

A Background Paper

The State of Electronic Recording in the Courts

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National Court Reporters Association

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By David Ward

NCRA's Technology Assessment Committee commissioned this background paper in order to provide a broad perspective on the use of electronic recording across the United States. The paper offers comments and opinions from a variety of stakeholders so that all aspects of the topic and differing perspectives can be considered.

This paper does not, nor is it intended to, provide a comparison of electronic recording to stenographic reporting. Rather, the intention is to better educate members on how and why electronic recording is being used in the courts so that stenographic reporters can respond effectively when dealing with this issue.

For veteran court reporters, the current worries that technology will soon render their role in the judicial system obsolete must seem like old news. For much of the past four decades, companies have been looking to convince court administrators that some new device, whether it's a tape recorder, PC, or vast IT infrastructure, can keep the official court record as accurately and as professionally as a live reporter.

New Mexico in the 1980s briefly bought into this myth, bringing in tape recorders for criminal trials. But they quickly returned to stenographic reporters for criminal cases after a flood of problems with electronic recording, ranging from numerous inaudibles found on tapes, to storage issues, to the tremendous time it takes to produce a transcript from tape.

So it's tempting to think that the latest push among court systems to adopt electronic recording will likely suffer a similar fate. But driven by the budget crises facing virtually every state, county, and local court system in the country, this time appears to be different.

Electronic recording in the courtroom, whether it's via computerized digital recorders, enhanced video equipment, or even old-fashioned Lanier Advocate or Sony BM-246 tape decks, is not only here to stay but likely to continue to grow so long as budget constraints plague our legal system.

Much of this growth is coming despite the admission by many in judicial systems across North America that a live stenographic reporter, especially one with realtime certification, is clearly superior at not only keeping the record, but also helping to manage the courtroom.

An electronic recording management plan recently prepared for the Colorado State Supreme Court states: "The

preferred method of making an accurate record of court proceedings is a court reporter. Therefore all the proceedings conducted before a district court judge may be recorded by a court reporter using a stenographic machine as well as on a realtime basis."

Yet despite this and other similar statements, many court systems now claim they either can't afford full-time court reporters or are unable to find enough stenographic reporters, and are thus being driven to bring in electronic recording.

A Nationwide Issue

There's no debate that electronic recording has spread dramatically over the past decade. "We're now at the point where we're in virtually every state in the country, whole provinces in Canada, and 31 countries around the world," noted Steven Townsend, president of FTR Limited (formally For the Record), a leading provider of electronic recording systems in North America.

Townsend added that even the states most resistant to electronic recording — such as New York, Texas, and California — have it in some parts of their judicial system. "We count about 50,000 rooms, of which 35,000 are judicial courtrooms and the remaining are hearing rooms such as labor relations hearing rooms," Townsend said. "Generally speaking, we believe that audio exists in 30,000 courtrooms across the country and video systems in maybe 5,000 or a little more."

Most states currently have a combination of official court reporters and electronic recording and are actively considering the role that each should play in keeping the record.

But in at least two states, New Hampshire and Oregon, the move away from live stenographic reporters and to electronic recording has been more troubling. In Oregon, the number of official court reporters has gone from 60 to 10 over the past few years, while New Hampshire is on track to completely eliminate the state's remaining official court reporting positions by the end of June 2005.

"I shudder to think that there are going to be no official court reporters in New Hampshire from here on out," said Marcia Patrisso, past president of the New Hampshire Court Reporters Association. New Hampshire's official court reporters have filed an appeal of the state Supreme Court decision to eliminate their jobs, and a stay has been granted while the decision is being appealed.

But some of the remaining dozen or so official court reporters are already looking to leave in advance of the June deadline, and Patrisso argued that even if the appeal is successful, it may be too late. "I have warned people here that

eventually you're going to want them back, and you're not going to get them," she said.

Ironically, Oregon may be in that spot right now. That state laid off 80 percent of its official court reporters in 2002, citing budget cutbacks. Since that time the state's courts have encountered numerous cases that have been affected by some kind of failure involving the recording system. A February 8, 2004, article in the *Portland Oregonian*

There are certain weaknesses regarding electronic recording that cannot be rectified even when the environment is considered. For example, mumbled speech will still be mumbled speech on a recording and cannot be dealt with effectively unless immediate clarification is requested, a duty that lies with the court reporter.

cited a 2003 murder case in which 55 minutes of key prosecution testimony was missing because someone forgot to turn on the machine.

The *Oregonian* also noted other problems such as the wiring in several older courthouses inadvertently picking up local radio broadcasts along with the courtroom testimony and one instance in which a private conversation between a lawyer and his client was captured and mistakenly transcribed into the official record.

