



Nevada Court Reporters Association
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An Analysis of Court Reporting and Digital Recording in the Nevada Courts

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Introduction

The Nevada Court Reporters Association has retained Justice Served®, a court management consulting firm, to provide a cost analysis of court reporting versus digital recording in the Nevada courts for the purpose of providing sufficient information to judicial decision-makers faced with altering the method of capturing the verbatim record as a result of budgetary pressures.

On the surface, it appears there are universal cost savings by replacing court reporters with digital recording equipment. However, there are a significant number of factors and quality issues to take into consideration in order to make an informed decision.

This study looks at the dynamics of digital recording, the dynamics of court reporting, the experience of other states faced with similar decisions, a comparison of transcript costs using both methodologies in a five-day trial, and a set of policy recommendations resulting from this examination.

The research was conducted and this report was prepared by Chris Crawford, a leading expert on judicial administration and the management of court reporter operations, and president of Justice Served®, a court management and technology consulting firm. For more information about Justice Served, visit www.justiceserved.com.

In his 37 years of experience as a California court administrator and private sector court management consultant, Crawford worked extensively in court reporting operations. He headed the court reporting office for the Los Angeles Municipal Court with over 90 court reporters on staff. He has also written several reports analyzing court reporting technologies and verbatim record dynamics for various state court reporter associations and the Association of Federal Court Reporters.

Executive Summary

Court leaders throughout the United States are making transformational decisions about how to continue delivering court services in this era of prolonged financial crisis. Among these decisions are how to capture the verbatim record and produce transcripts in a cost-effective manner, yet maintain the integrity of the court record.

46 of the 50 US states use some form of digital recording¹ (DR) and all but a handful use a combination of court reporters and DR. Various court jurisdictions throughout the US are considering whether to expand DR or even replace court reporters altogether as a cost-saving measure; some courts have already done so. In this report, we study this question of cost savings in Nevada courts by examining efforts in other states, and a side-by-side comparison of court reporting and DR in a sample Nevada jurisdiction.

What this examination reveals is that the budgetary impact does not result from a court reporter being replaced by technology, but by equipment and replacement staffing. Even if salary savings ensue from the salary differential between a court reporter and DR monitor, the overall costs still favor a court reporter, especially if a transcript is required, when the following issues are taken into consideration:

- Management and supervision.
- Transcript administration, production, delivery, billing, and accounts receivable.
- Court technology and network acquisition, maintenance, upgrade and repair.
- Added productivity from the court reporters' electronic work product, such as note storage, transcript storage/delivery, instantaneous, searchable realtime record, Reporter Electronic Data Interchange, and more.

The matter of transcript preparation and delivery are key components to a comparison of capturing the court record. As independent contractors, court reporters produce and deliver transcripts using privately purchased hardware, software, computer networks, supplies, shipping costs and even labor; the hardware and software must be regularly updated. A major shift to DR would require that individual Nevada court jurisdictions purchase recording equipment, hard-wire courtrooms, fund technology improvements (including updates) to support the capture, transmission and storage of massive digital audio files, and become the primary administrator of transcript production and delivery operations.

The experience of other states with expanded use of DR is that this policy shift resulted in the need to address several unintended consequences to widespread DR usage, including:

- Lack of standards in regards to DR staffing to monitor the equipment and annotate the recordings.
- The need for the court to exert quality control over choice and qualifications of transcribers.
- Liability associated with recording of privileged conversations between attorneys and their clients.
- The need to specify what is the "official" court record - the recording or a transcript (and even which transcript when the same DR record is produced by opposing counsel)?

In low-impact cases where transcripts are not often needed in Nevada courts, DR can be a cost-effective choice. However, the higher the stakes and the higher the need for a transcript, court reporters are more cost-effective.

¹ We define digital recording in this report as both analog and digital, and both audio and video.

1. The Dynamics of Digital Recording (DR)

Use of tape recorders in courts has evolved significantly over time, beginning with analog tape used mostly in courts where either the low-impact nature of proceedings (such as traffic or small claims) or the scarcity of court reporting resources in rural and remote jurisdictions drove the decision-making. The dynamics changed in the 1980s with the widespread use of video as the verbatim record-making method of choice in Kentucky, and the evolution of digital technology in the 1990s has now rendered audio recording as a viable option. The financial crisis beginning in 2008 has now accelerated the move to replace court reporting with DR using the justification of substantial cost savings resulting from the shift.

