



NATIONAL ASSOCIATION FOR COURT MANAGEMENT

MAKING THE VERBATIM COURT RECORD

**MANAGING
YOUR
RESOURCES
EFFECTIVELY**

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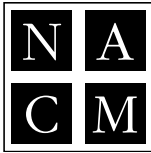
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Making the Verbatim Court Record Mini Guide

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TABLE OF CONTENTS

1.	INTRODUCTION	1
1.1	<i>What is the Court Record?</i>	1
2.	METHODS OF TAKING THE VERBATIM RECORD	3
2.1	<i>Stenographic</i>	3
2.1.1	<i>Introduction</i>	3
2.1.2	<i>Machine Shorthand</i>	3
2.1.3	<i>Computer-aided Transcription</i>	4
2.1.4	<i>Realtime Court Reporting</i>	4
2.1.5	<i>Work Assignments</i>	5
2.1.6	<i>Compensation of Reporters</i>	6
2.1.7	<i>Reporter Certification</i>	6
2.2	<i>Voice Writing</i>	6
2.2.1	<i>Introduction</i>	6
2.2.2	<i>Definitions</i>	6
2.2.3	<i>Present and Future of Voice Writing</i>	7
2.3.	<i>Audio/Video Recording</i>	7
2.3.1	<i>Introduction</i>	7
2.3.2	<i>Analog Audio Recording</i>	7
2.3.3	<i>Analog Video Recording</i>	8
2.3.4	<i>Digital Recording</i>	8
2.3.5	<i>Centralized Digital Audio and Video Recording</i>	9
3.	TRIAL COURT REPORTING PRACTICES – LESSONS LEARNED	10
3.1	<i>Input from End Users</i>	10
3.2	<i>One Size Does Not Fit All</i>	10
3.3	<i>Maintaining Needed Flexibility</i>	10
3.4	<i>Matching Technology with Specific Needs</i>	11
3.5	<i>Analysis of Available Resources</i>	11
3.6	<i>Identification of Efficiencies and Effectiveness of Options</i>	12

4.	DECISION CRITERIA/FACTORS – IDENTIFYING THE MOST APPROPRIATE AND COST-EFFECTIVE VERBATIM RECORD METHOD	14
4.1.	<i>Decision Criteria</i>	14
4.2	<i>Cost Considerations</i>	15
5.	MANAGEMENT OF COURT REPORTING RESOURCES	16
5.1	<i>Staffing Models</i>	16
5.1.1	<i>Personal Staff Model</i>	17
5.1.2	<i>Contract Model</i>	17
5.1.3	<i>Employee Model</i>	17
5.1.4	<i>Hybrid Model</i>	17
5.2	<i>Training Needs</i>	17
5.3	<i>Budget and Fiscal Administration</i>	18
5.4	<i>Urban vs. Rural Courts</i>	19
5.5	<i>ADA Act Compliance</i>	20
5.5.1	<i>Who Is Covered?</i>	20
5.5.2	<i>Who Is Not Covered?</i>	21
5.5.3	<i>How is ADA Act Compliance Associated with Making the Verbatim Record?</i>	21
5.6	<i>Performance Measurement</i>	22
5.6.1	<i>Step One: Map the Process</i>	23
5.6.2	<i>Step Two: Research Existing Legal Requirements, Policies, Procedures, Standards, Guidelines, and Other Accountability Requirements</i>	23
5.6.3	<i>Step Three: Develop Performance Measures and Set Performance Goals</i>	23
5.6.4	<i>Step Four: Identify Data Collection Needs and Establish Standardized Data Collection System</i>	24
5.6.5	<i>Step Five: Determine Performance Monitoring Method</i>	24
5.7	<i>Managing the Courtroom</i>	24
5.7.1	<i>Courtroom Layout and Infrastructure</i>	24
5.7.2	<i>Courtroom Processes</i>	26
6.	TRANSCRIPTION, STORAGE, AND RETRIEVAL OF COURT RECORDS	27
6.1	<i>Why a Transcript?</i>	27
6.2	<i>Three Qualities of a Transcript</i>	27
6.2.1	<i>Usability</i>	27
6.2.2	<i>Timeliness</i>	28

6.2.3	<i>Accuracy</i>	28
6.3	<i>Processes and Controls</i>	28
6.3.1	<i>Request for Transcript</i>	28
6.3.2	<i>Deposit</i>	28
6.3.3	<i>Workload Oversight</i>	29
6.3.4	<i>Delivery</i>	29
6.3.5	<i>Formats</i>	29
6.3.6	<i>Content</i>	29
6.4	<i>E-Filing and Redaction</i>	30
6.5	<i>Staying Current</i>	30
6.6	<i>Archiving and Storage</i>	30
6.6.1	<i>Introduction</i>	30
6.6.2	<i>Archiving Practices</i>	31
6.6.3	<i>Models of Archiving and Storage</i>	32
6.6.4	<i>Storage and Software Concerns</i>	33
7.	MANAGING COURT REPORTING TECHNOLOGY	36
7.1	<i>Introduction</i>	36
7.2	<i>Define Objectives and Goals</i>	36
7.3	<i>Understanding Court Reporting Technologies, Resources, and Models</i>	37
7.4	<i>Conduct Gap Analysis</i>	37
7.5	<i>Cost</i>	37
7.6	<i>Define Court Business Processes/Workflows</i>	38
7.7	<i>Identify Challenges and Potential Barriers</i>	38
7.8	<i>Forecast for the Future</i>	38
7.9	<i>Define Model</i>	38
7.10	<i>Create Transition Plan</i>	38
7.11	<i>Acquisition of Vendor or Partnership Selection</i>	38
7.12	<i>Technical Support</i>	39
7.13	<i>Troubleshooting</i>	39
7.14	<i>Electronic Backup and Archiving</i>	40
8.	PLANNING FOR THE FUTURE	40
8.1	<i>System Strengths</i>	40
8.2	<i>System Weaknesses</i>	41

8.3	<i>External Opportunities</i>	42
8.4	<i>External Threats</i>	42
8.5	<i>Elements of a Well-managed System</i>	42
GLOSSARY		45
APPENDIX A		46
	<i>Court Statutes Relating to Qualifications of Court Reporters</i>	46
APPENDIX B		
	<i>Recommended Procedures for Storage of Court Reporters' Paperless Stenographic Notes</i>	53
	<i>Overview</i>	53
	<i>Standards</i>	53
APPENDIX C		55
	<i>Florida Rules of Judicial Administration</i>	55

MAKING THE VERBATIM COURT RECORD

MINI GUIDE

1. INTRODUCTION

“The first duty of society is Justice.”(Alexander Hamilton)¹

An accurate, verbatim record of what occurred in the context of a court proceeding in any American trial court is essential to achieving Alexander Hamilton’s hope for justice. Without it, as astutely surmised by Henry Waldorf Francis, “the court [would be] a place where what was confused before becomes more unsettled than ever.”²

This guide attempts to navigate through the basics of making the verbatim record. The guide will document what constitutes a court record, the methods of taking the record, criteria for determining the appropriate recording methods, current best practices, administration and management requirements, and the integration of technology requirements in addressing present and future court reporting needs.

1.1 What is the Court Record?

John Carver and Barry Mahoney provide a very succinct definition of the court record:

“The making of the record of court proceedings is a core function of courts. The official record is not only the basis of appeals but also a means of reviewing all that transpires in the courtroom ... It is a pillar of our system of justice. How the record is made—how quickly it is produced, how accurate it is, and how usable the format—all has a significant impact on the flow of cases through the system and the fairness of the process ...”³

The establishment of an accurate and timely court record provides the transparency required in order to provide meaningful public access to our public trial courts. Trial courts, with a few exceptions, are courts of record. It is the court’s obligation, by constitution, statute, or court rule, to ensure that all court proceedings at the trial court level are recorded. An accurate record of preliminary, pretrial, trial, and post-trial court events is necessary in order to perform the essential role of the courts including:

- upholding the rule of law
- ensuring individual rights and liberties
- enforcing public order
- providing for the peaceful resolution of disputes

¹ Alexander Hamilton, “Federalist 78” *The Federalist* (1787).

² Quotationbook.com

³ John A. Carver with Barry Mahoney, *How to Conduct an Assessment of Your Courts’ Record-Making Operations: A Systemic Approach*, (The Justice Management Institute, June 2002):8.

- safeguarding victims' rights
- protecting families, children, the elderly, and the infirm

The court record includes the pleadings of the litigants, the transactions, decisions, and orders made by the court, and, when necessary to review the actions of courts, a verbatim transcript. The focus of this mini guide is the verbatim transcript. Verbatim transcripts are most often associated with appellate proceedings. Trial courts often require verbatim transcripts in the conduct of court proceedings. An example may be that a trial judge requires a transcript in order to properly prepare an order resulting from a lengthy hearing, e.g., motion to suppress hearing. The form and content of verbatim transcripts are dictated in most states by state statutes or court rules. Such laws or rules govern:

- Which trial court events must be recorded?
- What methods of recording may be used?
- Must the verbatim record be electronic or in writing?
- In what format must the verbatim record be prepared?
- Who may produce the verbatim record?
- Under what time constraints must the verbatim record be produced?
- How will the costs of producing the verbatim record be determined?
- Who is responsible for the payment of the cost of producing the verbatim court record?

The existence of accurate, verbatim transcripts is vital to ensuring confidence in judicial proceedings. State laws commonly set the qualifications of those who are entrusted with the responsibility to capture the verbatim record. States have chosen either to enact legislation that sets forth certification/licensing requirements for traditional stenographic court reporters or enact legislation that authorizes the judicial branch to establish the certification/licensing requirements. A surprising number of states do not have any statutes governing the qualifications of court reporters. Regulation of electronic court reporters is rarely included in any of the state statutes relating to the qualifications of court reporters.

In some states, such as Florida, the supreme court or its equivalent has enacted court rules that govern the delivery of court reporting services, including production of the verbatim court transcript. (See Appendix C – Florida Rules of Judicial Administration.)

A survey of the 50 states reflects the following:

- Sixteen states have statutory requirements.
- Eight states have statutory delegation to the judicial branch.
- Twenty-six states have taken no action.

All states that enacted legislation require the passage of an examination, either administered by the state or a national organization. Some states require United States citizenship while others only require an individual to be “of legal age.”

Appendix A sets forth summary details of the statutory requirements for each state that has enacted legislation.

2. METHODS OF TAKING THE VERBATIM RECORD

2.1 Stenographic

2.1.1 Introduction

The eye absorbs information more quickly than does the ear, but a written language based on an alphabet has at least one drawback: People can think and speak much more quickly than they can write. Virtually since the invention of writing, people have sought alternatives that would enable thoughts and discourse to be captured “verbatim” and stored for later convenient reference.

When the American judicial system developed an appellate process early in its history, it generally followed the concept of review established under Anglo-Saxon law. A reliable record of proceedings is an important part of the process, as appeals are judged on the basis of the record of the trial.

Following their English heritage, judges in the United States created notes of proceedings as part of their judicial responsibilities. The first known application of shorthand to the process of preserving a record of court proceedings took place in 1865 at a trial in Albany, New York.⁴ The mechanics of preserving the court record evolved through the 19th and 20th centuries. The prevailing Pitman shorthand system of the 19th century was largely supplanted by Gregg shorthand in the early 20th century. Both used pens, but whereas Pitman relied on accurate geometric placement of dots and the relative thickness of lines to represent sounds, Gregg shorthand represented units of sound with easily drawn lines that readily flowed from one to the next.

2.1.2 Machine Shorthand

The notion that the work of the shorthand writer could be performed with a machine gained traction in the late 1800s. Various inventors met with varying degrees of failure until Ward Stone Ireland introduced his stenotype machine in 1911. The Ireland machine enabled the operator to press several keys at once, like a piano chord, as contrasted with the typewriter keyboard (and subsequently the computer keyboard), which allows for just one letter to be struck at a time. Ireland standardized combinations of letters to represent specific sounds – typically syllables or whole words – and devised a way for the resulting lines of letters to be imprinted on an advancing strip of paper. Once mastered, Ireland’s invention enabled machine writers to capture verbatim speech at higher speeds for longer periods of time than could the typical pen shorthand writer.

Many pen writers claimed that Ireland’s machine was not “shorthand.” Nonetheless, the machine grew in acceptance and use to the point that, by the last decade of the twenty-first century, pen writing had all but disappeared from courts in the United States.

4 Lois Shirley Crayton, *The Adirondack Tales of Philander Deming* (2001).

Around the same time that Ireland and his predecessors were working on a shorthand machine, Thomas Edison and others were busy inventing recording machines that ran on electricity. Conversations about the possibility of using these inventions in court took place before the turn of the twentieth century and continue today.

2.1.3 Computer-aided Transcription

Whether based on microphone or keyboard input, any system of capturing speech involves a second, equally important function: making that captured speech available in useful form. With some exceptions, that typically means producing a written transcript for use by the reviewing court and often for use by attorneys and the judge during the trial. For most of the twentieth century, producing a transcript meant reading and typing from stenographic notes or listening to and typing from a recording.

Computer-aided transcription (CAT) changed that. As the name implies, CAT introduces computers to the task of converting captured stenographic notes into text that can be readily shared, searched, and stored. CAT started in the 1950s as a result of an investigation by the U.S. Air Force and IBM into language translation.⁵

The original CAT systems were housed in mainframe computers and cost more than \$100,000. The advent of the personal computer in the 1980s made the concept more affordable. Freelance (deposition) reporters accounted for most of the early adopters, with official court reporters following suit through the last decade of the twentieth century.

Most steno machines capture the reporter's keystrokes digitally in addition to creating paper records, but increasingly CAT vendors offer paperless machines as well. After the proceeding ends, the digital notes are translated into readable text. The translation is checked for untranslates (which appear as stenotype notes on the computer screen), corrected, and printed. Proof-reading, checking of citations, and other verification procedures continue to be part of the reporter's responsibilities.

Because CAT output is in digital form, stenographic reporters' work products can be integrated into case management and other litigation support systems.

2.1.4 Realtime Court Reporting

CAT technology enables a skilled reporter to provide readable text of the proceedings to court participants or to even broadcast on the Web in real time. This realtime translation capability is how broadcast stenographers produce captions of live television programming for deaf and hearing impaired viewers.

In the courtroom, realtime enables instant access to the transcript for reference by judges when making rulings and as a tool for court personnel and litigators. Court administrators can obtain current case status information to help with resource management. Court staff may cross reference exhibits, verify when exhibits were admitted, and copy and paste the judge's rulings on motions directly from the text of the proceeding into the minutes. The law clerk may highlight

⁵ Michael Brentano, "A History of CAT: From CIA to CIC," *National Shorthand Reporter* (July 1990).

and track motions and research legal precedents during the trial. The unedited transcript can be viewed by members of the litigation team off site. As a result, the transcript may be annotated, issue coded, and entered into a database for use in litigation support and synchronized with a simultaneously created video or digital audio record.

