning. For busy professionals, the options allow them to close a door for a couple of hours at work to become learners, or wait until they have settled in at home for the evening before regrouping their thoughts in a non-rushed manner.

Each method of distance learning is unique and challenging in the beginning. The environment is more in the user's control. This requires a different type of concentration than has been needed before. Some participants many feel confused, lost, and uncomfortable with the medium in the beginning. This is to be expected, as with any new experience, but research shows that multiple experiences with the Internet or VTCs can *significantly* reduce this discomfort, and the participant becomes a distance learner.

Distance Learning Classroom Philosophy

The introduction of distance learning processes into curriculum design and activities changes the focus of education and training in the classroom. Learning, traditionally experienced through the "lens" of the teacher, is replaced by learning through the eye of the distance learner. What is taught in a distance learning classroom is measured by what is understood and later practiced and appropriated into the distance learner's world.

This is a shift in focus, a big shift. Nick Schacht, president of GlobalLearningSystems, wrote an article in the May 1, 2002, edition of *e-learning* magazine on-line[49] entitled "Blended Learning: Turning the Training Center into a Learning Center." While the courts may not need to redesign a training center *per se* to make it become a more useful learning environment, some of Schacht's comments may help administrators frame their philosophy regarding education and training as the court system currently structures it. He states that a blended approach to learning is critical, "leveraging technology as a force to create a learner-driven model…is reshaping fundamental techniques that have existed for centuries." He speaks of the strengths of the traditional classroom environment as well as those of the virtual or e-classroom environment, and invites educators to consider incorporating elements from both approaches. He explains, "…the instructor's role changes in the new, blended environment. No longer an autocratic, omniscient, authority figure at the front of the room, the instructor must be transformed into a facilitator who guides learners through a self-directed process and provides assistance when necessary."

[49] Schacht, Nick. 2002. Blended Learning: Turning the Training Center into a Learning Center. *e-learning Magazine,* May 1. Retrieved August 8, 2002, from the Past Issues section of the *e-learning Magazine* Web site: http://www.elearningmag.com/elearning/article/articleDetail.jsp?id=18566

Such thinking parallels that of adult development theorists who have championed the adult learner as self-directed and filled with unique experience, expertise, and internal motivation to apply new learning to their daily lives. It conforms to the work of Dr. Pat Murrell at the Leadership Institute and the Institute for Faculty Excellence, both of which she directs out of the University of Memphis.

It may be helpful to apply some of Nick Schacht's thinking to education in the courts:

- *What* can be learned and *how* it can be learned must be expanded in the thinking of the decision makers.
- Faculty must be trained well in the new distance learning modalities for success to follow.
- Successful faculty will become *facilitators of learning,* guiding class participants along individualized learning paths toward selected goals.
- Participants must be learners who are open to self-direction, making choices, and taking responsibility for their learning.

As the courts embrace distance learning, the nature and shape of training and development will also change. Because it can occur without people having to travel, or can happen in off-peak hours, distance learning can minimize the effects of shrinking training budgets. Many in the courts will be able to participate with national peers in personal and professional growth programs offered at different times by different states on different topics. These programs, with asynchronous participation, also will allow a longer, more direct connection with the material, some personal exchanges with the faculty, exchanges with peers, and self-test opportunities if desired. Distance learning experiences can be designed to include pre-class assignments and follow-up presentations. However, we are getting ahead of ourselves. Here, our goal is to invite readers to think expansively about the possibilities of this new learning environment to retain interaction, human contact, and access to leaders in the field, while introducing personal tutoring, more comprehensive materials, and individualized learning paths. It is a challenge, because we have approached training and education for development so differently in the past.

In this chapter, we explore the roles of faculty and learners in different distance learning systems. We note frequently the challenges inherent in changing existing practices and styles of teaching and learning. Our intent in describing the challenges is not to exhaust the reader, but to honor what we know about learning curves. Knowledge of potential challenges gives us time to prepare for, and perhaps avoid, problem situations. It gives us a sense of power and serves as a grounding force. It is hoped that, armed with the anecdotes and lessons that follow, readers will have fewer problems entering the distance learning classroom. It is in this spirit that we unfold the rest of this chapter.

Chapter 4–Part 2: The Distance Learning Faculty

Is Anybody Out There?

"How hard can it be?" I thought to myself as I agreed to do my first on-line class last year, a course on emotional intelligence for court managers and staff. After all, I felt comfortable with the material, I thought I knew more than a little about adult learning gleaned from 25 years of teaching and lecturing, and the WebEx tools and techniques available to me were attractive. As it turned out, I was in for a surprise. Had I thought about why they call it "distance" learning, I might have been more prepared and less surprised.

In the first of two 90-minute classes, I was wired for success. I sat in front of my electronic classroom with my computer screen and telephone hookup as the first of the students started filtering in—some as far away as Singapore in the middle of their night. A few said "Hi, Ingo" over the telephone, to which I responded with friendly banter. Others registered their presence on the "whiteboard" or directly on the introductory PowerPoint slide. Most kept silent. The fact that I could not make eye contact, smile, and shake hands with the students, as I would do in a "live" class, threw me off my stride some.

My introductory remarks and warm-up exercise, designed to engage even the least interested in engaging, fell flat. I could not tell if the students were laughing or cringing in response to my stories that I thought were humorous. I was not helped by two interruptions caused by technical difficulties with the computer and audio hookups (someone's speaker phone was interfering with everyone's reception). I plodded on, interspersing my talk and PowerPoint slides with questions that hung unanswered in cyberspace, even after my exhortations for someone to please speak up that had the feel and sound of desperation. At one point, I actually asked, "Is anybody out there?" I was dying with no one to throw me a lifeline. The skills and techniques I used successfully in live classes that relied heavily on an intimate knowledge of and face-to-face interaction with my audience were not available to me. I certainly did not feel very emotionally intelligent—dumbstruck was more like it.

The end of the session did not come quickly enough. I came to the sobering conclusion that on-line distance learning using WebEx or similar technology required skills and techniques that I had not yet mastered. What helped me was thinking of on-line teaching as more akin to doing a radio program than leading a class in front of a "live" audience. Feedback does not come automatically in a radio program. On-line students can remain silent and anonymous with little risk, unless instructors build into their classes fail-safe techniques to elicit engagement in a way that fits their styles and personalities. It also really helps to feel comfortable with and model the interactive on-line tools for students. In more familiar, live presentations, seasoned instructors seamlessly integrate audiovisual aids, but practice may be required here.

The good news for me is that I learned and lived to give more—and, I am told, more successful—on-line classes. And, I actually enjoyed doing them.

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In the Lead and Out of Control

I have been an educator for many years, whether teaching high school, designing adult education programs, creating distance learning programs, or refining curricula for various organizations. I feel competent in many technologies and feel comfortable discussing the intricacies of IT systems in any setting. I have even taught instructors how to teach over the Internet. Yet, the day I led my first live Internet class, using an on-line education management system and the telephone for audio conferencing, I was not only nervous, I almost panicked. The challenge of engaging the learners without seeing them, switching PowerPoint slides manually, reading chat messages while thinking how to describe a concept, underlining or otherwise highlighting the text on the screen, and keeping the class engaged verbally was overwhelming. These simple tasks overloaded my brain when they had to be done simultaneously while trying to take the pulse of the voices on the conference call. On top of that natural learning curve experience, I had a disquieting internal experience. I was frustrated because I was unable to do better that which was central to my experience, background, and capabilities. That inner noise kept intruding, intensifying the pressure. I was relieved when the class was over and I could regroup! I have since become much more comfortable in the on-line world, but that first outing was a scary one.

Like many of my colleagues who enter distance learning classrooms, I did not know that the many tasks a teacher accomplishes simultaneously (and often instinctively) in a face-to-face setting require a different concentration when in a virtual classroom. I had been convinced that my personal ease with learners would overcome the difficulties of working in an on-line environment. Eventually, that happened...but only after several more e-learning experiences.

Author: Raymond Foster, NCSC Education Technology Director

These anecdotes are from seasoned distance learning faculty. The learning curve they encountered was surprisingly steep. They agreed to share their experiences to emphasize the extent of the new learning processes. Their goal is to warn face-to-face educators about systemic differences that affect initial distance learning efforts and to make a case for "hanging in" with the new learning. Experiencing this challenge can affect faculty both emotionally and cognitively in the beginning, but, after that initial learning curve, they find much value in adding distance learning skills to their education work.

In this pivotal section, we discuss distance learning in general from the perspective of the faculty—videoconference preparation and delivery, live Web class instruction, and on-demand Web classes. First, for those who would employ or contract with distance learning faculty, we offer a list of false assumptions with their more realistic opposites. Sometimes distance learning faculty find themselves in deep water, because *someone* assumed that they could teach well in the distance learning environment, that little preparation was needed for distance learning, and that the same approaches that work for face-to-face learning would apply to distance learning. It is useful for all involved in

launching new programs to appreciate that distance learning program development has its own set of rules, may need a different fee scale, and will involve multiple staff members.

Table 4
Distance Learning Assumptions

False Assumptions	Useful Thinking
Because someone knows technology, he or she will be a good distance learning faculty member.	A technologically savvy person may or may not become skilled faculty. Technology knowledge will help, yet he or she still needs to develop the same skills as others for dealing with remote learners. Without distance learning faculty skills, the technology buff will be challenged.
Because someone seems technologically challenged, he or she will be a failure at distance learning.	Faculty with great skills and a joy of the learning process may well find success in the distance learning environment. They may need one-on-one tutoring early on, but that should not stop anyone who wants to give it a try.
We should encourage long-time faculty to become distance learning faculty, because they will easily adopt the new skills.	Some faculty are eager to enter the distance learning world while others are not. Pushing someone to do a program, after he or she said no, may not be wise. Motivation to learn is one of the top three criteria for success here.
Face-to-face discussions are identical to distance learning discussions.	Face-to-face and distance learning discussions are quite different. Many of the cues one can observe and use in a classroom setting are not available. Conducting or facilitating successful distance learning discussions requires many new techniques.
Faculty preparation time will not vary because of the medium.	Time and again our experience has demonstrated that preparation time for distance learning programs is much longer than that for face-to-face programs.
Instructional materials are similar regardless of the medium.	PowerPoint slides that work well in a room full of people who have access to other visuals may not work well in an distance learning environment. Fonts, color, pictures, and vibrancy must compensate for the lack of face-to-face contact.
The fee structure should be the same for faculty whether they are preparing and delivering face-to-face or distance learning programs.	This is definitely not true. The preparation time for all new distance learning programs is greater. Therefore, compensation should be adjusted appropriately. Administrators do well to appreciate the amount of coordinated up-front work needed for distance learning endeavors. When a program is repeated, faculty compensation could be reduced to reflect less intense preparation effort.

Table continues on next page.

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False Assumptions	Useful Thinking
Distance learning faculty have very little to do with the technical staff that sets up the distance learning programs.	Distance learning faculty provide the content for successful distance learning programs, but team coordination and shared responsibility are key. Directors, technical staff, and media specialists want to help make the program a success and need faculty who understand how important it is to share, not hoard, materials; keep the team informed throughout the process; and hand in slides well in advance of the class. Cooperative attitudes and behaviors of faculty will help make the program successful; non-cooperative ones can scuttle it.

Distance Learning Faculty Development

"Teaching on-line is not for everyone." Some traditional, face-to-face faculty might breathe a sigh of relief at that statement. Nonetheless, we encourage professionals who feel like this to think twice before eliminating themselves from the distance learning field. Although teaching on-line may not be for everyone, it *is* for many more faculty than have yet tried it. Preparing to teach in one of the distance learning modalities will challenge faculty in several ways.

When first considering entering the distance learning field, faculty need to reflect on their backgrounds. This can offer them insights about why they may be more or less comfortable working in the new environment. To do this they should ask, "Why do I do what I do?" They should revisit their education philosophy, their current teaching style, the types of outcomes they generally seek, and the particular techniques on which they tend to rely. This is useful reflection, not designed to change their thinking or their methods necessarily, but to affirm why they do what they do as educators and to prepare themselves to be ready and open to building new skills on their existing skills.

Two other questions of importance for faculty when they are developing a class cannot easily be answered before the class begins, especially in a distance learning situation. They are "What do your learners want from this class?" and "Why are they there?" Distance learning faculty will need to discover or invent ways to gather this information.

Although teaching in a distance learning modality does not require faculty to give up all that is familiar and foundational to their educational philosophy, it does require them to be flexible and creative. Many teaching techniques and even some principles of adult education may need to be adapted to fit the new environment. Because distance learning draws faculty from different disciplines with different teaching styles to address a broad range of topics, it provides a rich source of ideas and philosophies to draw on—from process- or discussion-based approaches to technical-, skill-, or practice-based ones. That is good news! In addition, with the breadth and depth of possible topics expanding exponentially in the distance

learning environment, "motivation to learn" has been described as a primary factor determining success or failure in distance learning.[50]

Preparing to explore these new delivery methods, face-to-face, traditionally trained faculty might want to take an on-line class or participate in a chat session on a major TV network site, find an on-line self-help recovery group, or some other on-line organization's community forum. Potential distance learning faculty may want to participate in a videoconference and notice their own responses to it. Before participating in it, they may expect it to be like a television program, but may be surprised to find how much concentrated effort is needed to stay connected to that small screen without the super stimulation that expensive TV programs generate. They might want to ask themselves, "If I were the faculty here, what would I do?"

These experiences will prepare them for the opportunities distance learning can bring as well as alert them to its limitations. Their own inner response to their exploration of the distance education medium will hamper or propel their current decisions to move forward. In general, if people size up a system as unworkable or requiring too much effort, they close their minds to the opportunities there. Considerable effort may be needed to convince them not to toss distance learning out the window before getting a handle on its potential.

Our intention is not to dissuade faculty who are considering distance learning, but to prepare them for some of the potential stumbling blocks ahead. Appropriately prepared, they can problem solve, develop good strategies, and be confident in the knowledge that, overall, they will move the process forward, though at times it may not feel so.

Before addressing each distance learning modality separately, let us review some general guidelines for teaching in the distance learning environment.

- **Preparation time increases.** We cannot overemphasize this fact. People sometimes try to put on new shoes without taking off the old ones. One traditional faculty put it this way, "I do not tend to prepare for a class until it hits my radar screen (especially if I have taught it several times before). Then I jump into high gear, review my notes, comply with requests of the hiring agency, and set it all aside for the week or two before class." If this faculty member continued this pattern in a distance learning environment, he or she would be highly stressed, the receiving site team would be biting their collective nails, and creatively connecting with the participants would be unlikely. A conference call with the distance learning team at least one month prior to the event, practice time two weeks later, review of the slides and other visuals at that time, and submission of quizzes, surveys, and other labor-intensive activities *at least* one week prior to class will increase the likelihood of connecting effectively with participants.

  To engage a face-to-face class, one can shake hands and say hello as they come in, make eye contact, smile, learn a few names, hear a few stories, and get a general sense of the energy and readiness for the learning. How will these warming-up rituals

[50] See note 9 above.

be accomplished electronically? A connection can be made by sending e-mail welcomes, inviting questions via e-mail prior to the program, posting a survey on a Web site to ascertain baseline knowledge, skills, and abilities, and engaging everyone in the content prior to the program through selected reading. This up-front activity does not eliminate all the tension of the faculty who must still say hello when the program begins, but it goes a long way toward engaging participants who may be uncomfortable in the new learning mode. No one knows exactly what to expect. That common ground will allow everyone to learn the medium together as they explore a topic in which they are all invested.

- **The learning curve is longer than anticipated.** Although stated above, this important point bears repeating. Superimposing a set of traditional materials onto a distance learning program is counterproductive. Adaptations are necessary. Distance learning faculty must see themselves as part of a team with various members that help with materials.

- **Rehearsals are mandatory.** Faculty need to participate in at least one rehearsal a minimum of two weeks prior to the event for Web programs and a month for VTCs. (This can be done over the phone for Web-based programs, but it must be done in person for a videoconference). Traditional faculty have much to learn—how to work cooperatively with a coordinating team, how to speak to a camera or microphone, and how to engage participants in an active way.

- **Review of the presentation by or with a distance learning program director is useful.** On the distance learning team, the program director's job is to serve as a link between faculty and the technical staff. It is a much more central role to the education goals. The program director will facilitate the program with and for the faculty so that it runs seamlessly and participants are fully engaged. The program director will help faculty be effective and competent in the distance learning environment and help them get comfortable with the new tools. He or she also will become knowledgeable about the faculty's program and be able to make suggestions for optimizing its presentation. The program director can see that the suggestions are integrated, and that faculty have what they need to perform successfully. The program director connects faculty with the technical team member(s) who can help with visuals and other methods and materials to facilitate the distance learning process, but the faculty remains the content expert.

- **Deadlines may be one to two months ahead of the program delivery date.** Faculty must realize that the norms are different for distance learning programs—many more people are involved, many more processes need to be scheduled, and there is always still more to learn...by everyone involved. Therefore, honoring deadlines is critical.

- **Preparation may include discussing technological options with the distance learning team.** The distance learning team is there to help faculty do the best job possible. New distance learning faculty may be familiar with a few techniques, but

with the staff's help, their knowledge, skills, and abilities may truly grow. On the other hand, the faculty may have some clever ideas for enlivening a case study, and, in sharing them with the team, everyone is challenged to be creative. These are constructive challenges that move everyone toward developing excellence. See Chapter 3 for a more comprehensive discussion of the distance learning team.

- **Homework, pre-, post-, and between-class assignments, will enhance the substance and quality of the distance learning experience.** When presenting workshop-type programs in the courts, traditional faculty rarely think in terms of homework or pre-class assignments—programs are primarily self-contained. Yet, in the distance learning classroom, homework and pre-class assignments can focus the learning on specific topics or skills and let participants know that their involvement is critical to the success of the program. In addition, homework assignments strengthen and deepen what can be learned and provide a means for reviewing or considering practical applications back at the office.

