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Courtroom of the FUTURE

White paper

Innovative ideas and rapidly advancing technology have changed the courts and affected the way hearings are conducted. The new generation of lawyers, along with court users' demands to access information online, have driven the need for new courtroom technology.

Prior to this push for new technology, most processes and procedures in common law jurisdictions, particularly in terms of production of the court record, have changed little since Charles Dickens worked as a court stenographer in London in the early 19th century.

Most dramatically, the recent COVID-19 pandemic has been the catalyst for a fundamental, and likely permanent, shift in the methodology for carrying out hearings, particularly across multiple jurisdictions and with participants in many time zones.

CURRENT CHALLENGES IN THE AGE OF AI

While keeping with tradition, the court system has not really evolved much in the last 200 years, which means that an overhaul is long overdue.

While the court system has evolved alongside prominent technology, the age of artificial intelligence (AI) will bring unprecedented changes and benefits. The machines and AI that we have today are great at doing single, repetitive tasks: tasks with volume, that are transactional and have a definitive outcome. By allowing machines do these repetitive and mundane tasks, AI has the potential to lessen the labor crunch, lower court costs, and deliver mote integrated outcomes. This will eventually make it easier for people to have better access to justice. We have to recognize that we are approaching this technological frontier. Our first task should be to identify suitable processes and put AI to work.

TECHNOLOGY ADVANCEMENTS IN THE COURTS

For years, the courts in Australia have taken a proactive approach to codifying the requirements and parameters for the use of technology. In fact, much of the development and innovation has stemmed from the requirements of Practice Notes

issued by the courts. As far back as 2002, the Supreme Court of Victoria has issued a Practice Note (http://assets.justice.vic.gov.au//supreme/resources/25de055a-4ee9-443c-ac2a-2cfc94d75a60/practicenote-no1-2007_guidelinesforusetechnology.pdf) providing guidelines for the use of technology in civil litigation. The approach was driven by the recognition that the use of technology can save cost, increase access to justice, and streamline the courts' workload. For example, Practice Note CM6 (http://www.fedcourt.gov.au/law-and-practice/practice-documents/practice-notes/cm6) from the Federal Court of Australia provides that "the Court expects the parties to a proceeding and their legal representatives to consider, at as early a stage in the proceeding as practicable, the use of technology in the management of documents and conduct of the proceeding".

In 2015, the Hon. Marilyn Warren AC, then Chief Justice of Victoria, gave a speech entitled "Embracing Technology: The Way Forward for the Courts". She referred to many of the recent advancements in technology, discussed their practical impact in terms of the courts' workload, and posited a scenario where an entire hearing could take place virtually. She also outlined some of the more progressive options like picturing a court hearing that is entirely virtual: a judge presiding via videocall from chambers; barristers presenting arguments from theirs; witnesses giving evidence from their offices anywhere in the world, and jurors watching it all play out from another venue; or judge and jurors being taken by the prosecution on a virtual tour of a crime scene, as if they were actually in the accused's shoes.

Her vision of a court system where nobody needs to attend court at all, and where all documents are filed, served, and viewed online at anytime from anywhere – a 'paperless, *people-less* court' – has been played out in the last year as parties to hearings have had to adapt to a virtual environment out of necessity, and to embrace technology faster and more comprehensively than anyone would have thought possible.

In the UK, case law such as the landmark *Pyrrho Investments v MWB Property* matter in 2016, saw the Court commend the use of technologies in disputes, such as AI in the form of predictive coding, to reduce time and costs for the review of over 3.1 million

documents. In a subsequent matter, the same justification was used in *Brown v BCA Trading Ltd* when the Court ordered the use of predictive coding, despite objections from the Claimant. The use of predictive coding, rather than traditional document review, resulted in an estimated savings to be over £100,000.

It is also anticipated that a bill expected this year will pave the way for a new online civil court for smaller value matters, with much more simplified procedure rules. Supreme Court Justice Lord Briggs, in his final report on the proposals, has highlighted the advantages of online courts to make justice accessible to a much wider population.

Whilst technological adoption in UK court hearings has been slow, it is more common to see some technology driven initiatives such as electronic filing, the electronic presentation of evidence (EPE), and the examination of witnesses by video link. The events of 2020 expediated the move to virtual and hybrid hearings and the support of technology to facilitate their smooth running.

DIGITAL AUDIO AND VIDEO RECORDING

Since the 1950s, courts have had some way of recording proceedings, beginning with analogue tapes, then moving to digital audio recording in the 1990s. Many courtrooms around the world are equipped with the ability to create multi-channel digital audio recordings. Some of these courts are monitored and logged in person, some via CCTV or digital video camera on a centralised basis (i.e. from a control room within the building), and, many are now being monitored and logged remotely. For instance, the Fair Work Commission, a national federal agency with 35 courtrooms across Australia, is recorded and monitored from a central location in Melbourne. A team of monitors ensures that the recordings are up to the required standards and that notes or annotations are created.

