



Embracing Technology: The Way Forward for the Courts¹

Remarks by the Honourable Marilyn Warren AC Chief Justice of Victoria to the 23rd Biennial Conference of District and County Court Judges Australia and New Zealand, Langham Hotel Melbourne

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Introduction

Imagine a court hearing that is entirely virtual: a judge presiding via Skype from the comfort of his or her 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. Imagine the judge and jurors being taken by the prosecution on a virtual tour of a crime scene, as if they were actually there, standing in the accused's shoes. Imagine a court system where nobody need attend court at all. Where all documents are filed, served and viewed online at anytime from anywhere – a 'paperless, *people-less* court'.² Imagine an app that could predict your chances of success in litigation, or perhaps even adjudicate your dispute.

Ten or twenty years ago it would have perhaps seemed ridiculous. The reality is that much of the technology necessary to achieve it already exists. The question for the judiciary is: how can we best

¹ The author is indebted to Professor David Tait of the University of Western Sydney for his insights and assistance in the preparation of this paper. The author also acknowledges the assistance of her associate Sarah Werner.

² Thomson Reuters, 'The future of the courts' (A White Paper, 17 March 2015) 5

<<http://insight.thomsonreuters.com.au/resources/resource/the-future-of-the-courts-whitepaper/>>.

embrace it? And importantly how can we best embrace it in a way which aligns with our democratic role in modern society, that ensures efficient and affordable access and observes the principles of natural and open justice?

This paper focuses on what we might look forward to in the future. It engages in a little speculation and postulates some ideas about the future of technology and social media in our courtrooms and how it might be embraced.

Here and Now

Many Australian courts have embraced electronic filing systems³ and courtroom technologies such as ‘digital court reporting, telephone and video-conferencing, hearing loops, real time transcripts⁴, desktop mirroring, and multimedia evidence playback’.⁵ Some courts have also embraced technology and social media outside the courtroom. For example, the Supreme Court of Victoria regularly posts on Facebook and tweets about recent decisions and developments in the law, as well as judges’ publications and speeches. Recently we were able to stream the Sauber Formula 1 Car Race proceedings all around the world. We also provided regular updates on the progress of the proceedings via twitter. Collectively our tweets received thousands of hits.

³ For example, the Supreme Court of Victoria uses ‘RedCrest’, an electronic filing and case management system that allows court users to file and access documents 24/7 from anywhere and keep up to date on all matters over which they have conduct. See Julian Hetyey, ‘Commercial Court Reforms’ (Seminar delivered at the Advanced Litigation Conference, Melbourne, 13 March 2015)

⁴ Real time transcripts are roughly edited, unofficial, digital recordings of proceedings, which are beamed onto screens within seconds of being spoken in court. See Robert McDougall, ‘The uses and abuses of technology in the courtroom’ (Keynote address delivered at the Society of Construction Law Australia Conference, 2013) <<http://www.austlii.edu.au/au/journals/NSWJSchol/2013/29.html>> 8.

⁵ Robert McDougall, ‘The uses and abuses of technology in the courtroom’ (Keynote address delivered at the Society of Construction Law Australia Conference, 2013) <<http://www.austlii.edu.au/au/journals/NSWJSchol/2013/29.html>> 4.

The police and prosecutors continue to explore and embrace new technologies. DNA evidence is forever increasing in sophistication. Advanced CCTV and surveillance technologies are an integral part of criminal investigations and Crown evidence, especially where terrorist or organised crime groups are involved. No doubt telecommunications metadata will play an increasingly central role. The nature of crime itself has also changed: criminals now exploit technology and social media to commit new crimes, or traditional crimes in new ways, often anonymously from anywhere in the world.⁶

In the civil space, courts have adapted their practices and procedures to meet the needs of law firms and litigants who are accustomed to operating electronically. Many courts are moving to electronic filing and case-management systems; much of the discovery process already occurs electronically and parties have been given leave to serve documents electronically via email and even social media.⁷

To illustrate, a recent example. Earlier this year in a mesothelioma nervous shock trial before the Supreme Court of Victoria the presiding Judge, Justice Jack Forrest, travelled to Greece to hear evidence from several witnesses. The evidence was taken in conference venues within two hotels. Each of the parties was represented by queens counsel and a junior barrister with an instructing solicitor. An interpreter was also available. The Supreme Court personnel involved were his Honour, his associate and one court reporter. His Honour wrote to me following the trip:

The Court's approach was paperless: the hard copy court file was not taken to Greece because of its size. Similarly, the court books and associated discovered documentation were not

⁶ Australian Crime Commission, *Cyber and technology enabled crime* <<https://www.crimecommission.gov.au/publications/intelligence-products/crime-profile-fact-sheets/cyber-and-technology-enabled-crime>>.