Multitasking in a New Environment

When driving to an unfamiliar city, we use maps to guide us. Helpful friends and family tell us to look for a gas station or department store, or to count 12 lights before we turn. If we are on dark roads and traveling alone, we may need to stop several times to re-check the map, because someone forgot to tell us that we would need to travel 20 miles on that dirt road. Although this would have been useful information, it is a familiar detail that never occurred to him or her to relate. We know how to drive, but we are not at ease driving under these conditions—in the dark in an unfamiliar location. Such is the landscape for faculty learning to work in the distance learning environment. Since anything we do for the first time requires us to engage in the process so intensely, it seems to take an interminable amount of time. The second time, we will know what to expect, and it will be much easier. The second trip down that dirt road in the dark will be much more comfortable.

The *ability to multitask* is essential for successful faculty in distance learning. It is at the foundation of successful face-to-face education, too. So, one can infer that seasoned faculty probably do it well already…just not in the distance learning classroom. Developing the skills to flow seamlessly through a new program will always take its own time. A judge recently participated in an intensive training program to qualify him as a distance learning faculty. One day, he sheepishly told the trainers that he was the least skilled in the class, that he did not want to hold anyone back, and that he was convinced he had overstepped his ability level by attending. He was terrified of that dark road ahead. His worries wore off after three days, and he was free to become excited about the possibilities. By the end of the week, he had diligently worked to master a specific modality, developed a program, and beamed from ear to ear. His natural skill at generating programs, being creative, and engaging learners was only compromised for a short while. He knows he still has more to learn about on-line presentation options, but he knows he can do it. In addition, his multitasking skills for maneuvering in this environment sharpened with each presentation, thus lowering anxiety

and freeing up even more creative energy. After a while, he will not need to think about what he is doing. It will be integrated into his teaching.

Adapting Teaching Techniques for Distance Learning

Adaptations are necessary, because instructions need to be much more precise in distance learning modes. If directions are not clear in the traditional classroom, learners may pick up cues from the faculty's body language. Because learners in a distance learning environment are physically separated, the visual cues are filtered out; they will have to work harder to "get it." Distance learning faculty succeed when they *anticipate* participants' needs and frame activities in ways that make it easier for them to learn. For instance, discussions *are* still critical, but how one conducts them in the distance learning environment has new parameters. Important cues are missing—the fidgets, the eyes, the raised eyebrow. What exists in their place is often silence. Questions such as, "So, what do you think about this theory?" may hang in the air on-line. Although it is phrased respectfully and does not put any individual on the spot, it allows participants to hide. And often, it seems that participants all decide, quite coincidentally, to do so at the same time. Distance learning faculty need to consider saying instead, "Mary, you noted earlier that your court experimented with *X*; could you describe that process?" When even one person responds, it opens the door and others feel safe joining in.

Using another technique, this time to create a dialogue with distance learning participants, faculty must *compel* the would-be learners to enter the discussion. However, knowing what might compel their involvement can happen only if the faculty has learned about their needs beforehand, before the class sessions are to be conducted. And once again, as in other distance learning situations, the type of lead question is critical. It must trigger an engaging memory, feeling, or problem, or the sound of silence will reign. Similarly, distance learning faculty must know something about the participants. This kind of reworking of one's teaching style is central to the adaptation process. The same techniques are appropriate in VTC work. Although everyone can *see* others, the separateness of the sites elicits a more passive connection, unless the faculty changes the atmosphere. It also happens in on-demand modes, where so much material can be laid out for perusing (at one's own pace) that participants can hide in "the stacks." Many distance learning faculty will use these challenges to become renewed and excited and to sharpen their skills to engage learners in new ways.

Below is a table that lays out some common myths regarding teaching in a distance learning environment with a reality check on the right. Myths abound and will continue until more faculty and administrative staff members become familiar with the options and constraints of the environment.

Table 5
Distance Learning Faculty: Myths and Realities

Myth	Reality
I must become technologically proficient to teach successfully using distance learning.	You must be open to learning the rudiments of how the technology works so that you can engage the team to work with you. That is all.
I will have to learn a whole new set of techniques for relating to learners in the distance learning environment.	Yes and no! You will continue to use techniques that work with your teaching style and your personality, although some adaptations may be required. A distance learning curriculum designer can help you identify and accomplish the adaptations.
I like to engage learners in adapting the program to meet their needs, but I hear that I must be much more structured when I prepare a distance learning class.	Yes, you need to be structured, but distance learning faculty must engage learners in the process also. Pre-class assignments, surveys, anecdotal stories, and readings can bring energy to the class. Queries about what they already know and what they want to learn are valuable in any environment and convey your respect for them.

Teaching in a Videoconference Setting

Videoconferences come in different styles, offer unique options, and work toward a variety of outcomes. Using ISDN lines, videoconferences allow audiences in all locations to both see and hear each other as described in Chapter 2 (*two*-way audio and video). Using a satellite system, many more receiving sites may connect to a *one*-way video with audio presentation. Their comments and feedback come through at selected times via a fax machine, telephone, or computer with e-mail. Both systems work well, yet each challenges faculty to engage others who are viewing from a distance, who can be locally distracted, and who are more attuned to the energy in their own "distant" classroom than to the faculty who seems so far away.

In either modality, the opportunity for people from many settings to share knowledge with each other is rich. It rises or falls on the skills of the distance learning faculty who is like an orchestra leader with musicians in every corner. He or she must know which talents reside in which seats, then signal them forth at the appropriate moment. And, to continue the orchestra analogy, just as the conductor cannot lead his or her musicians well without a good sound system, cameras, stage, and stage manager, the distance learning faculty must work with the program and technical directors and technical staff for several months prior to the performance to coordinate all associated tasks to ensure success.

Successful videoconferences have several elements that are somewhat predictable. Although technology glitches are *not* predictable, they are manageable when a skilled team is assembled that knows how to deal with them. The first element for a successful VTC, then, is a ***skilled team***. The table below lists the distance learning team members and their roles in the production. Each person plays a significant role.

Table 6
Roles of the Members of a Skilled Distance Learning Team

Team Role	Role Definition
Program director	Serves as program and, usually, the overall project director; maintains connections with faculty, the technical director, receiving site facilitators, and the marketing staff.
Technical director	Serves as chief technical director; works closely with the program director, faculty, and his or her own staff.
Technical staff	Works under the technical director and sometimes with the program director or faculty to help adapt the graphics for the program.
Media specialist (if available)	Works with technical and program directors and faculty to brainstorm and produce graphics.
Camera people	Well-trained, ad hoc team members who must be present for dress rehearsals and program delivery; answer to the technical director.
Bridging staff (may be members of the technical staff or an outsourced bridging company)	Used when connecting multipoints to safeguard quality and technological efficiency; works closely with the technical director who oversees the timelines and makes executive decisions.
Receiving site program facilitators	Work closely with the program director to prepare the participants, materials, and the site; meet with faculty by phone to review program outline; make clear expectations for group discussions, feedback loops, and timing of segments; coordinate with the receiving site technical facilitators for camera and sound needs.
Receiving site technical facilitators	Work closely with technical director to ensure quality of line connections, camera angles, and sound; coordinate with receiving site program facilitators for program delivery needs.

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Team Role	Role Definition
Faculty	Works closely with the program director and technical director to refine program, set stage, plan audio and video segments and site exercises and develop timelines, with all audiovisual materials due two months prior to program delivery; teleconferences with program facilitators who will lead discussions and debrief exercises at the receiving sites.
Participants	Come early on the day of the program to become familiar with the distant classrooms (the receiving sites), the written materials, the placement of the camera and microphones, and ways to participate fully in this medium.

Engaging people through a TV monitor or large screen is the second element of a successful videoconference. Videoconference development and production is like making a mini-TV show. It is not for everyone. Many traditional, face-to-face faculty do not have the type of energy that projects well on a screen. One does not have to be an extrovert to work in this medium, but one does have to have a *presence* that comes across well. This is not the time to read notes verbatim, use flat PowerPoint slides, keep one's head low, or talk in a lecture-type voice. These quickly become tedious, and a participant's attention can wander. Without the participant's attention, content cannot be communicated. Therefore, distance learning faculty may need to be more dramatic, funny, or engaging than traditional face-to-face faculty, or be terrific at facilitating discussions among sites.

Participants at each receiving site must feel like they are local, that the faculty is sensitive to *their* queries, *their* comments, *their* energy, and *their* needs. Distance learning faculty need to think about how they can lead a group discussion so that all voices are invited and heard, and energy is contagious. Faculty who succeed move beyond their notes and follow the participants. They put aside time on the agenda to meet previously unplanned needs. The successful distance learning faculty allows participants to guide the movement of group discussions and share experiential wisdom with one another. The faculty facilitates that rich exchange. Faculty can be successful in VTC work regardless of their personality type or delivery style, if they incorporate the considerations discussed.

Two qualities in faculty contribute strongly to the success of a videoconference—their expertise and their passion for the topic or issue. Confidence in their expertise is also important. Knowing the topic well frees the faculty to direct or redirect dialogue to meet the diverse needs of participants. This ability is very valuable and often results in high marks on evaluations. When the faculty talks with participants at every site, it signals respect for all participants. Participants feel it; they relax and engage in an active learning session.

When passion for the topic or subject is evident, the distance between faculty and participants is forgotten. This encourages participants to access their feelings through role-plays, case studies, or story telling. Faculty can energize and empower others to recommit to

their work. And, when faculty are receptive to the distance learning team's efforts to enhance the visuals, teach them about timing, and help them structure movements and activities, all can celebrate a better-prepared and better-delivered program.

Not all videoconferencing is well done. Some faculty may read a paper or share a research finding as the only activity in a one-hour slot in a daylong program. They show up at the studio, are led to the presenting station, shown the camera locations, given a microphone to attach to a lapel, and wait to be called on by the host site. The distance learning team can serve as a resource in this situation to create a more engaging program. We suggest that faculty discuss their plans for the presentation with the team well ahead of time to arrange for the inclusion of photos, graphics, a cartoon, or a one-minute video clip. Sometimes that is all it takes.

With one-way satellite videoconferencing, focus on faculty is more concentrated—faculty can seek participant responses only at specific checkpoints through faxed or telephoned comments. On one hand, this gives them more control of the movement of the program. On the other, it means they are more responsible for creating any energy or enthusiasm that is transmitted to and caught by participants, for challenging the thinking of those in attendance, and for varying the presenting style. Participants will decide very quickly if the faculty is interesting to listen to, knowledgeable about the subject, or aware of and open to them as participants.

This monograph cannot describe the full range of work that VTC preparation mandates, but it *can* present an overview of many of the tasks to help faculty create and evaluate timelines and deadlines and appreciate the cooperative effort that is central to successful programming for distance learning.

We complete our commentary on this process with a note about cost. A point-to-point videoconference is extremely affordable—minor expenses are involved, but using a bridging company raises costs significantly ($100 plus per hour per site, including testing time), although the cost-per-head can be reduced significantly with 20 or more participants at each site. If participants at many sites are to join in an exchange with an expert who is thus made available to them, or if interested individuals can come together to see and hear one another, to share and learn from others' expertise, and participate in a vibrant forum to contrast and compare beliefs, the use of a bridging company can be worthwhile. The bridging company can significantly enhance the quality of the program by expertly managing the technical connections, monitoring all the receiving sites, promptly addressing any glitches that occur, and working with the host site for a smooth delivery.

When working with smaller groups, or when the budget is a significant issue, other options should be considered. Many states now are contracting with local colleges or school systems to use their established networks to provide programs within a state. The costs for using an in-state, established system are nominal, making this a valuable option.

Remember, no matter which system is chosen, up-front preparations are required.

Live Web Class Development

The Internet, accessed through a Web browser, is an exciting, ever-changing venue for bringing learners together. Each month new organizations make their Web sites more user-friendly. They make programs available to a wider range of potential learners so that many people can turn to the Internet for learning. It is no longer the private domain of the technologically privileged.

We support the notion that a great many topics *can* be presented live over the Internet —and work well—with the right participants and well-trained faculty. However, as with other distance learning opportunities, the success or failure of these programs resides with *all* distance learning team members. The technology has to work and not be complicated; faculty need to develop skills and comfort in the medium; and participants must learn how to maximize their involvement. Our term for this process is "Web socialization." We discuss the participant's role at the end of this chapter.

The opening anecdotes in this chapter related the distance learning experiences of faculty who focused on live Web classes. Faculty conducting a live Web class for the first time often describe awkward beginnings, because the experience is so different from other types of teaching and learning endeavors. It is challenging to comprehend the amount of practice time needed for the medium. The distance learning team's sensitivity to this learning curve and their desire to help the faculty transition smoothly to the new delivery mode challenges them to stay abreast of the faculty's preparations.

What makes live Web class deliveries so challenging even to seasoned faculty? In a live Web class, as in other distance learning situations—minus the normal visual cues—instinctive comments do not come to mind as readily. When participants collectively go into silent mode, the faculty is in the dark. Not wanting to lecture, lecturing nonetheless becomes a fallback technique when no one responds. In traditional classes, general queries, those not specifically directed to an individual, were designed to make responding easy and avoid embarrassing people, but in this mode, they may well lead to silence. It is more useful for faculty to ask specific people to respond to a non-threatening question in an on-line class. Another good technique to initiate on-line discussion is to relate an anecdote filled with controversy that stirs emotions among participants. A valuable tool in any setting, anecdote-led discussions can be lifesavers on the Web.

The need to concentrate on the new tools and multitask differently is challenging in the beginning. Practice reduces the intimidation and facilitates adaptation. A typical live Web class (in mid-2002) challenges faculty to be lively, passionate, and engaging while reading participants' names from a list, reading chat comments sent by participants who choose not to speak aloud, moving the PowerPoint slides forward, concentrating on the content, and using pointers and highlighters to add some interest to static pages, all at once! We are now convinced, after training at least three dozen distance learning faculty, that *everyone* needs practice on the Web, and that the first class is always a surprise no matter the amount of practice. Some live Web programs use a telephone bridging company to provide an audio

connection during the program; some use two-way audio over the Internet; and some use one-way streaming video and audio that lets participants see and hear the faculty while the faculty themselves respond through keyboard text chat. Each system has its strengths and challenges, but all require faculty to revisit teaching styles to involve "remote" participants.

We do not wish to discourage anyone from this adventure, because we are convinced of and excited about its usefulness and viability, especially when mixed with other modes. It can be a very practical and efficient way to debrief homework, monitor the progress of a shared project, teach a complex project management system, or work together to build an outline.

The limitations are familiar ones, however. Time limits still apply and must be honored. People cannot sit and concentrate on a small screen for more than 60 to 90 minutes at a stretch. Therefore, short segments work well. Participants are easily distracted and may begin to send private chats to each other rather than stay engaged in the discussion. Direct interaction of participants with faculty becomes crucial for Web success. Faculty need to involve participants by inviting them to share their experiences and expertise, build theory, and apply their learning creatively. Distance learning faculty do well to learn as much as possible about participants. The built-in polling systems available to most Web programs can call forth much information that engages, disarms, lightens the atmosphere, and prepares everyone for the content.

All this being said, motivation to learn is the primary reason people take classes over the Internet. They want to learn. They want to be engaged. It is a new medium and the role of faculty is to guide learning in this new venue. All distance learning faculty who are prepared, know their subject well enough to leave the beaten path, take time to get comfortable in the new system, and are passionate about their topic, will engage participants quickly and keep them engaged. They will creatively disseminate the material, challenge participants to answer hard questions, give them homework assignments on which to report during a second class, and strengthen critical thinking among the learners. Many will enjoy success teaching over the Internet for years to come. We encourage all to give it a try. All teaching styles can work, although each style may need a different adaptation process.

Tips for Faculty in Live Web Classes

We offer these tips for newcomers to Internet-based live Web classes.

- **Be specific and clear.** Prepare topics so they can be effectively presented and received by learners in 75-minute segments.

- **Use PowerPoint slides** as the main visuals for the class. Since this is primarily a visual medium, it is imperative that the slides look attractive and appealing through the use of color; pictures that make a statement; sufficiently large fonts; and variety.

Appropriate, clever, and novel graphics and the use of personal photos can help carry the story.

- **Make slides readable and engaging.** Add color to each slide. Develop only one thought per slide. Avoid long lists of bulleted points but do not limit your page to a two-line sentence that can bore the viewer. Fonts should be 28–36 in size; Arial or other sans serif fonts work well. A light background and a dark font (or vice versa) works well. Vary slide designs when topics change. Avoid bright reds; they bleed.

- **Keep template designs simple.** Avoid splashy backgrounds or design templates with big graphics or swishes. The bandwidth requirements are higher and they become a download (connection-speed) issue for many viewers.

- **Poll participants to establish group awareness.** Since most education management systems allow the use of polls, consider using these as anonymous quizzes to survey participants' backgrounds or range of knowledge, or to compare techniques and systems used in the different courts. The diversity of responses may lead to deeper-level discussions. Polling adds variety and fosters a common bond among participants that might otherwise be blocked by the nonvisual aspects of the class.

- **Add variety with unconventional polling.** Consider developing a slide with boxes, a football field, a series of circles, or anything creative (such as a picture of Superman). Participants are asked a question. Then, using the system tools, they are invited to click their pointer in one of the boxes, circles, or on the *head* or *feet* of Superman.

- **Incorporate pictures for emphasis, pacing, and personalizing.** Feel free to incorporate pictures, graphics, or hyperlinks to the Internet to make a point or to change the pace. Insert a few candid pictures of yourself along the way so participants can see what you look like from time to time.

  Using original photographs is effective, but check on and reduce their file size to 25K–50K before inserting them into the presentation.

- **Slip your own camera into the presentation:** If you have a Web camera, feel free to use it periodically during your own class. It is useful during discussions to let participants see your charming countenance as they talk.