Advancements in digital audio recording technology afforded the opportunity for court agencies to look at how they manage audio recordings, and providers are asked to provide online access to recorded audio with annotations within 15 minutes of the

completion of the recording. This increases the importance of the annotations, as they now form the basis of searches carried out by court staff. Increasingly, the courts are also asking for online portals to enable court users to access, with permission, the audio and written transcripts from hearings they were involved in which they can do from their tablets and smartphones. This has also had the side-effect of reducing the amount of transcripts that are required to be produced, therefore reducing cost for government agencies.

In 2020, when court hearings were no longer taking place in person and court administrators were looking for ways to ensure the record could still be captured regardless of how the hearing was taking place, it became a requirement to be able to record hearings taking place via Teams, Zoom, and other video conferencing platforms.

METHODOLOGY FOR CAPTURING THE RECORD

Audio transcription

Same day progressive, same day, next day, and longer turnaround transcription using QWERTY keyboards is routinely done, and audio recordings are transferred to teams of transcribers. However, access to the real-time feed gives lawyers the opportunity to follow a hearing remotely, either from a desktop or via a tablet or smartphone. There is room for all of these methodologies, depending on the requirements of the parties to the litigation as well as the nature of the litigation itself.

Real-time stenographers

Real-time court reporting is an in-demand service, particularly for long-running, complex hearings. A real-time reporting team, consisting of a stenographer and editor, can now attend the hearing virtually, if necessary, to take down proceedings in court as the words are spoken. This enables the words to appear on screen within a few seconds. Stenographers are highly skilled and can write at up to 280 words a minute at very high levels of accuracy.

Real time speech recognition

As the quality of output of speech recognition engines improves, coupled with innovative AI scripting, we will begin to see speech recognition entering the complex multi-speaker court environment as a "good enough" (and constantly improving) alternative to traditional court reporting services.

E-HEARINGS

Court hearings are increasingly taking place in an e-court environment, which is done to ensure the smooth running of every proceeding. An "e-hearing" is any hearing that encompasses the use of technology to assist in hearing preparation, but usually describes the technology provided within the hearing room to assist in the delivery and presentation of evidence to the court. For instance, Practice Note SC Gen 5 from the Supreme Court of Victoria, issued on January 30, 2017 (http://assets.justice.vic.gov.au/supreme/resources/fba6720a-0cca-4eae-b89a-4834982ff391/gen5useoftechnology.pdf), in providing guidelines for the use of e-hearings in Victoria, puts the onus on parties "to satisfy the Court that the presentation of documentary evidence in electronic format is not appropriate." The Practice Note also provides that "[i]n large scale litigation with a large amount of documentary evidence and where the trial is anticipated to extend over a period of ten or more sitting days, engagement of a third-party provider to operate a coordinated system is considered proportionate. In such cases, parties should be engaging at an early stage with each other, the Court and the agreed third-party provider to develop a protocol for the conduct of the trial and the use of technology".

In the e-hearing environment, documents are displayed onscreen as they are referred to within the hearing, or are live-linked within the real-time transcript, and can be annotated, enlarged, or rotated for viewing by participants. The entirety of the proceeding is often video streamed via the internet, thus enabling widespread public access.

In 2020, as it became necessary to carry out virtual hearings, e-hearing services seamlessly moved to a virtual environment, with the evidence being presented via videoconferencing platform, and providers began to supply an additional "concierge" service to facilitate participation in the hearing and enable the use of features like breakout rooms.

If there is one lesson to be learned from COVID, it is that the world can still thrive virtually, including the courts. Perhaps there will never be the need for a completely online environment for all hearings, but the future is definitely a hybrid of remote and in-person. While the courts have been forced to adapt and use generic video-conferencing platforms, the reality is that these platforms are far from ideal. What is truly needed is a video-conferencing platform that is fully integrated with the court hearing system that provides the required level of security and integrity along with elements of the formality of the full courtroom experience. Combining that with AI to enrich the content will be nothing short of revolutionary.

E-FILING

Courts worldwide have moved towards the use of e-filing systems, which enable parties to file their matters electronically. These systems form the front end, which then flows automatically to the case management system within the courts' own network. Many of the e-filings systems are not ideal, moreover, they are a nod to electronic filing, akin to taking a traditional hard copy filing and scanning and producing "electronically." There is little consistency in various courts or arbitration filing requirements or formats; some needing each file or folder to be a single PDF, others with more flexible submission options. Court documents equally evolve and files change with additions and removals. But it's a start! It is easy to see how this could subsequently be augmented with matter-number-specific documents and files – including audio files and transcripts – related to the hearing. This data would then become part of a repository of information about each hearing, which can then ultimately be accessible by court users. Use of cloud-based technology also enables greater flexibility in allowing full, real-time access to this information.