Two significant guiding policy resources address the use of DR in courts:

Making the Verbatim Court Record Miniguide, published in 2007 by the National Association for Court Management (NACM)²

Digital Recording: Changing Times for Making the Record, a white paper developed in 2009 by the Conference of State Court Administrators (COSCA)³

The salient portion of the NACM Miniguide publication is Chapter 4 *Decision Criteria / Factors – Identifying the Most Appropriate and Cost Effective Verbatim Record Method*, and in particular Section 4.2 entitled “Cost Considerations” with the following decision matrix:

² An online version of this publication is not available, but an order form is provided on the NACM website at <http://www.nacmnet.org/publications/pubsorderform.pdf>

³ A downloadable version of this white paper is available at <http://cosca.ncsc.dni.us/WhitePapers/DigitalRecording-Jan-2010.pdf>

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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 the 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

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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, CD’s, DVD’s, servers) • Equipment service and repair
Long term storage	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 prepare for periodic refreshing of storage media and for the ability to migrate to new playback software and equipment over time.	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.
Other supplies	<ul style="list-style-type: none"> • Note paper • Office space 	<ul style="list-style-type: none"> • To the extent dedicated staff are used to operate or manage the electronic record. • When not attending to DR monitoring duties, these staff could be deployed to other clerical tasks.

While the NACM Miniguide offers guidelines to assist decision-makers in choosing the most appropriate method of capturing the verbatim record, the COSCA White Paper recommends DR over court reporting and cites several factors in defense of this position, including a decline in court reporter resources. However, in their portrayal of *Efficient, Timely Transcript Production and Access to the Record*, several important

factors are missing⁴ including the question of whether or not dedicated staffing of DR equipment is needed.

This is a significant cost factor, yet most cost savings projections are attributable to merely replacing a court reporter with DR equipment. When DR equipment *and* staffing are factored in, the cost savings rapidly diminish. According to the American Association of Electronic Reporters and Transcribers (www.aaert.org), *(a)t all times, electronic recording equipment should be overseen by an experienced reporter, who also takes simultaneous notes regarding the proceedings. In digital systems, these notes can be very extensive, indeed. (Digital annotations are time-linked to the corresponding audio, so one can instantly go to that point in the record to re-listen to the actual testimony or colloquy or review the accuracy of an interpreter's translation.)*

Merely assigning DR monitoring duties to a judicial officer, courtroom clerk or bailiff is ill-advised and ignores the substantive duties for which these individuals are primarily responsible. As an example, a federal study indicated that DR monitoring duties, including time spent managing the record, consumed as much as 60.4% of a courtroom clerk's time⁵; this is hardly feasible when courtroom clerks have so many other responsibilities such as swearing in witnesses, checking in parties, monitoring the calendar, logging/tracking exhibits, locating/managing files, tracking judicial pleadings, writing up judicial sentences, answering phones, entering dispositions in the case management system and otherwise assisting the judge in caseload management.

As a means of improving DR staffing cost savings, some DR vendors offer the ability for a single monitor to handle up to four courtrooms simultaneously, thereby substantially reducing the personnel costs associated with DR; but the COSCA White Paper offers no guidelines as to when and under what circumstances such multiple courtroom monitoring is appropriate (see Chapter 3 of this report for Florida's recommendations on the DR staffing formula). Intuitively, one would conclude that the more serious the case the more justification for a one-to-one DR staffing ratio.

Another important aspect of a court's decision to use court reporting or DR is the cost and effort of preparing a transcript. Chapter 4 of this report compares transcript preparation costs comparing court reporting and DR, and provides deeper background on the transcription preparation process. The bottom line is less effort is required to produce a written transcript from a hearing captured by a court reporter versus an electronically recorded hearing due to (1) the use of computer-aided transcription software by court reporters, and (2) courts that do not now manage transcript production would have to create this administrative structure in order to do so. The COSCA White Paper sees managing transcript production as an issue of control citing that (1) most proceedings do not require transcription, and (2) courts should have the flexibility to assign these tasks to internal staff or contractors. In effect, court reporters, even those who are salaried court employees, currently act as contractors for the purpose of preparation of transcripts because the Fair Labor Standards Act allows court reporters to act in a dual capacity of public (or quasi-public) sector employee to capture the

⁴ The National Court Reporters Association has rebutted several other aspects of the COSCA report in an open letter at <http://ncraonline.org/NR/rdonlyres/D8E7C915-E8F5-4D46-A6C6-6F6A28834A32/0/NCRAletteronCOSCAwhitepaper.pdf>.

⁵ Source: NACM Making the Verbatim court Record Miniguide, cited in the decision criteria matrix on Page 4 of this report.

record, yet act as a private sector independent contractor when preparing a transcript. Presumably, this anomaly exists to promote efficiency and timeliness (a privatization of sorts) while avoiding the need to pay overtime.

The final issue regarding DR worthy of note is that in Nevada, the Federal Courts, the State Gaming Control Board and Nevada Gaming Commission all experimented with tape recording but returned to the use of court reporters in 1995. The Federal Courts have since opted for realtime court reporters, as Texas and Nebraska federal judges have done. The Gaming Control Board and Nevada Gaming Commission tried tapes for three years and, after incurring higher costs and receiving inferior service, went back to court reporters.