There's also a five-day civil trial that had to be

retried when four days of testimony went missing. The retrial ended up as a two-week jury trial with a different verdict, said Oregon Court Reporters Association President Joyce Zaro, adding that as a result several of the participants are suing the state.

Zaro said that in many of the courtrooms in the state, the court clerk is now responsible for the digital recording. "A lot of the problems they've had are a result of human error, forgetting to turn it on or not checking to see if it's recording," she said. "The legislative session is going to happen next year, so we have our lobbyist working on bills to mandate live court reporters on major felonies and death penalty cases."

The Appropriate Use of Electronic Recording

Some people within the court reporting community would say there are never any appropriate uses for electronic recording in courtrooms. But in most states there exists an understanding that electronic recording may play a limited role in keeping the court record.

"I'm very against electronic recording," said Bernadette Black, a court reporter in Philadelphia's Court of Common Pleas as well as the chairperson of the alternative technologies committee of the Pennsylvania Court Reporters Association. "However, I can see we are very, very short of reporters, and I'm glad I don't have to go to one of these courtrooms where you have to write four or five packs a day and have not even 100 pages on order."

While the guidelines surrounding the use of electronic

recording vary dramatically from state to state, the general unwritten rule is the lower the transcript volume, the greater the likelihood of a digital or analog recording device.

As FTR's Townsend claimed, "The fact is, something in excess of 80 percent of all proceedings that go on in this country that are recorded are never accessed again for any reason. It's recorded and it goes on a shelf some place."

"Where electronic recording should be used is where there is no transcript required," added Rick Greenspan, president of the Florida Court Reporters Association. "A court administrator can say we have a calendar call where 50 cases are called and the judge can be on the bench and there is no need for a transcript."

There are also some jurisdictions where it is impossible to either attract a court reporter or produce enough transcripts to keep them gainfully employed. Vicki Akenhead-Ruiz, managing court reporter in New Mexico and past NCRA president, said, "In New Mexico, we have outlying areas where we can not possibly get court reporters to live and work there, so those judges hire their own individual court monitors. And that shortage is what's creating a bigger hodgepodge of how to make the record." The challenge in filling reporter positions is often driven not only by location, in which there may be a shortage of reporters in a specific area of the country, but also by the fact that the income potential does not match the qualifications and skills of a highly trained court reporter.

But that hodgepodge of record making also increases the potential that at some point a machine malfunction or some other problem linked to electronic recording will result in a major miscarriage of justice.

"The big issue is where do they draw the line above which you really run a risk by using electronic recording and below which it's safe to use it," said Leslie Foldy, president of Foldy Reporting Service and president of the Arizona Court Reporters Association. "Where even if there is a problem, that's OK because they can redo it or it's just a procedural matter."

Right now, most court systems seem comfortable with the concept of using electronic recording in divorce, traffic, family, and similar lower-level court proceedings. Yet, there are certain weaknesses regarding electronic recording that cannot be rectified even when the environment is considered. For example, mumbled speech will still be mumbled speech on a recording and cannot be dealt with effectively unless immediate clarification is requested, a duty that lies with the court reporter.

As noted earlier, New Mexico experimented with tape recordings during criminal trials in the 1980s. "But the Court of Appeals hated the tapes in criminal trials, so we were one of the few states that went back to stenographic reporting," Akenhead-Ruiz said. "Now what we have is all criminal and civil proceedings are taken stenographically, then I have 13 other divisions that the court has said need to be taken by other means. So it's very well defined which technology goes where."

North Carolina has a similar arrangement, explained NCRA Board member Nancy Glynn-Braswell. "District

Court is an ER level because there are just not many transcripts that come out of district court,” she said. Glynn-Braswell added, however, that district court does deal with criminal as well as civil and domestic hearings, noting, “A lot of the attorneys who deal at that level and need the occasional transcript find it nearly impossible to get one.”

Glynn-Braswell added that she feels North Carolina will continue to support live reporters in Superior Court because of the support of both the state Supreme Court justices and the head of the judicial administrative offices.

By now, the benefits of court reporters are fairly obvious, even to many advocates of electronic recording. For one thing, stenographic reporters can help manage the court proceeding, stepping in when several people are speaking at once to ensure the accuracy and integrity of the record.

Far more common is the situation in Colorado, where there are general state guidelines prioritizing the use of court reporters beginning with first-degree murder cases and felony criminal trials. Richard Matt, official court reporter in Greeley, Colo., as well as president of the Colorado Court Reporters Association, said it’s ultimately the individual district court judges who make the day-to-day deci-

sions on which cases get live court reporters and which get electronic recording.