⁷ This practice remains unusual and mandated on a case-by-case basis, but if it continues to prove effective it may be the way of the future. See Thomson Reuters, 'The future of the courts' (A White Paper, 17 March 2015) 5 <<http://insight.thomsonreuters.com.au/resources/resource/the-future-of-the-courts-whitepaper/>>.

taken as part of the Court's materials. Rather, all documentation was maintained in the 'cloud' on the OneDrive system. My associate and I primarily utilised our laptops throughout the course of the hearing and all in all, we travelled with about 5 kilograms of Court material (which was mainly the weight of the laptops).

The wireless internet connection at both hotels was of a very good standard so access to documents and the transcript during the course of the hearing was almost instantaneous. In addition, we were able to work jointly on the draft judgment which was stored on the OneDrive.

By Contrast, the parties travelled with paper files. This meant that the solicitors had to cart approximately 50 kilograms of material each (in folders) to Greece. This meant that special arrangements for the luggage had to be made and that delays were encountered at the airport.

Upon his Honour's return from Greece, they resumed sitting two days later and took evidence from a medico-legal expert psychiatrist via video-link from Miami. The case settled that afternoon. One can readily contemplate that the Court's ability to remain on top of the case, via technology, played an important part in the resolution of the case.

Despite these developments the uptake of new courtroom technologies has been slow and far from uniform.⁸ Courts struggle to keep up with the commercial world. The reasons for this are well-documented. Courts and other government entities function in a markedly different environment to

⁸ This is true of other jurisdictions as well. For a US perspective, see Peter W Martin, 'How structural features of the US judicial system have affected the take-up of digital technology by courts' (2010) 1(1) *European Journal of Law and Technology* <<http://ejlt.org/article/view/16>>.

corporations; as Professor Peter Martin of Cornell Law School puts it ‘the e-commerce analogy does not readily apply to [sic] courts’.⁹ He explains:

Organizations operating in the commercial sector are pressed to change, some to the point of transformation, by the incentives and discipline of a competitive market. Large profits reward organizations that succeed in harnessing technology to improve internal efficiency, reach a broader market, or craft a totally new service. Their challenge is to convert customer gains into revenue. Where substantial investment is necessary to reap these rewards, capital markets offer the necessary funds. Powerful negative incentives operate, as well. Abrupt decline lies in wait for businesses that cling too long to old methods and organizational structures.

...

Most government entities function in a markedly different environment and with much less flexibility. The agencies central to law are largely unexposed to market forces, and their internal divisions of function and authority are not so malleable as those in the private sector. Roles and practices tend to be deeply entrenched... In addition, many gains available through digital technology take the form of public benefits not readily returned to the innovating agency through budget relief or increased revenue. Finally, even when future cost savings or efficiency gains might induce a commercial enterprise to invest in technology or process redesign, fiscal rigidities and politicians' focus on the short-term are likely to prevent a governmental body from doing so.¹⁰

I would add, that the courts' democratic role creates unique issues: courts must balance efficiency and cost-saving considerations with their duties to provide open and impartial justice, to afford

⁹ Peter W Martin, ‘How structural features of the US judicial system have affected the take-up of digital technology by courts’ (2010) 1(1) *European Journal of Law and Technology* <<http://ejlt.org/article/view/16>>.

¹⁰ Peter W Martin, ‘How structural features of the US judicial system have affected the take-up of digital technology by courts’ (2010) 1(1) *European Journal of Law and Technology* <<http://ejlt.org/article/view/16>>.

accused persons a fair trial and so on. Not all technologies will be appropriate for the courtroom. Even where technology *is* appropriate and subsequently adopted, there is the additional hurdle of encouraging judges to actually use it. Many judges remain reluctant.