2. The Dynamics of Court Reporting

Even if they are salaried court employees when reporting the court record, when preparing transcripts, official court reporters in Nevada courts act as independent contractors and therefore bear all production costs, and work mostly after hours and on weekends. These court-reporter-paid costs include personal labor for production; purchase, update and use of computerized technology; purchase of supplies; hiring of support personnel; and delivery. When the court orders a transcript, it is filed within the court-directed or statutory time requirements.

The Nevada courts would be hard-pressed to achieve the free-market efficiencies in terms of timeliness and cost for production that court reporters produce as private contractors working on a profit incentive. If the court were responsible for the current methodology of transcript production, court reporters would have to be paid straight salary to produce transcripts during an eight-hour workday, the vast majority of which is currently spent capturing the record in the courtroom. Replacing the court reporter would mean that the court would be required to (a) pay overtime to existing court reporting staff; (b) hire additional court reporting staff; (c) hire or contract for transcription staff; or (d) a combination, all of which would increase the cost and time needed to produce transcripts.

It is important to note that the court does not currently pay overtime to court reporters because after-hours time spent producing transcripts is performed by the reporter as a private contractor. This public/private employment relationship is unique to the official court reporting profession and rarely found elsewhere. It is recognized by U.S. statute in the Fair Labor Standards Act, which was amended in 1995 to allow this unique "privatization" and relieves the courts from having to pay overtime for work demands that easily exceed 40 hours per week.

Like other professions, court reporting has been dramatically affected by technology. However, what sets court reporters apart are two distinctions: First, these technologies are privately funded by individual court reporters at no expense to the courts they serve; and second, court reporters have been "early adopters" of technology for the past 25 years -- much earlier than a vast majority of the courts they serve. For example, over 98% of court reporters in Nevada use Computer Aided Transcription (CAT) for reporting and preparing transcripts of proceedings. Transcripts prepared by court reporters are backed-up for redundancy, significantly reducing instances of lost records, and they are capable of storage in web repositories for wider accessibility. In fact, Nevada law requires court reporters to maintain an archive of their notes for eight years, if done so electronically, in two electronic formats for safeguard purposes.⁶

The reason for this phenomenon is simple. In their role as private contractors producing transcripts, official court reporters are highly motivated to improve productivity. Investing in developing technology is a business necessity driven by a free market incentive. The side benefits to the courts, lawyers and litigants are impressive. CAT technology not only helps the court reporter to quickly produce a transcript, but proficient court reporters are able to simultaneously create and display a rough draft of the verbatim record at the time the proceedings occur. This feat is called Realtime reporting that judges, attorneys,

⁶ NRS 656.335 (<http://www.leg.state.nv.us/NRS/NRS-656.html#NRS656Sec335>) and NAC 656.410 (<http://www.leg.state.nv.us/nac/NAC-656.html#NAC656Sec410>).

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litigants, and others are quickly learning to use to improve their own productivity. This instant display and text file of the spoken word allows judges, lawyers, clerks, interpreters, and others to add notes and annotations for current or later needs.

By changing the nature of their "product" from a paper transcript to a digital file, court reporters have provided several additional opportunities for cost savings and improved productivity by the court and its users. Some of these include digital storage, electronic transcript delivery, incorporation of the verbatim record into the court's case management system and electronic data interchange between the reporter and clerk to ease keystroke data entry tasks related to updating the court's data system.

Unlike other Nevada public employees, court reporters in nearly all jurisdictions in the state must personally pay for a wide variety of technology, and even staffing, in order to perform their dual role of court employee (to capture the verbatim record) and private contractor (to produce transcripts). Since the Nevada courts are not centralized and therefore operate by differing rules, most court reporters are not allowed to use court equipment for transcript production, nor are associated costs such as a reporter's equipment, technology and office supplies paid by an overwhelming number of Nevada court jurisdictions. Exceptions are rare.

These annual and start-up costs are as high as \$23,000 or more for technology, equipment and supplies, and could run as high as \$15,000, \$20,000 to \$30,000 or more for staffing. The choice to hire transcript production staff differs from reporter to reporter, and the decision is largely driven by the amount of transcript workload. A reporter could decide to hire only a scopist (editor of court reporting notes), only a proofreader, both or neither. There is no choice when it comes to technology, equipment and supplies – these are necessary and ongoing costs.