“We’ve got ER equipment in almost every courtroom, so if I’m needed in a courtroom for a criminal case, the judge can turn on the tape for a civil case,” he said. “The judges have so much input, and when my judge has a trial to the court and he has to make all the decisions and all the rulings, he wants a live court reporter so that he can look at the record. Whereas if it’s a jury trial, the jury is the ultimate fact finder and renderer of the verdict and the judge doesn’t have to worry about it so much.”

The Appropriate Use of Stenographic Reporting

By now, the benefits of court reporters are fairly obvious, even to many advocates of electronic recording. For one thing, stenographic reporters can help manage the court proceeding, stepping in when several people are speaking at once to ensure the accuracy and integrity of the record.

Live court reporters can also interrupt when a lawyer, judge, or witness is speaking too low or too quickly and ask them to speak up or repeat a statement to ensure an accurate transcript. Their presence in the courtroom also enables them to put testimony in a context that would be missing when a tape or digital recording is transcribed days or weeks later by an outside transcriptionist who was not in the room during the proceedings.

But the biggest benefit is realtime reporters who can provide lawyers and judges with a running transcript that can be accessed at any time during the proceedings. “What

keeps us ahead of ER is this instant translation that is on the screen, and so the judge can go back and read it,” said Matt. “And we’re right in the 99 percent range of accuracy.”

There’s also the huge speed advantage in which a certified court reporter can produce a paper transcript. Florida’s Ninth Judicial Court District has been aggressively using electronic recording even in some felony trials, but court administrator Matt Benefiel admits, “We’ve got four full-time certified realtime court reporters, and the turnaround time in transcripts is so much quicker.”

Four Case Studies

Florida’s 9th Judicial Circuit

Consisting of both Osceola and Orange County in the Orlando/Kissimmee area, Florida’s 9th Judicial Circuit was one of the early adopters of digital recording, employing FTR’s 3.3 software in the mid-1990s and then shifting to FTR Gold.

Court administrator Benefiel said the circuit now uses digital recording to cover virtually everything in Osceola County except for capital murder trials and post-conviction motions, because, as noted earlier, those cases require quick transcript turnarounds.

Benefiel said he would like to have more live reporters at both courthouses, but added, “In Orange County it is very difficult for us to find a traditional court reporter. We have some on staff that we pay that were certified through the county. But the problem with the state budget is if they leave we can’t replace them because we’re required to hire at the state base pay, and we can’t get a realtime court reporter for \$41,000 per year.”

While the 9th Circuit initially had some problems with the quality of the digital recordings, Benefiel said those have long since been rectified. “We’ve spent a lot of time on our audio system,” he said. “We’ve got mikes hanging from the ceiling, we provide white noise in the jury box, and we’ve got network mixers in the courtroom, so we can actually monitor and adjust the amplification level from a central A/V room.”

In the central A/V room, one digital court monitor (DCM) can monitor up to four courtrooms at any one time, making notations in the record that are linked directly into the digital recording. If a monitor is required to make notations in more than one record at a time, the likelihood of missing information important to accurately tagging the record is greatly increased. Benefiel stressed that when there is actual testimony or arguments taking place, one DCM remotely monitors only a single courtroom.

“If playback is required, the DCM can actually play back from a remote location that goes back over the courtroom audio system,” he added. “The judges really like it when they ask for playback they get the actual audio, it’s not just a readback.” But, again, the ability to make use of this searching function is dependent on the individual monitoring the system. If the individual is monitoring more than one courtroom, the efficiency is greatly reduced. Moreover, if a single monitor is responsible for one courtroom, additional

staff at greater cost must also be available to handle record-making requirements in other courtrooms.

Every courtroom's electronic recording is fed directly to a central network as well as to a hard drive for storage. It is also recorded on a single DVD in one-channel sound for catastrophic backup. "By being on the network, we can provide that file to the state attorney or public defender or judge on request," Benefiel said. "We can also burn it to a CD for \$10 for someone who doesn't want to pay for a full transcript."

The court administration does have a \$10,000 contract with FTR for phone support for 70 courtrooms, but handles much of the service for their system internally. As far as training DCMs, Benefiel said they can be fully trained in about four weeks, but adds, "They can probably be productive and annotate within two weeks. The only real requirement is typing skills, because in addition to monitoring there's also a transcript pool, and they switch in between. We do all our transcripts in-house."

While he would prefer to add more realtime reporters, Benefiel said there's no doubt the switch to ER has saved the judicial district considerable money. "The recurring cost savings are about a half-million a year, which far surpasses the hardware and software costs." However, other costs also need to be considered, such as the costs assumed by litigants in having transcripts prepared and the impact on transcript accuracy when a transcriptionist who may not have been in the courtroom is charged with producing a record. Although financial costs are certainly a valid consideration, the cost of a fair and equitable judicial process is often immeasurable.