A realtime transcript is closer to a finished product than the first-pass translation of a non-realtime reporter's notes, but the realtime transcript is primarily a tool during the course of a proceeding and is not the official transcript. To finalize the transcript, the translation is checked for formatting, punctuation, mistranslates, or untranslates, then corrected and printed. Nonetheless, an unedited realtime transcript provided by a stenographic reporter with the requisite training and preparation gives judges and attorneys access to much of what they need from a completed transcript.⁶

Realtime requires significant preparation on the part of the reporter. In addition to accuracy on the stenotype keyboard, realtime requires reporters to modify their writing styles to distinguish between words that sound alike but have different spellings and meanings. Realtime also requires reporters to spend more time entering terminologies into their CAT dictionaries before each case. Not all reporters have the skills or the commitment needed to master realtime, and those who do sometimes lack the confidence or believe they lack the support to allow their raw work product to be on display for all to see.

Today, more than 90 percent of the stenographic reporters in the United States use CAT.⁷ The percentage that has the skills and confidence to do realtime reporting is less certain, but about half of the 18,000 reporter members of the National Court Reporters Association indicate they write realtime at least for themselves. The percentage is believed to be lower among the reporter population generally.

2.1.5 Work Assignments

As suggested above, the court reporting function is not simply about technology. Any process must be managed well if it is to produce optimal results. An in-house survey in 2006 by the National Court Reporters Association indicates that 71.5 percent of responding court reporters are assigned to a judge; 3.4 percent are assigned to a courtroom; and 25.1 percent are in a pool arrangement. In many situations, the court reporter and the judge work as an experienced team. They learn to anticipate each other's needs, and, as a consequence, the administration of justice assumes a smoothness of flow that few managers would be eager to disrupt. Nonetheless, there are circumstances when it might be appropriate to expand that two-person team approach to create a larger team that shares responsibility for the entire court reporting function. When properly set up and managed, a pool approach can foster balanced workloads, meet deadlines, reduce chances of injury and sick leave usage, and optimize the strengths that individuals bring to their jobs.

Pooling by itself is not a solution for being understaffed or for dealing with an excessive backlog of transcript orders, but it can be a useful core approach for maximizing the efficient deployment of reporting resources.

6 William E. Hewitt with Jill Berman Levy. *Computer-Aided Transcription: Current Technology and Court Applications* (1994).

7 National Court Reporters Association surveys and membership data, 2006.

2.1.6 Compensation of Reporters

Most reporters are compensated for their work in two ways because the job entails two aspects: they earn a salary from the court system, and they are permitted to charge requesting parties for transcripts. Transcript fees are in lieu of an overtime arrangement. In such cases, for purposes of transcript preparation, court reporters are specifically exempt from the overtime provisions of the Fair Labor Standards Act. Transcription work, of course, is mandatory, not voluntary, and it tends to be unevenly distributed over time. The fee arrangement serves as an incentive for reporters to devote the time needed to meet their statutory obligations for providing transcripts while still reporting during normal court hours. There are some trial court jurisdictions that employ the reporters fulltime, and the reporters receive a salary commensurate with their qualifications and duties. In these situations, the reporters do not receive additional income for providing transcripts.

2.1.7 Reporter Certification

Some states have certification requirements for reporters to work in the court system and others do not. (See Appendix A) In the 1970s, the National Court Reporters Association created the Registered Professional Reporter certification as a way for reporters to show to hiring entities that they have fulfilled certain minimum knowledge and skills standards to work as a reporter. (The associations for voice writers and electronic recording (ER) monitors also conduct certification programs.) The RPR designation has been joined by the Registered Merit Reporter, Registered Diplomat Reporter, Certified Realtime Reporter, and certifications in several specialized areas.

Certified stenographic reporters must take part in 30 hours of continuing education every three years to maintain their certification. NCRA works with an outside testing agency to assure the fairness and validity of its tests, and NCRA's continuing education program is accredited by the Accrediting Council for Continuing Education and Training.

2.2 Voice Writing

2.2.1 Introduction

According to the National Verbatim Reporters Association, the method of court reporting known as voice writing, formerly called steno-mask, was developed by Horace Webb in the 1940s. Webb wanted to create a reporting method that allowed court reporters to dictate directly during proceedings, eliminating the shorthand process of traditional court reporters.⁸ The voice writing method allows a court reporter to speak directly into a handheld mask with a voice silencer. The silencer prevents the court reporter from disturbing the court proceedings while repeating everything that occurs during testimony

2.2.2 Definitions

Voice writing - verbatim reporting: is the process of recording proceedings by voice by speaking into a device that silences and records the spoken words for subsequent transcription by hand or voice-recognition software.

⁸ The National Verbatim Reporters Association Web site, www.nvra.org.

Voice writer (CVR): The term adopted in 1999 by the National Verbatim Reporters Association replacing the trademarked name Steno-mask to describe all reporters who utilize voice to capture the record of any proceeding, whether using an analog or digital recording device or voice/speech recognition system.

Realtime Verbatim Reporter (RVR): Level of certification from National Verbatim Reporters Association pursuant to these standards:

Realtime Certifications	NVRA RVR
Written Knowledge Test	CVR Holder
Silence Test	Yes
Literary Dictation, in Words Per Minute	
Jury Charge/Legal Opinion Dictation, in Words Per Minute	
Question and Answer/Testimony Dictation, in Words Per Minute	180-200
Percentage Required to Pass	96%

2.2.3 Present and Future of Voice Writing

Voice writers have long been available to make the record through the use of a steno-mask with a voice silencer recorded by an analog tape. Digital recording is now the predominant technology used, resulting in a clearer, better-defined soundtrack, making transcription easier and more accurate.

The future, however, is in the application of new cutting-edge technology. Speech recognition CAT systems afford the voice writer the opportunity to have the spoken words instantly turned into text on a computer. As a result, the voice writer may produce realtime text feeds with the courtroom and download the text in a readable format that may be available immediately following the proceeding.

2.3. Audio/Video Recording

2.3.1 Introduction

The quality of the electronic recording, whether audio or video, is directly related to the ability of the microphones and/or cameras to capture voices and images. Selecting the appropriate equipment for a court environment depends on several factors. These factors are, but are not limited to, the acoustics of the courtroom, the location of the participants in the courtroom, whether or not the audio is integrated into a public address (PA) system, where sidebar conferences are held, site lines, etc. Correct selection and placement of microphones and cameras will avoid dead spots in the courtroom where individuals may not be recorded at optimum level. When planning an installation of electronic recording equipment, a site review of the court facility, an understanding of the courtroom workflow, and an evaluation of records storage is necessary to ensure the correct equipment is selected to meet current and future needs of the court.

2.3.2 Analog Audio Recording

Recording technology is either analog (tape-based) or digital (computer-based). Analog equipment for courtroom recording requires a specialized cassette recorder. These are four-track au-

dio recorders in which each track is designated to a participant in the courtroom; for example, the judge on track one, the witness on track two, the defense on track three, and the prosecutor or plaintiff on track four. Separation of the speakers on the recorded cassette allows for the isolation of one or more tracks during playback. With this configuration, when overlapping voices are recorded they are easily separated by track for review, playback, and transcription.

Cassette recorders are regarded as outdated technology, although they are still a viable method for recordation. Cassette recorders are relatively easy to operate and have a low initial cost. Analog recording technology has several disadvantages, including:

- the cost of purchasing and storing tapes is generally high
- playback is tedious, requiring fast-forwarding and rewinding of the tape to locate a specific portion of the record
- the equipment and time required in duplicating tapes for review of the record or transcription is costly and time consuming

2.3.3 Analog Video Recording

Analog video systems record in the same manner as audiotape systems, with the obvious addition of the visual component. These systems utilize multiple cameras to capture all activity during a trial court proceeding. The most common systems are sound-activated. With a sound-activated system, each camera has a specific visual zone of coverage, i.e. the bench, witness box, etc. Within each zone of coverage there are one or more microphones to record the audio within that zone. When a microphone picks up audio, the camera tied to that zone records the visual component. Camera switching is done automatically without the intervention of an electronic recording monitor. With most video systems, the electronic recording (ER) monitor is annotating the proceeding on a computer linking the annotations to the video record.

The visual component of video provides the court the opportunity to preserve visual evidence presented in court. Video recording systems can also interconnect for video remote appearances to link the courtroom to jails for arraignments or to access the remote testimony of a witness. The advantages of video recording are that it enhances the quality of read-backs to jurors, and it is an aide for transcribers through visual identification of parties. Attorneys have also found ways to make use of the video record. It is common for attorneys to use video in summations, to impeach a witness, and as a tool for improving their performance in the court. Video recorded to VHS tape is an analog recording and has the same limitations as analog audio.

2.3.4 Digital Recording

Digital recording technology is a computer-based process for recording, annotating, and managing court records. Digital recording systems use the same microphone and camera infrastructure in place for analog audio and video recording. With a courtroom-based digital recording system, the ER monitor must have a computer at their workstation. The exception is when a centralized recording system is deployed.

In a courtroom-based electronic recording system, a computer is used to annotate the proceeding and may provide access to any of the court's application software. Digital technology provides reliable records, easily searchable recordings, efficient and quick duplication of a proceeding, and, when stored on the court's central server, the record becomes part of the court's data

back-up program. With the record in a digital format, searching the court record for playback is easily achieved through the annotations made by the ER monitor during the proceeding. As all annotations are linked to the recording, selecting an annotation for playback instantly finds and automatically plays the linked audio or video, eliminating the tedious fast-forward and rewind searching process required with analog recordings.

2.3.5 Centralized Digital Audio and Video Recording

When migrating to digital recording, it is important to assess the workflow for the record-making process in the courthouse from recording to retrieval. With the audio and/or video recorded in a digital format, there are several options on how to record and preserve the record. The record can be saved locally on the computer in the courtroom used to record the session, to a CD-ROM, to a storage server connected to one or more courts, or to other digital media or combination of media. In a standalone, single courtroom or portable recording application, the record is preserved on the recording computer's hard drive. At the conclusion of the court day, a CD-ROM is produced containing the day's record along with the annotations made by the ER monitor. On most audio-only systems, as the record is saved to the computer's hard drive, it is also saved every 10 to 15 seconds to a CD-ROM. Should the computer fail during the court proceeding, the CD-ROM has all but the last few seconds of the proceeding recorded. (For a more detailed discussion of this storage and archiving process, see section 7.6.)

A courthouse with multiple courtrooms using digital recording technology may choose a distributive recording model, networking the courtroom recording computers to one or more storage servers for preservation of the record. As the recording takes place in the courtroom, the record is saved locally on the courtroom computer and simultaneously to a storage server on the court's network. The record becomes available to anyone on the court's network with rights to the storage server. Judges, administrators, and designated court staff can review the record of any proceeding on the server from their office computer.

An administrative option is to deploy digital recording in a centralized control room configuration. In this application, the audio, along with a minimum of a single camera feed from each courtroom, is transmitted to a control room. Staff in the control room each monitor and annotate the proceedings for four courts. Playbacks are also controlled from the central room and sent to a court when requested. The recordings are stored on a central server as in the distributive model.

Digital recording with server-based record storage offers the greatest control over the record and provides an efficient and cost-effective backup of the court record. Networked digital recording systems give court administrators the ability to monitor and troubleshoot live court proceedings from any computer on the network. Digital recording systems also have the capability to interface with the court's case management software, linking all case-related documents to their courtroom proceedings.

3. TRIAL COURT REPORTING PRACTICES – LESSONS LEARNED

3.1 Input from End Users

In the spring of 2002, a detailed and extensive survey was conducted to better gauge what courts were using to track and maintain the verbatim record.⁹ The scope of the research centered on the current use of audio and video recording to make the verbatim record in general jurisdiction courts. Although the design of the questions sought to discover how electronics were being used in courts, contacts were also asked to provide information on realtime reporting and on how court reporters were being employed to capture the court's record.

The respondents in 83 state trial courts answered such questions as:

- Do you use audio, audio/video, or realtime to make the record?
- What vendor and product are used?
- How long has the system been used?
- In what types of cases are audio/video used?

3.2 One Size Does Not Fit All

The responses to the questions were varied, and one real advance that might be observed if the survey was conducted today is that there would be fewer courts reporting the use of analog equipment. Digital recording has surpassed the reliability concerns of analog recording equipment. The quality of the sound and picture is vastly improved. Nearly every court responded that there would be an expansion of electronics use for keeping the record, and most plans for expansion were upgrades to digital audio/video and into additional courtrooms.

Comments that relate to individual court experience reflect that there was variance in the type(s) of cases for which a jurisdiction deployed electronics. Although some courts used some type of electronics in all case types, others associated the use of recording devices in lower-level types of hearings (e.g., small claims, traffic, equity, criminal pleas and motions, and non-trial matters). There was a preference in 2002, which continues today, for court reporters in major felony cases and complex civil trials.

3.3 Maintaining Needed Flexibility

Only five years have passed since the survey was conducted, but advances in electronics set a bristling pace, and courts continue to seek out the best and most economical means of conducting business. Advances in camera tracking, voice monitoring, sound buffering, and media accuracy have all led to more options and to some degree of price stabilization. This availability of higher-grade equipment at affordable costs has led to a growth in electronics as a viable choice in many courts and for most case types. Some appellate courts now accept the submis-

⁹ Survey: *Use of Electronic Recording to Make the Record in State Trial Courts*, (Superior Court of Arizona, Maricopa County, July 2002).

sion of the official court record on a compact disk (CD). Archiving of huge amounts of records is done with computers, and the distribution is completed via computer networks.

Relationships with the limited number of private vendors in the industry have solidified. Court officials who may have treaded forward slowly in advancing electronics for their courts gained comfort with the technology and with the providers.

3.4 Matching Technology with Specific Needs

Many court jurisdictions have implemented “best” practices in the field of court reporting and maintaining the verbatim court record. As noted in the Arizona Supreme Court’s Committee on Keeping the Record (Final Report December 14, 2005), “best practices are shaped by funding, availability of qualified reporters, and the legal requirements for verbatim recording.”¹⁰ The convergence of improved technologies with the shrinking labor pool of court reporters has led both small and large court jurisdictions to contemplate both short-term coverage needs and long-term strategic planning.

The U.S. Department of Labor, Bureau of Labor Statistics, estimates that in 2004 there were only 18,000 qualified reporters to fill all the needed openings. Of these, approximately 11,000, nearly two-thirds, worked in local and state governments – primarily courts.¹¹

Although the job market for qualified reporters is expected to grow “as fast as the average” through 2014, many new related openings will be to support emerging technologies such as synchronized text and captioning for prerecorded television. Federal legislation mandated that in 2006 all new television programming must be captioned for the deaf and hearing impaired. Many courts, both small and large, already suffer from a shortage of qualified or “official” court reporters. Court reporter training is difficult, and in the past several years less than 10 percent of students graduated from accredited training institutes on an annual basis. Even when there are an adequate number of employed reporters, a daily shortage may be experienced due to vacations, sickness, and position vacancies.