E-DISCOVERY

The ability to search huge volumes of audio files with their corresponding transcripts, case matters document, and files remains the holy grail for e-discovery. Current search technologies allow users to search and retrieve transcripts. This allows the courts to know "what" is being said. However, by allowing the courts to search audio, the courts will be able to hear "how" things are said. With an explosion of e-hearings due to COVID, the courts now must handle increasing volumes of video recordings. With videos, we can visually see "what" and "how" things are said. This potentially opens up a Pandora's box for experts and AI to analyze various behavioral aspects of "who" is speaking. However, for all these possibilities to happen, the courts need an AI-infused e-Discovery system to handle the volume of mixed-media digital assets.

THE NEED TO ADAPT

While recent innovations have taken place out of necessity, and a certain informality has been introduced to proceedings as result, it is likely that more formality in virtual proceedings will start to be required and that this will impact the functionality of the technology. Early experiments had already been taking place to create "distributed courtrooms" which is where participants meet within the same virtual space, all appearing from courtrooms or courtroom-like spaces and placed as they would be in a traditional courtroom. Other add-ons to video conferencing services that are specific to the courtroom environment and tailored to the formal legal process will cement the usability of such platforms and enable far greater flexibility in carrying out hearings in future.

While the pandemic has forced many proceedings to go virtual, it is more likely that the courtroom of the future will be a hybrid - a mix of physical and virtual environments. This means that the tools, processes, and technologies used will have to adapt to this new environment. This will require a human-centric approach and carefully planned change management.

All stakeholders, industry players, tools and technologies must adapt to the new normal. This process of adaptation will be disruptive.

ADDITIONAL BENEFITS

Aside from the efficiency and costs savings realized with the adoption of new and emerging technologies to assist with hearings, there are many additional benefits.

Businesses and law firms are focusing much more on their Corporate and Social Responsibility programs and environmental policies. Remote and hybrid hearings reduce unnecessary travel, particularly for global arbitration matters where parties can be based all over the world. The use of electronic bundling tools and streaming realtime transcription reduces the use of paper.

Feedback from court users highlights the increased accessibility of global expert witnesses for remote hearings, where in person attendance is not required; likewise, for interpreters and other contributors that may be required for their matters. These soft benefits will no doubt form part of the argument to keep some hearing practices as hybrid or remote as the world emerges from the pandemic.

CONCLUSION

The age of AI is inevitable. We have two choices: we can live in denial, hang onto the status quo or simply embrace it. Like any tool, AI can affect us positively or negatively. Therefore, it is of utmost importance that multiple stakeholders come together to ensure that whatever technologies used will impact the course of justice positively.

The rapid development of technology, and the time and cost savings from using it will inevitably mean that there will be further pressure on the courts to increase efficiencies to enable access to justice. As technology advances, we can expect to see further changes to the traditional courtroom. While technology may change the look of the courts, they will continue to perform the same essential role, the administration of justice, in an increasingly efficient way.

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OUR LEGAL PLATFORM

Videospace's legal platform has the following key features and functions to handle tasks that even humans have difficulties performing.

1. **Real-time transcription**
    - Able to transcribe multiple speakers concurrently in over 100 languages.
2. **Speaker separation**
    - Capture and transcribe multiple speakers separately and simultaneously.
3. **Hybrid audio capture (physical and remote)**
    - Probably the world's first platform to capture and transcribe physical and remote speakers simultaneously.
4. **e-Discovery (Audio Search)**
    - Allows users to search and retrieve parts of transcripts through search
5. **Audio-sync transcript**
    - Allows users to listen to the courtroom audio while reading the transcript
6. **Real-time editing (Multi-users)**
    - Allows transcript to be edited by multiple users with different roles simultaneously.
7. **Customised transcript template for export**
    - Transcript formats differ courtroom to courtroom. We can customise a template that fits your needs.
8. **Multi-user roles (from judges to witnesses)**
    - Multiple users are catered into this platform, ranging from judges, witnesses, court operator to system administrators.
9. **Data Sovereignty**
    - This system can be deployed into your specific country or region in order to ensure that data sovereignty.

Find out how we help one of the most technologically advanced Supreme Court in the world to deploy the **courtroom of the future**!

AI TRANSFORMATION – OTHER SECTORS

Enterprise - Videospace has multiple applications for Enterprises, particularly in Market Research, Communications, Training, Video SEO. Video Big Data. Click here for more.

Conferences - The industry is riped for disruption. Videospace provides a platform a set of automated features (like auto-translation) that enables events to have a wider global audience. Click here for more.

Broadcast and Media - Videospace addresses an existing need to search and re-purpose existing video content for new sources of revenue for media networks. Click here for more.

Education and Learning - Videospace is the ideal platform for "Knowledge Discovery" which plays an important part in Learning and Training. Click here for more.

Government - Videospace can be utilized by various agencies which have an immediate need for a media search engine. Archives, Political Arena, Communications, Intelligence, etc. Click here for more.

GLAM (Galleries, Libraries, Archives and Museums) - Videospace unlocks hundreds and thousands of hours of knowledge within your media libraries by making them accessible and discoverable. Click here for more.

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