First Judicial Court of Pennsylvania Philadelphia, Pa.

The Philadelphia Court of Common Pleas, as it's best known, is one of the largest on the East Coast with 110 courtrooms, of which 14 currently have only electronic recording — six in family court, two in municipal level (preliminary) court and six at the Common Pleas level.

Official court reporter Black said the 14 courtrooms currently using FTR Gold (there are plans to expand to 17 in the near future) are the "ones that are not desirable rooms for a court reporter. They have very high volumes of writing but little transcript generation."

There is a digital court monitor in each courtroom with the FTR Gold system, and the city has in-house transcribers to provide paper transcripts. The recordings are also burned to a disc as well as stored on a computer hard drive. Black said she's been impressed — as well as a little frightened — by the improved audio quality of these digital recordings, noting that it's now much easier to block out other microphones in the courtroom so the transcriber can focus only on the speaking voice they want to hear.

Black said electronic recording has become somewhat necessary, as Philadelphia is experiencing a shortage of court reporters, partly because of a city residency requirement for all municipal employees and also because nearly a dozen veteran reporters took advantage of a state early retirement

program last year.

Despite having more than 120 court reporters on the payroll, Black noted, "The reporters are pretty overworked, so it's not like they're losing work (to ER). But the reporters are a little nervous that it's going in."

Still, she gives credit to the city's judicial court administration for its decision making in regards to which courtrooms get electronic recording. "The courtrooms where the recorders are placed now have practically no chance of dailies," Black said. "The mindset in Philadelphia seems to be to use electronic recording to supplement the court reporters and not to replace them. But I get concerned that now that there's a foothold of ER in the courtroom, once there's a budget crisis, it may be more desirable to expand their use."

Maricopa County Trial Courts Phoenix, Ariz.

The Maricopa County court system is one of the poster children for ER, having dramatically expanded the number of courtrooms equipped with electronic recording from eight to more than 50 in the past three years, while at the same time maintaining their level of court reporters at 80.

Eric Ciminski, the county's director of courtroom technology, noted the growth in ER is being driven by a number of factors, including a lack of court reporters, a rapidly growing court system, and what he described as "a shortage of budget funds to pay the unrestrained costs of a court reporter."

"Electronic recording is a one-time cost one-quarter to two-thirds that of one year's salary for a court reporter," he added. "The court has saved \$1.2 million in contract reporter costs as a result of using electronic recording." However, how much of those costs were shifted to the litigants is not known.

Maricopa County has a large number of what Ciminski terms specialty calendars — early disposition court, initial pretrial conference, initial appearance, and probation revocation — with a low transcript volume that make it more appealing to use electronic recording. However, state statute allows counsel to request a court reporter for any judicial hearing.

Melinda Volmer, managing court reporter in Maricopa County, said, "There are places where the blended technology works very well," but added there remain some lingering concerns among the area court reporters over the county's plans for the future.

Maricopa uses FTR Gold and is one of the more aggressive jurisdictions in introducing video into the courtroom. In most of the courts with ER, Volmer said the bailiff or clerk operates the recorder, though the county now does have one new courthouse with a remote AV room where one DCM can keep track of up to four courtrooms.

Ciminski said, "Maricopa County trial courts are committed to expanding digital recording both in limited and general jurisdiction courts. While digital recording is available for some high-profile cases, attorneys can request court reporters for such cases in addition to digital recording. Per

local rule, when a court reporter is present, the court reporter keeps the official record. With a court reporter present, digital recording becomes a value-added benefit to the trial process.” He also noted, “The court has never laid off a court reporter.”

Volmer agreed that, at least to date, Maricopa County’s increased use of electronic recording does not seem part of a strategy to balance the county government budget on the backs of court reporters. “Our numbers are not growing, however they’re not fading, either,” she said. “I guess you can say we have successfully put them in — whether it’s a happy integration is another question.”

272nd District Court Brazos County, Texas

When lawyer Rick Davis won a local election in 2000 to become a judge in Brazos County, Texas, one of the first steps he took was to evaluate the electronic recording system that had been put in place by his predecessor, Judge John Delaney.

As an attorney, Davis had prepared numerous appeals from several courts in Texas, including the 272nd District. In a December 14, 2000, memo to the Brazos County Commissioners prior to taking office, he wrote, “My former observations have been that the records out of the 272nd District Court were not as accurate.”