3.5 Analysis of Available Resources

In its mission statement, the Committee of Chief Judges of the Wisconsin Circuit Courts was responding to executive branch budget cutbacks when they affirmed that “the court system must be the institution to develop alternative means of making the record.”¹² The challenges identified by that state are quite similar to those shared by any other court when addressing the current state of making the verbatim court record. Those challenges include:

- Budget cuts and a shrinking pool of available official reporters and freelance reporters have led to difficulties in coverage
- Official court reporter vacancies are typically filled through internal reassignment and less in hiring of recently graduated reporters
- Some court sites (particularly more rural courts) have difficulty in retaining reporters

¹⁰ Arizona Supreme Court’s Committee on Keeping the Record Final Report, December 14, 2005.

¹¹ U.S. Department of Labor, Bureau of Labor Statistics 2004 Report.

¹² Wisconsin Chief Judges Committee Report - Making the Record Committee Final Report, May 2004.

- Personal appointee (judicially hired) staff limit the flexibility of reporters' assignments
- An increase in judicial officers further stretches the availability of reporters
- The management of court reporters to ensure coverage where most needed is an administrative burden
- The physical demands of the job lead to work-related injuries, use of FMLA, and high absenteeism
- The absence of a reliable backup system of either available freelance reporters or electronics leads to increased case delay

3.6 Identification of Efficiencies and Effectiveness of Options

Traditionally, the court reporter is the party responsible for the accuracy of the record and for assuring that the record is being taken verbatim. The introduction of electronic record keeping now shifts those responsibilities. In the absence of a court reporter, the judge or hearing officer and courtroom staff are responsible for maintaining the quality of the record. This is done by assuring that the courtroom environment is as optimal as possible for producing the best record.

One model recently explored to monitor courtroom environment is to have multiple-simultaneous courtrooms monitored by staff specifically employed in this function. The practice of having these off-site ER monitors tracking the operation of equipment and ongoing recording of testimony enables courts to expand the number of courtrooms fitted with electronics while assuring that problems are dealt with almost immediately. The use of ER monitors, however, does not dispense with the need for a physical check of the equipment and the quality of the recording. This is done by assuring that the courtroom environment is as optimal as possible for producing the best record. The use of ER monitors, however, does not completely dispense with the need for someone in the courtroom to better guarantee the environment best suited for a high-quality and accurate record.

To establish standards and policies for best use, some courts have established protocols when electronic recording technology is used to make the official court record. Some examples are that:

- Prior to the start of proceedings, a court staff should assure that the recording system is working properly. A brief sound check at all microphones is recommended.
- Parties should be advised prior to the start of proceedings that microphones are sensitive. Caution should be used when moving papers, tapping near the microphones, and in making statements they do not wish to have recorded.
- Parties should speak in a normal, conversational tone.
- Speakers should avoid the use of gestures, nods, etc., and courtroom communication should be conducted in words that are clearly understood. Many courts also issue suggested practices or guidelines to lawyers and parties so that they are aware of how best to conduct testimony in electronic courtrooms. Examples of some of these practices are: identification of the speaker, especially when speaking for the first time, and spelling the name of speakers, and, if counsel, who they represent.

- Provide the correct spelling of any highly technical terms or unusual vocabulary.
- Avoid making statements you do not wish to have recorded and later transcribed – use of a mute button may be an option for confidential discussions.
- Speak clearly and audibly.
- Only one person should speak at any time.
- Remain close to microphones and be aware of “dead” areas for both audio and video.
- Use a portable microphone that is passed from juror to juror during voir dire examination of the prospective panel and that is used by the jury foreman when reading the verdict.

Additionally, every court that uses electronic recording methods should establish standardized training for judges, hearing officers, and staff. A record should be kept that details the type of equipment fitted in a courtroom. As staff assigned to a particular courtroom is rotated or otherwise changes, there may be a need for new training. Equipment checklists and recording protocols produced on laminated cards can help reduce the feeling of intimidation. These employees are sometimes the first line of trouble shooters when there are equipment problems.

In 2001, the State of Delaware strategically addressed the options available for making the official court record.¹³ The plan identified the various technologies available, their benefits, ease of use, and best management and coordination of the technologies. The court's work was also useful in identifying additional capabilities of digital recording equipment beyond making the verbatim record. As an example, queries can be made of the system almost immediately in the courtroom (realtime court reporters can provide the same function), and previous recordings can be reviewed as well.

Additional applications of digital recording are:

- Plays back statements of counsel or parties when disputes arise
- Gives judge a case management tool to replay previous hearings on a case
- Can be used as a training tool for courtroom personnel
- Provides a backup system for court reporters when unavailable
- Allows judges and counsel to take recordings of proceedings home for overnight review for next day's preparation
- Supports backup data entry needs for scheduling, sentencing, warrant, and bail information

¹³ Administrative Directive of the Presiding Judge of the Superior Court of the State of Delaware No. 2001-1, *Strategic Plan for Making the Court's Record*, April 12, 2001.

4. DECISION CRITERIA/FACTORS – IDENTIFYING THE MOST APPROPRIATE AND COST-EFFECTIVE VERBATIM RECORD METHOD

4.1. Decision Criteria

Considerations that come into play in identifying *the most appropriate* verbatim record method may include any of the following variables depending on the unique features of an individual case:

- the parties' preferences
- availability of a certified reporter
- the probability that a transcript will be requested*
- the number of litigants
- convenience of the parties and the court's schedule
- sufficiency of another form of record to convey the substance of the matters discussed at the proceeding;
- whether testimonial evidence will be presented at the proceeding*
- presence of non-native English speakers as witnesses or parties*
- the likelihood that technical or otherwise difficult terminology will be used*
- the need for formal or informal proceedings
- the need for a realtime transcript
- the likelihood that daily transcripts will be required*
- any other factor that in the interests of justice warrants a particular form of record, or as otherwise required to serve the interests of justice

The criteria above (designated with an asterisk) are offered as decision factors in the context of how a particular court handles transcription of electronic recording compared to stenographic reporting. Comparatively speaking, it is easier to produce a written transcript from a stenographically reported (or voice-written) hearing versus an electronically recorded hearing due to the use of computer-aided transcription (or voice recognition) software. However, if a court has established a reliable, accurate, cost-effective, and timely means of producing a written transcript from electronically recorded proceedings, these particular decision criteria are not applicable.

This same circumstance applies to certain types of cases and hearings. Often stenographic court reporters rather than electronic reporting equipment are preferred in particular cases, including trials in serious or complex criminal matters and grand jury proceedings (although concerns about grand jury proceedings sometimes relate to the need to swear the record taker to secrecy).

While some courts consider the likelihood of a transcript order when assigning court reporters in order to preserve privately generated transcript preparation income, this criteria is not rec-

ommended as a management practice. It is true that the Fair Labor Standards Act (FLSA) allows court reporters to act in a dual capacity of public sector employee (or quasi-public) to capture the record, yet act as a private sector independent contractor when preparing a transcript. This anomaly exists to promote efficiency and timeliness (a privatization of sorts) while avoiding the need to pay overtime. It is also true that transcript preparation fees are a major source of income for reporters, and a court that removes this revenue stream from court reporters' expected earnings may create a disincentive to recruiting and retaining qualified court reporters. However, this mini guide is intended to provide management guidelines, and this particular matter is best approached as a straight cost-benefit consideration. If, as the FLSA intended, it is more cost-effective, accurate, and timely to produce a transcript by assigning a stenographic (or voice writer) reporter to high transcript volume assignments, then this should be the determining criteria.

4.2 Cost Considerations

The following cost categories need to be considered in identifying the most cost effective verbatim record method.

Cost Category	Court Reporters	Electronic Recording
Personnel – related costs	<ul style="list-style-type: none"> • Salary + benefits for record storage personnel (to the extent this function is not managed by the reporters themselves) • Reporter training costs • If a court reporter is not used, the court will have to incur the cost of providing in-house or contract transcription services and supervision of this process (and quality control); 	<ul style="list-style-type: none"> • Salary + benefits for dedicated equipment operators and supervisors. If an existing employee such as a courtroom clerk is put in this role, then identify what portion of that person's time is spent on this duty – including time spent managing the record (the federal analysis calculated this to be 60.4% of a courtroom clerk's time). • Salary + benefits for transcribers, if in-house employees are used for this purpose. If no in-house transcriber is used, court will still need someone to coordinate transcript production and possibly conduct QC over transcript quality. • Salary + benefits for recording equipment technicians • Salary + benefits for technical support associated with maintaining the equipment that would be used to store and retrieve electronic recordings for transcribers and/or interested purchasers. • Staff training costs
Temporary personnel	Per diem costs to fill in for staff reporters' vacation, sick days, vacancies	Per diem costs to fill in for staff vacation, sick days, vacancies

continued

Cost Category	Court Reporters	Electronic Recording
Equipment-related costs	<ul style="list-style-type: none"> • Reporting equipment, including steno machines, and/or computers and software (may be paid for by the reporter) • Reporter's equipment service and repair costs (may be paid for by the reporter) 	<ul style="list-style-type: none"> • Analog or digital recording equipment • Digital recording software licenses • Installation • Duplicating equipment • Transcribing equipment, if done in-house • Video cameras • Microphones • Cabling, • Storage media (e.g., tapes, CDs, DVDs, servers) • Equipment service and repair
Long-term storage	<p>Depending on the applicable record retention policy, court may need to provide long term storage of raw reporter notes. If paper notes are made, then boxes or file cabinets will be needed to store them. If electronic reporter notes are made, then the court may need to categorize steno reporting methodologies (called theories) to ensure compatibility of non-original reporter for transcription if needed. Also, the court should periodically refresh the storage media and migrate to new playback software and equipment over time.</p>	<p>Depending on the applicable record retention policy, the court may need to provide long-term storage of digital records. This should entail refreshing and migrating digital audio/video files to new playback equipment and software over time.</p>
Other supplies	<ul style="list-style-type: none"> • Note paper • Office space 	<ul style="list-style-type: none"> • To the extent dedicated staff is used to operate or manage the electronic record, they will need office space. • When not attending to ER monitoring duties, these staff could be deployed to other clerical tasks.

5. MANAGEMENT OF COURT REPORTING RESOURCES

5.1 Staffing Models

A review of the types of proceedings to be recorded is necessary in order to determine the best staffing model to use in a particular locale. Of course, receiving the best return for the dollars should not become a detriment to those involved in any proceeding. Certain types of proceedings, such as grand jury proceedings and death penalty cases, may be required by federal, state, or local rule to be recorded by a certified stenographic reporter.

When digitally recording, staffing ratios should be taken into consideration to determine the number of personnel needed to handle the total number of rooms needing to be recorded and whether it is a standalone or remote centralized system. Using a standalone system requires a digital court reporter to be in the courtroom.

For digital recording, the recommended ratio of number of rooms to ER monitor is 1:1 for criminal felony trials and up to 4:1 for all other proceedings, depending on the type. There are four staffing models to choose from when deciding the best route to take in covering proceedings. For any of the models, certification may be preferred or required by the court administrator or state court system.

5.1.1 Personal Staff model

The personal staff model is one where each individual judge hires and supervises the court reporting employee, who is usually a certified stenographic reporter.

5.1.2 Contract Model

Stenographers or digital court recording firms contract with local courts to cover the different types of court proceedings in the contract model. The administrative office of each court system may advertise for requests for proposals (RFPs) in determining one or more firms with whom to contract. Hourly, per diem, and page rates may be set by local administrative order, by a state court rule, or statute. The market rates in a jurisdiction will also influence the level of compensation set under a contractual model.

5.1.3 Employee Model

The employee model is an entirely employee-operated system in which they are paid a flat salary. Employees may be stenographic reporters, ER monitors, or both. Greater control over the system is gained when all stenographic reporters or ER monitors are employees of the court system. Using ER monitors can also reduce staffing and contractual costs, as fewer employees are necessary to cover the same amount of rooms. A significant challenge to address in implementing this model is providing positive incentives for employees to meet the demands for transcript production without excessive overtime.

5.1.4 Hybrid Model

Digital recordings and stenographers are used in the hybrid model. The stenographic reporters, digital recording firm, or ER monitor may be contracted. In some courts, all death penalty and punishable-by-life cases are required to be reported by a stenographic reporter. Again, this model may reduce staffing and contractual costs by allowing the reporters to charge fees for transcript production to supplement their income.

5.2 Training Needs

Providing opportunities for continuous learning is critical to ensure that the professionals entrusted with making the court record are efficient and proficient. An entry-level court reporter should possess a high school diploma or the equivalent and be a graduate of a court reporting school or have successfully completed a training course in verbatim reporting and transcription. The reporter should also be tested and able to take verbatim dictation at 180 words per minute on a literary selection, 200 words per minute on a jury charge, and 225 words per

minute on a two-voice testimony. A court reporter should also maintain active involvement in both the national and state court reporting association and should sit for the examinations that certify advanced, specialized skills in a chosen area, such as realtime reporting. At a minimum, a court reporter should hold the designation from NCRA of Registered Professional Reporter (RPR). (See Appendix A for the specific certification requirements in your state.)

ER monitors in charge of the electronic recording systems require different training. At a minimum, an ER monitor should have a high school diploma or the equivalent, fundamental knowledge of the court system and the steps in a court proceeding, and technical skills to operate and maintain the electronic system. Additional training should be provided on logging procedures, equipment set-up, operation and maintenance, failure recovery, trouble shooting, backup and restore procedures, routine inspection procedures, microphone placement, and tape and transcript processing

In addition to technical training, ER monitors and reporters should also be required to attend training on administrative and professional skills. Topics can include timely transcription practices, knowledge of new technology and software, language, grammar, syntax and sentence structure, customer service, communication skills, courtroom procedures, practices and policies as they apply to the recording function in the courtroom, organization and time management, and ethics. Training should also be provided on the measures used to evaluate performance such as quality and quantity of work, work habits, dependability/promptness, attendance, relationships with people, and flexibility.

Resistance training should also be kept in mind as courts adopt new procedures and technology. Judges, attorneys, and court personnel accustomed to traditional methods may feel threatened when change takes place. Training will reduce anxieties and clarify ambiguities in implementing a different system.

When budgets are tight and time constraints are looming, training is one of the first casualties. Developing alternate methods of training is critical. Rotating court reporting staff is one means of offering cross training while also providing the opportunity to learn different styles, decrease boredom, and spread the wealth of lucrative transcript work. In-house seminars and brown bag lunches can also be provided at minimal cost. Topics can include word processing skills, training on office equipment, or vendor presentations on emerging technology and enhancements.

5.3 Budget and Fiscal Administration

Policy, procedural, and technological choices all impact budget. The choice will usually result in a trade-off among competing priorities. Courts may use more than one technology to capture the record.

Funding levels and services for court reporting can vary significantly by state. In some instances, the state may be responsible for the costs. In others, the county or the party to a suit may assume the responsibility. The delivery of court reporting services involves several variables, including how the service is delivered [stenography, CAT, realtime, audio (analog and digital), staffing (contract or employee or a combination), local market conditions, and geographic location]. These variables pose significant challenges in managing court reporting services.