A New Wave of Lawyers

Academic and author Professor Susskind wrote in his book *Tomorrow's Lawyers*:

Tomorrow's legal world, as predicted and described here, bears little resemblance to that of the past. Legal institutions and lawyers are at a crossroads...and are poised to change more radically over the next two decades than they have over the last two centuries. If you are a young lawyer, this revolution will happen on your watch.¹¹

We now have approximately 40 law schools across Australia (eight in Victoria) that produce 12,000 graduates annually.¹² Each year I admit 1500 new lawyers to the Victorian legal profession.¹³ Current forecasts suggest this number will rise to 2000 by 2017.¹⁴ These new generations of lawyers will increasingly drive demand for new technology in our courtrooms. Young lawyers today have exceptional IT skills: their capacity to grasp new technologies and to find answers online is devastatingly fast.¹⁵ Their news comes in the form of tweets and automatic updates, which they quickly share amongst each other. They are very well-informed.

¹¹ Richard Susskind, *Tomorrow's Lawyers: An Introduction to Your Future* (Oxford University Press, 2013) xiii.

¹² Marilyn Warren, 'The access to justice imperative: Rights, Rationalisation or Resolution?' (Remarks delivered at the Eleventh Fiat Justitia Lecture, Monash University Law Chambers, 25 March 2014) <<http://www.austlii.edu.au/au/journals/VicJSchol/2014/6.pdf>> 6. Earlier this year we saw the opening of Victoria's newest law school – Swinburne University Law School.

¹³ Marilyn Warren, 'The access to justice imperative: Rights, Rationalisation or Resolution?' (Remarks delivered at the Eleventh Fiat Justitia Lecture, Monash University Law Chambers, 25 March 2014) <<http://www.austlii.edu.au/au/journals/VicJSchol/2014/6.pdf>> 17.

¹⁴ Marilyn Warren, 'The access to justice imperative: Rights, Rationalisation or Resolution?' (Remarks delivered at the Eleventh Fiat Justitia Lecture, Monash University Law Chambers, 25 March 2014) <<http://www.austlii.edu.au/au/journals/VicJSchol/2014/6.pdf>> 17.

¹⁵ Marilyn Warren, 'Playing at futurology' (Remarks delivered on the occasion of the Victorian Bar Inaugural CPD Conference, Torquay, 5 March 2011).

The delivery of legal education today is unrecognisable compared with how it was delivered even a generation ago.¹⁶ Law students still do all the things we did – they attend lectures, conduct legal research, submit assignments, receive feedback, and communicate with lecturers and fellow students. However, they do these things largely online. Some students enrol in ‘external law degrees’ and might not even set foot on campus until exam time.¹⁷ I can envisage a day in the not too distant future when students sit their exams online too.¹⁸

To keep up with the way universities have really embraced digital learning, schools too are going ‘virtual’. This year in a Victorian first Nossal High School has given students the option to participate in a ‘virtual classroom’ from the comfort of their bedrooms.¹⁹ Once an online roll is taken, teachers give instructions via online videos and students interact with their classmates via online discussion boards. Even physical education class has gone virtual – students simply upload photos of themselves exercising at home. The principal says they are only just starting to scratch the surface of what is possible. This is the way of the future.

These educational methods sit at odds with the way we currently run courts in Australia. Lawyers must still appear before us and articulate their arguments verbally: we are not yet at the stage of

¹⁶ Marilyn Warren, ‘The access to justice imperative: Rights, rationalisation or resolution?’ (Remarks on the occasion of the 11th Fiat Justitia Lecture, Monash University Law Chambers, 24 March 2014).

¹⁷ Marilyn Warren, ‘The access to justice imperative: Rights, rationalisation or resolution?’ (Remarks on the occasion of the 11th Fiat Justitia Lecture, Monash University Law Chambers, 24 March 2014).

¹⁸ Demographer Bernard Salt in a recent report commissioned by the National Broadband Network *Towards a super connected Australia* predicts that future generations of Australians, raised in the digital age with universal access to fast broadband, will re-arrange the traditional work-rest-play lifestyle model to better suit their lifestyle needs. Mr Salt predicts that workers will work whenever, and from wherever, suits them: he says the nine-to-five work day will likely be replaced by 24-hour periods characterised by ‘bursts of activity’ and predicts that the reconfiguration of Australian cities by 2030 will see traditional commuting replaced by *telecommuting*. See Lisa Mayoh, ‘Work day revolution: typical 9 to 5 dead in a decade’, *The Herald Sun* (Melbourne) 26 April 2015, 26. The report can be viewed at <<http://www.nbnco.com.au/content/dam/nbnco2/documents/towards-a-super-connected-australia.pdf>>.