Accordingly, court reporters have made a significant investment in technology and productivity, which benefits the court in the form of low cost and rapid transcript production. A detailed breakdown of court reporter-paid costs is provided in the following tables:

STAFF COSTS

<i>Annual Volume of Transcript Production</i>	<i>Scopist (\$1.25-1.50 per page)</i>	<i>Proofreader (40¢ per page)</i>
1,000 pages	\$1,500 per year	\$400 per year
5,000 pages	\$7,500 per year	\$2,000 per year
10,000 pages	\$15,000 per year	\$4,000 per year
25,000 pages	\$37,500 per year	\$10,000 per year
<i>NOTE: The decision to hire a scopist (editor of court reporting notes) and/or a proofreader is optional and differs from reporter to reporter, and the decision is largely workload-driven. Higher scopist and proofreader rates apply for an expedited transcript.</i>		

EQUIPMENT AND SUPPLY COSTS

Hardware, Software, Supplies, Etc. (replacement cycle indicated in parentheses)	Initial Cost	Annual Cost
Software: Transcript prep & billing (3-4 years)	\$3,995	
Hardware: Stenotype machine (5 yrs), laptop & desktop computers (3-4 yrs), two printers (4-5 yrs), photocopier (leased), fax machine (5 years) and necessary updates.	10,180	\$3,000
Supplies: Copy paper (25+ boxes X \$30), stenotype ribbons (\$15 x 3), carrying case (7 yrs), printer toner \$125+ x 10, cables, serial converter, connectors (5 yrs), fax toner (\$35 X 4), binding equipment & supplies (6 boxes/yr @ \$40 per 100+shipping), office supplies, "original" & "copy" stamps, packaging material, diskettes, address labels, research material, business cards, CDs.	420	3,035
Other: Stenotype machine (annual maintenance, support for software, including updates), Internet provider, wheel cart (5 yrs), home office furniture (5 yrs), training/seminars, training/vendor, postage, professional dues, certification/license, equipment insurance, cell phone, liability insurance.	570	3,997
Investment in equipment and supplies	\$15,165	
Annual ongoing costs	\$10,032	
Combined costs (start-up and annual)	\$25,197	

It is important to note that Nevada is a decentralized state when it comes to court governance, so in limited circumstances cost reimbursement decisions are left to individual jurisdictions. However, as a standard practice jurisdictions do not pay these costs and require that court reporters do so in the scope of their employment. Exceptions are rare.

3. The Experience in Other States

While technical and human error problems can occur with both court reporting and DR, there are many more documented instances of these problems in the use of DR. Having to retry a case or conduct a new hearing to recapture a lost record is a staggering price to pay for a “cost savings” that doesn’t hold up under analytical scrutiny. Here are some examples of digital recordings gone wrong:

Queensland Courts, Australia – (December, 2010) Supreme Court Chief Justice Paul de Jersey warned that the poor performance of the State Reporting Bureau presented a “concerning and continuing challenge to the reliable administration of justice in Queensland and must be urgently addressed.” The problems include error-ridden, incomplete or delayed transcripts resulting from a digital recording that replaced court reporters in several court jurisdictions. *Brisbane Times, Dec 14, 2010*

US District Court for the District of New Jersey - (March, 2010) An appeal from a criminal judgment of conviction in the Third Circuit US Court of Appeals found the trial record to be incomplete. The appellants identified approximately 10,000 indiscernible and/or inaccurate portions of the trial and sidebar transcripts, all of which required substantive corrections. After audio was recorded onto discs and later transcribed by a transcription service, the District Court was required to devote months of time reviewing the audio recording of the entire 8-month trial, including sidebars. That review found four recording discs that were defective and couldn't even be reviewed and are now being reviewed by an expert computer service. Despite the District Court's best efforts, the record is not certifiable at this point.⁷

Essex County, NJ – (Nov 2007) A mistrial caused by a courtroom recording failure may have cost a medical malpractice plaintiff in Essex County up to \$560,000 of a high-low settlement, and it is stirring calls for more court reporters in New Jersey courts.

Portland, OR – (February 2004) A series of missing or inaudible recordings leads to editorials calling for a revisit of replacement of court reporters with DR. These instances include one hour of missing key witness testimony in a 2003 murder case; a retrial of a 2002 complex civil environmental case because the DR failed to record proceedings onto a CD; attorneys handling criminal appeals saying their clients’ rights are compromised by inaudible portions of recordings; and attorneys hiring their own court reporters for fear of an inaccurate court record.

Bryan TX – (December 2000) When Judge-Elect Rick Davis considered whether to use a court reporter or electronic recording in the 272nd District Court, he compared three trial transcripts – one produced by a court reporter and two produced by a DR transcriptionist. The comparative error rates were staggering:

Case	Transcript volumes	Total # of pages	# of inaudibles / errors	% Error per page
State v Robinson (Court reporter)	9	1,288	8	>1%
State v Smith (DR)	6	717	171	24%
State v Nutall (DR)	3	304	45	15%

⁷ The motion is available at <http://www.depoman.com/downloads/DigitalAudioOnAppeal.pdf>

The best case studies of the choice between court reporting and DR can be found in the experiences of California and Florida, which follow.