- **Use poignant, relevant case studies.** Create and use one or two case studies during each class that support your theme or challenge participants to advance the theme. Participants in this venue are sometimes reluctant to speak out early on. When you tell a story, they can react to it and find their voices in the class sooner, especially if the story is poignant, relevant, and sets up the theme for the class. Case studies can be sent out before class too, with questions from the faculty to focus attention for the class.

- **Try participant case studies as lead-ins.** Some faculty poll participants a week ahead of class for participants' own case studies, problem situations, or challenges. These then become relevant lead-ins for the next class.

- **Involve participants with the whiteboard tool.** This is your on-line, information-gathering tool. It looks like a blank page. Learners can utilize writing tools within the system to record comments. Learners really like to write about *their* experiences, *their* wisdom, or *their* solutions in this preset whiteboard box. It not only allows them to speak, but they can share their expertise and help develop the topic.

- **Consider opening or closing with an anecdote.** An opening anecdote that brings the class into the theme in a dramatic way is very useful. Participants tend to be deferential to faculty and to one another in the early part of the class. Stories, followed by questions on the stories, allow participants to "get in" sooner. Try to close the class on a summary note, with a poignant story or with some humor. Openings and closings are critical in this medium.

- **Draw in quiet learners.** Always ask direct, non-intimidating questions to people at a specific site or to a specific person. In this medium, we do not have the advantage of eye contact to find our responder, so you might say, "Several of you are from California. How is California handling the privacy issue? or dealing with domestic violence? or incorporating technology in courts?" You are really asking them to report what they know already. Such questions engage others, too. Once you have called on participants personally, they more readily volunteer other comments as the class progresses.

- **Assign homework.** Design a homework assignment to be distributed at the end of class one and reviewed in class two. Challenge participants with the assignment—building on what has been taught and preparing the way for what will follow.

- **Give handouts prior to sessions.** Prepare a handout for the class that summarizes the material prior to the first class session. Make it available to participants on your Web site. That way, the next class can be used to develop the material on a higher plane.

- **Use your Web site or e-mail for preparations.** Take advantage of your Web site to deliver pre-course assignments, host a post-course or follow-up discussion, and provide instructions for using the medium.

On-Demand Web Class Development

The most important element of on-demand program development is the communication among faculty, any other content developers or media specialists, and the technical staff. Typically, on-demand content will be text with perhaps some PowerPoint

slides or other visual materials that would have been used in a face-to-face delivery. These materials must be made more visually interesting, however, and broken into discrete sections that fit the Web-delivery format. Making this transition is challenging. The length, navigation, and visual appearance of each section must be appealing and manageable to participants, while content integrity is maintained. The conversation among faculty, other content developers, and the technical staff must focus on how to make this happen, with the needs of participants driving the discussion.

It is best not to require participants to spend more than an hour in an on-line segment, but the length of time needed to complete a section of on-demand content is difficult to determine. Since what constitutes an hour's worth of on-line content will vary from participant to participant, faculty or other content developers should test sections with various participants beforehand to determine if a segment *can* be covered in an hour. Reformatting content is easiest before it has been posted to a Web site, so time invested in gauging the length of each section is well spent.

Text on the Web should be accompanied by graphics such as images, graphs, or charts for illustration. Originals or high-quality reproductions of graphic materials should be used. Faculty or other content developers should be responsible for obtaining the best quality graphic materials possible. Only those that are copyright free, appropriately purchased, or already owned by the organization should be used. The person obtaining the materials should be responsible for any copyright issues.

Faculty should be aware that creating and posting a course on the Web does not end their involvement with the course. Successful on-demand programs will require that participants have access to the faculty, but this can be done asynchronously. Faculty also will need to be available to monitor threaded discussions, respond to questions, and provide feedback during the course. If the on-line program is offered for a specified period of time, the faculty should be available throughout. All participants should be familiar with the technology and able to use the discussion features of the Web site effectively. The technical staff may have to develop detailed instructions to aid those not familiar with the program, and one-on-one training sessions can be used to help new distance learning faculty feel comfortable in the on-line environment. An agreement should be reached with faculty that clearly spells out their responsibility regarding communications with participants, and participants should be told how long they should expect to wait for responses to questions or technical assistance during the course. In ***no case*** should they have to wait more than 48 hours for help. This assistance might be simply an acknowledgement of their request with a statement that more help is on the way. Preferably, however, it will be a direct response with the information they need to succeed in the Web class. Content developers, technical staff, and faculty should work out a shared responsibility for monitoring the class and assisting with this function.

While content developers and faculty must take the lead in the content development, the technical staff must be responsible for formatting the content appropriately for the Web and posting new materials when they are received. Network and server maintenance may be done within the organization or by contract, but it must be performed outside the time blocks

scheduled for program access. In the event of a temporary loss of service, acknowledgement of the loss should include an explanation of the problem with an assurance that steps will be taken to prevent such problems in the future. Technology failures are not tolerated well in an on-demand environment.

On-demand program delivery can be achieved through the development of a Web site or by using on-line courseware such as WebCT or Blackboard, which were discussed in Chapter 2. No matter how the materials are developed, they will reside in a Web environment and the content must be formatted accordingly. A number of skills are necessary to enrich content and make it more interesting and attractive for this environment.

- **Graphics.** Ability to create and format graphics in a colorful and interesting way. This includes assigning colors to backgrounds, changing text colors, and adding shapes and forms to create interest and highlight information on a text page.

- **Photographs.** Ability to capture and edit digital images. This includes changing image type, lightening and darkening images, changing color balance, adding borders, and reducing file sizes.

- **Video and audio.** Ability to capture video and audio files. This includes the use of video cameras and editing software. A basic understanding of good lighting and framing techniques is also necessary.

- **Web page development.** Understanding HTML (the code used for creating Web pages) is extremely helpful. The ability to create tables can enhance page layout and allows more control over the placement of graphics, charts, and forms in the Web environment. The technical staff must take the responsibility for these tasks and strive to expand on them as needed.

Chapter 4–Part 3: Distance Learning Participants

Just Ask

Recently, we began our first Web-based, instructor-led course for New Mexico judicial personnel. The course was on alternative dispute resolution (ADR) and, that being such a hot topic, there was a good response to our call for registration. Twenty-one judges, court mediators, and other staff signed up. Since this was our first experience with this level of distance education technology and this type of application, we were quite excited and quite nervous. We braced ourselves for a plethora of unanticipated technical problems and tried to prepare for as many as possible with a detailed course overview, instructions, a help page, and especially the "Contact a Real Person" section of help. What was surprising was not that we had many unanticipated technical problems—there were a few rather unsurprising technical problems—but that there was more unanticipated human behavior.

One of the critical factors for learning in a distance education program is interaction. The other is social presence—getting people connected to each other at a distance. We addressed the interaction and social presence issues in a variety of ways, one of which was establishing discussion groups. We had an introductions discussion group and introduced ourselves to set the tone. We had discussions within each module with prearranged questions for participants to address. We had assignments, document uploads, and e-mail—all kinds of ways to get students connected, talking, sharing ideas, thoughts, and problems. But it was awfully quiet out there.

When the course first started, we got a few calls and e-mails about problems with registration that we promptly dealt with. Then we received a few more calls and e-mails concerning problems with video, so we burned CDs and distributed them to those participants, and let everyone know they were available, to just ask. Things settled down a bit. Two weeks passed, but we were not getting a lot of activity in our discussion groups. In fact, we were not getting a lot of activity anywhere in the course.

Fortunately, we were on our toes. We started e-mailing and calling individual students to see how they were doing. Turns out that they were having problems, especially the ones from whom we had heard nothing—problems with registration, with video, with staying on schedule. Minor things that could be easily dealt with—if we had known! But they did not tell us, so we had to ask. People got overwhelmed by the whole concept of distance education and the new technology, so, in hindsight, this was quite an appropriate response. However, if we had not contacted them, we would not have known they were even having problems and would not have been able to help them. As it turned out, we did contact them, were able to help them, and, as a result of their feedback, decided to extend the course a couple of weeks so those lagging behind had a chance to catch up.

One of my favorite expressions has always been "Assume nothing," and yet we assumed something—that people would ask for help. That is often not the case, and, so far, that is one of the most valuable lessons we learned with our ADR course experience.

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The participant is a vital component of all distance learning activities. We focus here on participants in videoconferences, live Web classes, and on-demand Web classes. Elements in the different environments overlap, yet distinctions suggest that each be addressed separately.

Significant Role for Videoconference Participants

Put yourself in the following scene. You have signed up to attend a videoconference. This is new for you. Actually, you have been avoiding it for years, because you much prefer face-to-face programs. You feel like you get more for your money when you attend in person. Still, the faculty is a favorite of yours, you need the updated information her brochure outlines, and the timing is right. You were able to get funding for this distance learning presentation ($300) after your request for out-of-state travel ($1,500) to attend a session was denied. You enter a room with rows of tables. Several microphones sit on each table along with a booklet for each participant. Since this program allows for two-way audio and video, someone welcomes the twenty-plus participants around you and describes what will happen throughout the day. You peruse the manual, notice the break times, the planned discussion groups, and the opportunities for open questioning. You are shown how to turn on the microphone when you want to speak and how to look into the camera, and are introduced to the delay factor in the transmission. "This means," the program facilitator says, "that when the faculty speaks or when anyone speaks, they need to complete their sentence, *even if someone else is trying to say something from another site.*" Stopping speaking will only increase the delays. The delay factor is enough that if we "politely" stop talking, no one will ever complete a full sentence. When someone stops talking in deference to a voice coming in over theirs, the other person (within a couple of seconds), hears the first person's original few words, at which point the second person stops talking, only to hear the first person stop...and the stop-and-start beat lurches on.

Next, you are shown a whiteboard, which the program facilitator calls a parking lot on which you can place questions or comments at any time during the session. The faculty will call for parking lot comments frequently. You are told that the faculty will call on your site (one of eight) during the session, and anyone who wants to respond is free to do so.

The class begins. The faculty seems far away, and there is noise in the room. People are eating, whispering to each other, and someone is giggling. Several people are thumbing through the manual. Then the faculty calls on participants at several sites, seeking their concerns and interest in the topic. You start to quiet down, pay more attention, and get ready

for the class. Your turn speaking goes well, and, eventually, most of you participating in the session settle in, more comfortable with this new medium. The sounds are still distant, you still are aware that the faculty is in Kansas, but her slides are relevant, her exercises are sharp, and you get caught up in the movement of the class. Surprisingly, participants in other states start a debate that the faculty allows to go on; then she actually throws it to your site for comments. Silence! No one goes to the microphone. You are not prepared for that, but the faculty, undaunted, continues to ask someone to speak, and someone finally does. After the ice is broken, a number of participants have comments to make. It is okay.

By the end of the day, you have had the learning experience you desired, you have met new colleagues nationally, and you can go home to supper. It is not your preferred style of learning, but it worked.

Because the role of participants is so critical to the flow of videoconferences, it is important for new distance learning participants to know something about the medium before attending a class. It is very important for them to keep expectations simple and be willing to go with the flow. If participants are looking for broadcast TV–quality performances, they will be disappointed. Classes are not at that level yet. Participants with these expectations may never become engaged in the process. Yet, we have found that if we teach about the medium, emphasize its strengths, and offer programs that are well designed to meet the needs of the many different participants, the response is positive. It works! Perhaps, after reading this monograph, the next time you participate in a distance learning class, you will be more willing to speak up, challenge the speaker, ask your personal questions, and become the initiator for an interstate, live debate on a current court topic. It is quite exciting when it happens.

Participants Attending Live Web Classes

Attending a live Web class for the first time is no less challenging for new participants than it is for faculty. Most likely, participants will not have practiced with the on-line tools, do not know what to expect, are out of their comfort zones, and may hesitate to open up. Each is facing an unfamiliar computer screen that looks busy, and they may be confused about where to focus. The names of participants are listed in one corner; a chat box and series of options are in another corner; and across the bottom are some symbols that look like pointers, buttons, highlighters, or virtual writing pens, but what to click is still a mystery. A larger screen may have the faculty's picture on it and a welcome note. Someone sends a chat message privately, but it reaches the whole class inadvertently. Another succeeds in sending someone a private message, but the recipient is distracted by it and does not know how to respond. Meanwhile, for others, just focusing on the computer screen takes effort, because other pressing work is stacked in full view alongside on their desks. And, just as a reluctant participant finally gets focused on the presentation, someone knocks on the office door.

Participants in live Web classes have many challenges, to be sure, but the rewards can outweigh the difficulties. Among the challenges, two relating to voices and speaking must be overcome early. First, for those who have a microphone on their computer or a telephone connection through the audio bridge system, speaking up is very valuable to success of the class. It can turn a dull class into a vibrant, interactive one. Still, it is an unfamiliar way to interact, and many participants hesitate to speak up, even to take the conversation to a depth that would be useful to their work, or to introduce a subject of interest to them. The class may end with those students feeling disappointed, concluding that the class was not the best use of their time. For other participants, those who are feeling lost, confused, or unable to follow what is on the slides, silence is *not* golden! Just as in a face-to-face class, the faculty cannot know if participants need more time or direction unless those participants speak up. The faculty's invitations to join the discussion may not be easy to accept, but the quality of the class will be improved if they are heeded.

Second, distance learning has another component that distinguishes it from a traditional training session—conversations among participants. Although challenging at first, conversations have proven to be a particularly useful tool for distance learners. Participants can brainstorm an issue or invite some problem solving on a virtual whiteboard. Other participants can use the chat function to type in their solutions. Responses can be seen simultaneously, can be reviewed easily, and can provoke lively discussion. This interaction can make class members feel valued—anyone who wants to speak through their keyboard may do so. Any oral follow-up should be structured but open. The faculty is responsible for providing avenues for conversation, but participants must accept the responsibility of walking down those avenues. Even for the most timid, typing a chat message can become as familiar as writing an e-mail to a colleague. Evaluating the success (or non-success) of a particular distance learning class must include a consideration of parameters that are different from those in a typical face-to-face class, in which primarily the content and faculty presentations are considered in determining its success. In a distance learning situation, the active participation of the learners themselves is a major factor for success. If participants do not actively join in, even the best prepared faculty can fall short.

The two anecdotes at the beginning of this chapter about Web classes—one live and one on-demand—highlight some of the roles participants play. In a more traditional setting, when the focus is on the faculty who imparts wisdom through a lecture, the role of the participants is not considered critical to the process, but in distance learning situations, they are. Especially in live Web classes, there is a focus on participants whose presence, energy, needs, queries, and responses are indispensable to the success of a program.

Some topics *can* be presented quite well in lecture style on the Web. The faculty introduces a question-and-answer session strategically, the information is imparted in segments, and everyone is happy. We have observed several programs of this nature that work well (e.g., learning to set up a project management system, sharing information about grant funding sources, and learning Web development basics). The faculty speaks through the telephone conferencing system while the participants interject comments through the chat function or wait for a designated question-and-answer time. Yet, increasingly, faculty are introducing classes that depend on oral interaction.

Interaction informs and directs the content delivery and allows the faculty to ascertain if participants are connected, energized, interested, and learning. Without feedback, the faculty cannot be sure what is happening for the would-be learners. Are technical problems keeping them from participating, do they feel stupid about asking a novice question, are they unclear about *when* they can interject their comments, or are they listening with only one ear while doing some other work? The non-responsiveness of one or more participants affects the responsiveness of others.

We believe strongly that the participant issues listed below exist today, because the Web as a learning environment for court personnel is still very new. It is our experience that the more someone takes part in on-line classes, the less these issues apply. Participants quickly come to know how to manipulate the medium, feel freer to speak up, and know that their needs cannot be met unless they express them openly. They also come to realize that in order to learn, they must focus their attention on the class *despite* local distractions.

Table 7
Participant Issues in Live Web Classes

Issue	Consequences	Suggestions
Lack of familiarity with the technology	Even minor technological glitches can discourage a novice. Without a broader frame of reference, they might assume the condition is normal and bow out without mentioning it to anyone.	Learn about the technology. Call the person in charge if you have problems—even minor ones. Often, this is all it takes to make the transition to distance learning.
Situation is completely new	Many are shy in a new situation and are passive observers until a level of comfort is reached. Even locating a pointer, or clicking a button to enlarge a screen, can be disquieting.	Observe a little. Then, take the risk of asking your question. The effort usually will bear much fruit. Others are likely in the same boat, and your voice will cue the educator to clarify directions.
True technology problems beyond your control	These may well shut down the system or not let you enter a Web site. They can be related to an overload of activity on the Internet or audio bridge, problems with firewall blockage, or stormy weather.	These are not normal working conditions. Often they will clear up and not reappear if you restart the system that is experiencing the problem. You can click off the Internet and get back on; shut down your computer and restart it; or hang up the phone, and dial back in. If you have a firewall block, ask the technical staff if they can create a path through the wall.

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Issue	Consequences	Suggestions
Hesitant to interrupt the speaker	Your needs may not be met; your questions may never be addressed. You may leave disappointed, never to return.	On-line, no one knows you have an issue unless you speak up. Use the chat function to write your question, comment, or concern, especially if the faculty asks for comments; e-mail a colleague in the class for feedback; or e-mail the faculty after class with your concern and ask that it be addressed next class.
Embarrassment about the type of question you want to ask	You don't feel safe enough to ask the questions on your mind, even though it indicates what you want to learn.	Check, ahead of time, if the class is for beginners, advanced users, or a mixed group. You may feel more confident knowing others are on the same page. Write down initial questions and send to the faculty prior to class.
Ignorance about Web protocols (Web socialization)	You do not know what is expected, so you do nothing while trying to figure out what *is* acceptable by observing others.	This strategy may work for a short time, but, before long, ask about the protocols if they are not offered. Too much deference is more offensive than too many interruptions.
Interruptions at your desk by colleagues	Although your door is closed, people come right in. This breaks your train of thought. You miss several key points and never quite get on track again.	This is common. Try putting a "do not enter" sign on your door, move to another location, or sign in from home. Let colleagues know that you do not want be disturbed and tell them why. Talking with them often resolves this problem.
Differing goals and desired outcomes	If your objective is simply to observe the new style of class and not learn the content, that objective will affect the outcome for you and others. Or, if you *do* need the content but do not intend to interact in the class, you may affect the quality of the class for other participants.	Be clear with faculty ahead of time about your reasons for being in class. If you are an observer, there may be other ways to observe. If you really wanted a more specialized class, keep looking; you may find one that better meets your needs. When you do find an appropriate class, commit to attend all sessions for which you register and be prepared to participate actively.