¹⁹ See Henrietta Cook, ‘School’s out, virtually’, *The Sunday Age* (Melbourne) 1 March 2015, 3.

virtual courts.²⁰ However, there is a suite of exciting technology tools currently available, with great potential for courtroom use. The scientists and engineers have done the hard work; the profession is willing and able. Future generations of lawyers will increasingly drive demand for new technology. It is crucial that we prepare ourselves; educate ourselves about the possibilities and approach them with insight and open minds.

The next part of this paper speaks to some of those possibilities and will provide a taste of what is to come.

The Virtual Courtroom

Courtroom technology is developing rapidly in three key areas.

- Firstly, in the display of evidence in court: evidence is becoming increasingly virtual and interactive.
- Secondly, in communication: technology will increasingly enable people to engage in litigation from a variety of different locations simultaneously in ‘virtual courtrooms’ hosted online.
- Thirdly, in e-filing, case management and online dispute resolution: capabilities in these areas are also becoming increasingly sophisticated, with some disputes now resolved entirely online.

Virtual Evidence

²⁰ Marilyn Warren, ‘The access to justice imperative: Rights, rationalisation or resolution?’ (Remarks on the occasion of the 11th Fiat Justitia Lecture, Monash University Law Chambers, 24 March 2014).

In the beginning I asked you to imagine, in a criminal trial, the judge and jury being taken by the prosecution on a virtual tour of a crime scene, as if they were actually there, standing in the accused's shoes. This is certainly achievable using current technology. It involves something called 360 degree filming. Essentially, a crime scene is photographed with specialised cameras in such a way that when all the shots are combined they create a 'virtual' picture of the crime scene with which the viewer can interact. The end product is somewhat like a videogame. A physics engine can be used to create different versions of events within the crime scene. One simply programs it with different sets of assumptions. A simple example would be the scene of a car accident: the physics engine could be programmed to make the car drive at different speeds. Using this technology the prosecution could take the jurors through the crime scene, or 'play the game', according to their version of events. The defence can then play out their theory in real time.

Apparently we really need to see it to understand how it works²¹, but here is one user's description:

It's hard to describe the experience – you have to see it. But imagine a 3-D movie, something of the scope of *Avatar* or *Gravity*, where you place yourself inside and look around – forward, back, top, bottom and sideways – so your brain thinks you are there. You interact with this environment, moving and turning around as you would in reality... The feeling of "being there" rather than just being a distant spectator is [sic] a huge drawcard.²²

This virtual crime scene could be displayed in a couple of ways: either with the aid of 'virtual reality goggles' that each juror could wear, or in the form of a hologram projected in the courtroom which everybody views at once. The hologram approach is currently the most viable, although it would

²¹ Nathan Olivarez-Giles, 'Is virtual reality just hype?', *The Australian* (Melbourne) 19 March 2015, 16.

²² Chris Griffith, 'Strap on a helmet and never miss a thing', *The Australian* (Melbourne) 19 March 2015, 16.

involve redesigning the courtroom. Apparently quite a bit of space is required, ideally in the middle of the courtroom. Some courts in France are currently looking to modify their courtrooms to accommodate the technology. In Australia, organisations such as the Australian Federal Police are already using it.

The technology could revolutionise matters involving remote crime scenes. Take the example of a crime scene in the remote Australian outback, accessible only by a 10km trek. Rather than having to go through a process of selecting jurors fit enough for the journey and then transporting the whole courtroom there, the prosecution or defence could simply send a small camera team to do the 360 degree filming and bring the crime scene into the courtroom. This could save considerable time and money. The technology could even be made available in the jury room for the jurors to revisit and manipulate themselves during deliberations.

Virtual Courtrooms

Professor Susskind predicts that:

For tomorrow's lawyers, appearance in physical courtrooms may become a rarity. Virtual appearances will become the norm, and new presentational and advocacy skills will be required. I am not suggesting that virtual courtrooms will be pervasive in the short or medium term. But they will become commonplace in due course, I have little doubt.²³

All courts have video-link capabilities, however their use is, for the most part, reserved for vulnerable witnesses, or witnesses who cannot practicably appear in court. But what if all parties appeared this way, including the accused, the judge, the lawyers – even interpreters? Things are

²³ Richard Susskind, 'Tomorrow's Lawyers: a virtual judiciary – extract', *The Guardian* (online) 29 January 2013 <<http://www.theguardian.com/law/2013/jan/29/tomorrows-lawyers-virtual-judiciary-richard-susskind>>.