The California experience with DR

In the past three decades, the California Courts and the California Legislature have struggled more than a dozen times with the prospect of replacing court reporters with DR in the state trial courts based upon the belief that such a change would result in substantial costs savings. These efforts are most often triggered by state budget shortfalls and the belief that advancements in DR technology render the use of court reporters to be less cost effective.

While some minor court proceedings are electronically recorded in the state, most proceedings utilize a court reporter using computer-aided-transcription technology. The latest attempts at widespread implementation of DR centered on recommendations by the CA Legislative Analyst that speculated upwards of \$111 million in annual costs savings would result. *In the past two years, this proposal has been rejected three times* because lawmakers considered four major drawbacks to such a policy shift:

1. Replacing court reporters with DR would result in substantial costs associated with retirement and severance payments to departing court reporters;
2. Purchasing DR equipment and hard-wiring courtrooms to replace court reporters would result in substantial start-up costs;
3. Replacing court reporters with DR equipment also required the hiring of DR monitors, thereby resulting in substantially less cost savings; and,
4. The productivity loss to judges and attorneys having to review an audio versus a written record, coupled with substantial transcript preparation cost increases associated with a DR record outweighed purported cost savings.

As part of this ongoing evaluation, the California Judicial Council created a *Reporting of the Record Task Force* in April 2002 and charged it with evaluating how court reporting services are provided. Over its two-year term, the task force developed recommendations for the future of court reporting in the state, covering such policy issues as transcript format, training needs, electronic transcripts, and the challenges in recruiting and retaining qualified shorthand reporters. Widespread use of DR was considered and rejected by the task force in their final report.⁸

Despite crushing budget deficits and tempting recommendations from legislative staff that substantial costs savings would ensue, California policy and law makers rejected the wholesale replacement of court reporters with DR. The CA Administrative Office of the Courts was among the many stakeholder groups testifying against such a proposal at budget hearings.

⁸ *Final Report of the Reporting of the Record Task Force*, February 18, 2005, <http://www.courtinfo.ca.gov/jc/documents/reports/0205item7.pdf>.

The Florida experience with DR

Like many states, Florida has grappled with economic hardship for several years in a row, partly attributable to tax structure and politics, and partly attributable to natural disasters such as hurricanes. Even though limited use of DR was authorized by statute in 1995, in a continuing effort to find cost savings the state pushed the widespread replacement of court reporters with DR in July, 2004, the first step of which was to shift the cost of managing the court record from local to state government.⁹

Despite this major push in 2004 to replace court reporting with DR, today *every circuit (general jurisdiction) court uses a mix of court reporting and DR service delivery methods*. Approximately twice as many proceeding hours are digitally recorded compared to court reporting.

While all outward appearances indicate cost savings and a seamless transition to at least partial replacement of court reporting services, the Florida Commission on Trial Court Performance & Accountability (CTCPA) has issued three reports¹⁰ on the subject that address several administrative policy and related DR issues, including:

- A determination was needed that the official record of court proceedings is the *transcript*, not an electronic recording;
- A rule was promulgated finding that the electronic recording was not a public record, and the court “owned” it and thereby controlled access to it;¹¹
- The court needed to be immunized from legal liability associated with unintended interception of privileged oral communications by DR equipment, including attorney/client communications;
- Before a court sells an DR record, it should ensure that inappropriate content is redacted (a labor intensive process);
- It is incumbent upon the court to provide an accurate record maintained by qualified staff – asking courtroom clerks or bailiffs to assume these chores is not the preferred solution;
- Instances of recording inappropriate content increased when DR equipment was unmonitored;

⁹ Revision 7 to Article V of the Florida Constitution, which shifted several due process costs from local to state government.

¹⁰ The first report was December 2002

(http://www.flcourts.org/gen_public/pubs/bin/crtreporting_pubs1.pdf) that anticipated implementation of DR, the second was in February 2005

(http://www.flcourts.org/gen_public/pubs/bin/crtreporting_pubs2.pdf) and the third was October 2007

(http://www.flcourts.org/gen_public/court-services/bin/TCPACtReportingFinalReport.pdf).

¹¹ Subsequent to the latest CTCPA report, the FL Supreme Court ruled that the DR record is indeed a public record and the trials courts had no right to restrict access to it (July 16, 2009, SC08-1658 In re: Amendments to the Florida Rules of Judicial Administration and the Florida Rules of Appellate Procedure – implementation of Commission on Trial Court Performance and Accountability recommendations, <http://www.floridasupremecourt.org/decisions/2009/sc08-1658.pdf>).