Salary and benefits comprise the bulk of a budget. This includes full-time, part-time, and overtime. This category can also include merit increases, cost-of-living adjustments, and longevity adjustments.

Services that are necessary for court reporters to operate make up the second largest component of budgets. This category includes cleaning and janitorial services, general training, telephone and communications, postal service, applicable licenses or permits, off-site storage, transcription services, dues, repair, and maintenance. Materials and office supplies, including paper and toner, can also comprise a large part of the budget.

Finally, equipment costs should be included. In some courts, equipment is either purchased or leased for the court reporter by the court; whereas other courts may require court reporters to purchase, update, and maintain their own equipment. In addition to the hardware costs, there are associated software costs. Routine office equipment, including a photocopier and fax machine, should be considered. Software costs may include digital court recording software, word processing software, Microsoft Windows operating system, anti-virus and security protection, archive storage, and utility tools. Hardware costs include computers, servers, monitoring workstations, digital audio adapters, tape backup units, media-related hardware and embedded devices, including microphones, audio and video mixers, visual and audible monitoring devices, printers, video appliances, steno machines, and tape recorders.

Ideally, budget and expenditure reports should be reviewed monthly. Preparing the budget should use historical data – looking at how much has been spent and forecasting for any large or unusual trials that have the potential to drain available resources. Forecasting is a challenge because providing court reporting services is driven by the users of the system, which is difficult to predict. A management system to log and track all work being produced should be designed and implemented. The manager can query the system to review status of work for each reporter and manage workflow and resources. An added benefit of a comprehensive system is that it can reduce costs in paper, storage space, and time, since all transcripts are saved to a secure server.

5.4 Urban vs. Rural Courts

In the budget process, urban courts often have advantages in obtaining adequate funding for due process and technology costs that may not be as readily available to court managers in rural courts. Many times the rural courthouse may be old and the electrical circuitry may not be able to handle the items necessary for technology upgrades, or a room once used for another purpose may now become a courtroom, with special consideration necessary to bring it up to code for using electronic recordings.

A rural courthouse may have only one courtroom and one judicial official, or it may have several, and court proceedings may not be held every day. Depending on the type of proceedings being handled in a rural setting, an ER monitor could likely handle all of them. Stenographers could be contracted to cover specific cases, such as death penalty cases.

In a judicial circuit, the distance between courthouses in different counties may be too large to remotely cover judicial proceedings from a centralized location without upgrades to the technology infrastructure and network. In this case, a standalone or portable system may be the best solution.

The portable or handheld device could be a laptop set up with a digital encoder and two or more microphones, or an MP3 recorder, or even an analog tape recorder that has two or more microphones, preferably with dual tapes. When a laptop or analog tape recorder is used, a copy of the recording should be made upon conclusion of the proceedings for redundancy. A

standalone digital court reporting system is permanently installed in the courtroom, and an ER monitor or clerk can operate the system. There should be archival capabilities built into this system. To avoid the cost of having an ER monitor in the county, the clerk may be enlisted to operate and test the digital recording equipment and provide compact disks of the recordings to anyone who request a copy.

After choosing a digital recording system and installing the equipment, training classes should be scheduled for judicial officials, bailiffs, clerks, and local attorneys. Mass training classes are effective for showing how well the system records and plays back, but individual classes may promote a better understanding of the use of the control box that may be located on the bench in the courtroom.

In areas where technology is readily available, a networked computer with the client application installed will allow the judicial official to also take his own personal notes during a proceeding and, if necessary, access the recording later for review. Other court personnel may also be granted access to the audio files for review at a later time.

Court personnel, as part of their routine duties, may perform transcription of digitally recorded proceedings, or a court reporting firm or transcription firm, even one located out of the area, may be under contract to transcribe them.

A rural court may also seek the assistance of the state administrative office of the courts, which may have expertise to provide technical assistance and training when such expertise is not available in the local court.

5.5 ADA Act Compliance

The Americans with Disabilities Act (ADA) adopted in 1990 prohibits discrimination on the basis of disability in employment, state and local government, public accommodations, commercial facilities, transportation, and telecommunications.¹⁴ Title II of this law ensures that all qualified individuals with disabilities enjoy the same opportunities that are available to people without disabilities, including accessibility to all activities of the judicial branch. Consequently, providing equal access to people with disabilities is a matter of primary importance for every state and local court system.

5.5.1 *Who is covered?*

According to the U.S. Department of Justice, all qualified people with disabilities are covered under Title II. To be protected, a person must have a disability or have an association or a relationship to an individual with a disability. An individual with a disability is defined as a person who has a physical or mental impairment that substantially limits one or more major life activity, a person who has a history or record of such impairment, or a person who is perceived by others as having such impairment. For instance, physical or mental impairments may include physiological or psychological disorders and visual or hearing impairments. A qualified individual with a disability is defined as a person with a disability who, with or without auxiliary aids or services, meets the essential eligibility requirement for receiving services or participating in programs or activities provided by a public entity.¹⁵

¹⁴ A Guide to Disability Rights Laws, U.S. Department of Justice, September 2005.

¹⁵ Title II Highlights, U.S. Department of Justice, <http://www.ada.gov/t2hlt95.htm>

5.5.2 *Who Is Not covered?*

According to the U.S. Department of Justice, persons suffering from temporary, non-chronic impairments or conditions of short duration with little or no permanent impact are not covered under Title II. These types of impairments include, but are not limited to, broken limbs, pregnancy, sprained joints, and concussions.¹⁶

5.5.3 *How is ADA Act Compliance Associated with Making the Verbatim Record?*

Each court is required to provide necessary auxiliary aids and services for qualified individuals with disabilities. These individuals must have equal opportunities, offered in the most integrated setting possible, that provide the same quality result as that provided to people without disabilities.¹⁷

In the court reporting arena, one auxiliary aid for the hearing impaired is a form of stenographic realtime reporting titled Communication Access Real Time Translation or CART. CART involves a court reporter inputting information in shorthand on a keyboard that is electronically transmitted to a computer. The computer translates the phonetic entries and displays the information on a monitor for viewing by the hearing impaired as a proceeding takes place. This allows the hearing impaired to take part or follow a proceeding in “real time” similar to closed captioning on a television.¹⁸

In 2002, the American Judges Foundation and the National Court Reporters Foundation issued guidelines for the use of CART in court. The guidelines state, “it is strongly recommended that a single court reporter not perform both functions of making the record and providing CART services...”¹⁹ When compliance with this guideline is not feasible, the client in need of the CART services must rely on the realtime displayed on a monitor connected to the court reporter’s display screen. In this situation, the role of the court reporter in providing for the verbatim record supersedes the need for the CART services.

When using CART, a court should consider instituting policy guidelines such as the following examples used by Florida’s court system. Two other common types of auxiliary aids in the court reporting arena are audio recordings and Braille printers. These aides may be used when providing copies of the verbatim record when requested by people with visual impairments. An audio recording of a proceeding may be copied to a cassette tape if a proceeding is recorded using an analog tape recorder or copied to a CD or DVD if a proceeding is digitally recorded. Braille printers may also be used to produce a transcript for a proceeding recorded by computer-aided transcription (CAT) or realtime stenography. The computer file of the record may be converted through special software to print in Braille.²⁰

¹⁶ Title II Highlights, U.S. Department of Justice, <http://www.ada.gov/t2hlt95.htm>.

¹⁷ *Ibid*

¹⁸ Americans with Disabilities Act Title II Guidelines - State Courts System of Florida, Office of the State Courts Administrator, <http://www.flcourts.org/gen-public/pubs/adati2/shtml>.

¹⁹ CART in the Courtroom: Model Guidelines—A Joint Project of the American Judges Foundation and the National Court Reporters Foundation, 2002.

²⁰ See note 18 above.

Category	Policy
Court Reporter	CART should be performed by a court reporter that is specially trained in this skill.
	If CART is provided for a juror, the court reporter should be present in the jury room during deliberations to provide CART services. However, the role of the court reporter should not be that of a reporter of the official record and thus, any record of the jury deliberations should be immediately deleted upon conclusion of jury deliberation. Further, the court reporter should refrain from any participation in the jury deliberations, including read back of the jury deliberations, without express judicial approval or authorization.
Text Display	The monitor used to display text to the viewer should be in a manner that accomplishes full access to the service. The monitor should be a non-glare, large-screen image from a data projection panel and overhead projector or other device that ensures effective visual communication.
	The size of the monitor should be 15 inches or larger and take into consideration the number of persons viewing it.
	The display of text should be dark letters on a light background, double-spaced, with mixed case as appropriate for the context of the proceeding.
	The display font or type size should be a minimum of 18 points.
	No less than four and no more than 17 lines of text should be displayed on the monitor at any one time.
	The display view should be limited to text that relates to the proceeding. System information should not be visible to the viewer.
	Text should be displayed to the viewer within three seconds from the time of steno-type input, including the time required for spell checks and phonetic translation.
	The text displayed on the monitor during the proceeding should be preserved in a manner to reflect what was actually displayed to the viewer. Any corrections that were not viewed but later become apart of the official court record should be maintained separately from the record of displayed text.
Courtroom Procedures	Courtroom procedures should be developed for determining, at the commencement of the proceeding, whether effective communication is occurring.
	Courtroom instructions should be developed for the person using the service, the court reporter, and other participants in alerting the court should a problem occur.

5.6 Performance Measurement

An important responsibility of the court reporting manager is the monitoring and oversight of all aspects of court reporting services provided by the court. As stated by the Justice Management Institute in *How to Conduct an Assessment of Your Court's Record Making Operations: A Systemic Approach*, "...closely related to the element of leadership is the ability to set goals, articulate those goals in a clear and understandable fashion, and monitor progress toward those goals."²⁰ In other words, effectively managing court reporting services equates to the ability to monitor the performance of a court reporting program. Despite the level of performance measurement currently performed, there are five steps that will assist in evaluating or reevaluating a court's performance measurement needs.

²¹ Carver, *How to Conduct an Assessment*, 11 (Justice Management Institute, June 2002).

5.6.1 Step One: Map the Process

First, managers should have a comprehensive understanding of the court reporting process. The best way to gain this understanding is to visually diagram the process. In creating a process map, several questions should be posed, such as:

- What are the main stages of the process? (i.e., setting the docket, assigning coverage, monitoring the proceeding, storing the record, receiving requests for the record, production of transcripts/CDs/ DVDs, transmittal of the record, etc.)
- Who are the major players involved in each stage of the process? (i.e., judges, court reporters, clerks of court, attorneys, parties, etc.)
- What are the “inputs” or resources contributed at each stage of the process? (i.e., employee costs, contractual costs, equipment, supplies, etc.)
- What are the “outputs” or resulting products at each stage of the process? (i.e., coverage of proceedings, technology logs, record request forms, electronic or physical documentation of the record, etc.)
- Are there variations in the players, inputs, and outputs by case type, proceeding type, method of court reporting, court location, etc.?

5.6.2 Step Two: Research Existing Legal Requirements, Policies, Procedures, Standards, Guidelines, and Other Accountability Requirements

Once a process map has been created, managers will have a comprehensive view of their court reporting program, including the major players who are impacted by the process. Managers should be aware of stakeholders the court reporting program must be accountable to inside and outside of the court system. Performance goals for a court reporting program should include all accountability requirements placed on the program by supervising judges, court committees, and state and federal government entities. Thus, importance should be placed on researching and summarizing all existing legal requirements, policies, procedures, standards of operation, and best practice guidelines. This research will likely be the foundation for determining many of the performance goals for a court reporting program.

5.6.3 Step Three: Develop Performance Measures and Set Performance Goals

With all accountability requirements researched and summarized, managers will have a better picture of what is expected of their court reporting program. Managers may also realize where “holes” or “problems” exist in the process. Supplied with this information, there are three main performance areas that managers should examine when developing performance measures: effectiveness, efficiency, and timeliness. In reviewing the process map, managers may develop a laundry list of questions for each stage of the process within each of these performance areas. Once the laundry list of questions is developed for each performance area, a question or group of questions may be translated into one or more performance measures. Performance measures should be statistically quantifiable, thus allowing managers to calculate performance. Some examples of questions and associated measures are:

- **Question** - Is the court reporting program’s digital court reporting technology operating properly?
Measure - Percentage of proceedings that experience problems with digital recording technology

- **Question** - Are transcripts being produced in a timely manner?
Measure - Time between a transcript being requested and the transcript being delivered

When the performance measures have been developed, managers may then set performance goals. Some goals may already be predetermined due to existing legal or other accountability requirements. For instance, if the law requires that a transcript be provided to the requesting party within 30 days, a goal for the court reporting program could be that 100 percent of transcripts in a given fiscal year will be delivered within 30 days of the request.

5.6.4 Step Four: Identify Data Collection Needs and Establish Standardized Data Collection System

After performance measures and goals have been developed, a manager should be able to identify the data variables that need to be collected. Using the above example, if the performance measure is the time between a transcript being requested and the transcript being delivered, the data variables collected would include date of transcript request and date of transcript delivery.

When all the data variables have been identified for the performance measures, managers must then determine the best method of collecting the data in a standardized fashion. Electronic databases may already exist to collect the information needed. Alternatively, managers may need to establish a new database. When establishing a database, managers should consider the source of the data collected (i.e., clerk's office, log sheets, request forms, etc.); how the data will be transmitted and/or entered into the database (i.e., electronically or by hand); who will be responsible for the transmittal or entry of the data; who will be responsible for analyzing the data; and which database software is most appropriate for these activities.

5.6.5 Step Five: Determine Performance Monitoring Method

The final step in evaluating performance measurement needs is to determine the method for monitoring performance of the court reporting program. The format in which managers review this information is extremely important. The data should be presented in a clear and consistent format that not only the manager may easily interpret but also that other stakeholders may easily interpret. Using charts and graphs with limited text is usually the most straightforward method for reporting data. Additionally, managers should consider how often the performance measurement data should be reviewed based on their own needs and the needs of those they must be accountable to. Some may find it useful to review data on a monthly or quarterly basis while others will prefer to review this information annually. Regardless of preference, performance monitoring should be a standard component of a court reporting manager's responsibilities.

5.7 Managing the Courtroom

5.7.1 Courtroom Layout and Infrastructure

A critical component in determining the appropriate method of court reporting is the layout and infrastructure of the courtroom. There are several questions that need to be addressed when determining the readiness of a courtroom.

- What are the requirements to adequately wire the courtroom to accommodate the needs of court reporting systems?

Special attention needs to be given to the proper wiring of a courtroom. Courtroom uses determine where the microphones and the computers need to be accommodated within the courtroom. Therefore, wiring a courtroom for present and future uses may be the best approach in planning for an automated solution in the courtroom. Court reporting requires that all locations be properly covered in a courtroom (courtroom bench, witness stand, podium, attorneys' tables, jury boxes, and the well). Typically courtrooms are equipped with five to eight microphones with mute switch capabilities in different locations. Sometimes a microphone needs to be used for only specific hearings, and at that point it needs to be determined that the microphones can be retrieved and reinstalled properly so they can function. A process will need to be developed by the court reporting staff or court reporting service providers to take care of this. Also, adequate space will need to be provided for associated audio and network electronic equipment where the cable terminations must reside (a nearby equipment closet with adequate access).