already happening in Australian jurisdictions. The Federal Court has eCourtroom, an online courtroom used by judges and registrars to assist with the management and hearing of certain matters (such as *ex parte* applications for substituted service in bankruptcy proceedings).²⁴ Judges in NSW and Victoria go on ‘virtual’ circuit for civil matters: rather than physically travelling to the circuit locations, the judges appear via video-link from chambers. WA too has a system of virtually remote courts to deliver justice to remote communities.²⁵ Interactive video and audio-links facilitate communication between different parties in different locations.²⁶ Even judges can video-link in from a different location to deal with a matter where there is no judge available onsite. This allows for better allocation of judicial resources across different locations around the state and reduces travel costs for participants. There is also talk about a coordinated, national, ‘remote’ interpreting service. It would involve a select number of highly qualified interpreters working remotely. This would allow greater quality control and could dramatically reduce costs.

Despite these developments, video-link remains clunky and sluggish at times. When the technology fails, the disruption often outweighs the time/cost saving. The remoteness of video-conferencing can also reduce the quality of communication. For example, studies by Professor Sabine Braun of the University of Surrey found that remote-interpreting services produce a higher number of problems and a faster decline of performance over time.²⁷ Anecdotally the weight of witnesses’ evidence can be ‘lost’ over video-link: some witnesses do not fully comprehend the gravity of sworn evidence

²⁴ Federal Court of Australia, ‘Online Services – eCourtroom’ <<http://www.fedcourt.gov.au/online-services/ecourtroom>>.

²⁵ See generally Anne Wallace, ‘Virtual Justice in the Bush: The use of court technology in remote and regional Australia’ (2008) 19 *Journal of Law, Information and Science* 1 <<http://www.austlii.edu.au/au/journals/JILawInfoSci/2008/2.html#Heading56>>.

²⁶ District Court of Western Australia, ‘Video-links’ (11 July 2014) <<http://www.districtcourt.wa.gov.au/V/videolinks.aspx?uid=3497-6895-5208-0018>>.

²⁷ Sabine Braun, ‘Keep your distance? The use of videoconference technology for ‘remote interpreting’ in legal settings – a critical assessment of a growing practice’ (Remarks delivered at an international research seminar organised by L’Institut des Hautes Etudes sur la Justice, Sorbonne Law School and the University of Western Sydney, Paris, 28-29 June 2012) <http://eprints.surrey.ac.uk/804832/1/Braun_2013_INTP_prefinal.pdf>.

when removed from the formality of the courtroom, and their expressions and demeanour can be more difficult to deduce.

An alternative concept to the virtual courtroom is the *distributed* courtroom. The difference is quite important. In a virtual courtroom, participants who appear remotely via video-link are often isolated from the other participants and may not feel as though they are really there. By contrast in a distributed court participants meet within the same virtual space, all appearing from courtrooms or courtroom-like spaces. They appear on screens placed as the participants would be in a traditional courtroom: the judge behind the Bench, the witness on the stand and so on. Importantly the screens are large, allowing for participants to appear life-sized, and are set up in a way that facilitates eye contact between each participant. The NSW Department of Justice is in the process of developing a demonstration facility.²⁸

Video-conferencing services can also be expensive. Some courts and tribunals are looking into more affordable alternatives such as Skype, which is free. Apparently this has been piloted in the New South Wales District Court and also in the Federal Court, although it is confined to uncontentious evidence.²⁹ As Skype works over the internet, rather than a dedicated telephone line, security and connectivity are valid concerns.³⁰ Dr Marilyn Krawitz of the University of Notre Dame says however that in 10 or 20 years' time, these issues will no doubt be worked out and asks 'who knows where

²⁸ For an in-depth discussion of distributed courtrooms see: Emma Louise Rowden, *Remote participation and the distributed court: an approach to court architecture in the age of video-mediated communication* (PhD Thesis, The University of Melbourne, 2011). In her thesis, Dr Rowden explores the question: how might remote court participation be more 'just'. Professor David Tait adds that the distributed courtroom aims to provide a realistic, dignified experience and protect the right to a fair trial.

²⁹ ABC Radio National, 'Skype in the Justice System', *The Law Report*, 9 December 2014 (Damien Carrick interviewing academics Dr Marilyn Krawitz and Justine Howard)
<<http://www.abc.net.au/radionational/programs/lawreport/skype-in-the-criminal-justice-system/5932116>>.

³⁰ See ABC Radio National, 'Skype in the Justice System', *The Law Report*, 9 December 2014 (Damien Carrick interviewing academics Dr Marilyn Krawitz and Justine Howard)
<<http://www.abc.net.au/radionational/programs/lawreport/skype-in-the-criminal-justice-system/5932116>>.