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- Instances of equipment problems, inaudible portions and unrecorded proceedings increased when the DR record was unmonitored;
- Giving DR records to parties provided opportunities for modification of the record and/or errors associated with use of untrained transcribers; and,
- Both audio and video recording has advanced technologically so that digital recording is the preferred method over analog, yet many courts still use analog equipment.

What is clear from the Florida experience is that there are a myriad of administrative issues that must be addressed before DR is implemented in a trial court. When mandated and recommended best practices accompany implementation, additional costs are incurred in the form of appropriate equipment and adequate staffing by dedicated DR monitors. The budgetary impact is not that a court reporter is being replaced by technology, but by equipment and replacement staffing - even if salary savings ensue from the salary differential between a court reporter and DR monitor. This differential increases when a DR monitor handles multiple courtrooms simultaneously, but these instances should be driven by the complexity and severity of the proceeding types, as is the recommendation in the 2007 CTCPA Florida report. The costs associated with management and supervision of DR monitors and the transcription process were not addressed.

None of this discussion concerning the Florida experience addresses the loss of productivity associated with judges and lawyers having to review electronic recordings as opposed to transcripts, the additional costs for transcription of a DR record, and the loss of potential productivity associated with court reporters using Realtime technology to make the written record instantly available to the users.

4. Transcript Cost Comparison

The best comparison of transcript production costs is an analysis of court reporting and DR side-by-side in a five-day trial. In order to do so in a diverse state such as Nevada, we must choose a sample court jurisdiction, in this case Washoe County, which encompasses the greater Reno area. Each of the cost elements, calculations and related issues are described in detail as follows:

<i>Cost Component</i>	<i>Court Reporter</i>	<i>Digital Recording</i>
1. Personnel (5 days)	\$ 850	\$1,205
2. Transcript (1,000 pgs, Orig+2)	\$4,100	\$6,250
<i>SUBTOTAL</i>	<i>\$4,950</i>	<i>\$7,455</i>
3. Delivery costs	\$ 0	\$ 14
4. Tech acquisition/maintenance	\$ 0	\$ 35
5. IT network upgrades	\$ 0	\$ 223
6. Added servers	\$ 0	\$ 75
7. Management overhead	\$ 16	\$ 50
<i>TOTAL COST COMPARISON</i>	<i>\$5,645</i>	<i>\$7,852</i>

1. Personnel (5 days) – The per diem rate for a court reporter in Nevada is set by statute at \$170/day; there are no salaried court reporter positions and these positions do not perform DR monitoring duties. There is no consistent per diem or salary figure for DR monitors in Nevada because (a) DR is in scarce use, and (b) court jurisdictions use differing compensation rates. A private court reporting firm in Washoe County charges \$190/day for a court that uses DR, such as family court, while the Clark County District and Justice Courts pay salaries ranging from \$48,422 to 52,291 for Court Transcriber I and II positions dedicated to these tasks; averaging these two salaries, adding 30% for benefits and dividing by 225 (number of court days available) comes to \$291 as a daily rate. Splitting the difference between the private sector rate and Clark County salaries comes to a daily rate of \$241, which we will use as a representative rate for DR personnel costs.

2. Transcript (1,000 pages) – 1,000 pages of transcript is the estimated output from a five-day trial. For a court reporter-produced transcript, the statutory transcription rate is \$3.55 per page for an original and one copy; additional copies are 55 cents-per-page. These rates have not changes in over 11 years. For a transcript produced from DR, a survey of local transcription providers showed a range of \$6.75 per page for an original and one copy; additional pages at \$2.50 each. Clark County courts uses the salaried Court Transcriber positions to perform both DR monitoring and transcription tasks, but excess transcript demands result in either contracting elsewhere, the need for additional transcribers or overtime. For this purpose, we will use \$5.00 to transcribe an original and one copy from a DR recording, and \$1.25 per page for additional copies. These calculations for 1,000 pages of transcript appear in the table, and a typical order of an original and two copies.

3. Delivery costs – The US Postal Service rate of \$14.50 covers a large flat-rate Priority Mail box carrying approximately 25 pounds of printed transcript. Court reporters privately fund these costs. Overnight rates for private carriers run as high as \$383.00 for

this volume of paper, but presumably these added costs would be passed along to those demanding earlier delivery. DR would require management and tracking of these pass-along costs, while court reporters would do so in the course of their transcript production duties.