- Is the PA system adequate to provide for efficient recording of court events?

Sometimes there is a requirement in the courtroom for the use of speakers to project audio to different areas in the courtroom where audio projection is less than adequate. The uses of audio public address systems are becoming quite common within the court culture. Care must be given to assure that no feedback is present while projecting audio from speakers close to microphones within the courtroom.

- Is the courtroom configuration flexible to accommodate differing court reporting methods?

The courtroom configuration may determine how a court reporting system or method is deployed to capture a clear, concise, accurate record. Whether you are using an ER monitor or a stenographer, careful placement of microphones and people in the courtroom is crucial.

- Does the court have available evidence presentation equipment?

The court record may be composed of audio (verbatim), video (visual), or documents that must be captured to complete the accurate record. Having requirements for the proper presentation and capturing equipment is a must in today's modern courtroom.

- Is the courtroom set up to allow for a court reporter to properly record bench conferences?

Bench conferences could be crucial in the process of creating a record. Therefore, the capture of this activity must be designed to work with any court reporting method or system. Placement of microphones, mute switches, and white noise generators must be considered during the installation of a system or application of a court reporting method.

- Does the court reporter in the courtroom have network access?

Most electronic court reporting systems and stenography systems may require access to several locations in the courtroom. A network becomes the crucial element for the implementation of

these systems. The ability of a system to access resources outside the courtroom will be determined by the type of network that is implemented. This is also true for any other type of technology used in the courtroom to access information residing on servers and outside resources that may be accessed through the Internet.

5.7.2 Courtroom Processes

It is important to document the regular court process, including the flow of information that has been established in a courtroom. The method of court reporting implemented will impact routine court processes.

The fundamental goal of any trial court is to insure the reliability of the record. The role of the court reporter, electronic recording monitor, judge, attorneys, and clerk should all be focused on protecting the validity of the record. This responsibility shall include:

- capturing the record
- managing, maintaining, and storing the record
- managing and maintaining all equipment utilized in the delivery of court reporting services
- monitoring of the testimony in a court proceeding to ensure that the record is being accurately recorded, read or play back of testimony is provided for and transcripts of the proceedings may be produced
- identifying all of the participants by name and position
- ensuring that whenever digital court reporting is used all confidential communications between attorneys and their clients are protected and not divulged in any present or subsequent court proceedings, audio/video recording, or transcript
- providing for safe and secure storage and retention of all stenographic notes, disks, tapes, and transcripts
- providing for ownership of the verbatim record by the court;
- adjusting the method of court reporting service delivery if required due to unique circumstances (ie., coverage of capital murder cases may require coverage by a realtime reporter or close captioning may be necessary to accommodate a hearing-impaired defendant)
- dealing with Privacy Act requirements and handling sealed or redacted materials

The court reporter or ER monitor in the courtroom works with the judge, clerk, attorneys, and the court officer to manage the courtroom and the court proceeding. In particular, attorneys are often comfortable with the existing culture of information exchange. Changes to this culture will disrupt the proceedings if the changes are not properly planned for and communicated to the courtroom participants.

When contemplating a change in the method of court reporting, it is necessary to document the existing courtroom processes and how a change in court reporting method will affect the process. Prior to implementing any changes, discussions with the stakeholders should be conducted. Training materials should be distributed to the various courtroom participants in preparation for implementing a new court reporting delivery system.

6. TRANSCRIPTION, STORAGE, AND RETRIEVAL OF COURT RECORDS

6.1 Why a Transcript?

The record of what transpires during a trial is preserved in one or more of several analog and digital forms – stenographic notes, closed microphone audio recordings, open microphone audio recordings, and video recordings. Diverse as these forms are, they share the fact that each is less user-friendly than a printed transcript. Futurists say that the printed word will have diminishing relevance as the twenty-first century unfolds. For now, though, whether for use as an in-trial tool or on appeal, trial courts in most cases are expected to be able to provide at some point a written text of proceedings, either paper-based or digital.

Evolving technologies and new approaches to using them have expanded the concept of a transcript beyond its customary form as a certified collection of paper. In lieu of an official transcript, stenographic realtime transcripts (sometimes called rough-draft or first-pass transcripts) can be used to facilitate record access and expedite proceedings. For example, this approach is used by the Nevada Supreme Court to fast-track criminal appeals. Realtime transcripts contain untranslated and mistranslated words that are edited for the official transcript, and the page and line numbers may change. Any rough draft or realtime transcript should be clearly marked as such to avoid any confusion with a certified transcript.

Other technologies have increased courts' options for handling access to the record of proceedings. In Kentucky, the video serves as the record on appeal. Michigan and New Jersey, with considerable video courtroom experience, continue to require a transcript. Most courts with audio recording systems require written transcripts on appeal, although rules vary regarding who can prepare an appeal transcript. Copies of recordings normally are available.

6.2 Three Qualities of a Transcript

Jay Carver and Barry Mahoney note that well-managed systems produce court records that are usable, timely, and accurate. Each of these qualities merits management attention.²²

6.2.1 Usability

Usability relates to the two (at least) functions that a record of proceedings serves:

- a tool during the proceeding
- the official record of the proceeding

A tech-savvy trial attorney will find it convenient to have an electronic transcript available as a realtime feed, particularly during a lengthy or complex case. Some trial judges also find realtime transcripts helpful in ruling on motions and in keeping one's place during testimony.

²² Carver, *How to Conduct an Assessment*, 12.

If court management's focus is solely on the official transcript, key audiences may be underserved.

The appellate court, though, has little concern about the transcript as a tool during trial. Its focus is on the transcript as part of the trial court record. Requirements will vary from state to state. For example, as mentioned above, not all states require a written transcript on appeal when video is used to record the trial. Transcripts can be provided in a variety of media: paper, floppy, CD, DVD; they can be transmitted by email or placed in an online repository; and they can be provided in several file formats, including ASCII, PDF, proprietary, and condensed. Regardless of method used to capture the record, the court will need processes in place that assure ready access to the record in required form by all who have a right to it.

6.2.2 Timeliness

The record system should be managed with an eye both to statutory requirements for transcript delivery and to the softer but still important notion of expectations in an increasingly speedy world. Focusing on appellate needs, the system should be designed and monitored to assure that delivery takes place within required timeframes and their reasonable extensions. The system also should accommodate, to the extent possible, requests for expedited, daily, and hourly delivery.

6.2.3 Accuracy

Regardless of the method of reporting, what does it mean to have a verbatim literary rendering of a nonliterary event? Is verbatim "word for word"? If so, does that include stammers, false starts, and other verbal tics? Does it include mispronunciations, dialecticisms, and nonstandard grammar? If so, does this apply for all participants or just the witness? Should transcribers change what they hear to what the speaker believes he said but did not ("perspective" instead of "prospective," for example)?

Answers to these questions vary from one court's procedures manual to another, and, if not standardized, from one reporter/transcriber to another.

6.3 Processes and Controls

The court reporting systems in place in a particular court will shape the details of the work to be accomplished, by whom, and with what management controls. But the process follows a general pattern.

6.3.1 Request for Transcript

The appropriate form should be completed by the requesting party before transcription begins. Form is forwarded to the court reporter/transcriber and also entered into the court administration's transcript tracking system.

6.3.2 Deposit

If the requesting party is required to pay for the transcript, rules should require payment of a deposit or estimated cost of completed transcript before transcription begins.

6.3.3 *Workload Oversight*

Whether transcription is done by the reporter who recorded the proceeding or by an in-house or out-of-house transcription service, court administration should have in place a process to monitor transcript workload and assure that priorities are set properly and adjusted as needed. Transcript requests tend to ebb and flow. It may be desirable to establish workload standards and identify in advance steps to be taken when the standards are exceeded. Whether transcription is performed by individuals accountable to the court or outsourced to a service, court administration should be able to readily determine the amount of transcription work it faces at a particular time.

6.3.4 *Delivery*

Delivery of the transcript to the requesting party needs to be documented and matched with the original request. Over time, the process helps measure the performance of the system and identifies problem areas. The information also is necessary in individual cases should payment to a service provider need to be adjusted.

6.3.5 *Formats*

Each transcript page needs to conform to the approved format regarding number of lines, font, margins and indentations, headers and footers, title/appearance page, certification page, etc. At a minimum, periodic spot-checking will help assure that standards are being met.

6.3.6 *Content*

A transcript format guide should address both the appearance of a transcript – number of lines per page, size of margins, location of page elements, etc. – and matters of style regarding the representation of the spoken word in print. Topics include:

- representation of numbers
- interruptions and overlapping speech
- examination setup
- index requirements
- colloquialisms
- pauses
- stammers, stutters, and false starts
- capitalization and punctuation
- speaker identification
- utterances that are not words
- other nonverbal gestures and responses

In addition, the format guide should specify parenthetical handling of nonverbal events including:

- when proceedings are begun, recessed, and adjourned
- when the jury is in the courtroom and when they leave

- presence or absence of the defendant
- sidebar conferences
- off-the-record conferences
- when matters are held in chambers
- portions of the record read back or played back
- when an interpreter is present and the language used

Accuracy is a key aspect of transcript content and will be reflected, among other ways, in correct spellings of names and technical terms. Feedback from transcript users will be one guide to any need for improvements. Strategic sampling of transcripts can help court administration provide timely corrective guidance and keep small problems from evolving into larger ones.

6.4 E-Filing and Redaction

The ability to file transcripts electronically brings with it added concerns about privacy. The routine placing of transcripts in court-managed online databases increases the exposure of sensitive information to a wide audience that is no longer constricted by courthouse hours or by concerns of being noticed by court staff. Reporters have always had a responsibility to redact personal information when directed by a judge, but e-filing rules may include provisions for parties to request redaction of transcripts. Procedures for complying with such requests should be established, as well as an understanding about liability for redaction errors.

6.5 Staying current

Procedure and style manuals and guidelines should be reviewed periodically to assure they conform to mandates resulting from changes in statutes or court rule and those that continue to reflect best practices.

6.6 Archiving and Storage

6.6.1 Introduction

Preserving the official record of a court hearing or trial is critical to the effective functioning of the judicial system for three reasons: security, longevity, and accessibility.

In the past two decades, archiving, along with many other court-related activities, has moved into the electronic age, and new computer technologies have generated many alternative methods for archiving. Simply stated, a judicial definition for “archiving” would be “a place where court documents and other materials of the court’s interest are preserved in accordance with state statutes, rules, and regulations.” Archiving implies that others have access to and can receive certified documents that have been preserved.

The statutes regarding archiving vary from jurisdiction to jurisdiction, including variations from county to county. Some states/counties require electronic submissions; others still expect paper documents in sealed envelopes. The fact that archiving is a legal obligation makes it clear that it is an activity that is done for preservation and protection of the record and for the benefit of others.

Not only does archiving provide access to records, it also can be used for continuity. If a court case uses multiple court reporters, having an archived record allows each court reporter to seamlessly and efficiently pick up from the previous court reporter's work. For example, if multiple reporters are working the same case, and if one reporter reports on Monday while the second reports on Tuesday, the first might have a list of proper names or case-specific words they can provide to the second reporter so they do not have to recreate such aids each day. In addition, information on exhibits being identified and admitted can be passed along each day.

6.6.2 Archiving Practices

Currently there are several archiving practices being used among court reporters. The use of CDs and DVDs is becoming widespread, while some use online repositories and others are still continuing to use paper records.

What happens when the courts and court reporters do not have a secure, technologically up-to-date archiving system? Unfortunately that question was answered for the victims who were using paper records or utilizing CDs and DVDs for storage in the wake of recent natural disasters. Due to water and wind damage, many court and court reporter records were destroyed, which stresses the importance of having some type of offsite/online archiving storage/retrieval system plan in place.

Maintaining files for long periods of time and making the files available to others in a form that guarantees their accuracy and authenticity is the challenge that the courts and court reporters need to meet in their archiving practices. The determination needs to be made of what gets stored.

The official record begins with the reporter's notes, whether they are captured electronically or with paper, which are considered his/her work product. However, the court has an obvious interest in being able to access and, if needed, translate the reporter's notes in the event that the reporter is not able to produce a transcript. In addition to the notes being made available, it is also important that the court reporter provide the court with the standards relative to file format, file name, file organization, and the media used.

In order to translate the notes into the spoken word, it is necessary to include the court reporter's stenographic dictionary. The dictionary is the reporter's creation, and the reporter has a clear ownership interest in it. Courts often require stenographic reporters to periodically archive a copy of their dictionary to guard against being left with notes that cannot be translated.

It is recommended that a court of any jurisdiction have approved archiving policies and procedures in place for all court reporter-produced records and that they meet the profession's standards and any federal, state, or local court rules for their jurisdiction and geographical location. The notes of all stenographic court reporters may be kept in any format, including paper, electronic, or magnetic media or other technology capable of reproducing for transcription the testimony of the proceedings according to standards or guidelines for the preservation and reproduction of the medium adopted by the American National Standards Institute or the Association for Information and Image Management. Reporting notes shall be stored in an environment free from excessive moisture, temperature variation, and electromagnetic fields if stored on a medium other than paper.

Copying directly from the notes files created by the stenographic machine, the stenographic notes will be stored on one of the court's network servers, ensuring that there is an off-site copy of the notes available, while also providing data redundancy.

The stenographic notes will also be copied to the court reporter's personal computer to a folder named with the current month and year. Because the stenographic notes are in a proprietary format that may become obsolete, using the paperless stenographic machine's accompanying software, the court reporter will print the steno notes to an Adobe Acrobat PDF file – a recognized and accepted industry standard for document images – named with the date or date range of the proceedings. This ensures the notes will be able to be read just as if they were in paper format.

At the end of each month, the court reporter will copy both that month's PDF files and raw steno notes to a compact disk (CD), removable hard drive, or other storage medium. The CD or other medium will be clearly marked as to its contents and stored in a secure location.

Each reporter must maintain his/her paper notes in an orderly fashion. The notes should be filed in such a manner that another person could easily locate items. Each group of notes should be clearly marked either on the notes or on an information sheet with the reporter's name, personal number, the date, judge, case name, assigned case number, tape numbers, attorneys' names, and the name of any other reporter(s) who took notes in the same case. Notes should be wrapped in rubber bands and stored in an upright manner in filing cabinets. Before being moved to long-term storage, all notes should be neatly boxed and identified.

The reporter, supervising judge, and the court manager may wish to meet and discuss the long-term storage requirements for a reporter's notes. Local procedures vary as to storage of a court reporter's notes.

6.6.3 Models of Archiving and Storage

There are generally two methodologies used to archive digitally recorded proceedings. The first is a decentralized model. In this model, archiving takes place at the location where the record is made. The second model is to utilize a centralized storage server where the record is sent over a network connection to a storage server.