On-Demand Web Class Participants

Your boss has just handed you a Web address and informed you that you are registered in an on-demand class that will last four weeks. He says you may use work hours to complete the assignments. Tentatively, you go to the Internet and look for the site. You enter a predetermined password and find the class. The layout seems simple enough. You can maneuver well and even find the pre-class survey the faculty has set up. You find the syllabus, the content materials, assignments with dates for submission, and an invitation to join a chat room. After filling out new student information, you read an opening lecture and click into a threaded discussion room where other participants have begun to post some comments. Mostly, this section is reserved for comments on the lecture, a forum for asking general questions and receiving responses from the faculty.

You return to the class the next day to find messages in your private e-mail box and an invitation to post your picture. The faculty has posted a new message; this time it is a video clip. He announces a new assignment that involves choosing a partner from among the other participants. He explains that with this partner, you must develop a case study on the topic and walk through several resolution steps.

Four times a week you check for new messages, add your comments to readings, write abstracts for submission to the faculty, and/or connect with your partner. Occasionally, you receive a private e-mail from the faculty answering a question or responding to a summary that you submitted. This is important to you. It lets you know that you can ask or say anything, and he will respect it. Mostly, the comments he offers are public and given to the class at large.

Each week on a given afternoon, the class of 20 meets *live,* using a telephone audio bridge and an on-line education management system for 90 minutes. During these live events, projects are debriefed, role-plays enacted, and/or deep-level discussions carried out. The class is very different from what you expected. It is lively, has many different components—not simply reading, reading, reading! You find yourself thinking about many issues throughout the day and cannot wait to find a few minutes to share your thoughts with your new colleagues who are attending from many parts of the country. You vow to do this again and are grateful to your boss for the opportunity.

Once new learners become acclimated to the Web environment, this system is quite useful. It is a mainstay of universities and colleges. It is becoming widespread among business entities and can become a valuable tool within the court network. It does, however, take time to accustom oneself to the system, to learn how to maneuver, to concentrate, and to feel connected to peers one cannot see. All who want to learn can and will learn in this environment.

Participants in Other Live Web Environments

The live Web environment has mushroomed during the past 18 months. Prices are competitive, usage is easier, and interactions are enhanced, but bandwidth challenges continue. If courts are operating on 56K or slower modems, participating in this environment can be painfully slow. It can take 30 seconds to pull up a visual, while those with faster systems see it in 3 seconds. Most new computers come equipped with fast processors, sound cards, speakers, and CD-ROMS, and some even with Web cameras. Participants with almost any new computer and reasonably good connections (sufficient bandwidth and speed) have a good baseline for success. In addition, static, silent displays, which recently were the norm, are now augmented with audio and video. Real Player,[51] Real Media,[52] HorizonLive,[53] WebEx,[54] PlaceWare,[55] and many other companies are developing systems that heighten the engagement of the distance learner.

The skills, presence, and openness faculty and participants develop for connecting with others in the virtual classroom can be used for other activities as well. The distance learning classroom itself can also be an excellent forum for other business-related work. The more comfortable we become with the medium, the more uses we can find for it. Listed below are some of the most viable for the courts.

- **Meetings.** Three executives were going to meet for a couple of hours, prior to a national conference, to strategize how to lead a workshop they were going to co-host at the conference. A snowstorm on their scheduled travel day shut down their airports. They decided to conduct their meeting on-line using an audio bridge. They used a virtual whiteboard to write their outline together, develop their major points, and designate the speakers. Proficient with computer systems, they even posted photos, so they could "see" one another on the screen when they were talking. Before closing, they "shared an application" and finalized the document that was sent, later that day, to the hotel for duplication. They arrived the next morning, and the conference went off without a hitch. Their distance meeting had been successful. This is a perfect example of the potential for an on-line meeting. It is not the norm yet, and it lacks eye contact, but it does allow for camaraderie, processing, program development, and use of visuals to move the topic along. Most people can handle a maximum of 90 minutes at one time. Therefore, for longer sessions, some groups meet at the designated time, take a break for a couple of hours, and return later for the second half. Creativity is necessary when budget cuts or snowstorms interfere with "Plan A."

- **Committees.** As a component of a grant project developed through the State Justice Institute at the National Center for State Courts, two committees, each with over 25

[51] *Real Player.* Retrieved August 8, 2002 from the Web site: http://www.real.com
[52] *Real Media.* Retrieved August 8, 2002 from the Web site: http://www.realmedia.com
[53] *HorizonLive.* Retrieved August 8, 2002 from the Web site: http://www.horizonlive.com
[54] *WebEx.* Retrieved August 8, 2002 from the Web site: http://www.webex.com/home/default.htm or http://www.gentner.com
[55] *PlaceWare.* Retrieved August 8, 2002 from the Web site: http://www.placeware.com/index.cfm

members across the country that normally met face-to-face in a hotel in for a day, hosted their meeting on-line using an audio bridge for conversation. Participants were taught about the medium through e-mails, instructed on the procedures for checking their computer configurations for compatibility with the on-line system, and given the entry codes and passwords for participation. In each case, committee members were reviewing recent additions to a document they were working on. The on-line program allowed them to do this work so easily that their meetings lasted less than 90 minutes, and no one left their local office. Compared to cost of the hotel and meals for the face-to-face meetings, these on-line meetings were a huge bargain (less than $200 per meeting), so future meetings were planned for the virtual conference room.

- **Study groups.** Attorneys located throughout a state want to study together for the state boards; or groups formed during a strategic planning course want to make group strategic plans to be debriefed during a live Web class; or national experts commissioned to explore the outcomes of specific interventions in various drug courts want to meet—all these situations are candidates for an on-line study group. When groups meet electronically, the depth and breadth of their work can expand. Time and money that would have been spent traveling can be invested more productively in the work itself. On-line study groups can be formed to help overcome time constraints, physical distances, or babysitting problems. The on-line connection bridges the gap.

- **Project planning.** It follows from the above examples that a Web forum can be used for many purposes. Working on a project usually means meeting a series of deadlines. As team members work collectively, an on-line forum for hour-long checkpoints, biweekly or monthly, can be extremely helpful. Coupled with a Web board where information can be stored, reviewed, and amended, pertinent documents also can be shared and analyzed. Travel costs and time constraints on the team make this a useful way to stay connected and allow more frequent meetings.

- **Statewide Continuing Education.** While administering the Distance Learning Center at the National Center for State Courts, state education representatives hoped to set up a series of education programs for state court employees through an on-line forum. Although that series never materialized, the idea was a good one. For such a series to succeed, states would need to advertise it heavily and/or conduct interest surveys to ensure that topics are on-target, because program attendance is usually voluntary. States could teach participants how to use the on-line system through e-mail communications a month prior to program start-ups, and they allow programs to be taken during work time. They could even generate some reward for taking a predetermined number of the classes. With these practices in place, distance learning programs can provide valuable education and training during lean economic times.

- **Developing a document collaboratively.** This is called "application sharing" and is a terrific tool with any kind of document, from spreadsheets to word processing

documents. Charts can be designed and surveys written. Excellent results can be achieved.

- **Prequel to a face-to-face class or postscript to a VTC.** Distance learning activities can extend participants' involvement before or after a program. If the information to be covered during an upcoming, face-to-face program is substantial, much of it could be disseminated electronically to participants well in advance, to allow them time to prepare. Alternatively, as part of a three-hour VTC, participants could be invited to continue the activity by working on a project. On-line meetings could then be used to debrief the project development, share the wealth of the results, and celebrate the work done to integrate the learning.

We are confident that distance learning will be around for many years. It will continue to evolve—become more sophisticated, cost even less, and be enhanced by quality, two-way streaming video. Many topics and issues can and will be argued or taught within the classroom's virtual walls. Its main limitations currently are the faculty's and participants' unease with the medium, the preparation needed for working effectively in this environment, and, of course, the occasional technological glitches (such as overcrowding of lines at certain times of day). However, all these can be alleviated, or at least managed, with effort and experience.

CHAPTER 5

Distance Learning Readiness Check

Getting into Distance Learning Is Not a Piece of Cake!

I was introduced to distance learning ten years ago as a faculty member at a major university where I led a series of courses via directed study. As part of our transition from traditional classrooms to virtual classrooms, we were changing from "snail mail" assignment/grade submissions to the on-line communication system operative today. We thought this transition would be simple but we were wrong! Fortunately, from the get-go, we had established a feedback loop to evaluate the quality of the system from both a faculty member's, as well as a student's, perspective. Then, curriculum and customer service elements were evaluated. Student feedback and new faculty mentoring became the key ingredients to achieving quality in our emerging virtual classroom.

The transition to virtual classrooms at the university was complex and broad. Central to the change was the leaders' investment in new systems and equipment along with a careful selection of qualified practitioners—ones who understood that teaching effectively in a traditional classroom did not automatically qualify one for on-line teaching. Effective on-line teaching depends on faculty becoming facilitators of learning rather than lecturers. Potential on-line faculty were required to participate in extensive faculty training and work with a mentor during their first course assignments.

My advice to others looking to enhance their organization with on-line educational services is simple. In addition to the time and talent needed for faculty development, you, the leaders, must also recognize that an investment of dollars during the lengthy developmental phases is key to success. You should expect little financial return during the lengthy foundational times. It just goes with the territory. With this philosophy, we, at the University of Phoenix, have achieved international success. I have witnessed the implementation of a distance learning vision—a vision shared by senior executives and an inspiration to the rest of us. However, implementing that vision originally was not, and sometimes still is not, a piece of cake.

Don Reinhart, Ph.D. candidate, former corporate executive and currently a University of Phoenix On-line Campus faculty/facilitator.

In previous chapters, we addressed organizational issues that affect the willingness of court organizations to invest in distance learning. We discussed some major technologies, described the distance learning environment, detailed the tasks and learning curves of faculty and participants new to distance learning, and underscored the importance of a team concept. Distance learning development requires an investment of time, dedication, and patience,

often for a longer period than anyone anticipates. Those who have the vision of what distance learning can do for their organizations must become and remain energized while sharing their vision and energy, inviting others to help develop the programs.

The genuine support of management for these endeavors will be critical to success. Facts, hard data, research statistics, feedback from other users, and projected revenues will help win support. This information must be detailed on paper, analyzed, discussed, and specifically considered. Ultimately, if distance learning is to succeed, management must be able to see how it will benefit the organization. They must use it experimentally themselves and send people in their departments to training long before the decision is made to support or not support distance learning. As part of that support, they will need to finance research and development phases that build a foundation for distance learning. They will need to create incentives for its adoption throughout the organization. Finally, they will be called on to grant sufficient authority and autonomy to the education department to explore options and experiment with program designs to discover a system that is not only useful to the organization, but is also exciting and enticing for court constituents who look to the organization for education and training opportunities.

Distance learning initiatives have received mixed financial reviews at academic institutions. Distance learning programs do present significant economies, because they eliminate faculty travel costs, but they have not been found to generate much income. Distance learning will save more money than it will generate and can provide a useful and viable service to the courts. Its applications are many and varied and will extend well into the future. But focusing only on the shortest view, program design is expensive, and its immediate financial returns on investments are incremental, if any.

Our experience suggests that it takes about two years for all the elements to come together. The team must be developed; management must make infrastructure changes; programs must be designed; delivery systems chosen; faculty must adapt materials; and internal as well as external customers must be prepared (Web socialized). Additionally, without extensive up-front marketing, demonstrations, and motivational sessions, even strategically sound programs can fail.

Management Support

Management support is fundamental to any major organizational effort and should be based on clearly communicated goals, cost estimates, and projected timetables. Distance learning is no different. Defining the roles of key staff and describing the extent of support needed from different divisions of the organization creates a framework that makes clear the impact distance learning will have throughout the organization. It is difficult to initiate distance learning programs with only tacit support from management. The project needs to be an organizational priority for all departments that will be actively involved. Management support should manifest itself as an investment by the entire organization in developing and using distance learning.

- **Funding.** A yearly budget supports team development, research, software and hardware, program design, graphics specialists, experimental programs, and training.

- **Organization-wide awareness.** All levels of the organization need some training or experience with distance learning in general to be able to use it effectively for their own product or service development. They also need distance learning training so that they can share the value of this delivery mode with other agencies. Lastly, although some people might never use the medium in their own work, they have political connections, sit on budget committees, or make policy decisions. Their understanding of the vision of distance learning, its inherent value for the organization, and its place in future planning is critical to effective decision making about distance learning.

- **Team autonomy.** For distance learning teams to operate across divisions, but within the scope of the distance learning plan, they must be able do so without the burden of multiple approvals. This is not to say that the team operates without oversight, but oversight should be centralized and not present impediments to the process.

- **Team authority.** The very nature of a team resists hierarchy, while collaboration is central to its process. Ultimately, all decisions must be someone's responsibility, and the team must have the authority to make decisions and recommendations. There should be a recognized decision maker for technology choices, financial commitments, curriculum choices, and program scheduling. Typically, it will be a different person for each. A team valued by the organization, with its recommendations heeded, has a great deal of authority and responsibility within the organizational structure. Without that authority and responsibility, a team may have some autonomy, but its impact within the organization will be very limited.

Ongoing Research and Development

The research and development required to develop a distance learning capacity can be time consuming, frustrating, and expensive. During the past two years, the software companies we originally contacted have mutated multiple times. Their options (and prices) expanded, but so did their competition. Each mutation required us to do additional research to determine their continued usefulness for our constituents. These efforts were time consuming and often did not yield conclusive results. Finding the best bridging system to use for videoconferencing required numerous phone calls and an equal number of mini-videoconferences to explore what each company offered in service, capacity, and long-term value. It required travel to corporate headquarters of some major companies to review their wares. It also required an investment in training our team in the more sophisticated systems. The team reviewed and experimented with a dozen Web-based education management companies. They negotiated fees, set up trial classes, and compared features. A collaborative decision to invest in a particular system was frustrated when a better set of options became available. Team members took free classes over the Internet to test software, chat rooms,

whiteboard, discussion sections, and streaming video and audio. We read books, found current articles in the newspaper, and signed up for *e-learning Magazine* on-line,[56] read information available on the United States Distance Learning Association Web site[57] and the Web site of the American Society for Training and Development.[58] We met with content designers and faculty willing to be on the ground floor of this development, and researched editing systems and video cameras.

This work was done as an investment. It was the research and development needed to create distance learning capacity. While some hope existed for cost recovery, there was no expectation of profit.

The Internal Inventory

Whether held in a traditional classroom or on-line, every education program starts with content, and content is king. Beyond that, to enhance the development of distance learning, intensive efforts in technology implementation, team building, and staff training may be needed. The distance learning effort can build off of existing materials targeted for the face-to-face environment. The first step is to review existing electronic files, PowerPoint presentations, printed materials, graphics, charts, video, and audio files. Successfully converting any existing items to a useful format for the distance learning mode being considered saves valuable development time. Formatting content for distance learning deliveries, nonetheless, can be time consuming and require specialized skills, but if the content is already available electronically, more time may be available for editing, rewriting, or adapting it to fit the intended distance learning mode.

Simple visual materials can be extremely helpful in enriching electronic text documents. Using already-developed materials is cost effective and saves time. Media coverage of the organization's events may offer an opportunity for AV enrichment. Face-to-face education programs can be video- or audiotaped to capture supplemental materials for subsequent distance learning programs. ***Awareness is the first step*** in gathering visual images. Making the organization aware of the need for images allows other staff, throughout the organization, to suggest potentially rich resources of materials. To facilitate and encourage staff involvement, identify the subject matter for which audiovisual materials are needed and define acceptable formats. After this early guidance, periodic reminders will keep the staff tuned in to the continuing need for audiovisual materials.

The second step is ***organizing the materials*** so they are readily available to everyone involved in the development process. If the organization uses an internal network, create a shared directory where all electronic files can be deposited. Provide a few simple nomenclature rules to ensure the files are named in a useful way, and set up logical

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[56] *e-learning Magazine*. Subscription section. Retrieved August 8, 2002, from the *e-learning Magazine* Web site: http://www.elearningmag.com/elearning/static/staticHtml.jsp?id=3080

[57] United States Distance Learning Association. As of August 8, 2002, http://www.usdla.org

[58] American Society for Training and Development. As of August 8, 2002, http://www.astd.org

directories to receive the materials. These files will become a resource not only for the programs currently under development but also for future programs.

Next, take an informal, organization-wide inventory of the types of still cameras, video cameras, tape machines, copiers, and scanners that are available. These devices can expand the range of possibilities for gathering materials. If a digital still camera is not available, consideration should be given to purchasing one. Relatively inexpensive, they are a quick, easy way to add visual materials to the existing curriculum. Do not overlook the desktop computer. By adding a simple microphone and using the sound recorder bundled with the Microsoft operating system, acceptable quality audio files can be recorded for inclusion in distance learning programs.

Finally, never overlook the opportunity to audio-record, photograph, or video-record content experts, faculty, notable speakers, and celebrities, when they are making presentations that may contain information that could be used in a future distance learning program. ***Make it a habit*** to record them. It focuses the attention of the organization on the process of developing content for distance learning and can enrich the library of materials available for distance learning programs. When recording or photographing someone, always ask for a signed release giving the organization the right to use the recorded information in future programs.

