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Emerging Ethical and Legal Issues Related to the Use of Artificial Intelligence (AI), Automatic Speech Recognition (ASR), and Digital Audio Recording in Legal Proceedings

Court reporters are highly trained professionals who share a unique ability to convert the spoken word into information that can be read, searched, and archived. These experts also are known as "guardians of the record" because of their impartiality and role within the judicial process primarily capturing the words spoken by everyone during a court or deposition proceeding. Court reporters then prepare verbatim transcripts of proceedings.

Stenographic machine and voice court reporters are impartial officers of the court who must comply with state laws and federal and state court rules regulating their practice.

The official record or transcript they generate helps safeguard the legal process. By combining their skills with the latest technology, some court reporters provide realtime access to what is said during a trial or deposition for the benefit of all involved parties. A court reporter providing realtime — the only proven method for immediate voice-to-text translation — allows attorneys and judges to immediately access a transcript while also providing a way for people who are deaf or partially deaf to participate in the judicial process.

Artificial Intelligence (AI) and its subsets, such as machine learning, are only among the latest in more than a century of technological advances that have disrupted and ultimately advanced the professions of court reporting and captioning. AI is defined as "a machine-based system that can, for a given set of human-defined objectives, make predictions,

recommendations, or decisions influencing real or virtual environments," according to the National Artificial Intelligence Act of 2020.

As highly trained, tech-savvy professionals, America's court reporters and captioners have long mastered cutting-edge innovations to bring the spoken word to text accurately in real time. Indeed, today's court reporters can accurately capture in writing 225 or more spoken words per minute in real time.

Clearly, court reporters do not fear or avoid technology innovations when they know that such changes are reliable, trustworthy, and strengthen transcript protection, accuracy, access, and speed. However, AI has flaws and is developing so rapidly that even the world's leading AI developers and users are urging caution and greater control by governments. Indeed, more than 1,000 CEOs and AI leaders sent a joint letter in early 2023 to policymakers urging federal and state governments to establish guardrails and standards for the application and creation of AI systems.

These leaders emphasized that AI and the use of machine learning or AI technologies to process human speech into text (known as Automatic Speech Recognition or ASR) are not unimpeachable in their work and outcomes. Such technologies have already proven to be untrustworthy and risky for the court reporting profession, especially when compared to the tremendous human expertise, integrity, and experience of court reporters.

Other leaders and practitioners in the judicial system also have expressed concern and warnings about the growing use, ethics, and influence of AI and ASR in the nation's legal system. The House of Delegates adopted a resolution at the 2023 ABA Midyear Meeting on Monday that addresses how attorneys, regulators and other stakeholders should assess issues of accountability, transparency, and traceability in artificial intelligence.

Resolution 604 calls on organizations that design, develop, deploy, and use AI to follow these guidelines:

- Developers of AI should ensure their products, services, systems, and capabilities are subject to human authority, oversight, and control.

- Organizations should be accountable for consequences related to their use of AI, including any legally cognizable injury or harm caused by their actions, unless they have taken reasonable steps to prevent harm or injury.
- Developers should ensure the transparency and traceability of their AI and protect related intellectual property by documenting key decisions made regarding the design and risk of data sets, procedures and outcomes underlying their AI.

Ensuring AI is developed and used in accordance with established standards and guidelines as well as in conjunction with state and federal rules and laws is critical when the use of such technology could erode the public's confidence, trust, and faith in the fairness and legitimacy of the judicial system.

The federal justice system and the justice systems of every state rely on the integrity and accuracy of the trial court record for appeals. Without a proper record of what occurred in the trial court, an appellate court may be left to decide matters of law based on the best available means, including the appellant's recollection.

Courts unable to attract and retain stenographic court reporters, coupled with always-evolving technology, may push decision-makers and the public to ask why court proceedings are not digitally recorded and automatically transcribed by computers or manually transcribed by humans later.

Most people agree that digital technology has brought important benefits to society. However, the authentication of digital multimedia is an emerging challenge since it has become increasingly easy to manipulate recorded audio contents using a growing number of free and generally accessible software tools.

Today, when authenticity examinations are conducted on digital audio and video files, the purpose of these complex analyses is fourfold to determine if a file (1) is an original or clone (i.e., a bit-for-bit copy) or a re-encoded or transcoded copy, (2) contains any alterations, (3) has any discontinuities due to stop or start events, and (4) matches the characteristics of a

specified recording system, if known. These authenticity examinations, probably more than any other forensic laboratory analysis, require a more conceptual rather than a purely ‘cookbook’ protocol, since every case is at least somewhat different from any one preceding it, due to differences in the audio/video material, metadata, compression effects and various forms of possible duplication and alteration.

Members of the public should be advised if AI and/or ASR is being used in litigation and should be cautioned regarding those risks. Courts should expect deepfake audios and videos to begin to find their way into court transcripts and files.