4. Tech acquisition and maintenance – The cost to purchase a single DR unit is approximately \$2,800, hard-wire installation is approximately \$20,000, and a one-year maintenance agreement is approximately \$200. As with all technology, DR equipment must have a life-cycle replacement, which we estimate to be every five years. If these equipment, maintenance and hardwire costs are amortized over a five-year period of time, the daily rate translates to \$7.
5. IT network upgrades - DR would place a substantial added burden on a court's IT computer network infrastructure attributable to the creation, transmission and storage of large digital audio files. Costs associated with network upgrades to support DR files would be approximately \$10,000 annually. The daily costs would translate to \$89, which are then multiplied by five. There is no need for a network upgrade to support court reporter operations.
6. Added servers - Costs associated with additional servers to support the storage area network for large DR files is approximately \$17,000 every five years, which translates to a daily rate of \$15. These estimates do not include additional IT personnel, if needed. No server enhancements are required to support court reporter operations.
7. Management overhead – This is a less scientific but nonetheless real cost to account for management overhead needed to support DR. Examples of these management tasks are the need to set up accounts receivable protocols to bill for transcripts, manage transcript orders, and generally supervise DR monitors who do not possess as high a level of professional training as a prerequisite of hiring compared to court reporters. By virtue of their professional training and independent contractor status producing transcripts, court reporters require minimal supervision, which is typically limited to coordination of assignments. \$10-a-day to account for overhead costs to manage DR is a reasonable assumption.

It is clear from this side-by-side comparison that even if the Washoe County Courts were successful in forcing either court reporters or some private transcription service to charge identical transcription rates as court reporters, the cost differential is still higher for DR compared to court reporting to produce a transcript from a five-day trial. Putting salaried transcribers on payroll to perform these tasks begs the issue of staffing formulas that would allow these individuals to both monitor the DR equipment and transcribe the outcome. The result is either higher staffing or overtime, neither of which are incurred with court reporters.

Most court jurisdictions have found that transcription costs are higher for DR recordings because they are simply more difficult to produce and free-market cost pressures prevail. It is also equally clear that even if a transcript is not required, the costs for DR staffing alone is higher compared to court reporting; these costs are exacerbated when transcript delivery, IT infrastructure improvements and management overhead are added.

Since court reporters operate largely as independent agents, minimal supervision is needed compared to DR except for coordinating assignments and some administrative support. Court reporters also privately fund technology acquisition, maintenance, upgrades and networking, while DR requires that most courts substantially upgrade their computer network to support the creation and transmission of digital audio and video records, which are quite large compared to documents and other electronic files. Additional servers are also needed to accommodate storage and retrieval of these files.

5. Recommendations

For cost savings in low impact cases that have reduced need for a written transcript, DR can be an appropriate choice to supplement court reporting resources. However this practice should be select, not widespread, and should take into consideration the administrative impact and policy considerations that must accompany such a move, including the need for dedicated DR monitor staffing, qualified transcription services, technology infrastructure improvements and safeguards to reduce instances of equipment malfunction and inappropriate recording/transcription of portions of the record that violate privacy issues such as attorney-client privileged communication discussions.

Widespread replacement of court reporting with DR would result in substantial hidden and shifting costs that may impact the quality of justice, the productivity of those who work in the system, and the timeliness of case processing, as follows:

- **Productivity** – The role of a court reporter is not merely to “capture” the verbatim record and transcribe it when needed; it is to provide enhanced productivity to judges, attorneys, parties and court staff in dealing with the court record and managing information. The most significant impact of replacing court reporters with DR is the resulting loss in productivity by judges and key stakeholders, especially when dealing with complex cases. A good example is the need for “readback” of past testimony that can be performed instantly by a court reporter by a word or name search of the text-based record, while DR is incapable of this search unless annotated at the time of the recording, resulting in substantial delay while the testimony is located.
- **Transcript Production** – Nevada courts spend a substantial amount on transcript production; most independent analyses of transcript production costs show that producing a transcript from an electronic recording is more costly and less timely than one produced by a court reporter, most of whom use privately funded computer-aided-transcription software and hardware to achieve this productivity. The statutory fees that courts pay for a court reporter-produced transcript are relatively low compared to free market rates, so that switching to DR will likely drive up costs for transcript production and increase processing delays.
- **Capital Investments in Technology, Management and Staffing** – Even salaried court reporters act in a dual role of “employee” while reporting the verbatim record and “independent contractor” when transcribing that record. Accordingly in most NV jurisdictions, all of the costs for equipment, software, staffing, supplies and management of these processes are privately borne, saving the state millions of dollars in cost avoidance. Moreover, these private investments have ensured that courts reap substantial productivity benefits from state-of-the-art advances in technology. With DR, the individual court jurisdictions would be charged with making these investments and keeping technology current.
- **Accuracy and Certification of the Record** – Court reporters are trained, accredited and highly skilled professionals who prepare accurate transcripts based upon first-hand experience reporting the proceedings, research as to proper names and technical terms, and extensive use of technology and private staffing to produce and proof the record. When a court reporter “certifies” the record, it is an authentication to its accuracy. A transcript produced by a third party from DR is subject to error because all that DR captures is “sound,” which could include background noise, inaudible responses and unintelligible utterances. A “certified” DR transcript is merely an indication that a typist

unconnected to the record has done his or her best to discern its accuracy. Moreover, DR equipment will not inform the monitor that it is not functioning properly, and the discovery that a record is lost does not occur until it is too late. A “re-transcription” of previously transcribed audio files will reveal significant differences in “certified” drafts.