- **Decentralized Model**

In this model, the digital record is made on either a digital recording appliance (similar to an analog tape machine) or on a courtroom computer installed with digital recording software. Both recording systems archive the record to their unit's respective hard drive and simultaneously record the proceeding to a CD. The CD becomes the permanent court record.

Archiving the CD in a decentralized model follows the same process for archiving an analog record. At the end of each day's recording, the CD is logged in and stored in a secure area within the courthouse. The proceeding stored on the hard drive of the recording appliance or courtroom computer is the court's backup recording if the original CD is lost or damaged. As each day's recording is added to the hard drive, eventually the drive will reach its capacity and stop recording. To prevent this, digital systems employ a FIFO (First In First Out) format to free space on the hard drive. When the hard drive reaches capacity, the oldest case is automatically removed, making room for the current day's recording. Based on a court's activity and the size of the hard drive, data can remain on hard drive from two to 10 or more months.

Retrieving data in a decentralized recording solution follows the same procedures in place for analog systems. The original CD containing the court record never leaves the courthouse. The CD is copied in whole, or in part, for transcription or for review by judges or others.

Maintaining annotations of the proceeding provides a quick and efficient way to locate portions of the proceeding for transcription or playback. With a standalone appliance, annotations are handled in the same manner as an analog recording. Annotations are made on paper, keyed to the counter numbers on the digital appliance. With a computer-based software recording system annotations are made on a computer hyperlink to the recording for easy retrieval of the court record. There are some systems that use a separate computer-based annotation program. In this application, the computer-generated annotation synchronizes with the recorded audio when both files are opened on the same computer.

The decentralized storage model provides courts with an easy way to begin the transition from analog to digital recording.

- Centralized Network Model

A centralized networked model takes advantage of an automated infrastructure to capture and archive proceedings from multiple courtrooms. Courtroom computers with installed digital recording software are networked to a central storage server(s) for archiving the records. The server records all audio/video and annotations. As in the decentralized model, the courtroom computer can also store audio and annotations locally to the computer's hard drive, providing the court with an additional backup of the record. A more common network design is to send the audio along with the annotations to a primary and backup server where two archives are made.

In a centralized model, each courtroom records its audio and annotations to a discrete segment on the storage servers. The stored files conform to a directory structure identifying files by date, time, and location. Files on the primary or backup servers are integrated into the court's standard nightly backup procedures. In some jurisdictions, the court recorded proceedings are also sent off-site to a data archive service. With the record located on a centralized server, any user on the courthouse network, with appropriate access rights, can open stored files in a read-only format to copy files for transcription, duplication, and to play back the record for review either in the courtroom or chambers. The record is secure and easily managed from any point on the network.

The centralized model provides courts with a central repository for the record that is secure, easily accessible, provides economy of scale, and limits possible points of failure in making and archiving the court record.

6.6.4 *Storage and Software Concerns*

Maintaining files for long periods of time and making the files available to others in a form that guarantees their accuracy and authenticity are the challenges that court reporters need to meet in their archiving practices. These requirements boil down to two issues: storage media and software.

- Storage Media

Storage media, such as CDs, DVDs, and, to some extent, floppy disks, are common methods of storage for court reporters. While still being used, floppy disks are being used less frequently for two reasons: size and availability.

- Floppy (3 ½-inch) Disks

Floppy disks do not hold much information, which can be a significant disadvantage for court reporters, who need to preserve gigabyte-consuming exhibits or audio files. And, increasingly, computers are being made without a floppy disk drive, making the disks unusable or, at the least, requiring an external drive to read them.

The looming obsolescence alone should eliminate floppy disks as a serious archiving medium for court reporters.

- CDs and DVDs

These two media formats have some advantages: they are relatively low cost and DVDs in particular hold comparatively large amounts of data.

There is some disagreement over how long CDs and DVDs may last. There are differing opinions on how long a period of time the disks are reliable, ranging from several decades to uncertainty. They should only be considered a short-term solution for media storage. Because the life of CDs is generally considered to be five to seven years, it would be prudent to re-burn the CD archives approximately every five years.

- Online Repositories

The arrival of the Internet has introduced another medium of storage, and that is online repositories. There are companies on the Internet that will protect your data, so you have the security of knowing that you have entrusted your documents to someone who has accepted the responsibility of preserving and protecting your records. One of the advantages of online archiving is that it is media independent. That is, the archive is not dependent on any particular software or hardware accessibility. Regardless of what kind of computer or what kind of removable media one has, the document can be downloaded and processed. The need to keep archives accessible to users for decades underscores the importance of this consideration.

Archiving online also offers the advantage of the court reporter being able to access the archived files anywhere, anytime. The primary disadvantage to online repositories is cost.

- Hard Drives

Court reporters do use external hard drives for backup and archiving of files. Hard drives are excellent devices for backing up and restoring, but they do not do the complete job of archiving. Like other devices, external hard drives can be susceptible to failure.

- Local Network Server

Most courts have their own network with one or more servers that can host a storage drive accessible to court reporters to store and retrieve their notes. This subjects the notes to the same backup and security features of other court data, including onsite and offsite backups. A process needs to be put in place for the court reporters or other court staff to copy the note files to the server because court reporters often do not have access to the courthouse network.

The most common example is a file server that has a drive mapped so that court reporters can remotely read and write files to that drive.

- Software

Which software to use is the second major concern when considering archiving alternatives. The need to make archives accessible to many parties for the foreseeable future suggests that nonproprietary software (for example, ASCII and RTF) are preferred formats. A concern articulated is that archives must be “media independent.”

- ASCII and RTF

Both ASCII and RTF meet the criterion of media independence. ASCII files are easily accessible for reading or printing. When archiving files, one thing to consider is that the files should be archived in the lowest common file format to facilitate printing in the future. Obviously the concern is that files saved in one software edition that is current today could eventually become obsolete.

There is a disadvantage to ASCII and RTF files; there is no way to protect these two file formats. ASCII and RTF are not designed for security; they are designed for ease of transport. They offer a way to get documents back and forth between computer programs. Given that court reporters need to provide transcripts that can be certified as accurate and un-tampered, this lack of security is a problem in using nonproprietary formats for archiving purposes.

- PDF

PDF (portable document format) files are emerging as a popular and attractive alternative for storing documents. PDF documents, which are the product of a proprietary software application, have several advantages over documents produced using nonproprietary software formats.

First, unlike ASCII, PDF files retain the formatting of the original document. Second, PDFs can be locked to make tampering more difficult. A PDF does contain “meta-tagging data,” data about the document’s creation and modification. The meta-tagging data provides information on whether or not a document has been modified.

In addition, PDF files can be read by anyone who has a PDF reader, which is free and downloadable online. A PDF combines the ease of nonproprietary formats with the strengths of proprietary software: they can easily be sent and opened and yet are relatively secure.

- Purpose-Built Software

Although nonproprietary formats and PDFs accommodate any and all kinds of documents, the use of software programs that have been specifically designed for the court reporting profession is growing more widespread. In general, software built for court reporting is more robust than nonproprietary software or even PDFs. The specially designed software offers built-in features that court reporters use routinely, such as the ability to lock files, include digital signatures, and perform searches.

- Digital Signatures

One of the critical components in selecting software is how effectively the document can be protected. Digital signatures are a popular tool for verifying the source of a document. It is important to note, however, that digital signatures cannot prevent document tampering, although the digital signature is invalidated if the file is breached or changed from the original.

Digital signatures allow an independent third party to verify where the file originated. If a file is going to be archived and made publicly accessible, then a digital signature should be used by the reporter to prove that this was produced by him/her. Ensuring the complete protection of a reporter's work, he/she would have to include encryption and password protection.

While digital signatures are not the complete answer for preventing document tampering, they do allow some verification. And digital signatures are being adopted by some courts as a requirement for documents that are submitted.

- Indexing

Archiving is obviously important, but indexing your archives is critical to this business practice. What good are your efforts to archive if you do not know what you have and are not able to access the record in a timely manner?

Although CDs and DVDs have advantages, they have one disadvantage from an archiving standpoint: they are hard to index effectively. There is no automatic indexing technology built into CDs and DVDs. Any indexing is up to the court reporter to provide, which would involve labeling the disk and manually logging in some form the contents of a CD or DVD.

Another consideration is CDs and DVDs are generally located in the same physical space as the court reporter. The disks are not remote backups and, therefore, are subject to the same loss to natural disaster or other emergencies as your office or home. As a result, if CDs or DVDs are used, the court reporter should have at least one copy off site.

- Retrieval Policies

This function requires each court and its court reporter(s) to work together for the best possible solution. Obviously security and accessibility of their work products are major concerns for court reporters. Threats come not only from malicious tampering but from environmental disasters as well. Several factors need to be considered and discussed for developing the appropriate plan for each court.

7. MANAGING COURT REPORTING TECHNOLOGY

7.1 Introduction

A key consideration prior to implementing any court reporting model for a court system is to assess the existing technology infrastructure. Whether the method implemented to capture the record and to subsequently produce a transcript is stenography, electronic, digital, audio/video, or a hybrid system, each method utilizes some form of integrated technology. The means by which the technology is integrated and managed can take on various forms and should be given extensive thought when developing a court reporting technology management plan.

7.2 Define Objectives and Goals

There are different purposes for capture and use of the record. The wide range of actual and potential users and costs and benefits must be calculated in the context of the court's business and

technology objectives and goals. In identifying the objectives and goals, define the characteristics of the jurisdiction and, given the differing uses for the record throughout the court system, define what the best mix of technologies is for capturing the record by taking into account the differences of a jurisdiction, local legal culture, resources, and technology infrastructure.

7.3 Understanding Court Reporting Technologies, Resources, and Models

In the development of your model, it is important to have an understanding of the technologies and resources available prior to developing a technology and management plan. In order to gain an understanding of the technologies and resources available to create a plan, it is critical to:

- Conduct a comparative assessment and evaluation of the different court reporting methods. The comparative assessment and evaluation of the different court reporting methods should include a review of the actual costs and benefits of the differing methods, site visits, surveys of other jurisdictions, systems and models, vendor demonstrations of the available technologies and, if practical or viable, the implementation of a pilot project to learn about various court reporting technologies.
- Conduct a self-assessment of the court's needs by defining the court reporting mission as it relates to the record-making function. The self-assessment and evaluation may include gathering of information by meeting with and interviewing the judiciary regarding the types of hearings conducted, length of court sessions, caseload analysis, and volume of transcript pages produced per court division. Other assessment factors of consideration include system reliability, accuracy of the record, read back and playback of the record during court proceedings, timely completion and filing of the record, and the degree of flexibility offered by a specific model in a single or multi-county jurisdiction. This information is vital to determining the desired technology or best mix of technology that will meet the needs of the court.

7.4 Conduct Gap Analysis

An inventory assessment of existing hardware, software, network, and technology infrastructure for all methods of court reporting (stenography, electronic, digital, audio/video, or hybrid), will need to be conducted. The information gathered through this inventory assessment will be useful in identifying the gap between existing technology and requirements for implementation of the desired model.

7.5 Cost

The major costs associated with any court reporting model are the costs of personnel and equipment. The costs and benefits of different court reporting techniques should be compared to the courts' overall budget and the availability of technology funds allocated for court reporting.

7.6 Define Court Business Processes/Workflows

It is also important to link court business processes and workflows with the implementation and technology management plan in conjunction with the development of court reporting strategies, policies, and performance measurements.

7.7 Identify Challenges and Potential Barriers

As in developing any plan, potential barriers and challenges exist and need to be identified prior to implementing or re-engineering the model. Barriers may include budgetary constraints, lack of available skilled resources, organizational structures, facilities, and internal political agendas.

7.8 Forecast for the Future

Technology management will require forecasting for the long term – five to 10 years – as technology requirements change based on population growth, increased filings, additional judicial resources, statutory and rule changes or requirements, and technology innovations.

7.9 Define Model

Based on this informational foundation, define a traditional stenographic, electronic, audio/video, digital, or hybrid model and determine how the model should be configured, or re-engineered, utilizing the preferred technology coupled with a technology management plan.

7.10 Create Transition Plan

A transition plan is necessary to provide a direction and set an expectation for the users of the system. The following steps have been identified to assist in creating a plan:

- a pre-visit and orientation for the users of the system
- a training schedule
- a timetable for hardware and software deployment
- a post-visit and survey of the users to identify any issues that may require follow-up or further actions
- documentation of the implementation of the system for later reference

The development and use of a transition plan will address a method for gradual transition that will keep pace with the changes and address possible challenges and barriers. The process will test the progress of the implementation and gain user approval of the system.

7.11 Acquisition of Vendor or Partnership Selection

In advance of the court reporting method to be implemented, it requires an exercise of due diligence by the court prior to the selection and acquisition of the technology or selection of a vendor. This can be accomplished by utilizing traditional procurement methods (request for proposal, request for qualifications, request for quotes, invitation to negotiate). Non-traditional

methods (government-to-government partnerships, government-to-private partnerships, demonstrations, and competitions) may also be explored. Both the traditional and non-traditional methods of procurement require education and research. The certification of vendors and systems is highly recommended. This will require the vendor or systems to adhere to standards and specifications for providing appropriate resources to support, operate, and interface the systems with the existing model and future planned technologies that are being contemplated.

7.12 Technical Support

Technical support is a range of services providing assistance with the implementation and operation of the court reporting model selected that may include computer hardware and software, audio visual hardware, services, and networks. Generally, technical support services assist users of the system in resolving any issues arising from the use of the court reporting method. The initial question for a court implementing any court reporting model to ask is: Is the model going to be managed by staff, contractual service provider, or a combination of both? Once this determination has been made, it is necessary to determine if staff or the contractual service provider has the resources and requisite skill-set to manage the technology component of any court reporting model.

In deploying a management strategy for technical support, it is also necessary to have tools in place that will proactively monitor the performance of the system. Technology tools and processes should be in place to ensure that service level agreements, performance levels, and standards are monitored and maintained for any court reporting system.

Technical support for the operational system of any court reporting model should include training and the establishment of processes, workflows, and standards for testing, validation, and certifications. Established operational processes and systems testing should be conducted on a daily basis to ensure reliable performance. Continual validation and certification processes will guarantee the system is meeting standards and recommended best practices. The use of a help desk model is one of the most common best practice scenarios as a global support method in use today.

7.13 Troubleshooting

As part of the technology management plan, it is required that a troubleshooting and maintenance process be developed. This can be accomplished through the utilization of automated tools and human-driven processes.

Tools, procedures, and operational schedules are essential elements of the maintenance and troubleshooting plan. Performance software tools, which are readily available, will monitor systems and notify of degradation in performance before an interruption of service occurs.

Typically a troubleshooting process has a human-driven element prepared to take appropriate corrective action to repair or replace any defective equipment and prevent future occurrences of the problem while continuing with business. A recommended best practice is the establishment of a multi-level help desk that encompasses the talents of staff resources and/or a contractual service provider utilizing automated tools and processes.