Management support, research and development efforts, and resource availability are each important to organizational readiness for undertaking a distance learning effort. No prescribed combination of these elements will ensure success, but, without fundamental management support, it is difficult for distance learning to succeed.

The Need for Marketing

We are not marketing experts, but we want to underscore the need for a distance learning program to be grounded in a marketing plan for several reasons.

- New program opportunities, such as distance learning programs, do not always come up on the radar screens of potential customers, e.g., court leaders with training budgets. In the court system, budgets are set in advance, and training dollars allocated accordingly. So, as a rule, court leaders must know about the availability of distance learning programs long in advance.

- Distance learning is not *familiar* to many court personnel. Some courts do not even have Internet access for their employees. The amount of time and creativity needed to spread the word among colleagues about distance learning possibilities is great. Conversations about distance learning need to be held over dinner, at meetings, via e-mails, in annual catalogues, and through one-on-one telephone or face-to-face opportunities. The sale of distance learning will gather momentum from your energy,

your motivation, and the possibilities you envision for rooting distance learning in the yearly budget.

- Once sold as a good idea, potential participants must learn about the education management systems chosen, and they must practice in the medium before the scheduled program. Without participants, an otherwise good idea or well-worked out plan will fail. Contrary to the popular saying, building it does *not* guarantee that they will come. Potential distance learners must see how taking on-line classes or attending videoconferences will benefit them, and some may have to surrender their desire for a travel "perk." Any new way of participating in learning will get a variety of reactions, so plan to devote the effort needed to bring various staff members onboard.

From our learning lab, we marketed distance learning internally and externally. We told everyone about the programs we were developing...for two years. Initially, we delivered programs to small audiences. We sent e-mail notes to thousands of court employees, but, for the most part, they did not come. We wondered what the problem was or what we were doing wrong.

We mused that word might have gotten around about the number of technology glitches in early programs and this discouraged others from participating; or that awkwardly delivered programs by faculty new to distance learning might have left some participants dissatisfied. We questioned whether we had chosen useful topics.

After two full years of marketing, we concluded that we had done nothing wrong; it just takes that long for people to get accustomed to the idea of doing things a new way. Some suggested, early on, that we do a needs assessment, seeking input on the types of education programs court staff members would take via distance. This did not seem feasible or useful to us, at the time, because court staff members had no reference point. They might respond that they wanted certain classes, but would they actually pay for and attend those classes if they were held on-line? The variables could not be isolated. We needed to practice delivering programs, spreading the word, and gathering feedback before we could do a needs assessment with a credible body of participants.

In the spring of 2002, we developed a grant project at the Institute for Court Management, through the sponsorship of the State Justice Institute, in which free half-hour demonstrations on the ins and outs of live Web classes were made available to potential customers. These demonstrations were well marketed and available at various hours over a six-week period. These were followed by seven free, topic-based programs, in one or two segments, to groups from 20 to 50 in size. Some of the program topics were new; others were repeats from past years. To our surprise, these programs filled within three weeks of being posted on the Institute for Court Management's Web site. Were these repeat customers taking advantage of free classes? Were the new customers only present because the classes were free? Or could the reason be a marketing response? We had marketed for two years and delivered over 40 different distance learning programs. Perhaps audiences were now tuning

in to the possibilities. Perhaps other changes in the world of distance learning had come about. Perhaps potential customers now had Internet access. Perhaps, after reading about on-line opportunities for two years, they were ready to try it out. We still are not sure, but now is the time for a quality needs assessment.

We are confident that state court systems will have a more manageable learning curve than we had when deciding to inaugurate an education plan on-line. However, they will still need to bring participants and faculty on board early, prepare them well, and be available to answer many questions. We provide the following discussion as food for thought regarding technology innovation risks versus development innovation risks.

The Value of Well-Tested Technologies

Caution, in the face of a bewildering array of technologies and delivery mechanisms, is sensible, and courts, typically conservative in their adoption of new technologies and practices, would be wise to continue that practice. Thankfully, there are many reliable means of delivering distance learning programs that can use existing data networks, computers, software and hardware, most of which are familiar and available to court personnel. Courts should not be on the "bleeding edge" of technology implementation, but should take advantage, as much as possible, of well-tested technologies. By doing so they can

- avoid costly failures,
- benefit from the use of existing, robust infrastructures,
- find competitive pricing and multiple vendors,
- use well-tested hardware and software, and
- enjoy the protection of recognized national and international standards.

New technologies emerge regularly, and many have implications for distance learning delivery, including wireless and broadband networks (Wi-Fi), increased satellite capacity, fiber optics (10-Gigabit Ethernet), nanotechnology, and others. Each of these technologies promises a faster, more robust delivery of distance learning programs, but the risk and cost of implementing them (before they are affordable and reliable) should eliminate them from consideration by most court organizations today. Eventually, the implementation of newer, faster, and cheaper technology will improve not only the court processes but the competence and efficiency of court employees. And distance learning can play a pivotal role in this process by making high-quality, up-to-date training for court employees broadly available.

Being cautious in the development of distance learning should not be equated with a lack of willingness to take risks, but courts should take risks only where they are warranted.

A Final Thought

The fundamental reasons for the expansion and growth of distance learning are clear. Distance learning can provide (1) higher-quality education and training, (2) an expanded

range of available educational options, (3) reduced costs for education and training by reducing travel costs, and (4) improved organizational efficiency and effectiveness—all strong recommendations for any organization to explore the use of distance learning, but most especially for the courts.

APPENDIX A

Sample Videoconference Timeline

Following is an example of a timeline developed to define the elements occurring during a multipoint videoconference. This videoconference used multiple faculty, technical personnel, and cameras. In addition to the camera shots of the faculty's computer documents, VHS videotape and document camera materials were shown during the presentation. The Binder Material referenced in the Timeline was a notebook provided to all of the receiving sites prior to the videoconference. This notebook contained copies of all PowerPoint (PPT) slides used in the presentation in addition to written exercises and a copy of the Timeline. For brevity, only the first hour of the three-hour Timeline has been included.

Videoconference Timeline

Time	Codec	Action	Person	Media/Source	Binder Material	Camera/ Operator
12:30 PM	(View sent to the sites)	Dial up connections to all sites. Testing of line connections – audio and video. WV first call for ATM network.	Ray – Kevin	(NLE = Non-Linear Editor)	**1. Agenda [AGENDA] 2. Introduction to Objectives of Program [OBJECTIVES]**	**#1 – Daniel #2 – Kala #3 – Remote** (CU = close up WS = wide shot)
1:00 PM	NCSC	Completion of dial up testing – go to music seal		NLE – NCSC Seal		
0-1 min. 1:01PM	NCSC		Video Clip #1	Fade to :30 video clip montage. ***NLE***	Video opening clip	
7 min. **1:08PM**	NCSC	Welcome to today's program. Introduction of faculty Camera shot with titles over	Karen – podium Bert Jake Susan – Stools for Intro	Opening camera shot of Karen – Intro camera shot for introductions ***NLE - Titles***		**#1 – Daniel** Karen – Podium CU – for intro **#2 – Kala** WS – 3 seated **#3 – Remote** WS – 3 seated
12 min. **1:20PM**	Split-screen NCSC and respond-ing site	Introduction of sites and any comments the judges want to make to "What is the most burning issue in your court concerning scientific evidence?" Site facilitator will give an overview of their participants.	Receiving sites Karen	**Camera Shots**		**#1 – Daniel** Karen – Podium CU – for intro **#2 – Kala** WS – 2/3 stools **#3 – Remote** WS – 3 seated

Timeline continues on next page.

Timeline continued from previous page.

Time	Codec	Action	Person	Media/Source	Binder Material	Camera/ Operator
3 min. **1:23PM**	NCSC	Karen – intro set up Video Vignette #1	Video Judge #2 **Susan and Bert move to chairs**	Video - **NLE**		**#1 – Daniel** Karen – Podium CU – for intro **#2 – Kala** WS – Chairs **#3 – Remote**
3 min. **1:26PM**	NCSC	Summary of Greyhound Hypothetical PowerPoint is set up so that there is one pp for each paragraph – Karen summarizes hypothetical while pp flash on screen	Karen	***Podium Computer PPT's*** **[PPforHYPO1]** **Camera Shots**	**3. Random Hypothetical [CASE1HYPO]**	**#1 – Daniel** Karen – Podium CU – tracking **#2 – Kala** WS – Chairs **#3 – Remote**
15 min. **1:41PM**	NCSC	Exposition of Probability – mini-lecture (Hypothesis Testing, Null Hypothesis, p-values measuring the probability of chance but not something else)	Jake	***Podium PPT*** **Camera Shots**	**4. Mini-lecture [CASE1MINI]**	**#1 – Daniel** Jake – Podium Tracking **#2 – Kala** WS – Chairs **#3 – Remote**
10 min. **1:51PM**	NCSC To 5-in-1 or split screen	Receiving sites are asked individually for questions	Karen Intro Jake Receiving sites	**Camera Shots**		**#1 – Daniel** Karen – Podium Jake – Stool Tracking **#2 – Kala** WS – Chairs **#3 – Remote**
7 min. **1:58PM**	NCSC	Jake discusses the z test for hypothesis testing for binomial distributions using Greyhound example	Jake and Receiving sites **Jake does Intro?**	Podium PPT **Camera Shots**	**5. Mini-lecture CASE1MINI2**	**#1 – Daniel** Jake – tracking **#2 – Kala** WS – Chairs **#3 – Remote**
5 min. **2:03PM**	NCSC	Point-counterpoint from Plaintiff and Defense Attorneys regarding expert witness evidence in Case1.	Bert and Susan **From Chairs**	NLE – Titles May add Plaintiff/Defense **Camera Shots**		**#1 – Daniel –** cover shot **#2 – Kala – opening WS, CU individual**

APPENDIX B

Distance Learning—Lessons Learned

The Distance Learning Questions

The JERITT project will publish a monograph on preparing organizations for distance learning technologies. We would like to include an appendix that profiles the experiences of judicial branch education organizations that are currently offering distance learning opportunities to their target audiences. Please address the following questions relative to your experiences.

1. Brief description of (a) what you are doing, (b) when you started, (c) general subject matter, (d) audiences served, and (e) the technology used.

2. Brief description of what you did to prepare your organization for distance learning (i.e., courses on how to use distance learning, meetings and/or classes to prepare users, installed technology, offered pilots, etc.).

3. What did you do that worked best, and why?

4. What did you do that didn't work or didn't work to your satisfaction, and why?

5. What are your plans for the future?

6. What guidance would you offer to your colleagues?

Arizona's Response

Arizona Supreme Court Distance Learning Programs

By Agnes Felton, Education Services Division Director, and
Sue Latzko, Distance Learning Program Manager

The Arizona Supreme Court has a number of distance learning *irons in the fire* that have proven to be effective and timely solutions to court training needs. The table offered in this summary provides an outline of our distance learning efforts. Briefly, our distance learning efforts fall into three categories—Web-based and standalone computer–based training, written and video materials, and satellite broadcasts.

Our Web-based and computer-based training includes self-paced training over the Internet from Learn2.com; custom-developed computer training that is distributed to the courts for use in the courts; and live, interactive instructor-led training over the courts' Intranet using Centra, a software product that allows voice communication, PowerPoint presentations, tests, activities, Internet browsing and application sharing. In the written and video category, we have developed two video and workbook sessions covering Civil Traffic Hearing Officer Training and New Employee Orientation that can be used for individuals or as facilitated courses. Additionally, we publish bench books and reference manuals for judges each year that include bench scripts, procedural information, and updated statutes and rules. In our third category, we do four to six satellite broadcasts of training sessions each year covering topics for judges and staff. Most of the broadcasts include some group activities conducted by facilitators at sites around the state. The broadcasts last from one to three hours.

We were fortunate to have management leadership in the Arizona Supreme Court from Administrative Director David Byers and Deputy Director Michael Baumstark. We have a Distance Learning Unit as part of our Education Services Division that provides consultation and support on creation of distance learning, advice about the appropriate tool(s) to use, instructional design elements, and technology instruction. Originally we tried to staff a position to develop custom, computer-based training, but quickly found we could provide neither the skill level nor the software and hardware products needed. We found we could not produce many distance learning courses in a year. So, we put out a Request for Proposals in 2000 and contracted with vendors for self-paced, computer-based training (Learn2.com), custom CBT development (multiple vendors), and an interactive, instructor-led Web-based software product (Centra). Now we have a position that provides consultation and support services for staff throughout the state and in the Administrative Office of the Courts who want to develop distance learning products in their subject areas.

Our biggest challenge has been getting staff members to use the self-paced training offered through Learn2.com. We have publicized it, and we pay for the licenses from the Education Services budget. To promote its use, we offer a Learn2.com Learning Lab course at our three regional Judicial Staff Conferences and plan to offer it at upcoming Judicial Conferences. The conference classes are three-hour blocks of time. We set up a number of

computers that will connect to the Internet and then to the Learn2.com Web site. We place a facilitator in the room to help create user accounts and to respond to user questions. The chief benefit of this class is the uninterrupted block of time available to participants to experiment with the on-line tutorials. Initial response is positive.

The driving factor in selecting a product for live, instructor-led training over the Internet was the need to provide statewide training on the Supreme Court–supported court automation system (AZTEC). This is the primary use of Centra, although its use is expanding to other areas such as the juvenile court automation system, legal services training on contracts and the upcoming, adult probation automation system. Local courts have also expressed interest in using this technology, and we are working with them to determine the best way to provide the services they need. One position in Education Services is designated as the Automation Training Specialist, and that person works with the trainers of the AZTEC system to develop and put on Centra classes for court and staff statewide. As use of Centra expands, this person will work with the Distance Learning Specialist to provide support for other training.

Our Information Technology Division (ITD) has an automation trainer for the Supreme Court and Administrative Office of the Courts (AOC) who provides classes in software applications and computer operations. These classes are always well attended and help mitigate learner concerns about computer usage. The classes serve as an ideal way to introduce new technologies into the court environment. Courses that have been especially useful have been "Introduction to MS Internet Explorer" and "Word Perfect." ITD is preparing to roll out a new version of Windows and to introduce the AOC to use of MS Word, versus our current Word Perfect word processing software. Our distance learning staff is working with the ITD trainer to develop recorded mini-Centra courses to help AOC staff transition.

When we first introduced Centra, we did a number of demonstrations around the state at courts and Judicial Staff Conferences. While this showed the product to potential participants, it did not give them any hands-on experience with the application. We changed to a new introductory method using our Centra application to record particularly useful class sessions. We have found it helpful to record "How to be a Centra Participant" for users to view prior to taking a class with this distance learning tool. We use this same class in a live environment any time we need to demonstrate the product for potential new faculty.

Our best effort with distance learning to date would most likely be the use of Centra. We have a 30-user license for this product, and it is the closest we can come to simulating typical classroom training. Centra provides an environment that allows faculty to present PowerPoint-type slides housed on a teaching computer to participants' computers statewide while maintaining voice contact via IP. Faculty may introduce whiteboard activities, break out rooms, application sharing, and Web sites with the Centra application. Participants see and can manipulate what is on the faculty computer. It is effective, because the application is intuitive and very easy to use, it allows hands-on experience as well as providing static information, and it incorporates a number of interactive tools that keep participants actively involved in the training. It is also affordable. A Centra server license costs about $35,000,

and each user license costs $2,500. The product can be used for classroom training, for conference style events, and for smaller group meetings. It will run adequately over a 28.8 modem connection, although, if presentations are largely dependent on graphics, it should be used with a T1 line. Additional information is available at http://centra.com. We have high hopes for the success of two custom computer-based training (CBT) modules recently distributed to juvenile courts statewide on CD-ROM. Initial feedback is very positive, and we have built in post-tests so participants can document to their supervisors they have completed the CBT.

While all of the current distance learning methodologies that we use work, the satellite broadcasts are perhaps the most labor intensive, yet the most highly attended. We generally have over 400 participants statewide for broadcasts. There is a great deal of coordination between sending and receiving sites that must be done, equipment requires expert operators and includes studio cameras, lighting, switch and fade transition machinery, audio equipment, satellite dishes, and receivers, etc. In addition to expert operators, the equipment must be maintained, and contracts for services must be rendered. On the day of broadcast, signal production and transmission can be interrupted by atmospheric phenomena such as sunspots. It is difficult to incorporate interactivity into a typical broadcast, so participants see speakers simply as talking heads. However, it is a good medium to use when information needs to reach a wide audience and when the information needs a live presenter. We have had success using different formats in our broadcasts such as mock news shows like *60 Minutes* that provide interviews interspersed with commentary by a main announcer.

As noted earlier, getting people to *use* distance learning is the biggest challenge, especially getting them to start and complete self-paced training. In addition, the network infrastructure has frustrated some of our efforts in using Centra and other distance learning products that run across the network. We cannot use streaming video due to bandwidth demands and because some courts connect to the network with slow modems. It can bring down the whole operating system of the courts if too many staff members sign on to Centra or other Internet based programs at once. Courts going into distance learning need to work closely with their technology divisions on specifications needed to run distance learning programs on the network, or on the computers available.

Our future goals with distance learning include development of additional Web-based materials. We would like to begin pulling presentations from conference sessions (both judicial and staff conferences) into a Web format and offering those materials through our education portal. We are looking into developing new judge training for limited jurisdiction judges in a Web-based format. This would be available to judges appointed in between the times we offer our orientation session. We will continue to develop CD-ROM–deployed training per group requests and we would like to increase the use by different groups of our Centra licensing. One additional project we are working on is to create training through a *Jeopardy*-style game format and offer it on the Web for various topics.