Currently, transcripts prepared by digital reporters and/or AI/ASR transcription companies include cleverly worded or misleading “certificate” pages that are designed to give legitimacy to a document that, in essence, has no basis for certification if one person who administered the oath and witnessed the proceedings records the audio file and another person 12 transcribes the audio file without comparing the resultant transcript. Proper certification and authentication are further complicated if there are multiple undisclosed transcribers involved.

How can courts protect against these dangers? First, courts can take stock of their own internal security practices. If audio or video is being used to capture the record in courtrooms, it is vital that control measures be implemented that govern who has access to these files and how file access to others outside the organization is granted.

Washington, after a legislative effort, is an excellent example of a state establishing safeguards for its courts. Its new court rule requires chain of custody for audio file in addition to a court requirement to provide authorized transcriptionist standards and oversight.27 Another safeguard would be if a court maintains an “approved” transcriber list and prudently takes the additional measure of knowing each person within the transcriber’s organization who has access to the files and how they are transferred. Does each transcriber maintain adequate virus protection on their computer, for instance? While the latter may seem like a mundane question, the public may be surprised at the answers, and the court may

want to ensure that safe practices are being followed by its authorized providers. It only takes one data breach for a catastrophic event to occur, so protocols and standards should be developed, defined, and adhered to rigorously.

Another dilemma the courts must wrestle with is evidence introduced by counsel at trial that involves transcripts introduced after having been transcribed from audio or video sources created outside of the court on privately owned audio or video recording devices. Strong safeguards should be put into place regarding the chain of custody of all audio or video media and/or transcripts generated by a method using only audio or video for transcript production. These pose significant risks of manipulation if strict protocols are not followed — another reason close attention should be given to the “certificate” page of all transcripts. Such scrutiny would determine when one has been recorded and transcribed after the fact, especially when doing so conflicts with any state laws.

ASR, AI, and Racial, Gender, and Age Bias AI lacks the capacity for contextualization that humans possess. It works by combining large data sets with intuitive processing algorithms that can be manipulated by learning behavior patterns within one or more data sets. What is clear across multiple studies is that training data has led machines to learn more about white men’s speech patterns and less about those of women and people of color. One case in point is that Stanford researchers found that Google’s speech recognition is 13 percent more accurate for men than it is for women.

ASR or AI platforms frequently use feminine voices as digital assistants such as Siri, Alexa, and other voice-activated chatbots. However, virtual assistants are more likely to understand male users than female users.

In a different study shared in the article “Bias in Automatic Speech Recognition: The Case of African American Language” in Applied Linguistics, “researchers Joshua Martin and Kelly Elizabeth Wright list numerous cases of systemic bias in their evaluation of various speech activation technologies and its often poor interpretation and transcription of speech by African Americans.”

Efficient, effective, and equitable solutions will be found when decision-makers include the knowledge and expertise of stenographers in future planning of the best means to capture speech-to-text that depend on humans to hear and conceptualize speech rather than depend on predictive speech models and algorithms.

While all states have court rules related to the people who may administer oaths and function as a deposition officer, some states have laws that prohibit notaries from providing court reporting services. Over half the states have statutes regulating all facets of court reporting where legislatures have found it necessary to regulate the practice of court reporting with licensure or certification requirements to protect the public safety and well-being.

However, for many years the litigation arena has seen analog and digital recording equipment in courtroom proceedings. For the same number of years, transcriptions of those recordings have been littered with inaudible and/or unintelligible parentheticals in addition to unidentified speakers. Despite the problems, many court systems have slowly and tragically adopted a standard of “adequate” rather than “accurate” for these all-important records that must stand the test of reliable review over years or decades.

Although courtroom recording equipment is frequently monitored by court personnel who operate under predetermined court standards, this is certainly not the universal practice. The recordings themselves are known to be largely transcribed by remote employees or contractors or authorized transcriptionists who have no knowledge of the speakers, have no standard guidelines on transcript preparation, and have no requirements in place for security, chain of custody, or preservation of the actual transcription.

The process of digital recording does not transfer well from the courtroom setting to the regular deposition setting in that there is no universal standard or set of requirements related to the equipment used to create an audio recording. Unfortunately, recording and transcription standards that do exist are widely diverse and largely unregulated.

The range of digital audio and video files used by multiple companies is large and ever-changing, as are the practices for distribution and transcription of media. Some digital and video companies are incorporating AI and ASR into transcription of files even though most court rules do not contain specific language allowing either technology.

The Necessity of Court Reporters vs. AI and ASR America's justice system is founded on the premise of providing fair and equal access and equitable treatment to all, and in many circumstances, both in the legal system and without, stenographic court reporters and captioners have always embraced the concept of fair and equitable access.