7.14 Electronic Backup and Archiving

To address the need for an electronic backup and archival system, it is essential to understand what information is being collected and stored (steno notes, digital audio, audio/video, analog audio) and determine the workflow for collecting and storing the information. Although it is difficult to predict the future in relation to the volume of information that will have to be collected, stored, backed-up, and archived, at a minimum the following should be taken into consideration in establishing an effective and efficient information management system:

- regulatory compliance
- security of system
- cataloging, indexing, and retrieval process
- mechanisms for retrieving the stored information
- volume of information
- record retention schedule
- space and storage considerations
- disaster recovery
- primary and secondary backup strategies
- off-site storage of the record

In summary, completing the comparative and self-assessment process and setting clearly defined objectives and goals will assist in defining the model. These steps will foster the development of a technology management plan, resulting in the deployment and execution of the desired court reporting model.

8. PLANNING FOR THE FUTURE

John Carver and Barry Mahoney opined that

“[t]he most important element in any well-managed system is the strength of its leadership.”²³

As court managers plan for the future of the record-making operations in their courts, they need to take into account the interplay of various factors, both favorable and unfavorable, that combine to make each situation unique.

8.1 System Strengths

Managers can count on several helpful advantages going forward. There is an array of tools at hand to meet every reporting need including:

- The ability of the reporter to convert testimony instantly into text is well-established with stenographic reporting and emerging with voice writing. The

²³ Carver, *How to Conduct an Assessment*, II.

realtime transcript can be viewed on a networked computer in the courtroom or anywhere in the world over the Internet. An instant transcript is not perfect, but the output of a skilled, realtime reporter is sufficient for in-court overnight uses by judges, clerks, attorneys, and expert witnesses, as well as for participants who are deaf or hearing impaired. As a rough-draft transcript, realtime is used by at least one state to fast-track appeals in criminal cases.

- Electronic text enables the readable transcript to be synchronized with a digital audio or video recording of the proceeding for the ultimate in a court record when the complexity or magnitude of a case merits it.
- Electronic notes, rough drafts, audio and video recordings, and official transcripts can be entered into the court's networked database for safekeeping and access by authorized individuals for information mining.
- Digital audio recording vastly improves on the quality and utility available from analog recording.
- Video recording similarly benefits from 25 years of design and technology advancements.
- Court systems have a large cadre of court employees who are experienced and knowledgeable about court reporting systems.
- Many courts have developed or are developing a strong IT infrastructure and personnel to serve it.
- The courts have a lot to offer as an employer.

8.2 System Weaknesses

Managers will have to deal with several weaknesses and limitations within the system.

- The reporter work force is aging. The typical official reporter is in their mid-40s.
- While reporter training school enrollment is up over the past few years, it is not at the level it reached in the mid-1990s.
- Steno and voice realtime are not easy skills to master. The average time to completion for steno reporting, which is realtime-based, is 33 months. Voice realtime is sufficiently new that a track record has not been established. Experienced steno and voice reporters learning realtime on their own invest significant time and effort doing so.
- Court reporting services are not interchangeable. While improved as recording technologies, digital audio and video do not replicate services available through realtime reporting. Moreover, Reporter/Monitor/Transcriber A is not the same as Reporter/Monitor/Transcriber B, is not the same as Reporter/Monitor/Transcriber C, ad infinitum. They will produce non-identical transcripts from the same proceeding or recording.
- Digital audio and video recordings need to be transcribed in most cases.
- Court systems are in competition with other sectors of the economy for talented employees.
- All systems, whether people-based or machine-based, need to be properly designed, managed, maintained, and funded to deliver the results that are expected of them.

8.3 External Opportunities

Trends in the larger environment may help make the reporting function easier to manage.

- Overall, caseloads may be stabilizing. Incoming cases in state courts in 2004 totaled 100.1 million, virtually the same as in 2003 according to the National Center for State Courts (NCSC). Federal criminal appeals were down 5 percent in 2006, and civil appeals were down 3 percent according to annual figures released by the Administrative Office of the U.S. Courts. Civil cases filed in U.S. district courts were up 2.5 percent, while criminal case filings dropped 4.3 percent in 2006.
- Funding, while always an issue, in many situations appears to be lessening as a crisis.
- Tort reform and alternative dispute resolution may tend to reduce caseloads.
- Use of videoconferencing is growing, and the possibility of virtual courtrooms could ease logistical pressures.
- Voice-independent speech recognition may be closer (though probably not close) to reality.

8.4 External Threats

Environmental trends may make the court's work more difficult as well.

- While the rate of growth has declined short-term, caseloads have increased with population over the past decade. The total number of cases coming into state courts has grown 11 percent from 1995 through 2004 according to NCSC. The ratio of new cases to the total population has been virtually constant over that time.
- Tort reform has an uncertain political future.
- Electronic filing and posting of documents online creates privacy and redaction issues.
- The digitization of society has affected expectations regarding forms and speed of service delivery.
- Funding will always be an issue.

8.5 Elements of a Well-managed System

Mahoney and Carver identify eight elements of a well-managed system of record-making services that can serve as a roadmap into an uncertain future. Leadership, as noted, is first and foremost among them.²⁴

²⁴ Carver, *How to Conduct an Assessment*, 11-13.

The others, in summary, are:

- Clear Articulation of Goals

In addition to responsible budget management, what are the goals of your court's record-making system? What services should your system provide to court participants and other stakeholders? Carver and Mahoney suggest that the goals that many courts have for their court reporting systems may not be well-chosen. "There are 'win-win' solutions that benefit many parties, but finding them requires everyone to abandon outmoded or doctrinaire positions and begin to focus on how their talents and their resources can be used to add the greatest value to the justice system."

- Accuracy, Timeliness, and Usability of the Record

Carver and Mahoney quote extensively from *Computer-Aided Transcription: Current Technology and Court Applications*, written by William E. Hewitt and Jill Berman Levy and published by the National Center for State Courts, which explores the accuracy, form, availability, and cost of the trial record. The details of such a discussion might differ today from when that study was written, but the concepts remain fundamental to what courts seek to achieve with their record-making services. What largely has been missing, then and since, is not new ways of accomplishing old tasks, but new ways of thinking about the tasks.

- Technical Infrastructure

The advent of computer networks, wired and wireless, presents new ways for sharing, securing, and using data associated with the trial record. Courts are increasingly able and prefer to handle electronic forms of documents, including transcripts, which can easily be synchronized with digital audio and video records and linked to exhibits and other trial documents.

- Good Management and Accountability

Carver and Mahoney note that court reporters are exceptions to the norm in most court systems: They typically work for one judge, purchase their own equipment and supplies, and are compensated through a combination of salary and transcript income as an alternative to overtime. But, the authors note, there is a continuum of alternatives to the traditional approaches that are now in use, with no one answer being right for everyone.

- Scope of Reporting Services

Part of defining the goals of a court's record-making services involves assessing the expectations and levels of satisfaction that users of the system have. An accurate, timely official transcript becomes the starting point, and research into what stakeholders value will point court management in the direction of closing the gap between what their system is and what it could be.

- Customer Satisfaction

This element expands the notion above to assure that everyone who is served by the reporting function is taken into account during the evaluation process. Carver and Mahoney define a customer as "someone you must satisfy" and include the following: "the public, legislators,

parties before the court, attorneys and judges at both the trial and appellate levels, clerks, court administrators, and others.”

- Incentives for improvement

Finally, the authors note that courts are in competition with other sectors of the economy for talent, no less so for court reporters, electronic recording monitors, and transcribers than for court managers and network engineers. Reporters, transcribers, and monitors, like all employees, bring varied skills, experience, and other qualities of employment to the job. It is important that the available skills match the envisioned goals and that an appropriate level of compensation and other incentives are used to acquire and develop them.

GLOSSARY

This glossary of terms will help the reader of this mini guide with the various technical terms, acronyms, and abbreviations used throughout the publication.

Term	Definition
ADA	Americans with Disabilities Act. Requiring reasonable accommodation to allow accessibility for the disabled (see CART).
ASCII	American Standard Code for Information Interchange. An open, non-proprietary text file format that is easily readable from a wide variety of word processing programs. ASCII generally does not allow formatting such as bold, underscore, hyperlinks, etc. (also see RTF).
CART	Computer-aided realtime translation of stenographic reporting. This term is often used to describe a service provided to assist the hearing impaired.
CAT	Computer-aided transcription software that translates stenographic keystrokes into text to the extent that a court reporter has built up a sufficient dictionary of translatable words and phrases.
CIC	Computer-integrated courtroom, presumably one in which the various hardware and software are connected (such as case management system, evidence presentation, verbatim record, etc.).
Court reporting manager	The person in charge of managing the verbatim record for the court. This person would supervise ER monitors and court reporters and/or contract providers, as well as requests for transcripts and performance monitoring.
ER	Electronic recording. Audio, video, or both.
ER monitor	One who operates the electronic recording equipment.
PA	Public address system. The amplifier, wiring, and microphones used to amplify sound in a courtroom.
PDF	Portable Document Format. A file format that allows ready exchange and use among different computer operating systems, yet is tamper resistant. PDF files retain the formatting of the original file (bold, underline, hyperlinks, etc.)
Realtime	A proficient stenographic court reporter using computer aided transcription software is able to capture the verbatim record at the time it occurs and translate stenographic keystrokes into written text displayed on a computer screen. A realtime record is often accompanied by a software package to allow the user to annotate the record. Voice writers are beginning to provide a realtime record using voice recognition software that is trained to interpret the voice of the voice writing operator.
Rough draft transcript	The raw feed of a court reporter's realtime readout that is not the official record but often sufficient for case preparation or other uses by the party. This rough draft will contain untranslated and mistranslated words and phrases, but will provide enough of a context to be otherwise useful.
RTF	Rich Text Format. An open, non-proprietary text file format that is easily readable from a wide variety of word processing programs. RTF generally allows some formatting such as bold, underscore, hyperlinks, etc. (also see ASCII)
Steno-mask	See voice writer.
Voice writer	Also called steno mask. Someone who utilizes voice to capture the record of any proceeding, whether using an analog or digital recording device or voice/speech recognition system.

APPENDIX A

Court Statutes Relating to Qualifications of Court Reporters

State	Statutory Provisions	Education	Licensing Requirements	Exceptions	Miscellaneous
Alabama	§§34-8B-1 et seq	High school graduation or equivalency	1 – mandatory as of January 1, 2007 2 – pass the written knowledge exam administered by the National Court Reporters Association (NCRA) 3 – pass Alabama skills exam or provide documentation of having passed the NCRA Registered Professional Reporter Examination or the National Verbatim Reporters Association (NVRA) Certified Verbatim Reporter Examination	Court reporter on June 1, 2006 can be licensed if: 1 – submits affidavit with past education and work experience 2 – submits from a judge or three attorneys an affidavit as to proficiency or member of The Alabama Court Reporters Association as a certified court reporter and applies within one year of June 1, 2006	1 – The Alabama Board of Court Reporting determines licensing procedures, disciplinary procedures, and continuing education requirements 2 – Misdemeanor to practice as a court reporter without a license 3 – Board can seek injunction to prevent non-licensed court reporter from practicing 4 – Board can enter into reciprocal agreements
Arizona	§§32-4001 et seq	High school diploma or equivalency	1 – State and federal criminal records check 2 – 18 years of age or older 3 – citizen or legal resident of the United States 4 – good moral character 5 – One-year experience or complete court reporting school or be a NCRA registered professional reporter/ registered merit reporter 6- NCRA Registered Professional Reporter Exam or the National Verbatim Reporters Assoc (NVRA) Certified Verbatim Reporter Examination or other exam as approved by the supreme court 7 – pass written knowledge test of rules and statutes regulating court reporters	Pass an exam approved by supreme court rule that includes: 1- NCRA registered professional reporter or 2 – NCRA registered merit reporter 3 – NVRA Certified Verbatim	Board of Certified Reporters recommends to supreme court practices with regard to testing, continuing education, code of conduct, licensing, and discipline.

State	Provisions	Statutory Education	Requirements	Licensing Exceptions	Miscellaneous
California	Business and Professions §§8000 -8027.5	High school diploma or equivalency	1 – 18 years of age or older 2 – passed an examination as determined by the board 3 – one-year experience making verbatim records or complete court reporting school or have a certificate from NCRA demonstrating proficiency in machined shorthand reporting or passing grade on state hearing reporters exam or valid certificate/license from another state		1 – Court Reporters Board of California determines qualifications, examinations, applications, and grants certificates 2 – misdemeanor to violate the provisions regarding court reporters 3 – can require proof of English proficiency
Georgia	§§15-14-20 et. Seq.	High school graduate or	equivalency 1 – 18 years of age or older 2 – good moral character 3 – pass exam	If actively and continually a court reporter for one year prior to March 20, 1974	1 – Board of Court Reporting of the Judicial Council determines licensing fees, examination requirements, and contents of examination 2 – board can revoke a license 3 – board can take disciplinary action 4- board can seek injunction 5 – misdemeanor to violate statutes
Idaho	§§54-3101 et seq.	High school graduate or equivalency	1 – pass Idaho examination or pass within the prior two years the registered professional reporter or registered merit reporter or registered diplomat reporter or certified real-time reporter examination 2 – citizen of United States 3 – good moral character	1 – temporary appointment to district court as long as apply for certification within 30 days 2 – magistrate courts if rely on electronic or similar recording 3 – taking a deposition if prior to commencement attorney/party certifies no certified reporter available 4- full time employee as a hearing reporter with a state agency	1 – State Certified Shorthand Reporters Board determines licensing fees, examination requirements, and contents of examination 2 – misdemeanor to violate statutory provisions

State	Provisions	Statutory Education	Requirements	Licensing Exceptions	Miscellaneous
Illinois	§§415/1 – 415/28	1 – high school graduate or equivalency 2 – 10 hours of continuing education every two years	1 – good understanding of English language 2 – ability to accurately report 3 – clear understanding of obligations 4 – good moral character 5 – passed examination certified shorthand reporter from another jurisdiction not required to pass examination may be granted licensure through reciprocity if the CSR Board determines the tests are comparable		1 – Department of Professional Regulation can assess civil penalty for violation of the statutory provisions 2 – Certified Shorthand Reporters Board appointed by Director of Department of Professional Regulation 3 – first conviction for violation of provisions is a misdemeanor; second or subsequent is a felony
Louisiana	Revised Statutes §§37:2551 et seq		pass examination	1- discretionary to waive exam if have comparable certificate from another state 2- official and deputy official court reporters designated as same on or before September 1, 1991	1 – Board of Examiners of Certified Shorthand Reporters establishes continuing education requirements, determines examination contents, issues certificates, takes disciplinary action 2- different certificates for forms of court reporting 3 – violation of the statutory provisions is a misdemeanor
Michigan	MCR 8.108	shorthand reporters must have graduated from a recognized postsecondary reporter training program; and electronic reporters, stenomask/voice-writer reporters must have completed an approved postsecondary workshop or course of study prior to taking the exam	license required in order to record or prepare transcripts of proceedings held in Michigan courts or of depositions taken in Michigan	reciprocity with state with comparable license requirements	State Board of Examiners of Certified Shorthand Reporters determines qualifications of applicants, conducts the examination at least once a year, makes recommendations to the supreme court, adopts with the supreme court's approval examination rules and keeps a current roll of certified reporters and a file on all those disciplined