Skype will go in the future?’ She says that already there is talk of jurors attending court by Skype, ‘can you imagine?’³¹

Hologram technology could also be used in this context: witnesses could appear via hologram and give evidence ‘virtually’. This technology is already being used in the business world. For example, back in 2008 Bill Gates addressed the World Congress on Information Technology in Kuala Lumpur. He appeared as a 4.6 meter holographic projection. His address was pre-recorded two weeks beforehand in Seattle.³²

Virtual Dispute Resolution

Speaking in 1999, Justice Michael Kirby said:

There is no chance that in a quarter century's time, judges either of trial or of appeal, will have been replaced by thinking machines: artificial legal intelligence. Yet it seems unlikely that the courts will be left completely unaffected by this development.³³

A decade and a half later his Honour's prediction stands: Judges have not been replaced by computers; however, the debate about online dispute resolution and artificial intelligence has progressed. In February this year, the UK Civil Justice Council's Online Dispute Resolution Advisory Group published a comprehensive report on the potential for online dispute resolution

³¹ ABC Radio National, ‘Skype in the Justice System’, *The Law Report*, 9 December 2014 (Damien Carrick interviewing academics Dr Marilyn Krawitz and Justine Howard) <<http://www.abc.net.au/radionational/programs/lawreport/skype-in-the-criminal-justice-system/5932116>>. The idea of jurors appearing remotely was raised by the former Victorian Juries Commissioner Rudy Menteleone. He suggested that jurors who fell ill could watch the trial from home to avoid delaying proceedings.

³² Ahmed Elmorshidy, ‘Holographic Projection Technology: The World is Changing’ (2010) 3(1) *Journal of Telecommunications* 104 <http://www.academia.edu/5038143/Holographic_Projection_Technology_The_World_is_Changing>.

³³ Michael Kirby, ‘The future of courts – Do they have one?’ (Paper presented to the Bombay High Court, Mumbai, 21 December 1999) <http://www.hcourt.gov.au/assets/publications/speeches/former-justices/kirbyj/kirbyj_future.htm>.

(ODR).³⁴ The Council recommended that ODR services be introduced for low value civil claims in English and Welsh Courts. In essence, members of the judiciary would decide cases on an online basis, interacting electronically with parties. Such systems are already being deployed around the world to resolve a wider range of disputes, mostly in the consumer and e-commerce spaces. For example, eBay provides an online resolution centre which, remarkably, is used by 60 million eBay traders every year to diagnose and resolve disputes. Parties present their arguments in an online discussion area and then an eBay staff member determines a binding outcome. There is a set of standards by which eBay assesses the merit of complaints.³⁵

At the moment, the technology is limited to ‘high volume low value’ disputes, but the UK Civil Justice Council’s Report also makes some interesting predictions about the future of ODR. The Council says ‘there is no finishing line in the world of IT’ and it would not rule out the prospect of ‘artificial intelligence’ assisting with disputes in the future.³⁶ Parties’ arguments could be coded and analysed by an artificial intelligence system which would then generate proposed solutions, or perhaps eventually a final decision. There is also potential for such systems to advise parties on their prospects of success in litigation.³⁷ As courts move online, an enormous amount of data is being generated. This data could be collated to create electronic precedents and rules according to which such advice might be given.

Conclusions

³⁴ Online Dispute Resolution Advisory Group, ‘Online dispute resolution for low value civil claims’ (Report, Civil Justice Council, February 2015) <<https://www.judiciary.gov.uk/wp-content/uploads/2015/02/Online-Dispute-Resolution-Final-Web-Version1.pdf>>.

³⁵ For more in-depth information and other examples of ODR services see Online Dispute Resolution Advisory Group, ‘Online dispute resolution for low value civil claims’ (Report, Civil Justice Council, February 2015) <<https://www.judiciary.gov.uk/wp-content/uploads/2015/02/Online-Dispute-Resolution-Final-Web-Version1.pdf>> 4.2.

³⁶ Online Dispute Resolution Advisory Group, ‘Online dispute resolution for low value civil claims’ (Report, Civil Justice Council, February 2015) <<https://www.judiciary.gov.uk/wp-content/uploads/2015/02/Online-Dispute-Resolution-Final-Web-Version1.pdf>> 8.2.