Distance learning is something of a new animal in the training and development field. There is a great deal of information about it and its cousin, e-learning. If you are just starting out in the field, take advantage of a large conference such as the On-line Learning

Conference that is held each autumn in various locations around the U.S. Take a class on-line through some recognized agency such as Walden Institute (www.waldeninstitute.com). They offer an excellent on-line class in e-learning development. Build support throughout your organization for distance learning methods beginning with the executive level. Finally, be somewhat careful in your initial forays into distance learning. A typical, custom-content development team will consist of a project manager, an instruction design architect, a programmer, a graphic artist, a test person and a videographer, if video is to be incorporated. If you try to build these competencies within your own organization, be prepared to hire several people for the unit and expect salaries to range from $30,000 to $60,000 per year depending on the role.

Distance Learning Description	Started	Subject Matter	Audience Served	Technology Used
Print media	1988	Publications such as Bench Books of Scripts for Judicial Officers and Reference Manuals	• Judicial Officers • Supreme Court Law Library • Independent Law Offices	Publications: 1) Printed in hard copy and distributed in 3-ring binders 2) Published in PDF format on a judicial Web-page 3) Copied onto CD-ROM
Video-workbooks	1999	New Employee Orientation Civil Traffic Hearing Officer Training	• Judicial Officers • Judicial Staff • Probation and Detention Officers	Materials available through phone call or on-line checkout: 1) Video shot within court community 2) Accompanying workbook with questions and exercises related to video content
Satellite broadcasts	1991	Legislative Updates State of the Court Systems Ethics Diverse Topics	• Judicial Officers • Judicial Staff • Probation and Detention Officers	In-studio and video production up-linked through Northern Arizona University satellite relay and trans-mitted to statewide receiving sites
Web-based training/ information	1999	Wendell – the Arizona Judicial Reference Web site Interim Training for Dependency Judges "Web Safari" for Ethics and Court Information – Web-based scavenger hunt granting approximately 3 hours of credit	• Judicial Officers • Judicial Staff • Probation and Detention Officers	Court employees access via internally hosted Intranet or through e-mail
Learn2.com	2000	On-line Library of Technology Courses including MS Office, Word Perfect, MS Front Page, Intro to the Internet, etc.	• We maintain 400 to 500 user accounts that are assigned on a first come/first serviced basis • Judicial Officers • Judicial Staff • Probation and Detention Officers	Hosted solution: Purchased user licenses through NCSC contract with Learn2.com Classes are hosted on Learn2.com site and court employees access through the Internet
Centra	2000	AZTEC – Court Business Process Software Training; New Training Coordinator Training; Legal–Contract Training, Court Clerk Training, Publication Meetings, Juvenile Hearing Officer Reference Manual Training, Vendor Software Demos	• Judicial Officers • Judicial Staff • Probation and Detention Officers	Court employees access through internally hosted Intranet

California's Response

Preparing Organizations for Distance Learning Technologies

By Edward Davis, Senior Education Specialist
California Administrative Office of the Courts (AOC), Education Division

1. Brief description of (a) what you are doing, (b) when you started, (c) general subject matter, (d) audiences served, and (e) the technology used.

The Education Division or CJER (California Center for Judicial Education and Research) began its distance education efforts in 1998 with the addition of an "Alternative Delivery" goal that became part of a long-range strategic plan for judicial branch education. This goal called for CJER to "Enhance alternative delivery of judicial branch educational services (publications, video and audio tapes, programs) by providing support for and technical assistance to local education programs and by the use of technology."

In other words, judicial branch education should be delivered in more ways than live statewide programs and conferences, reference materials, and mail-order tapes. Developing alternative or distance education delivery methods was considered particularly important, because the cost of reaching CJER's audience of 20,000 court employees using solely traditional means would be prohibitive. In addition, it was hoped that through distance education, CJER would be able to

- Reach a broader audience (particularly people who do not travel to programs now)
- Target a new audience (court clerks and managers)
- Meet the learning styles/needs of more learners
- Achieve a lower cost per learner
- Increase efficiency (provide relevant information in a more timely fashion)

Over the next two years, additional CJER staff members were hired to begin designing, developing, and implementing various distance education delivery strategies.

Currently, CJER is focusing on two distance education delivery methods—broadcasting and the Web.

CJER also believes it is necessary to provide multiple delivery options for education content. That is why traditional delivery methods will continue to be an important component of CJER's education efforts.

Content for distance education is currently being developed that will deal with 1) substantive areas of law for judicial officers (criminal, civil, family, juvenile, and probate, etc.) and 2) core education and training for supervisors and staff (*e.g.*, ethics, fairness, organizational change, court safety and security, customer service, and writing).

Satellite broadcasts. CJER has recently completed the installation of over 130 satellite dishes in trial and appellate court buildings throughout the state.

The first broadcast of the California AOC network took place in February 2002 and was transmitted to the appellate courts. Entitled "Identifying Recusal Issues," the broadcast included an in-studio panel and gave appellate justices an opportunity to exchange ideas with their colleagues about recusal issues in order to ensure public confidence in the courts.

Beginning in April 2002, CJER began offering weekly statewide broadcasts for court staff members. These serve as judicial branch orientation classes for new employees and as continuing education for supervisors and staff. Broadcast topics that have already aired include an orientation to the California court system, legal advice versus information, ethics, and a dialogue on Islam. Using a combination of live and prerecorded segments, the broadcasts typically feature a moderator to introduce and lead the program, in-studio subject matter experts to share their knowledge and experience, and local site activities to engage participants. There are also opportunities for local site participants to ask questions via telephone, fax, and e-mail. Questions that are not answered on the air are posted to a CJER Web site. Some of the broadcasts are repeated for two consecutive weeks so that the content can be offered in the first week to supervisors (with a focus by the panel on supervisory issues), and in the second week to their staff.

Web-based delivery. In addition to satellite broadcasting, CJER is developing on-line training and education courses for court staff and judicial officers. The first Web-based products made available for court staff were business software tutorials purchased from a vendor (Learn2.com) under a licensing agreement arranged through the National Center for State Courts. We have also licensed professional development courses from other vendors on topics such as time management, understanding sexual harassment, motivation, and grammar. More recently, we have begun to convert some of our own "core curriculum" staff training classes to on-line delivery, starting with a course entitled "Handling Change." Three additional courses are in various stages of development, including "Court Safety and Security," "Fairness," and "Ethics." All the courses are self-paced, giving learners the flexibility to start and end them at times and places convenient to them. These and other on-line learning resources reside on a Web site developed and maintained by CJER for court staff called COMET (Court On-line Mentoring, Education, and Training).

For judicial officers, video recordings from selected conferences and institutes have been converted for viewing on our AOC Web site. Some associated printed material is also available. CJER is also beginning to develop self-paced courses for judges. The first one, on Proposition 36 (an initiative measure passed in California dealing with nonviolent drug offenders), includes several examples and hypotheticals to reinforce understanding of how the proposition works.

2. Brief description of what you did to prepare your organization for distance learning (i.e., courses on how to use distance learning, meetings and/or classes to prepare users, installed technology, offered pilots, etc.).

Pilot projects. Beginning in 1998, CJER began developing pilot projects to show key constituencies (oversight committees, executives, managers, etc.) how technology can be used to deliver education to remote sites. At first, examples of the Web, satellite, and videoconferencing were presented at meetings to familiarize various stakeholders who were in charge of approving budget changes and staffing requests. The first pilot project, Judicial Branch Radio, placed videotapes of selected judicial education programs on the Web in a format that enabled judges to select specific topics within a program and access the audio or video versions of the presentation. CJER also showcased videoconferencing technology by inviting court executives to participate locally in programs sponsored through the National Center for State Courts. Prior to the installation of our satellite network, CJER developed a broadcast for trial judges on jury innovations and leased downlink equipment for viewing in ten sites around the state.

Local court coordinators. Once decisions were made to build a satellite broadcast network and develop courses and education resources for on-line delivery, CJER needed mechanisms to assist in promoting and delivering distance education programs to the local courts. CJER went to the court executives in each of California's 58 counties and asked them to appoint personnel to fill two roles—a technical contact (for technology troubleshooting) and a training coordinator (to assist in promoting on-line courses and to distribute materials, collect program evaluations, and facilitate local site discussions for broadcasts).

Judicial Branch Radio. CJER also took a "build it and they will come" approach by creating *JBRadio* and purchasing several on-line courses and making them available to anyone who wanted them. This was done, in part, because court executive officers had indicated that it was difficult for them to justify the costs needed to upgrade their technology infrastructure if there were not products already available to make use of newer technologies.

Computer classes for judges. CJER offers beginning and advanced computer classes for judges in order to help get them over their technology fears as well as to introduce them to specialized computer application and resources that can assist them on the bench and that can be used for continuing education purposes.

Collaboration guidelines. Finally, CJER recently developed a set of documents that spells out in great detail the steps involved in developing distance education programs for various delivery methods. It serves as both an internal document for CJER staff as well as a learning tool for other AOC units that wish to collaborate with CJER on delivering distance education programs but do not know where to begin.

3. What did you do that worked best, and why?

Satellite broadcasts. Based on participant evaluations, our satellite broadcasts have been well received and well attended. We have excellent staff members who produce high-quality programs, and there are a number of highly regarded subject matter experts working in the courts who are willing to appear on camera to share their knowledge and experience. Selecting topics that are interesting and relevant for participants, and building in discussion breaks for local sites to help stimulate thinking about the subject have also contributed to the success of these broadcasts. The decision to be part of the AOC satellite network was left strictly up to the individual counties. Some local courts were reluctant to participate at first, but when they saw neighboring counties eagerly submitting requests to install satellite dishes on multiple buildings, they realized they might be missing out on something worthwhile. Consequently, CJER wound up installing dishes in all 58 counties and on several more county courthouses than originally anticipated.

Court staff Web site. Our court staff Web site, COMET, has shown a steady increase in usage as word gets out to the local courts about the valuable on-line resources that are available to court staff.

Upper management support. CJER was able to move forward relatively quickly in developing and delivering distance education products and services because of the encouragement and support from the AOC executive office for resources to create the infrastructure for distance education.

4. What did you do that didn't work or didn't work to your satisfaction, and why

Satellite broadcasts. Television is primarily a one-way medium, so the challenge for our broadcasts has been to make them as interactive as possible, given the inherent limitations of the technology. For the most part, we have been very successful, although a few of our regularly scheduled programs will be revamped because of feedback indicating that there were too many talking heads (resulting in information overload) and not enough audience participation.

Web-based distance education. Unlike the broadcasts, which are promoted as special events, our Web-based distance education products are always available for viewing or downloading. It has been a challenge to sustain interest in our on-line courses after initial promotional efforts. People tend to forget that they are available, or earlier products get buried as new course offerings and resources are added to the COMET Web site.

Videoconferencing. Videoconferencing is a promising technology with its ability to create highly interactive learning environments. However, in some of our pilot projects, a combination of technical problems and inappropriate content and presentation formats has resulted in mixed reviews.

5. *What are your plans for the future?*

As our infrastructure grows to support high bandwidth applications, video-conferencing and Webcasting (streaming audio and video using the Web) will be evaluated as potential delivery methods. In the area of on-line delivery, CJER will continue to create self-paced courses for both judges and court staff. In addition, we will begin developing instructor-led classes that emphasize interaction between and among learners and faculty. To accomplish this, we are reviewing course management software that allow administrators and faculty with little or no technical knowledge to easily create content for on-line courses and use integrated communication tools (*e.g.*, threaded discussion, whiteboards, chat) to lead and facilitate class discussions. Blackboard and WebCT are two course management applications currently being evaluated.

6. *What guidance would you offer to your colleagues?*
   - Raise awareness of distance education's potential through pilot programs and technology demos.
   - Provide incentives. If there are no incentives or rewards for participating in education or training opportunities, then regardless of how the program is delivered, it will be difficult to get employee commitment. This is especially true for on-line, self-paced courses, which (even with incentives) require a greater degree of learner self-motivation (compared to other delivery methods) to be successful.
   - Whatever time you think it will take to develop an on-line course, multiply it by a factor of two or three.
   - Keep it simple (at first). Do not create products that require steep learning curves for users or that cannot run on existing hardware and software platforms.
   - Engage your learners. Television and to a lesser extent the Web are delivery media that are better at telling and showing us than interacting with us. Consequently, it is important when designing programs for these types of delivery methods to build in activities that engage participants in ways that can reinforce learning and stimulate new ways of thinking and behaving. For broadcasts, incorporate local site discussion breaks with structured activities and opportunities for participants to call or fax in questions in real time. For Web-based courses, create interactive quizzes and assessments, and, if possible, make faculty available via e-mail and bulletin boards to respond to questions and facilitate discussions among learners.
   - Bring in consultants in areas where you have little or no expertise (*e.g.*, identifying appropriate technologies to deliver learning, developing attractive and user-friendly Web sites, producing high-quality broadcasts, translating content to interactive on-line delivery).
   - Develop a transitional model that combines elements of the familiar with the less familiar to help people feel more comfortable as they begin using distance education delivery methods. For CJER, this was Judicial Branch Radio, which, as described previously, took videotapes of selected live judicial education programs (the familiar) and placed them on the Web for viewing in a streaming video format (the not-so-familiar).

- Continually reassure folks that the aim of distance education is not to replace more traditional education models. It is designed to complement and supplement existing delivery methods and provide learners with additional opportunities for learning that are available when and where people need them.

District of Columbia's Response

Spanish in the Courthouse: An Online Delivery!

By Matilde L. Martin, Bilingual Training Specialist,
District of Columbia Courts Center for Education, Training, and Development (CETD)

1. Brief description of (a) what you are doing,

I designed and delivered a distance learning class to teach Spanish fundamentals and bilingual legal terminology useful in the courthouse. Its purpose is to offer a different modality to the already full-time delivery of language classes in the courts. The idea behind the language classes is to equip employees with sufficient skills to better serve external customers, since many DC residents who have business in the courts are solely Spanish speakers.

(b) when you started,[a]

I began pre-planning the course sometime in April 2002, and developed the course May 2. I had only 60 days of free access, including development time, and my class was scheduled to run May 28 through June 21.

(c) general subject matter,

The title of the class is *Spanish in the Courthouse: An Online Delivery!* The general subject matter includes the Spanish language and culture, the similarity of Spanish to other Romance languages, basic vocabulary, survival phrases for total immersion, information about Spanish-speaking countries and the nationalities of their citizens, a bilingual, legal glossary, and customer service expressions useful for courthouse personnel when providing services to external customers. In addition to the in-house materials created, I provided external links to already-existing Web pages to reinforce the material learned and to expand upon and complement class materials for the self-explorer. I developed the course around ten main topics[b] and included an ad-hoc audiotape for participants' listening exposure. Transcripts of the audiotape are easily retrieved and printed from the on-line program. I also prepared pre- and post-chapter tests in diverse formats, which allowed, and continue to allow, me to monitor participants' progress. The distance learning software allows me to insert

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[a] I was fortunate to have been selected by the National Center for State Courts for a Distance Learning training course subsidized by the State Justice Institute in Reno, Nevada, at the National Judicial College last December. You can say it all started there, or at least, that got me thinking and doing.

[b] Each topic was a chapter and included learning objectives, a vocabulary lesson with all the new words introduced in the chapter, and a bilingual legal glossary when appropriate. The audiotape was made with male and female voices of native speakers and American students of Spanish; commercially sung songs and others sung by the instructor. These tapes were reproduced by internal court operations and provided opportunities for participants to hear and repeat native speech patterns, as well as answer some questions in Spanish.

immediate feedback following each quiz. Course content is geared to stimulate the four language-learning skills—listening, writing, reading, and speaking.

(d) audiences served,

Students registered for the Spanish on-line class are members of the Court of Appeals and members of the Superior Court—judges, magistrate judges, division directors, branch chiefs, supervisors, social workers, probation officers, administrators, mediation professionals, accountants, judicial and non-judicial administrative assistants, law clerks, and persons from the Probate and Administrative Services Divisions. The Center for Education, Training, and Development (CETD) of the District of Columbia Courts is in charge of the training needs of the DC Courts' community. Classes are offered, for the most part, during working hours, and on the courthouse premises. Attendance is optional and the classes are free of charge for the participants and taught by external consultants. I'm pretty satisfied with the attendance of the Spanish on-line class.

and (e) thetechnology used.

I used a Web course management system called *Blackboard.* Although it was not developed for language classes specifically, it is as easy to use for that as just about any subject matter. If one wants to incorporate sound, video, or other media elements, the proper software and hardware have to be available on participants' PCs. This on-line learning environment is password protected. Blackboard is used as an on-demand modality, that is, participants can work at their own pace, and they can participate actively through discussion boards. There is, however, an opportunity for what I like to call "cyber-meetings" through the "real time" chat capabilities. These can make a world of difference.

2. *Brief description of what you did to prepare your organization for distance learning*[c] *(i.e., courses on how to use distance learning, meetings and/or classes to prepare users, installed technology,offered pilots, etc.).*

There was only one specific course to be offered via distance learning, and it was advertised in our regular printed semester course catalog. I also posted a few flyers by the elevators of the courthouse and I sent an internal global e-mail with a multimedia attachment created in PowerPoint. In addition, I used the opportunity of our semester open house to recruit more people and demo the program for attendees. I kept potential students posted on the technology needed, the methodology to be used, the content, what to expect. I even requested their input prior to the development stage. I also arranged for a group to serve as guinea pigs for the pilot program, but they never did have a chance to try it prior to May 28. I decided to gather participants the first day of classes to walk them through the Blackboard

[c] As far as I understand, distance learning is not entirely new to some persons of the DC Courts' community, since some have participated in training programs by satellite and one- and two-way video conferencing. Also, since last fall, the CETD has monitored the 100 licenses purchased from Learn2University.com for court-wide access. This e-training includes learning modules in soft and hard skills, from communication skills, leadership, management, and conflict resolution to English writing, math, computer applications, etc.

screen and show them what they could find and how; I alerted them to check the announcements every other day since that would be the medium for one-way communication with hopes that we would have on-line chat capabilities soon after.