State	Provisions	Statutory Education	Requirements	Licensing Exceptions	Miscellaneous
Mississippi	§§9-13-101 et. Seq.		1 – reached the age of majority 2 – good moral character 3 – resident of the state 4 – pass examination	1 - state employed reporters as of January 3, 1996, free lance reporters as of July 2, 1994, or students enrolled in court reporting school as of July 2, 1994 2 – graduates of a program accredited by NCRA who graduate prior to November 1, 2008	Board of Certified Court Reporters determines examination contents, issues certificates, makes recommendations to the supreme court, disciplines certified reporters
Nevada	§§656.010, et seq.	High school graduate or equivalency	1 – not delinquent in a court-ordered child support obligation 2 – pass an examination administered by Nevada 3 – pass the NCRA registered professional reporters examination or complete a course of study for court reporting or be a registered professional reporter with NCRA or have a valid license from another state or have one year continuous experience 4 – citizen of the United States or can lawfully work in the United States 5 – 18 years of age or older 6 – good moral character		Certified Court Reporters’ Board of Nevada establishes continuing education requirements, takes disciplinary action
New Hampshire	§§331-B:1 et seq.	High school or equivalency 10 hours of annual continuing education	1 – pass an examination no less stringent than NCRA or NVRA examinations 2 – age 18 or older 3 – citizen of United States 4 – good moral character 5 - \$1,000 surety bond		1 – Advisory Board of Court Reporters advises the chief justice

State	Provisions	Statutory Education	Requirements	Licensing Exceptions	Miscellaneous
New Jersey	§§45:15B-1 et seq	high school graduate or equivalency	1 – citizen of the United States residing or having a place of business in the state 2 – over the age of 18 3- good moral character 4- pass an examination		State Board of Court Reporting determines continuing education requirements and contents, determines examination requirements and contents
Oklahoma	tit. 20, § 106.1 et seq.; § 1501 et seq.	1- high school education or its equivalent 2- four hours of annual continuing education	1 – of legal age 2 – meets the requisite standard of ethical fitness 3 – pass examination	if an individual has a license from another state or has national certification	1- State Board of Examiners of Certified Shorthand Reporters determines qualifications of applicants, conducts the examination at least once a year, makes recommendations to the supreme court, adopts, with the supreme court's approval, examination rules, and keeps a current roll of certified reporters and a file on all those disciplined
Oregon	§§ 8.340, 8.420,		pass examination		1- State court administrator adopts policies to establish and determine qualifications of persons, adopts policies for the examination and the issuing of certificates, establishes continuing education requirements, collects fees, requires biennial renewal of all certificates, establishes code of conduct and grounds for disciplinary action, investigates complaints, and may appoint committees

State	Provisions	Statutory Education	Requirements	Licensing Exceptions	Miscellaneous
Texas	Gov't § 52.001 et seq.	continuing education – supreme court may authorize, and the board by rule may require, continuing professional education	pass examination	<p>1- may waive any prerequisite after reviewing and determining applicant holds a license or certification issued by another jurisdiction that has licensing or certification requirements substantially equivalent to those of the state</p> <p>2 – may waive any prerequisite for applicant who holds a license or certification issued by another jurisdiction with a reciprocity agreement</p>	<p>1 – Court Reporters Certification Board administers examination, sets charge, and collects fees, determines the qualifications, maintains a record of each court reporting firm/affiliate office, and issues a registration to each court reporting firm/affiliate office</p> <p>2 – board may appoint subcommittee, designate a board employee to serve as director, approve curriculum for court reporter career schools and colleges, approve continuing professional education courses, and maintain complete records</p> <p>3 – non-certified court reporter may be employed until a certified court reporter is available</p> <p>4 – a person commits an offense if the person engages in shorthand reporting in violation of code</p>
Utah	§§ 58-74-302, 58-74-101 et seq., 78-56-103	bi-annual continuing education reporting	<p>1 – at least 18 years of age</p> <p>2 – citizen of the United States</p> <p>3 – possess a high degree of skill and ability in the art of court reporting</p> <p>4 – good moral character</p> <p>5 – submit evidence of passing the Registered Professional Reporter Examination of the NCRA or the CVR Examination of the NVRA</p> <p>6 - \$2,500 bond required</p>		<p>1 – Certified Court Reporters Licensing Board assists division in reviewing complaints, advises division in its investigation of complaints, and issues licenses</p>

State	Provisions	Statutory Education	Requirements	Licensing Exceptions	Miscellaneous
Washington	§ 18.145 et seq.		1- certification application with fee 2 – certificate of proficiency, registered professional reporter, registered merit reporter, or registered diplomate from NCRA 3 – pass examination	persons with two or more years of stenomask experience in Washington as of January 1, 1996, granted certificate without examination if the application is made before January 1, 1996	1 - director of licensing adopts rules, sets all fees, establishes the forms and procedure, issues certificates, approves the preparation and administration of examinations, establishes advisory committees and establishes ad hoc advisory committees 2 – Does not prohibit: a) court reporting by individuals who are licensed, certified, or registered as court reporters under other laws of the state and who are performing services within their authorized scope of practice b) court reporting by individual employed by the government of the United States while the individual is performing duties prescribed by the laws and regulations of the United States c) The introduction of alternate technology

APPENDIX B

Recommended Procedures for Storage of Court Reporters' Paperless Stenographic Notes

With the use of paperless stenograph machines, the court reporter must now provide the court with computer files of the steno notes rather than paper steno notes. To ensure that the notes are accessible to the court, standards relative to the file format, file name, file organization, and media are included in the following general procedures for the handling of paperless steno notes.

Overview

- Copying directly from the notes files created by the steno machine, the steno notes will be stored on one of the district network servers, ensuring that there is an off-site copy of the notes available, while also providing data redundancy.
- The steno notes files will also be copied to the court reporter's personal computer to a folder named with the current month and year. Using the paperless steno machine's accompanying software, the court reporter will print the steno notes to an Adobe Acrobat PDF file – a recognized and accepted industry standard for document images – named with the date or date range of the proceedings.
- At the end of each month, the court reporter will copy all of that month's PDF files and raw steno notes to a compact disk (CD), removable hard drive, or other approved storage medium. To label the CD or other medium, the court reporter will create and adhere to it a printed label. The CD or other medium will be stored in the district-owned locked cabinet maintained for that purpose.

Standards

- ***Stored Notes on a Network Server.*** At least weekly, the court reporter will copy the files from the steno machine's diskette or other memory/storage to the designated district network folder. Under a shared network folder, each court reporter will have a folder named with the court reporter's name. In the court reporter's folder, the court reporter will create a subfolder named with the date range of the notes it will contain. The naming convention of "ddmmyy-ddmmyy" will be used for the folder names. The court reporter will then copy the notes files from that diskette to that folder. The next set of notes from the next diskette will be copied to a new folder named with that diskette's date range.
- ***File Format for the Printed Image.*** The court reporter will print each set of notes to Adobe PDF file. The notes print to the PDF file in three columns set at 8 ½ x 11 inches, and each column of notes is identical in appearance to a fold of notes on regular steno paper.
- ***Folder Names for Steno Notes and PDF Files on the Court Reporter's PC.*** The raw notes files and the PDF files will be stored in a folder on the court reporter's computer, with a subfolder created for each month and year. For example, if the main steno note folder is C:\StenoNotes, then the folders for the first three months of 2007 would be named c:\stenonotes\jan2007, c:\stenonotes\feb2007, and c:\stenonotes\mar2007. The court reporter will print the steno

notes to PDF and save the PDF files, along with the raw steno notes files, in the appropriate month/year folder.

- ***Steno Notes and PDF File Names.*** Adobe PDF files created from steno notes shall be named with the date or date range of the proceedings plus a dash character “-“ plus the court reporter’s initials (first-middle-last), in the format: ddmmyy-fml.pdf or ddmmyy-ddmmyy-fml.pdf. Steno notes files should follow this date-name convention, with the exception of the fact that the file extension will be the extension employed for steno notes created by the court reporter’s particular CAT software.
- ***Creating Archive CDs or other media.*** All steno notes files plus all PDF files for each month for each court reporter will be written to one compact disk (CD) or other appropriate removable storage media that may be designated by the court reporter supervisor. The court reporter will create a label to adhere to the month’s CD or other medium. The label will contain the court reporter’s certification language as well as lines on which to provide the judicial officer(s), dates of the notes, and the court reporter’s signature.
- ***Archive Storage.*** Within 30 days following the close of a month, the court reporter will file that month’s CD or other approved storage medium in a common storage cabinet designated by the court reporter supervisor.

APPENDIX C

Florida Rules of Judicial Administration

Rule 2.535. Court Reporting

- (a) **Definition.** “Court reporting” means the act of making a verbatim record of the spoken word, whether by the use of written symbols, stenomask equipment, or electronic devices, in any proceedings pending in any of the courts of this state, including all discovery proceedings conducted in connection therewith, and all proceedings required by statute to be reported by a certified or official court reporter. It does not mean either the act of taking witness statements not intended for use in court as substantive evidence, or the act of electronic recording and transcription of proceedings as provided for in subdivision (g)(3).
- (b) **When Court Reporting Required.** Any proceeding shall be reported on the request of any party. The party so requesting shall pay the reporting fees, but this requirement shall not preclude the taxation of costs as authorized by law.
- (c) **Record.** When trial proceedings are being reported, no part of the proceedings shall be omitted unless all of the parties agree to do so and the court approves the agreement. When a deposition is being reported, no part of the proceedings shall be omitted unless all of the parties and the witness so agree. When a party or a witness seeks to terminate or suspend the taking of a deposition for the time necessary to seek a court order, the court reporter shall discontinue reporting the testimony of the witness.
- (d) **Fees.** The chief judge shall have the discretion to adopt an administrative order establishing maximum fees for court reporting services not covered in the plan adopted pursuant to subdivision (g). Any such order must make a specific factual finding that the setting of such maximum fees is necessary to ensure access to the courts. Such finding shall include consideration of the number of court reporters in the county or circuit, any past history of fee schedules, and any other relevant factors.
- (e) **Transcripts.** Transcripts of all judicial proceedings, including depositions, shall be uniform in and for all courts throughout the state. The form, size, spacing, and method of printing transcripts are as follows:
- (1) All proceedings shall be printed on paper 8 1/2 inches by 11 inches in size and bound on the left.
 - (2) There shall be no fewer than 25 printed lines per page with all lines numbered 1 through 25, respectively, and with no more than a double space between lines.
 - (3) Font size or print shall be 9 or 10 pica, 12-point courier, or 12-point Times New Roman print with no less than 56 characters per line on questions and answers unless the text of the speaker ends short of marginal requirements.

- (4) Colloquy material shall begin on the same line following the identification of the speaker, with no more than two spaces between the identification of the speaker and the commencement of the colloquy. The identification of the speaker in colloquy shall begin no more than 10 spaces from the left margin, and carry-over colloquy shall be indented no more than five spaces from the left margin.
 - (5) Each question and answer shall begin on a separate line no more than five spaces from the left margin with no more than five spaces from the "Q" or "A" to the text. Carry-over question and answer lines shall be brought to the left margin.
 - (6) Quoted material shall begin no more than 10 spaces from the left margin with carry-over lines beginning no more than 10 spaces from the left margin.
 - (7) Indentations of no more than 10 spaces may be used for paragraphs, and all spaces on a line as herein provided shall be used unless the text of the speaker ends short of marginal requirements.
 - (8) One-line parentheticals may begin at any indentation. Parentheticals exceeding one line shall begin no more than 10 spaces from the left margin, with carry-over lines being returned to the left margin.
 - (9) Individual volumes of a transcript, including depositions, shall be no more than 200 pages in length, inclusive of the index.
 - (10) Deviation from these standards shall not constitute grounds for limiting use of transcripts in the trial or appellate courts.
- (f) **Reporter as Officer of Court.** A court reporter is an officer of the court for all purposes while acting as a reporter in a judicial proceeding or discovery proceeding. The court reporter shall comply with all rules and statutes governing the proceeding that are applicable to court reporters.
- (g) **Court Reporting Services Provided in Mental Health Proceedings or at Public Expense.**
- (1) *When Reporting Required.* All criminal and juvenile proceedings, and any other judicial proceedings required by law or court rule to be reported at public expense, shall be reported.
 - (2) *Circuit Plan.* The chief judge, after consultation with the circuit court and county court judges in the circuit, shall enter an administrative order developing and implementing a circuit-wide plan for the court reporting of all proceedings required to be reported at public expense using either full or part time court employees or independent contractors. The plan shall ensure that all court reporting services are provided by qualified persons. This plan may provide for multiple service delivery strategies if they are necessary to ensure the efficient provision of court reporting services. Each circuit's plan for court reporting services shall be developed

after consideration of guidelines issued by the Office of the State Courts Administrator.

- (3) *Electronic Recording and Transcription of Proceedings Without Court Reporters.* A chief judge may enter a circuit-wide administrative order, which shall be recorded, authorizing the electronic recording and subsequent transcription by persons other than court reporters, of any judicial proceedings, including depositions, that are otherwise required to be reported by a court reporter. Appropriate procedures shall be prescribed in the order which shall:
- (A) set forth responsibilities for the court's support personnel to ensure a reliable record of the proceedings;
 - (B) provide a means to have the recording transcribed, either in whole or in part, when necessary for an appeal or for further use in the trial court; and
 - (C) provide for the safekeeping of such recordings.

The presiding judge in a specific case, however, may require a court reporter, if available, or either party may provide and pay for the cost of a court reporter. Such court reporter shall be subject to the orders of the court and directions to transcribe the record from all parties.

- (4) *Grand Jury Proceedings.* Testimony in grand jury proceedings shall be reported by a court reporter, but shall not be transcribed unless required by order of court. Other parts of grand jury proceedings, including deliberations and voting, shall not be reported. The court reporter's work product, including stenographic notes, electronic recordings, and transcripts, shall be filed with the clerk of the court under seal.
- (h) **Court Reporting Services in Capital Cases.** On or before January 1, 2001, the chief judge, after consultation with the circuit court judges in the circuit, shall enter an administrative order developing and implementing a circuit-wide plan for court reporting in all trials in which the state seeks the death penalty and in capital postconviction proceedings. The plan shall require the use of all measures necessary to expedite the preparation of the transcript, including but not limited to:
- (1) where available, the use of a court reporter who has the capacity to provide real-time transcription of the proceedings;
 - (2) if real-time transcription services are not available, the use of a computer-aided transcription qualified court reporter;
 - (3) the use of scopists, text editors, alternating court reporters, or other means to expedite the finalization of the certified transcript; and
 - (4) the imposition of reasonable restrictions on work assignments by employee or contract court reporters to ensure that transcript production in capital cases is given a priority.

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