³⁷ Thomson Reuters, ‘The future of the courts’ (A White Paper, 17 March 2015) 5 <<http://insight.thomsonreuters.com.au/resources/resource/the-future-of-the-courts-whitepaper/>>.

Justice Michael Kirby also wrote in 1999:

The right to see in public a judicial decision-maker struggling conscientiously with the detail of a case is a feature of the court system which cannot be discarded, at least without risk to the acceptance by the people of courts as part of their form of governance.³⁸

As the litigation process moves increasingly into the online space, fewer and fewer people are coming into our courtrooms. The traditional methods of guaranteeing open justice are rapidly changing.³⁹ The public now relies almost exclusively on the media, and increasingly on social media, for information about the work of the courts. Younger and future generations will obtain their news exclusively online. Courts are being driven towards online community engagement in order to preserve the operation of open justice.⁴⁰ Direct community engagement will also be vital to the effectiveness of concepts such as ‘deterrence’ in sentencing.

So, there is a taste of what is to come.

How will this be done?

The question might then be asked as to how this would be achieved. Notoriously courts are not sufficiently resourced to deal with the full take up of modern technology and all that it offers. However, there are opportunities. For example, the Offices of Public Prosecutions across the country, particularly the Commonwealth DPP, embark on criminal prosecutions that call out for sophisticated technology. We need only think of terrorism, organised crime, commercial fraud and

³⁸ Michael Kirby, ‘The future of courts – Do they have one?’ (Paper presented to the Bombay High Court, Mumbai, 21 December 1999) <http://www.hcourt.gov.au/assets/publications/speeches/former-justices/kirbyj/kirbyj_future.htm>.

³⁹ Marilyn Warren, ‘Open Justice in the technological age’ (2013) 40(1) *Monash University Law Review* 45.

⁴⁰ Marilyn Warren, ‘Open Justice in the technological age’ (2013) 40(1) *Monash University Law Review* 45

the like. Indeed, there have been a number of experiences in Victoria where the Commonwealth prosecution has provided the technical resources to support the court.⁴¹ It comes down to a question of resources. Often state DPPs could take the opportunity to broaden the scope of technology in criminal trials. For example if a victim of a serious crime against the person was traumatized about giving evidence in court the quality and impact of that evidence need not be reduced or potentially compromised by way of external video link. A hologram may provide a far more effective way for that person to give evidence.

There is a role for all the higher courts - that is the utility of technology should not be confined to or dominated by the Supreme and Federal Courts. If we think about it, the bulk of criminal trials in this country occur in the County and District Courts. There is an opportunity for those courts. In turn, if technology is taken up in the higher courts it will then be utilized in appellate courts. Often sitting on appeals the benches find the viewing of video evidence clunky. Imagine if appellate judges were able to call up the witness or victim's hologram from the trial.

Broadly speaking there is reticence by State governments to build new court buildings. It may be more attractive to governments to invest in technology and thus provide justice in a way that is accessible but potentially less costly. However, the rider must always be added that there cannot be a disinclination to provide built infrastructure for courts with a view to the answer lying in technology and then to underspend on that technology. Technology will never be a solution if it is under-resourced. Courts should not have to settle for cheap, out-dated technology. They should be equipped with the same state-of-the-art facilities that court-users enjoy. Such investment now will almost certainly save governments money in the long term. Courts may benefit from advocating this message.

⁴¹ For example, the *Benbrika*, *Pong Su* and *Jacobson* cases.

For example, Microsoft have developed large, table-top tablet facilities called ‘surface tablets’. They are used in the business world to create immersive video conferences. Multiple people can interact with the tablet at once and everybody can therefore view documents on the screen simultaneously. It is also possible to ‘flick’ documents between different screens (rather than having to send them via email). These tablets have been built into table-tops. Imagine if they could be built into judges’ benches. Judges could have multiple documents open at once, filed or set out in any way they like, that they could move around with their hands (just like we move physical papers on a physical desk). The bar table could be set up similarly. There could be a shared space for documents that everyone views simultaneously (like transcript) and private spaces for the judge and each party to view their personal documents and notes. In jury trials, instead of having to ask the jury to leave while a party raises a particular point, that party could simply type it out on their screen and ‘flick’ it to the judge’s screen, without the jury having to leave the room. The judge could then make a decision about whether or not the jury should leave. This is certainly feasible with current technology.

So why pursue technology?