In terms of installing technology, I made students and supervisors aware of the expected technology and equipment needed for participation in the class. Consequently, people called the Information Technology (IT) division or spoke with their supervisors to obtain such things. I told enrolled students that we would meet in person for our first day to learn about the Web course management platform, distribute an audiotape prepared in-house for the class, and collect additional information on their individual learning styles and course expectations. On behalf of the Center for Education, Training, and Development (CETD), I offered the use of the PC belonging to the Center's library and coordinated with a few offices to have a PC available in their quarters for use by any participants who did not have a personal PC assigned to them. By authorizing the enrollment of students who could only access the program from home, more participants were able to join the course, since some did not have access to a PC at work or had no time to devote to the program during working hours. I had the full support of my immediate supervisor, the division director of the CETD, Ellen Marshall, whom I kept posted on initiatives, progress, and impasses. In response to my request, she prepared introductory remarks supporting and promoting this training delivery methodology. I included her remarks in the Web class.

Last, but not least, I'd like to mention, in more detail, the impact on the court community of the six-slide multimedia PowerPoint sent via e-mail announcing the class. The presentation was carefully crafted and delivered, used ingenuity, creativity, music, special effects, and transitions. All were in good taste. It was eloquent and effective and although my intention was not to recruit people, but rather to let the entire community have a taste of what they could get in the class (or what they would miss if they did not attend), nonetheless many people were intrigued by this delivery medium. We'll capitalize on this for future offerings. The immediate consequence, however, was the enrollment of many more participants.

3. What did you do that worked best, and why?

Because it is important to verify the proficiency level of students when they are learning a language, I created a good way to monitor students' progress ***with tests and quizzes***. Once you have played for awhile with the quiz capabilities of *Blackboard* and get the hang of it, you see that it's very user friendly and comes with many ready-to-use templates. *Blackboard* offers numerous options for creating exams with multiple types of questions, and allowing the instructor preset, immediate feedback. This was a definite plus. I was also able to make good use of ***external links*** to take students "virtually" traveling with me in time and space. In a language course, the more real-life situations available to participants, the greater their chances for success. This is especially helpful for an adult audience acquiring a second language, whether attending on-campus or virtual classes. The incorporation of ***sound*** through links to other sites was also helpful to supplement student's listening exposure, although I regret not being able to experiment with sound in the Web-based program itself, other than links.

I am particularly proud of the automatic ***slide show*** I sent to the entire District of Columbia Courts' community as an attachment to the e-mail, as previously mentioned—the multimedia announcement. The brief PowerPoint document I created had multiple transitions and unexpected special effects, colorful and unusual photos and engaging messages with classical music playing in the background. I hoped that this could serve as a door to Blackboard's different and enjoyable way of learning. My idea was to turn non-believers into potential customers, and I believe I did.

I created a supplemental device, an ***audiotape***, to provide what I could not, through the Internet, because the software we had purchased did not allow enough recording time of sufficient quality. The audiotape was a plus, it offered listening exposure, variety, cheerful pedagogy and easy-to-follow singing; it also exposed students to female and male adequate enunciation, and native pronunciation. Through its use, students' acquired phonetic input; it allowed students a less passive listening experience by giving them an opportunity to listen, repeat, answer, and interact. All the tape transcripts were easy to retrieve from the on-line program as well as the songs included, which added variety to the tape and allowed students to listen separately from their transcripts at all times.

Making good use of ***external links*** was also very positive. Indeed, it allowed me the opportunity to take students traveling in time and space. However, I knew, for a beginners' course, I had to limit the number and variety of external links to avoid overwhelming them. I included links in four categories, two or three per grouping. (1) In the first category, I included links to on-line tutorials—electronic workbooks with some refresher, referral material. (2) The second category was to publications produced in Spanish speaking countries, such as the newspapers of major circulation in Peru and Spain, as well as weekly newsletters. The electronic Peruvian newspaper had links to video segments through which one could see sharp images and hear clear voices as on televised news. Of course, for beginners, I included directions to find the want ads, because they are shorter and easier to read. (3) In the third category, I incorporated links to different landmarks in the Spanish-speaking world, such as palaces, main plazas, historic and tourist attractions. (4) The last category included sites that provided information and audio versions of survival phrases for the traveler; for instance, how to make hotel reservations, shop, find transportation, exchange money, get to places, tell time, and etc., in lifelike situations.

Something else that worked well was the inclusion of a ***bilingual legal glossary***. It served a dual purpose. First, it allowed participants to have access to specific legal information at their fingertips. Not everyone who works in the courthouse is knowledgeable about legal terminology, definitions of terms, processes, and actions. By having such a glossary in English, with the translation into Spanish, the internal customers were better informed and could better explain the terms to Spanish-speaking court customers. The second purpose of the glossary was to organize the information presented in the course. The newly introduced vocabulary was summarized by chapter and by topic. I provided diversity in the activities presented as well as the homework requested.

Miscellaneous: In the classes, I did most things that I claimed distance learning delivery could do, in terms of (1) saving students commuting time and (2) faculty prep time

for subsequent offerings. I had curricular flexibility. I was able to make modifications as I saw fit and, in doing so, was able to attract people with different learning styles, who normally do not sign up for our offerings. Although I did not have a pilot group to test the program as I had anticipated, the whole first delivery served as a pilot program, and I'm looking forward to doing a combined, on-campus/on-line delivery this fall. In attempting to perfect the class, I worked through the program one time as a student. This allowed me to see imperfections I then corrected; most modifications were made on the test and quiz portion, such as improving the kind of feedback offered and selecting the most appropriate types of questions. I made sure instructions and directions were clear and that students always had a way to find their way. I also met on an individual basis with the participants who did not attend the first day of class, the on-campus component. I asked students to check for announcements every two days and be prompt in delivering assignments when due. Overall, although various inadequacies limited the photos, videos, and media files I could use, and there is always more that can be accomplished when everything works perfectly, the outcomes were strongly positive.

4. What did you do that didn't work or didn't work to your satisfaction, and why

Not having the chat feature available due to our firewall restrictions was one problem that detracted from the interactive component and lessened the distance learning delivery. Without it, I could not schedule the cyber meetings as previously announced, or prepare discussion groups. My ability to monitor students' participation diminished, as a direct consequence. However, I am still hoping to obtain such capability to allow communication between instructor and students, and among students, if not before the class is over, in future deliveries. In delivering the class this time, for communication purposes, I substituted conventional contact by telephone and e-mail. Without the instant chat capabilities, I had to rely on these forms of interactions with participants.

There was no dedicated budget for this class, and therefore, we could not incur additional expenses to improve this product further. For teaching languages, it is necessary to have software and hardware that can handle high-quality sound and allow recordings of sufficient quality and duration. Financial resources are needed to invest in software and products to create media files that can add more variety and fun to the delivery. I would have liked to videotape some lessons and had those videos digitized for further inclusion in the program. I would have liked access to a scanner for special photos I've collected throughout my travels, even access to an "elmo" for a tri-dimensional viewing of artifacts I have acquired throughout my experiences in the Spanish-speaking world.

Buy-in from upper management is highly desirable, because with that you overcome budgetary constraints and unconditional and prompt support from IT.[d] With upper management's support, your merchandise—your in-house distance learning product—gets endorsement, some stature, advertisement, and promotion. With that buy-in, you may get

[d] The support we did get through the IT division was through direct bargaining. It is my perception that the reception of any new initiative or any changes is received with more enthusiasm if the courts' community sees the endorsement of upper management.

supervisors supporting education by freeing employees' time to devote to training and the exploration of the new and exciting technology.

5. What are your plans for the future?

I'll develop a full-blown course for presentation this fall, integrating on-campus classes and on-line delivery. The pilot revealed that no matter how accessible the technology, more is needed to make it more user-friendly for participants. More importantly, participants need to understand before the actual class begins, how to use the technology, what will be expected of them in class, and the amount of time they need to scheduled for homework, if learning is to occur. Students tend to rely on the fact that the program can be accessed 24/7 from home or office and postpone their commitment to complete the assignment. This program needs to have deadlines for turning in homework and a rigorously adhered-to schedule for the simultaneous, live exchange of ideas through on-line chats. I plan to negotiate the firewall restrictions to be able to access the chat capabilities any time.

I also plan to put together a brief proposal to justify additional funds for distance learning training in our 2004 budget. I will find prices for Blackboard, and will compare pricing with WebCT. The idea is to create a system that would be good for all offerings, including Spanish, MS Office applications, law-based training, soft skills, leadership and management classes, and all the regular courses offered by the training division.

The training division (CETD) may be in a position to save money for the courts by educating other court staff members to be learning facilitators and by using the distance learning technology to train existing and new staff, consequently reducing the number of external consultants. This technology allows more experienced people to show newer employees "the ropes." This allows newer staff members to become more knowledgeable quickly, which results in a better-informed external customer base—customers who have received accurate information in a timely manner. On-line deliveries foster cross training, precisely because they make it much easier to work with a template and modify it for a target audience and because they allow non-trainers to transfer the knowledge. On-line deliveries also contribute to employee morale by giving more people an opportunity to have their contributions recognized. In addition, of course, distance learning always offers the benefit of reduced travel expenses.

6. What guidance would you offer to your colleagues?

Getting support from the top helps, but having the technical staff work with you is a must. It is important to share with your potential audience that the traditional training your department or division has been delivering successfully is still good and will continue, but that new, distance learning classes will be offered in addition. I would also say to my colleagues that an on-line class allows the learning facilitator to reach students with a wider range of learning styles. It reaches individuals who do not feel comfortable in a more typical classroom, who may not like having to answer questions aloud in class. A distance learning

class will reach shy people who feel much more comfortable participating through a chat room, discussion board, or interactive silent exams. Also, analytical or inquisitive students will have a chance to explore beyond curricular requirements, making use of the external links for further research. Finally, people who ordinarily avoid training classes, because they feel their studying techniques are weak or learning pace is slower than average, will feel a bit more secure and comfortable in a distance learning program. By gradually pacing their learning and finding a comfort level through anonymity (as long as some learning takes place), they can achieve acceptable levels of learning. Naturally, it also reaches fast learners who want to cut down on the amount time that would typically be provided in live, on-campus classes.

Another selling point for distance learning is the fact that it saves time and money when people do not have to commute.

Distance learning can improve the quality of learning that takes place, because there is a greater chance for the instructor to monitor the acquisition of new knowledge by the students. In a traditional, one-day class, the presenter moves ahead with the next topic regardless of the participants' level of understanding. However, a distance learning class can be set up so participants cannot even browse through part two until they have successfully mastered part one. This readiness to progress can be verified through an interactive test, with meaningful feedback.

Through a distance learning class, the opportunity to have an active exchange with other participants also is much greater. It is an added advantage for students to learn from other participants' experiences, but, in an on-campus class, time is rarely allowed for that.

Further, a distance learning class can offer more flexibility in adapting the subject matter to new requirements, or in view of participants' reactions, even while the class is in progress. A distance learning class saves a great deal of prep time for subsequent deliveries. It is also an excellent medium for transferring institutional knowledge from more seasoned employees or specialized knowledge from subject matter experts to less-experienced or less-expert employees. It is also a good medium because of its flexibility for cross-training within an institution. The design and delivery of a well-planned Web class is easily modified for future groups with different needs or for different audiences with different levels of expertise.

In a nutshell:

- Try to obtain buy-in from top management from the beginning.
- Get support from the IT department as well.
- Rehearse what you want to offer, in the medium in which it will be offered (things that work for a live class may not work well in other mediums).
- Advertise all the benefits of the new product.
- Make future or potential audiences knowledgeable about the technology and the changes it implies.
- Once you have selected a topic and are ready to create your course, allow lots of time for planning, planning, and more planning!

- Make sure all the instructions or directions are clear, such as, how you will communicate with your students, how often, how they can communicate with you, and how often.
- Be clear about expected homework, including the delivery method, date, and time.
- Be mindful of time zone differences.
- Anticipate questions and concerns of students.
- When you are done with course preparations, ask a person to test your product as a student. Request him or her to do X, Y, and Z to see if anything is missing. Get constructive feedback, and, finally, enter the site as if you were the student. Notice what, if anything, is missing; what is working well; and what else may be needed.
- Remember that this medium is good for subsequent deliveries and easy to adapt for different audiences.
- Also, keep in mind that this technology promotes cross-training.

Good luck! I certainly enjoyed putting together my class, and I am looking forward to putting together many more in a variety of subjects.

Michigan's Response

Michigan Judicial Institute's Distance Learning Initiatives

By Vickie Eggers, Distance Learning Administrator
Michigan Judicial Institute

1. Brief description of (a) what you are doing,

The Michigan Judicial Institute (MJI) has developed a variety of distance learning initiatives. These include written training modules (20-page participant packets with a 20-page trainer packet) on various topics, training titles on CD-ROM, Web-based programs, programs on videotape with accompanying print packets, and videoconferences using desktop and codec systems.

(b) when you started,

MJI started by producing training development programs on CD in 1996 and broadened its initiatives in 1998.

(c) general subject matter,

The subject matter of our training programs varies from soft skills to legal updates. For more information, visit our Web site at www.courts.michigan.gov/mji.

(d) audiences served,

MJI serves a variety of audiences from judges to court administrators, court professionals, and court support staff. MJI has also collaborated with court professional associations, and the Michigan Bar in creating educational initiatives.

and (e) the technology used.

The Michigan Supreme Court will be moving into a new building in October of 2002. We envision using live and archived Webcasting to distribute seminar and special event programs to geographically dispersed court populations.

2. Brief description of what you did to prepare your organization for distance learning (i.e., courses on how to use distance learning, meetings and/or classes to prepare users, installed technology, offered pilots, etc.)

MJI's approach is to model cutting-edge distance learning deliveries. Our focus is assisting faculty who have content expertise to design a delivery method, with various distance learning modes, that is interactive and makes best use of the technology. We also provide a three-day seminar for trainers from local courts to use MJI's training materials,

such as CD-ROMs, effectively. Computer training seminars are offered to all court populations.

3. What did you do that worked best, and why?

Modeling has been effective, because most court personnel have little or no concept of what distance learning looks like. Once they have participated in a distance learning initiative or been exposed to distance learning materials, they have a foundation for better understanding.

4. What did you do that didn't work or didn't work to your satisfaction, and why

The challenge with modeling a technology is that the technology can sometimes let you down—a technical glitch occurs, the faculty are unfamiliar with the process, or have a less than exemplary delivery style—and then the audience makes a negative judgment on the basis of one "bad" program. The other problem occurs when court staff use the technology in a way in which it was not intended. For example, a meeting is scheduled to connect 20 people at one site with 4 people at another site using a desktop computer system with videoconferencing. The desktop system is designed to accommodate 1–2 people at each site. Again, participants may make a judgment that videoconferencing is "bad" when in fact it was simply an inappropriate choice of systems that impacted the delivery.

5. What are your plans for the future?

The Michigan Judicial Institute is moving into a new building in October 2002. The Hall of Justice (HOJ) includes a conference center that is intended to serve as the primary location for training. It is the intention of MJI to broadcast many of the HOJ seminars to Regional Videoconference Centers (RVC) across the state to accommodate court audiences at distant locations. These RVCs are located in courts and organizations such as community colleges. MJI is also positioning its technology to accommodate future broadcast over an Intranet /Internet as well.

6. What guidance would you offer to your colleagues?

The prime consideration needs to be, what technology does your intended audience have available? For example, you can design a Web-based training program for court support staff, but it is generally court support staff that does *not* have access to the Internet in the court setting. The same with CD-ROM—many court support staff members do not use computers in their day-to-day work, or, if they do, their computers do not have the CD-ROM drives or speakers necessary to utilize a training program on CD. These issues are often overlooked in the enthusiasm of designing distance learning initiatives.

Missouri's Response

Instructor-led focus to a blended approach

By Kirk Arnold, Education Technology Coordinator
Missouri Office of State Courts Administrator

1. Brief description of what we are doing, when we started, general subject matter, audiences served, and technology used.

Learning Management System, Web courses, and Judicial Education's Web site: Judicial Education is the name of the division of the Missouri Office of State Courts Administrator charged with providing educational services to court staff (judges, clerks, court reporters, juvenile officers, detention workers, and internal OSCA staff) throughout the state of Missouri. Approximately 550 classes are offered annually at the Judicial Education Center or regional locations throughout the state. Nearly 6,000 participants participate in these classes each year. A small sample of topics includes the following.

- Computer skills courses (Lotus Notes, PC Foundations, Microsoft Office)
- Case management software courses
- Supervision certification
- Management certification
- Case processing
- Legislative updates
- Sound recording equipment
- Court management
- Diversity training
- Clerk orientation
- Judge orientation
- Court reporter seminars
- Trial skills
- Child abuse and neglect
- Ethics and accountability
- Improving customer service
- Legal writing

Approximately three years ago, in an effort to better serve participants, the division began researching and experimenting with alternative delivery methods and building the infrastructure needed to sustain multiple access points to content. Over the past 24 months, Judicial Education has implemented services to offer blended learning opportunities for Missouri's judiciary. Those services include

- Implementing the Learning Management System
- Expanding delivery methods to include satellite broadcasts, videoconferences, and Web-based courses
- Maintaining a lending library with on-line searching capabilities
- Offering regional and on-site training sessions

The division now provides approximately 25–30 satellite broadcasts and 10–12 videoconferences annually. In addition, there are in excess of 200 Web courses available to OSCA employees and court staff on topics including end-user computer skills, technical courses, soft skills courses, and case management software. Judicial Education continues to examine how we offer education services, look for new and innovative ways to deliver content, leverage resources, and cut down on the amount of time we ask court staff to be out of the office.