To buttress his argument, Davis compared the official record of three cases: one that had been done by a live stenographic reporter in the 361st District Court and two that were prepared by commercial transcriptionists from recordings of cases tried in the 272nd court. Davis found the error rate, measured by the number of “inaudibles” or “indiscernibles,” was 20 times greater in the transcripts done from the electronic recordings.

Davis also questioned the cost savings supposedly offered by electronic recording and voiced concern about getting vendor support if the system — a Digital Audio Tape (DAT) recorder serviced by FTR — broke down. He also pointed out that not only were two court employees receiving additional compensation for the added responsibility of monitoring the system, but one, a court secretary, had to abandon her normal responsibilities and go to the courtroom to operate the recorder whenever a trial was in session.

Davis made a persuasive argument, and the county did provide additional funds for a live court reporter when he took office in 2001. But ironically, three years later he was still dealing with problems from the period his predecessor used electronic recording.

Davis’ new problem dealt with the fact that for some older trials, the only record was the DAT tape, and the county’s sole computer with a DAT reader had crashed. Their vendor, FTR, wanted \$4,500 to retrieve the data from 10 tapes, far exceeding Davis’ \$200 annual computer expense budget. Davis was eventually able to hire a local computer repairman to fix the computer for considerably less, but used the opportunity to once again question the cost savings of electronic recording.

“As I am sure you are aware, my predecessor utilized an

electronic recording system to make official recording of court proceedings,” Davis wrote in a second memo to the county commissioners, dated September 2, 2004. “He touted this use as a significant cost savings because we did not have a court reporter on the court’s staff. However, it was then, and is now, my opinion that those cost savings were largely illusory because of the maintenance required for the electronic recording system and because two staff members formerly received salary supplements to compensate them for the additional skills that they had to acquire to operate the system.”

Davis now has two certified court reporters on his staff and stressed he has “no regrets” about eliminating electronic recording in his courtroom.

Behind the Electronic Recording Growth Curve

There are several reasons court administrators cite when making the decision to add electronic recording to their judicial systems: budgetary concerns, a shortage of certified court reporters, and the general trend toward increased automation in all facets of life, including the legal process.

Cost

The major driver behind electronic recording is, and will continue to be, cost. Martin Gruen, president of Applied Legal Technologies, said, “I’m not going to deny economics is probably number one. A highly trained certified court reporter costs a statewide average of \$89,000 a year for salary and benefits in California, for example, not counting transcripts. If you look at those kinds of numbers, court administrators figure they can save a lot of money by switching to electronic recording.”

But what’s interesting is that right now much of the current growth in the ER industry is coming from not court systems making the move from live court reporters to ER, but rather from courts upgrading their existing ER from analog tape to digital recording.

“The dominant demand that we’re seeing is from court systems that have been using analog recording,” said Bill Taylor, product and sales manager for Mercom’s VeriScribe software suite. “In general, most are already wired for ER, and they want to replace their Sony BM-246 or Lanier Advocate with a laptop and probably a mixer.”

The budget squeeze faced by most states and local jurisdictions has made a switch to electronic recording seem more enticing. In several instances, such as Oregon and Colorado, state administrators simply cut the budget in judicial districts across the board, leaving it up to the individual court systems to prioritize their personnel.

Vendors of electronic recording technology know this and target local court administrators with claims that a one-time investment in electronic recording can lead to annual savings of hundreds of thousands of dollars for years to come.

Colorado CRA President Matt said, “It’s almost like the debate on the usefulness of court reporters is directly related to how the economy is doing. If the economy would improve, I don’t think it would be near the issue it is today.”

But the big question is, if the economy improves and expands the state and local tax revenue, will there still be such a push to replace court reporters with electronic recording? Andrew Treinis, president and CEO of Court-Smart Digital Systems, said the current cost-cutting mentality among court administrators is likely here to stay, even with another economic boom.

“I don’t think state and local governments are going to say, ‘The spending lamp is lit, go knock your socks off,’” Treinis said. “What we’re dealing with now is what you’re going to get in the future.”

But what may change the push toward electronic recording is a closer look at the expenses involved in these complex systems. “It may be cheaper to have electronic recording, but we’re finding that very few states have sufficiently done the research to figure out the real costs,” Akenhead-Ruiz said. Purchasers often don’t realize that a one-time investment becomes a long-term commitment requiring regular maintenance and upkeep and the hiring of additional staff, thereby reducing not only the expected cost savings but also the advantages obtained when using a court reporter.

Many vendors of ER equipment readily admit the only surefire way to ensure their products are functioning properly during a proceeding is to have a trained and certified electronic court monitor in the courtroom.

“From our perspective the best solution down the road is you still want a human being at the recorder taking notes,” said Mercom’s Taylor. “It makes it a lot easier to transcribe later on as opposed to having an eight-hour recording and you have to figure out what’s there.”