Savings

The conduct of the Kilmore East Bushfire trial and the Great Southern Investment Scheme trial demonstrate the significant benefits from the use of technology. Independent analysis conducted of both trials in the Victorian Supreme Court disclosed that the trial time was reduced by about one third. Further, there was a very real facilitation of access to justice by the streaming of the trial. Hence, barristers and lawyers colloquially would stay in their chambers or offices and do other work meanwhile they would have one eye on the trial as it ran on their screen. It is self-evident that there would be significant savings on the cost of witnesses with adequate technology.

Information for the public and public access

In a nutshell what is proposed is in fact not revolutionary. Recently Victoria marked the 160th anniversary of the Eureka Stockade trials in the Victorian Supreme Court. Those trials were conducted in the old Supreme Court courthouse, but a traditional courthouse nonetheless, not all that different from the Supreme Court building of today. What occurred in the court was viewed from the public galleries. Otherwise the public were informed by the medium of the newspaper. With the implementation of technology all that changes with the Eureka experience is that the court or studio is changed and the medium or newspaper is changed. With modern technology the courtroom becomes a virtual studio and social media and the internet provide a universal medium.

Controlled by the courts

Technology provides the inherent indeed fundamental advantage that the courts themselves will be able to control usage of court evidence, and the message conveyed to the community. Importantly through technology the courts are able to be their own media organisation and inform the public.

Complementing the community

Use of technology ensures that the courts operate in a manner which is complimentary with the community's practices and expectations. These days most of the community and the legal profession utilize the internet and social media. Certainly young lawyers do. Technology provides the opportunity to heighten community awareness, knowledge and appreciation of the courts and their role in our modern democratic society.

Keeping up

These days it is essential that court cases be conducted in a way that is empathetic and consistent with the way litigation and its surrounding circumstances are developing in the community. Let me give three examples: first construction cases; second, medical cases; and third, forensic pathology matters.

Firstly, in construction cases there are opportunities which will inevitably arise from the way buildings are designed nowadays. For example, in architecture there is a program called 'Grasshopper'. If a group of architects want to design a building calling on the work of say Frank Gehry or Utzon, involving perhaps extensive arched roof panels, the program can be used. Grasshopper involves computations that will work out the dimensions of each panel through mathematical equations. This technology, now used quite widely, is available for construction design, engineering and architecture and will manifest itself in construction cases.

Secondly, Google Glass is available in medicine. Surgeons are operating with specially equipped voice responsive glasses or opticals that show the surgeon what the particular section of the body looks like (that is a virtual Grey's Anatomy) as the operation progresses. Surgeons can also instantly bring into view patients' medical records, x-rays and MRIs.⁴² This technology will increasingly pop up in personal injury cases.

Thirdly, in forensic pathology MRI utilization is extensive, certainly here in Victoria. There is a capacity to zoom in and out of sections of the body to demonstrate the angle of weapons for example to help establish the cause of death.

⁴² See *Virtual surgery: doctors using Google Glass* (18 June 2014) The Telegraph <<http://www.telegraph.co.uk/technology/technology-video/10908370/Virtual-Surgery-doctors-using-Google-Glass.html>>. New technology is also being used to perform 3D surgery, for example to treat heart arrhythmia: see Lucie van der Berg, 'Heart Miracle', *The Herald Sun* (Melbourne), 11 April 2015, 5.

All these points come together to suggest to us as judges that technology will facilitate what we do to deliver a potentially better and more effective and more qualitative justice.

We cannot forget the opportunities that technology offers for judicial education and ongoing judicial development. Imagine lectures by hologram from eminent persons. Or attending overseas conferences in a virtual way compared with a filmed manner. Better still imagine the potential for interactivity between a speaker and the viewer as occurred with the US President Barak Obama in his State of the Union blog recently.

Why change?

Let me summarise five points to urge change:

1. Cost - the savings demonstrated by technology.
2. Efficiency - again the savings with time are significant.
3. Openness - technology provides an opportunity for the world to come into the courtroom (compared with the Eureka experience where the Melbourne crowd flocked until the courtroom was filled and the balance of the crowd had to wait out in the street).
4. A potentially higher quality of justice - presently courts are applying a 19th century model to a 21st century situation.
5. Coming to terms with the reality - the slogan 'sleepers wake!'⁴³ Some of us who have served judicial office for many years might reflect as to how far courts have come in the last few years. We might also think about how relevant we will be within society if we do not explore and exploit technology.

⁴³ Taken from the opera of Puccini, and the aria '*Nessun dorma*' from *Turandot*; also utilized by Barry Jones in his book of the same title.