Judicial Education selected the Pathlore Learning Management System, which serves as the infrastructure on which our entire blended learning strategy is built. The Learning Management System (LMS) is a suite of applications and services, which allow an organization to plan, develop, coordinate, track, and report all types of professional development activities. It comprises two major components, one containing applications and services to perform administrative tasks, the other containing content management and delivery functions. Most attractive to users is the LMS Web Self Service (WSS). This functionality allows participants to administer their own professional development. Through this Web technology, Missouri judiciary staff can register for classes, update their student information, view or print their professional development calendar and transcript, or launch a Web-based course. We have personalized the WSS for Missouri courts and have named it the Judicial Education Web Learning System (JEWELS). JEWELS is currently available only within OSCA's wide area network.

Videoconferences and Satellite Broadcasts: Over the past two years, Judicial Education has conducted a number of informational meetings and workshops through videoconference technology. We currently use a Polycom MP512 ViewStation via an ISDN line connecting at 384K. Efforts to migrate to the H.323 video protocol (via IP) are currently underway and should be in place by fall 2002. The major benefits of videoconferences include communicating synchronously with participants dispersed over a wide geographical area, decreasing time out of the office, and cutting travel costs.

In addition, we have a satellite system (c-band and KU-band) allowing us to receive educational satellite broadcasts. We regularly record broadcasts and place them in the lending library. Occasionally, participants come to the Judicial Education Center to participate in broadcasts of special interest.

All of the educational activities discussed above (classroom, Web courses, videoconferences, and satellite broadcasts) are tracked through the Learning Management System.

2. Brief description of what you did to prepare the organization for distance learning (i.e. course on how to use distance learning, meetings and or classes to prepare users, installed technology, offered pilots etc.).

Judicial Education staff members created a marketing and implementation plan outlining how we would achieve the transition from a strictly instructor-led format to a blended learning approach. I would love to say we created this plan first and then implemented per the plan. However, the marketing and implementation plan actually unfolded as we moved forward building the infrastructure and testing the environment. In the beginning, this plan was merely a collection of ideas captured in meeting minutes, e-mail, etc. Eventually, however, we developed a comprehensive set of documents, which outlined the issues surrounding transition from an instructor-led environment to a blended approach. As we matured in our knowledge, we realized that simply advertising JEWELS was not enough. We had to educate court staff about the concept of blended learning and assist them in their efforts to access learning through alternative delivery methods. Therefore, we are developing strategies for helping court staff members become educated consumers of our educational services. We call this process *managing the learning environment.*

Managing the learning environment is a concept we developed to describe the complex paradigm shift that takes place in transitioning from a predominantly instructor-led focus to blended learning. This process has impacted nearly every decision we make regarding professional development opportunities. We continually evaluate the best delivery option(s) for content, impact on resources, and ultimately the impact on the learner and their learning. Perhaps more importantly, we have extended our notion of managing the learning environment out to the offices of our constituency.

To this end, Judicial Education staff members have demonstrated JEWELS at education committee meetings, internal staff meetings, judicial colleges, clerk colleges, and association meetings. In addition, we wrote newsletter articles, sent e-mail, conducted focus group meetings, and developed a Web page for the division.

3. What did you do that worked best, and why?

Learning Management System: Early in the planning stage, we developed an incremental implementation strategy. Knowing there would eventually be a significant collection of on-line courses, the challenge was how to develop the library with limited resources and minimal experience authoring Web-based courses. Therefore, we had to rely on partnerships and third-party courseware. We worked with other organizations to develop pilot on-line courses. We also established contracts with two third-party software vendors (NETg and SkillSoft). Their courses were certified to be fully functional within the Pathlore Learning Management System. This allowed us to provide a significant library of courses on relevant topics to court staff. However, these courses were not content specific to judicial audiences, so we knew that we would need to develop courses as well.

The next stage in our implementation was to commission the development of a series of Web courses for Missouri's judiciary staff. Therefore, we contracted with Pathlore's development team to create courses on the upgrade of our case management software. In addition, the division is building the capacity to author Web courses internally. In May 2002, the Education Technology section completed a weeklong certification course on the Pathlore authoring tool. As a result, the section will begin editing current courseware. In phase three, the Education Technology section will take over primary responsibility for developing Web courses internally, resulting in a reduction in development costs. Future development plans include courses for the case management software, orientation courses for new staff, and Web-based modules which will be on-line components of instructor-led courses.

Videoconferences and Satellite Broadcasts: Videoconferences have also played a major role in our transition to blended learning. Videoconferencing technology was not widely used in Missouri to deliver professional development when we first used it to offer a small number of workshops. We learned a tremendous amount during those first few sessions about coordination, scheduling, facilitation, presentation, participant interaction, and logistics. These first sessions were fairly small in attendance, but received promising evaluations. Participants were warm to the idea of attending professional development through this medium.

In December 2000, Judicial Education offered a videoconference on the Adoption and Safe Families Act legislation. Ms. Mimi Laver from the American Bar Association was the presenter. Since she works in Washington, D.C, she traveled to Williamsburg, VA, to facilitate the workshop from the National Center for State Courts. In Missouri, we had five sites around the state connected to the conference. Nearly 80 participants attended the workshop. The program was tremendously successful. Participant evaluations clearly demonstrated that videoconferencing was definitely an effective delivery method for professional development. In addition, it proved to be quite cost effective. Had the session been conducted in Jefferson City, we estimated the cost would have been approximately $10,000. Due to reduced travel costs of both the speaker and participants, the actual cost was approximately $3,000. OSCA continues to look at videoconferencing as a viable means for delivering information to groups dispersed over a wide area.

4. What did you do that didn't work (or didn't work to your satisfaction), and why?

Underestimation of the importance of marketing: As Education Technology Coordinator, I thought we were doing an outstanding job of marketing and advertising JEWELS. However, after nearly 18 months of regularly presenting and demonstrating JEWELS at various meetings, workshops, and conferences, I recently had a humbling experience. Several of us from the Judicial Education staff provided an exhibit booth at a Knowledge Fair sponsored by one of the state clerk organizations. I provided a laptop with a few of our Web courses loaded on the computer's hard drive so participants could experiment with Web learning. The clerks were very excited about the opportunity and provided great feedback. However, through my conversations with them, I learned that some had heard of JEWELS, but most did not know what it was, how to access it, or what they

could do in the system. We discovered that our marketing strategies had not really reached our intended audience. That forced us to revisit our marketing strategies and expand our efforts. We are now looking for new and innovative ways to get "the message" out to court staff.

5. What are your plans for the future?

As we move from the implementation stage to maintenance and expansion of our blended learning program, we are looking forward to increasing both the number of educational activities and delivery options for participants. Our end goal is to provide comprehensive education services with multiple points of access to better serve court staff throughout Missouri. We are also looking for ways to leverage our efforts. Early in our work, we realized the importance of partnerships. Judicial Education is seeking to develop collaborative partnerships with agencies and organizations at both the state and national levels to initiate and maintain dialog on issues surrounding technology integration, exchange information on skills and experiences, and create opportunities to co-sponsor or co-develop programming.

6. What guidance would you offer to your colleagues?

The future of blended learning in judicial education is a bright one. In Missouri, the feedback from clerks, juvenile officers, detention workers, and judges is positive. However, much work remains to be done to ensure that our distance learning initiatives reach their potential. One of the toughest responsibilities we have is to make sure that staff members have the tools, experience, and resources they need to be effective in their jobs. Distance learning is certainly not a new concept, but its availability to court staff in Missouri is. We are learning more each day about how to better harness the power that is created when technology is used to support professional development. It is also important to note that distance learning is not meant to replace classroom instruction. The two work in tandem to leverage valuable resources. In Missouri, we are striving to successfully blend instructor-led learning and distance learning through *Managing the Learning Environment.*

Guidelines need to be developed at the local level that support distance learning initiatives. Issues that need to be addressed are how personnel can have the time to take advantage of this type of learning from the office and how distance learning can become an equal partner with instructor-led education in staff professional development. We need to help staff members take advantage of what is available and then assist them in accessing it. The key is to work with the leadership in the courts to develop a process that meets the specific needs of the personnel at the local level *and* encourages staff members to take advantage of all of the various delivery methods for education.

Finally, you do not have to be an expert in technology to develop a successful distance learning program. Simply reach out and make as many connections as possible with others doing similar work. So many of our successes have come from ideas spawned in

conversations with colleagues, or in talking to those who have already done what we are doing. Great resources for establishing connections are the JERITT discussion board and the Court Technology Conference. Both of these avenues will provide access to colleagues across the country, who are grappling with the same issues. Chances are someone has already solved your challenge or would appreciate working together to solve a common problem.

New Mexico's Response

Distance Learning Applications

By Pam Castaldi, Instructional Media Specialist
New Mexico Judicial Education Center

The Seventh Annual Howell Heflin Award (2002) was presented by the State Justice Institute to the New Mexico Judicial Education Center for its "Internet Education for the New Mexico Judiciary." The specific course that earned the Center the award was "Court-Initiated Alternative Dispute Resolution for New Mexico Communities: An Internet Course," SJI-01-N-055.

1. Brief description of current applications of distance learning

Web-based applications: The New Mexico Judicial Education Center (JEC) has had a long-term commitment to developing Web-based resources for the New Mexico judicial branch. Since launching our first experimental tutorial in 1997, we have produced numerous interactive resources for use over the Web, including

- a Web course on Alternate Dispute Resolution;
- an interactive DWI trial;
- interactive basic tutorials on a variety of subjects for judges, including ethics, hearsay evidence, torts, sentencing and search warrants;
- an interactive DWI sentencing calculator that allows judges to issue correct sentences for each level of DWI offense;
- interactive tutorials on subjects for court personnel, including federal personnel laws, ethics for court staff, and orientation materials; and our entire benchbook series for judges, including
  - the Magistrate/Metropolitan Judges' Benchbook,
  - Judicial Handbook,
  - Municipal Court Benchbook,
  - Domestic Violence Benchbook,
  - Traffic Citations Benchbook,
  - Child Welfare Handbook,
  - DWI Benchbook, and
  - summaries of new appellate decisions.

Our primary audiences are the judges and staff members of all levels of courts in New Mexico, with particular emphasis on the non-attorney judges. All of our Web resources are developed in house by our staff Web designer and systems administrator/programmer. The technology used ranges from simple HTML files to much more complex, database-driven Web applications. The Web applications track the users' progress allowing them to get important feedback, and allowing JEC to use the tracking information for evaluative

purposes. In addition, many of the training programs include streamed video that is housed on JEC's video server.

Satellite broadcasts: Since 1992, JEC has offered annually at least one satellite broadcast to judges and any court staff participating at downlink sites around the state. We usually have selected topics of interest to multiple levels of courts and staff as well as to judges, but most of the attendance has come from limited jurisdiction courts. Topics have included DWI issues, managing pro se litigation, hate crimes, customer service, drug courts, and contempt, among others. We used various satellite broadcast systems with the most recent being a "Wenger" system that uses a narrow band frequency downlinked to fixed antennas. All technical services for the teleconferences are provided through the Media Technology Services Center of the University of New Mexico.

2. *How we prepared our organization for distance learning*

To prepare our judicial education program to *deliver* distance learning programs, we took the following steps.

- Hired a Web designer
- Expanded responsibilities and skills of the system administrator to include programming for Web applications
- Invested in hardware and software for developing distance education
- Provided continual training to staff on technical and theoretical distance learning issues
- Developed contacts with outside contractors for technical work
- Constantly reevaluated our needs in terms of technology and staff

To prepare the audience to respond to distance learning programs, we have done the following.

Web-based applications. We used multiple approaches to prepare the audience, since we did not believe any single approach would be sufficient. These included introducing the Web site at conferences using projected images; providing hands-on training for new judges at each new judge orientation; traveling to various courts for scheduled demonstrations of the Web site as well as one-on-one training of basic Web and computer skills for the judges; setting up the Web site in lobbies of conference facilities for one-on-one demonstrations during breaks; and sending out pamphlets, newsletters, and e-mails informing judges and staff of the site.

Satellite broadcasts. We announce the broadcast topics and schedules at conferences and send out flyers with specifics. Facilitators are recruited and trained to organize the session and lead discussions at each downlink site. The facilitators participate in a conference call to prepare them for each broadcast and receive packets of materials with instructions to them on when and how during each broadcast to distribute and work with the materials. They thus provide the on-site training for each group.

3. Our best results

Our best results have come from hands-on experiences with the Web programs. Except for a few especially proficient judges and court staff, one-on-one training seems the best way to ensure that people become comfortable using Web-based educational resources and training. Group demonstrations in computer pods are almost as good if the students can actually work with the programs and take a guided tour that they operate themselves. We have even visited courts in various parts of the state to work with them to demonstrate the Web site on their own computers. At one conference we randomly selected a number of judges one day and clerks the next, took them to a room, gave them lunch, and showed them how to use the Web-based resources. Neither approach is always convenient or possible, so we also distribute written instructions.

4. What didn't work

We found that presenting a demonstration to a large group of new or non-computer users with a projected image of the computer screen did not accomplish much, because, to the extent that we could even hold the participants' attention, they did not learn how to replicate what they observed. We now always make certain that people not only see what is on our site, but also have the opportunity to access it themselves on a computer.

5. Plans for the future

Our plans include additional showings of our first Web course, the addition of new Web courses and resource libraries, use of Webcasts and videoconferencing, and integration of Web-based techniques and resources into as many of our conferences as possible.

6. Guidance we offer

To prepare judicial audiences for Web-based and other distance learning technologies, we would emphasize these points.

- Build in considerable lead times for students to become comfortable with new technologies; remember that you are doing nothing less than changing a culture;
- Anticipate that students will learn how to use these technologies one at a time, so structure in as many one-on-one experiential learning opportunities as possible;
- Make sure that the faculty and staff who will be working with students in distance learning environments have proper training on the technology and distance learning techniques;
- State clearly the goals, objectives, course expectations, and computer requirements to all participants;
- Incorporate tracking systems so you can ascertain how many people are using these resources, and how far they are going with them;
- Build in adequate support systems so students can easily obtain help. Use multiple approaches such as print and Web-based resources, e-mail, and direct phone contact.

Initiate contact with students who appear to be falling behind to offer support. Often, students are reluctant to ask for help when they need it, especially judges, and;

- Constantly evaluate. When problems recur, or if people just do not make use of the program that you have set up, investigate the reasons and make adjustments to your program (or to future programs).

When delivering video or audio over the Web, have backup media available, such as audiotapes, videotapes, and CDs, for distribution to students with slow Internet access.

Ohio's Response

Ohio's Distance Learning Experiences

By Philip Schopick, Assistant Director
Ohio Judicial College

1. Brief description of (a) what you are doing,

We currently present approximately 13 videoteleconferences per year to a variety of court audiences at up to 16 sites statewide.

(b) when you started,

Audio teleconferencing started in Ohio in 1989; satellite videoconferencing was instituted in 1993; and our current system of videoconferencing using designated full T1 telephone lines began in 1996.

(c) general subject matter,

We cover subjects including ethics; professionalism; substance abuse; a variety of update topics in Juvenile, Domestic Relations and Municipal Court areas; and court personnel management and administration of justice topics.

(d) audiences served,

We serve all court personnel, including judges, magistrates, court managers, bailiffs, probation officers, clerks, mediators, court reporters, pre-trial officers, and jury managers.

(e) the technology used.

Designated full T1 phone line videoconferencing units are situated in rooms statewide with either two-monitor television units or one-monitor (picture-in-picture) units.

2. Brief description of what you did to prepare your organization for distance learning (i.e., courses on how to use distance learning, meetings and /or classes to prepare users, installed technology, offered pilots, etc.).

- Preparation was incremental. It started with audio and moved to satellite as a result of calls for more visual input, then moved to the current setup in response to cost issues and availability of viewing sites.
- We identified administrative facilitators (not discussion facilitators) and held a pilot meeting that included training for them. Our administrative facilitators distribute materials packets and collect sign-in signatures, CLE request forms, and participant evaluations.

- We maintain working relationships with entities that own and operate the equipment, such as the Ohio Department of Job and Family Services, the Ohio Department of Administrative Services, PBS television stations, and several community colleges.

3. *What did you do that worked best, and why?*

- We found that faculty can be at different sites, which means less travel for them. It is better for audience participants to have a live presenter available for at least part of a program; and for more sites to have, if not discussion facilitators, then someone such as a faculty person, ready to report results of discussions at these sites.
- Faculty seem to do best with learners in the room. Because most faculty are identified as good, due to their success dealing with learners, removing learners from the room challenges them. Therefore, the distance learning program is likely to be much better received if it is produced with learners present. Faculty tend to feel more comfortable and teach better when learners are in the room; and a greater percent of total attendees feel that their needs have been addressed when they have an expert in that subject area available at their site.
- We back up PowerPoint-type presentations with thumbnails (or larger versions) of each slide in the manual. These serve as a safety net should visual transmission fail.

4. *What did you do that didn't work or didn't work to your satisfaction, and why*

- We found that discussion groups at outlying sites have not worked as well when trained discussion facilitators are not present. And, unfortunately, we do not have staff and facility time available to train discussion facilitators and do run-throughs with them prior to conducting the courses.
- Visual aids, transmitted on-screen, do not seem to work well; they can distract learners from making a connection with the faculty. Also, when displayed without large screen projection capability, visual aids can be hard for the learner to read. Conversely, we found that distributing a packet of printed materials to which each distance learner can refer during a program (similar to those commonly shown as overheads at on-site programs) seems to work very well. The packet provides the information that learners desire while allowing them to make more frequent *visual contact* with the faculty.

5. *What are your plans for the future?*

- Have a short training video for faculty with examples of "things that work" in videoteleconferences.
- Have our own origination site in the new Supreme Court building in early 2004.
- Continue to offer videoconferences 13–15 times a year.
- We hope at some point to offer programs via the Web, available at a learner's individual computer.

6. *What guidance would you offer to your colleagues?*

- Be sure you have support from your constituents before trying to initiate these programs.
- Faculty will make better connections with *all* attendees if they are in a room with at least *some* attendees.
- Distribute paper copies of the visuals to the sites beforehand, so the distance learners can follow along with a presentation even if the visual transmission fails.