A certified electronic court monitor will, in most cases, be paid less than an experienced court reporter, but these new employees are still an ongoing expense tied to electronic recording that often isn’t figured into the budget equation.

Akenhead-Ruiz said there are other hidden costs associated with electronic recording. “I know one cost that all the states face is the cost of generating a transcript from a tape,” she said. “They’re finding that it takes three to four as many hours to produce a transcript from a tape as from a court reporter. If the transcriber is getting paid by the hour, it’s not nearly as cheap as they thought it would be, not to mention not nearly as accurate.”

Florida CRA President Greenspan suggested electronic recording doesn’t so much save money as shift the cost burden. “It may be cheaper for the court system, but it’s not for the litigants,” he said. “The court goes ahead and records a proceeding and then sells a CD-ROM to the attorney. That attorney then has to go to a freelance agency to get a paper transcript.”

Consider a comment taken from *How to Conduct an Assessment of Your Court’s Record-Making Operations*, a publication prepared by the Justice Management Institute: “The driving issue for most jurisdictions undertaking an assessment of their record-making operations will be cost. There are many dimensions to the questions of costs and benefits. Cutting costs in one sector of the justice system may impose significant new costs on another.”

Individuals focused on cost don’t often realize the scope of a qualified reporter’s work. For example, in addition to preparing an accurate, complete, and secure transcript while serving as the impartial guardian of the record, the court reporter also plays an absolutely essential role in providing access to litigation support technology, which depends entirely on the reporter’s realtime feed. This expansion of duties enhances the efficiency of the courtroom and benefits all stakeholders, whether judge, attorney, litigant, court clerk, or observer. Therefore, when focusing on cost, the efficiencies and benefits gained through the services of a qualified court reporter that are lost must also be considered.

Court Reporter Shortage

The other major factor cited by court administrators in making the decision to add more electronic recording is a looming shortage of court reporters, especially ones with realtime certification. “There is a declining court reporter pool,” said Gruen, citing an NCRA white paper published in 2002 that found enrollment in court reporting schools declined from 14,202 students in 1992 to 5,885 students in 2001. However, it should be pointed out that in the three years since 2001, enrollment at NCRA-approved programs has increased by almost 25 percent.

Wisconsin is one state facing a severe shortage. In June 2004 judiciary officials put out a report recommending a change in the state personnel policy to allow certified stenomask reporters to operate as official court reporters.

However, there is valid debate within the court reporting community as to how much of this personnel shortage is myth and how much is reality. Some people openly wonder if the shortage would quickly evaporate if only talented people interested in court reporting as a career received assurances they’re entering a profession with both a near- and long-term future. “It’s the fear factor at work,” said Glynn-Braswell. “It’s the threat of ER, that so many of the courts in so many states have got some form of audio recording or video.”

Foldy went even farther, suggesting that the court reporter shortage may in fact be nothing more than a talking point for vendors and court administrators to justify bringing in ER over the objections of many judges and attorneys.

“Everywhere across the country you see this same exact language being used by the courts, which is there is a looming shortage of reporters and we’re going to be moving to ER to solve this problem,” she said. “But court reporting is not a huge industry and by the time we do full-time layoffs in a few courts, we’ll have plenty of reporters across the nation.”

Courtroom Automation

No one wants to be behind the technology curve, including court administrators, and electronic recording is being positioned as a key element in the fully automated courtroom of the future. “More and more courts are integrating applications such as e-filing and case management,” said Treinis, adding that in the future electronic recording will be part of “distance justice” where all participants in a proceed-

ing, including the judge, may interact via teleconference and even courtrooms themselves could become obsolete.

Many of the individuals involved in this process fail to realize that realtime court reporters have an important role to play in the introduction of new technologies to the courts in their quest for greater automation. One example of this is Reporter Electronic Data Interchange, an enhancement to the computer-integrated courtroom that links the court reporter's and the clerk's systems, enabling both to enter data into the court's electronic database and reducing duplicate functions. Unfortunately, this tool has yet to catch on in many courtrooms.

Perhaps a more relevant example is in-court computerization, which allows for a variety of research opportunities. When using litigation support software, which relies on the reporter's realtime feed, attorneys and judges can call up depositions to compare to current testimony. Technology enables attorneys to bring volumes of legal research into the courtroom on CD-ROMs. In addition, attorneys can send the trial proceedings off-site, access online legal research programs, or communicate with co-counsel and consult with expert witnesses remotely.

Primary Vendors/Products

With more than 35,000 courtrooms in the United States alone, the market for electronic recording in North America is potentially huge, which is why the number of electronic recording vendors has grown in recent years.