Stenographic court reporters are committed to the rule of law and their role in it. In its simplest form, the rule of law means that every person in the United States is subject to clearly defined and publicly promulgated, well-accepted legal standards and principles that are equally enforced rather than subjected to the personal whims of powerful corporations, individuals, governments, or other entities.

The concept also embraces two other foundational principles deeply rooted in American jurisprudence: (1) American laws apply equally to all people at all times, and (2) no one is above the law. However, a September 2022 Gallup survey found that just 47 percent of adult respondents "expressed even some trust in the judicial branch of the federal government, a stunning 20-point drop over the last two years and a 7-point drop from last year."37 Reasons vary, but it is safe to say that few within the public understand that transcript integrity and accuracy are foundational to fair, equitable court decision-making. Individuals charged with determining the future of people's lives — from juries to judges — must have total faith that transcripts reflect the actual stated words and/or testimony of those involved in or presenting a case.

AI and its subset technologies have no loyalty to the rule of law and no ability to perceive and interpret nuance or emotional expression. Although exciting in their abilities to achieve tasks such as processing mass data, none has the ability (as yet) to provide risk-free and near-total accuracy in

capturing, transcribing, and protecting the words of all people regardless of gender, race, national origin, or age.

In recognizing AI's serious risks and fallibility, the ABA and many of its specialty sections have studied and passed numerous related policies that acknowledge innovative opportunities but strongly caution users and developers about the real or possible harmful impacts on insurance, privacy, and cybersecurity, to name a few sectors.

A universal thread throughout these statements, resolutions, and reports is an urgent call to action to decision-makers that "responsible individuals and organizations should be accountable for the consequences caused by their use of AI products, services, systems, and capabilities, including any legally cognizable injury or harm caused by their actions or use of AI systems or capabilities, unless they have taken reasonable measures to mitigate against that harm or injury."

Traceability is considered a key element for trustworthy AI. Traceability relates to the need to maintain a complete account of the provenance of data, process, and artifacts involved in the production of transcripts that incorporate an AI model. Without traceability, AI should not be used in the production of certified court or deposition transcripts.

IN SUMMARY

Emphasis on Accuracy - Error Challenges:

■ ASR systems struggle with legal jargon, overlapping speech, and background noise, leading to higher error rates compared to human transcription.

■ While the technology boosts speed, ensuring the precision of transcripts remains a critical challenge.

Quality Assurance:

■ Human oversight is essential to review and correct AI/ASR-generated transcripts.

■ A hybrid model—using AI for initial drafts followed by expert human editing—is recommended to maintain transcript integrity, especially in legal contexts where accuracy is paramount.

Emphasis on Bias - Training Data Limitations:

■ AI systems are only as good as the data they are trained on; if the training data is skewed, the system may misinterpret or underrepresent certain accents, dialects, or terminologies.

■ Bias in AI can result in misinterpretations that affect the quality and fairness of legal transcriptions, potentially disadvantaging certain speakers.

■ Continuous refinement of AI algorithms and diversified training data are necessary to reduce bias.

■ Ongoing evaluation is recommended to ensure that the technology accurately represents all speakers, regardless of linguistic or cultural differences.

Emphasis on Security and Privacy of Sensitive Information - Data Sensitivity:

■ Legal proceedings contain highly confidential information, making secure handling of audio recordings and transcripts critical.

■ Cloud-based ASR solutions raise concerns about data transmission and storage outside secure, controlled environments.

■ The possibility of unauthorized access or breaches requires stringent security measures.

Recommended Security Measures:

■ Implement robust encryption and secure data transfer protocols to protect sensitive information.

■ Adhere to legal and regulatory standards to safeguard client data and maintain confidentiality throughout the transcription process.

Ethical Considerations:

■ In utilizing AI/ASR technology there needs to be a balance of technological efficiency with ethical obligations regarding confidentiality, privacy, and the secure handling of sensitive legal data.

Possible Strategic Recommendations – Invest in Training and Technology:

■ Combine the efficiency of AI-generated drafts with the accuracy of human review to address both error and bias issues.

■ Ongoing training for court reporters in digital tools and continuous improvements in AI models are crucial to minimize bias and enhance accuracy.

Industry Standards Must be Established Before Deploying AI/ASR to Capture Legal Proceedings:

■ Collaborate with industry stakeholders to develop and enforce guidelines that ensure AI systems meet high standards of data security and privacy.

■ Encourage research into refining ASR technology, particularly in areas of legal language processing, bias reduction, and secure data management.

Recommendation:

■ Establish a taskforce to address the emerging legal and ethical issues related to the potential usage of artificial intelligence (“AI”) in the United States Judicial System.

■ Appoint to the task force individuals who have demonstrated expertise in the following areas: (A) Official record making process for the judicial system (B) Court reporting in federal and state court systems.