- **“Off-shoring” of Transcript Production** – Court reporters are “guardians of the record” who place high value on the accuracy, impartiality and confidentiality of the court record. Selling audio files to attorneys and others could result in the use of overseas transcription services in an effort to save costs, resulting in violation of privacy, illegal disclosure of protected information, and identity theft. Selling audio files to attorneys and others also introduces opportunities to fraudulently alter the record using digital audio editing software.
- **Accountability** – Since court reporters are licensed, they are more accountable for their qualifications and attention to duty. No such controls exist over DR monitoring staff or privately retained transcript production contractors. Errors and delays in producing transcripts from a DR record have become a way of life in those states that have adopted its widespread use.
- **Replacing Transcripts with a DR Audio File is Not a Cost Savings** – One of the biggest myths about DR costs is that judges, attorneys, parties and court staff are able to review the audio DR files in lieu of a transcript and thereby realize substantial savings. Intuitively, it takes three-to-five-times longer to review an audio file compared to a written transcript; this is especially true of DR records that have not been annotated by a monitor. Widespread use of audio files is highly unproductive and will result in delay, while transcripts are more cost-effective, especially electronic versions of transcripts that are capable of word and name searches.
- **Personnel Cost Savings will Not Occur with DR** – The biggest justification for replacing court reporters with DR is the estimated cost in the form of salary savings by eliminating court reporters. These cost savings are over-projected for two reasons. First, it assumes that most DR monitoring can be done with a single staff person handling multiple courtrooms, or no monitoring staff at all. Every reputable source recommends dedicated DR staff monitoring and differs only when it comes to a formula for how many simultaneous courtrooms can be effectively covered by a single monitor. Second, transcript production cost savings are achieved by a court reporter using computer-aided-transcription software and privately-paid staff, both of which (technology and staffing) would become court costs when using DR.
- **Court Reporter Technologies Yield Substantial Cost Savings** – Court reporters have privately invested in computer hardware, software, telecommunications and staffing to make technological advances available to judges, attorneys, parties and court staff, thereby increasing productivity. One of these technologies, “realtime” instant display of the record for viewing and annotation, is a substantial benefit when efficiently resolving cases. Computerized court reporting, in general, produces electronic transcripts, ease of storage of notes/transcripts, printed concordance indices, condensed printed transcripts and computer-integrated courtrooms, which are substantial improvements in the administration of justice that will be lost with DR. Moreover, a court reporter’s “realtime” record allows courts to make proceedings available to the hearing impaired, while computer-aided-transcription supports sight-impaired users, enabling courts to comply with *Americans with Disabilities* requirements. An emerging court reporter technology called REDI (Reporter Electronic Data Interchange) would ease the keystroke data entry chores of courtroom clerks and speed the updating of the court’s case management

system by selectively marking and transferring case processing information from the court reporter-produced verbatim record. When this feature becomes marketable, the productivity gains for the court will be substantial.

- **The Unquantifiable** - While it is important to present accurate cost figures as we have attempted in this analysis of the financial impact of shifting from court reporting to DR, there are also a substantial number of unquantifiable negative consequences for doing so. It is important to ask *who is in charge of making the record? Are there a chain of players and equipment, or one individual who is responsible and accountable for accuracy and the integrity of the record?* A court reporter is currently the central figure in charge of the record. When the responsibility for the record is shared among several parties, such as a DR monitor, court clerks and court management, chances for errors and delay increase precipitously.

In short, widespread replacement of court reporters with DR does not provide universal cost savings, and the tradeoff is often negative consequences that impact the accuracy, timeliness and integrity of the record, as well as the productivity of judges, attorneys, court staff and litigants. These policy decisions should take into consideration the likelihood of the need for a transcript and the severity or complexity of the cases involved. A set of policy determination criteria should then be developed to determine (1) whether cost savings will occur and if so (2) whether the court has the management and technology infrastructure to absorb the verbatim record enterprise, and (3) whether the quality of the end product is sufficient to ensure the integrity of court proceedings.

Whenever courts examine these issues, it is imperative to have court reporters actively participate in the information gathering and even decision-making process. Capturing and preserving the court's verbatim record is a complex process; producing a transcript from that record is not as straightforward a process as it appears, especially in terms of cost and effort. Moreover, court reporter-paid technology enhancements could be harnessed by the courts to achieve further cost savings that would offset overall costs for court reporting services.