Yet despite the inroads made by newcomers such as Mercom, as well as established smaller companies such as VoiceIQ and Novo Technologies, makers of CourtLog, the two main players remain Phoenix-based FTR, maker of FTR Gold, and Boston-based CourtSmart Digital Systems.

One thing the increased competition is doing, however, is driving down prices for electronic recording. "The court systems are becoming very price sensitive, and that has become a problem for some of our competitors," said Mercom's Taylor. "There is a growing resistance to the cost of the entire system."

According to FTR's Townsend, the cost of equipping a courtroom went down from about \$25,000 per courtroom in 1995 to \$10,000 for a single courtroom in 2000. "Now they're getting them for about \$5,000 a room pretty consistently," he said, adding the cost per courtroom can go even lower depending on how many rooms are involved.

FTR's key product offering remains FTR Gold, which the company introduced about four years ago. Townsend said the Australian company's U.S. division, which he heads, sells about 250 systems a month.

FTR offers both software and digital recording decks that, while based on PC architecture, are designed to operate like analog tape recorders, with simple play, stop, and rewind buttons. That's significant because, as noted earlier, many vendors in this market, including FTR, are currently getting the bulk of their business from court administrators looking to replace old analog tape devices.

"All of our recording systems record immediately to the hard drive and also to a second location, either a CD drive

or a network drive," Townsend said. "Some court systems then burn them to disc and take them off-site for storage every night."

Mercom can arguably be considered the clearest direct competitor to FTR. The New Jersey-based company has been in the digital audio marketplace for the last 10 years, primarily in call center and 911 recording technology, and is now aggressively pushing into courtrooms with its VeriScribe product.

Mercom has been getting traction with court systems particularly in the western part of the United States, touting a laptop PC-based flexible architecture that can be integrated with a courtroom's existing microphone, sound-mixer, and amplifier.

"The current iteration of VeriScribe is a stand-alone solution where each PC is its own recorder," explained Taylor. "That can be put in a central room, but basically most of our clients have one recorder to each courtroom."

Since VeriScribe is built upon a Microsoft SQL 2000 database, Mercom claims an advantage over competitors in that it can provide a much more straightforward integration into the case management infrastructure already in place in many courtrooms. "Our basic pitch is not that you're going to save money by eliminating people," said Taylor. "You're going to make your people more productive and more accurate and more reliable, which has value."

Based in the Boston area, CourtSmart Digital Systems describes itself as the Cadillac of electronic recording, offering what it believes to be the best recording technology at what it admits are slightly higher prices than its competitors.

Unlike FTR and Mercom, CourtSmart claimed its core business is not to provide a simple digital upgrade to an analog tape system, and has turned down some court administrators who were looking for only that.

"We don't replace tape recorders," Treinis said bluntly. "That's not the real market for our technology. We replace court reporters. We espouse centralized recording, we espouse four-to-one ratios where you have one person monitoring and controlling up to four courtrooms."

CourtSmart offers a turnkey product for court systems, with everything from sound systems and video arraignment systems all the way down to and including the wiring.

CourtSmart costs about \$10,000 to \$30,000 per courtroom, though Treinis noted that it can go much higher. "We've had courtrooms that spend as much as \$100,000 on just advanced video presentation equipment, with plasma screens in the court and where every juror has an LCD panel," he said.

CourtSmart is also aggressively adopting new technologies, having replaced CD storage with DVD-RAM discs that store up to 30 times more data and come encased in a cartridge to prevent damage. The company also claims that its storage network is far more secure than its competitors. "Our server contains anywhere from six months to two years of cases that users can access on a local- or wide-area network," said Treinis.

Technologies to Watch: DVD, Video, and Voice Recognition

According FTR marketing manager Marni Patterson, only about 10-15 percent of court systems have made the switch completely to digital recording via computers, so there's still plenty of room for growth in that market.

But even after a court system has made that initial switch, lots of other technology upgrades are available. The first is the move from CD or CD-ROM discs to DVD for storage.

FTR's Townsend suggested most court systems already realize the advantage of using high-quality blank CDs for long-term storage and added that a few have taken the next step of shifting over to recording onto DVD. "The one advantage of DVD is you can store a lot more information," Townsend said. "By our way of recording you can get a whole day of recording on a CD so a DVD you can probably get a week on."

CourtSmart is also a strong advocate of DVD, but in many ways it is simply a storage device that alone is unlikely to accelerate the growth of digital recording in the courtroom.

Indeed, the rapid turnover from CD to DVD (and soon to the newer blue-ray DVD that offers even more storage per disc) causes some to worry that technology may be racing forward a bit too fast. Already there have been instances where administrators with new computer systems have been unable to retrieve data from older storage formats such as digital audio tape, and there's no guarantee court systems a decade from now will still have the technology to read the CDs or DVDs being used for storage today. Moreover, this is a valid concern even when simply upgrading the system, depending on the extent of the upgrade.

Video

The other big shift taking place in the legal system is the increased presence of cameras in the courtrooms. As noted earlier, FTR estimates there are some 5,000 courtrooms with video, and most court administrators have said that a better official court record is not the major reason behind the move.

For some it is the opportunity to have distance arraignments, such as those involving a prisoner who no longer has to be taken from a correctional facility for a procedural hearing. Advocates of video also cite its ability as an antiteror device that, when linked up to a court's closed circuit TV system, can monitor empty rooms and ensure that no one is sneaking in anything illegal or potentially dangerous.

"Video is becoming more and more important, not just for the record but for security reasons," said Treinis, adding that more than 50 percent of CourtSmart's new clients are opting for video.

As a format for court records, video is gaining some acceptance in the reporting community, especially in the deposition and freelance market. But Townsend noted, "I wouldn't say it's getting a lot of traction. There are places that want video, but there remain plenty of places that adamantly oppose it."

Indeed, despite the growth of Court TV, many jurisdic-

tions around the country feel that having cameras in the courtroom has a negative effect. There's also the fear that video could taint the appellate process. "The appellate judge should only be looking at questions of law; they should not be judging the veracity of witnesses as they are not the tryers of fact," Townsend said. "If you bring video into the appellate process, there's a risk that appellate judges can be influenced by the video."

Voice Recognition

While the arrival of audio recordings in courtrooms is viewed with suspicion by most in the court reporting community, it's still a technology that requires human input, if only to ensure that the recorder is working properly or to transcribe an audio disc to paper if requested.

But somewhere over the horizon lies the potential that technology may eventually be able to not only record court testimony, but also — automatically and in real time — convert that audio into printed words.

There already appears to be some pent-up demand for voice recognition software, as its called, from court administrators. "It's something we get asked about every day of the week," said Mercom's Taylor, adding his company is keeping an eye on the new technology, but is not actively developing it.

Yet despite all the hype and promise, voice recognition software reliable enough for live courtroom use remains at least a decade away. "There are two worlds here," explained Taylor. "There's speaker-dependent recognition, which is addressed by commercial products such as Dragon and ViaVoice. There you're already in the 80-90 percent accuracy range and sometimes higher. And then you have the speaker-independent world, which is about 50 percent accurate at best right now."

"The holdup isn't the software," added Gruen. "Right now it's the training of the software that will recognize the variances of the human voice." That ends up being a major issue, especially in a country like the United States with numerous regional accents as well as a large immigrant base, many of whom still retain hints of their original language in their speech long after they've mastered English.

Even once that huge hurdle is overcome, court systems are still faced with the same problems that hamper electronic recording — the ability for a microphone to pick up one or several voices all speaking from different areas in a courtroom.

"I'm not a huge believer that we'll have automated transcription systems anytime soon," said Townsend. "Right now you can dictate, and it gets a pretty good recording. But when you move away from dictation and into an open microphone in a full speaker environment, it's a completely different situation."

FTR has been doing tests using multiple speech engines and has achieved about a 65 percent accuracy rate. "If you were to read it, it's actually pretty readable," Townsend said. "But the problem is you still have 35 percent errors, and that's not good enough to just clean up."

Akenhead-Ruiz believes voice recognition will continue to

slowly improve, adding, "Voice recognition will find a role, but I do not see it ever being in the place where court reporters are, in my opinion."

But voice recognition software could eventually play a role in reviving the somewhat dormant skill of voicewriting via stenomask.

"This is the leading edge," Gruen said. "They talk into the mask and it comes right up on the screen, so you've got instant realtime. If you look at a recent test in California, there's no denying that voice writers are equal to or better, depending on how you look at the numbers, to a stenographic court reporter. That makes it a very viable court record keeper. It's a step backward to go forward."

CourtSmart's Treinis added that voice recognition via stenomask in the courtroom can be done today, but added he felt that will not be a long-term solution. Instead, CourtSmart is examining using voice in a different way, developing what Treinis called speech recognition software that should be ready in the next 12-24 months.

"Speech recognition is the ability to phonetically search what has been spoken," Treinis explained. "It gives you the ability to issue voice commands to search a recording, such as 'Find me red dress' or 'Find me the description of the vehicle.'" Treinis said the new software is designed to replace the annotations and notes electronic court monitors take and insert into audio recordings, noting such details as who is speaking and other key bits of information.