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Court-provided Trial Technology: Efficiency and Fairness for Criminal Trials

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Abstract: In Australia, trials conducted as 'electronic trials' have ordinarily run with the assistance of commercial service providers, with the associated costs being borne by the parties. However, an innovative approach has been taken by the courts in Queensland. In October 2007 Queensland became the first Australian jurisdiction to develop its own court-provided technology, to facilitate the conduct of an electronic trial. This technology was first used in the conduct of civil trials. The use of the technology in the civil sphere highlighted its benefits and, more significantly, demonstrated the potential to achieve much greater efficiencies. The Queensland courts have now gone further, using the court-provided technology in the high profile criminal trial of *R* v *Hargraves, Hargraves and Stoten*, in which the three accused were tried for conspiracy to defraud the Commonwealth of Australia of about $3.7 million in tax. This paper explains the technology employed in this case and reports on the perspectives of all of the participants in the process. The representatives for all parties involved in this trial acknowledged, without reservation, that the use of the technology at trial produced considerable overall efficiencies and costs savings. The experience in this trial also demonstrates that the benefits of trial technology for the criminal justice process are greater than those for civil litigation. It shows that, when skilfully employed, trial technology presents opportunities to enhance the fairness of trials for accused persons. The paper urges governments, courts and the judiciary in all jurisdictions to continue their efforts to promote change, and to introduce

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mechanisms to facilitate more broadly a shift from the entrenched paper-based approach to both criminal and civil procedure to one which embraces more broadly the enormous benefits trial technology has to offer.

Keywords: electronic court, trial technology, evidence presentation

I. Introduction

In Australia, trials conducted as 'electronic trials' have ordinarily run with the assistance of commercial service providers, with the associated costs being borne by the parties.[1] However, in October 2007 Queensland became the first Australian jurisdiction to develop its own court-provided technology, to facilitate the conduct of an electronic trial. The technology was first-employed in the trial in the Supreme Court in *Covecorp Constructions Pty Ltd* v *Indigo Projects Pty Ltd* ('*Covecorp*').[2] The use of the technology in that trial highlighted its benefits and, more significantly, demonstrated the potential to achieve much greater efficiencies.[3]

Legal representatives were then encouraged to adopt the court-provided technology for civil cases where there is likely to be more than 500 relevant documents, as part of a 2008–09 pilot period.[4]

The Queensland courts have now gone further, in that court-provided technology has been employed in the criminal jury trial in *R* v *Hargraves, Hargraves and Stoten* ('*Hargraves*'), in which the three accused were tried for conspiracy to defraud the Commonwealth of about $3.7 million in tax. The original trial began in the Brisbane Supreme Court on 10 March 2009.

In his opening comments to the jury, Fryberg J explained that they were participating in 'cutting edge jurisprudence', being the first wholly electronic criminal jury trial in Queensland. The experience in this trial demonstrates that the benefits of trial technology for the criminal justice process are greater than those for civil litigation, and that there are implications not only in terms of cost and efficiency, but of enhancing the fairness of trials for accused persons.

1 R. Macdonald and A. Wallace, 'Review of the Extent of Courtroom Technology in Australia' (2004) 12(3) *William & Mary Bill of Rights Journal* 745 at 750.

2 File Nos BS 10157 of 2001; BS 2763 of 2002. The trial commenced on 8 October 2007, but the matter settled out of court on 6 November 2007 before completion of the trial.

3 S. Jackson, 'Court-provided Technology Brings the "Electronic Trial" to the Ordinary Litigant' (2008) 20(1) *Bond Law Review* 52 at 67–73. See also S. Couper QC, 'ETrials—The Way of the Future' paper presented at the QLS annual symposium, 28 March 2009.

4 For further details about the pilot project, and the processes for adopting the court's e-trial technology, see http://www.courts.qld.gov.au/4265.htm.

II. Case Background

i. Nature of the Charges

The three accused men were all charged with conspiring to defraud the Commonwealth and conspiring with each other to dishonestly cause a loss to the Commonwealth.[5] The essence of the charges was that the accused had conspired to use off-shore accounts to avoid paying about $3.7 million in tax between 1999 and 2005.

The prosecution, which was conducted by the Office of the Commonwealth Director of Public Prosecutions (CDPP) alleged that the men knowingly took part in a Swiss-based scheme to avoid paying personal and company tax. It was alleged the scheme involved artificially inflating invoices for business expenses, and diverting the inflated amounts into Swiss trust accounts. It was further alleged that the accused persons would then repatriate the cash, tax free, using credit or debit cards at local ATMs and overseas and that the alleged the scheme was put in place through an arrangement with Strachans SA, an accounting services firm based in Switzerland.

ii. Documentary Evidence

The prosecution's evidence in the matter included a large volume of documents which had been seized from Strachans SA, and which provided information on how the scheme allegedly set up by the defendants had been implemented. The evidence included accounting records, invoices, correspondence and email traffic between Strachans SA and the defendants.

When the Australian Crime Commission, as the agency referring the prosecution to the CDPP, had prepared the brief to the CDPP they had allocated unique identifier numbers to each of the documents. Documents seized in one of the searches of the premises of one of the defendants, for example, had been identified as the 'H' series of documents. This meant that when the documents in this series came in from the referring agency in paper form, they were already paginated and numbered on a coversheet sequentially from H1.

Consistent with its usual practice, the CDPP had then forwarded this documentary evidence to the Australian Securities and Investments Commission (ASIC), which acts as a third-party provider, to be scanned and loaded into the Litigation Support System (LSS) database.[6] The LSS is a litigation support system developed through the

5 The charges essentially involved the one offence, but on 24 May 2001 the relevant offence under the Crimes Act 1914 (Cth) was replaced with a new offence under a new section (s. 135.4) of the Criminal Code Act 1995 (Cth). Two charges were accordingly laid so as to encompass the whole of the relevant period.

6 LSS has been used by the CDPP for about ten years, although alternative systems are currently being trialled.

cross-agency collaboration of ASIC and the CDPP.[7] Rather than allocate new identifier numbers, the barcodes prepared by the CDPP, and affixed to the documents in preparation for scanning, had adopted the identifier numbers allocated by the Australian Crime Commission. This meant, for example, that document 'H39' as presented to the CDPP would be barcoded: 'H00000039'. Once the documents had been scanned and loaded into the LSS, the associated data entry was undertaken in the office of the CDPP.

The committal hearing was paper-based. Even though barcoded with the nine-character identifier number, the documents had been referred to at the committal in their abbreviated form such as, for example, 'H39'. The original paper documents were tendered into evidence.

iii. Adoption of Court-provided Trial Technology

At a trial review towards the end of 2008, Fryberg J suggested to the parties' representatives that the nature of this matter made it ideally suited to be conducted as an electronic trial, with the support of the court's e-trial system.

Though comfortable with the use of common information technology, such as email and word-processing packages, and text messaging, none of the defendants' solicitors regarded themselves as having high levels of information literacy levels and none of them had previously been involved in an electronic trial or had any familiarity with the court's e-trial system. This meant they were a little concerned when the judge suggested the matter should run as an e-trial. They were conscious, however, that almost all of the documentary evidence was to be adduced by the Crown, and that the defence did not intend to dispute the authenticity of any of the Crown documents. In these circumstances they did not oppose the adoption of the court-provided trial technology.

Initially, the representatives for the prosecution opposed the adoption of the court-provided e-trial system, primarily because they were familiar with LSS and had no experience with the court's e-trial system. Although the LSS used by the CDPP was principally intended to assist with case preparation, senior counsel for the prosecution had used that technology on previous occasions to assist with evidence presentation at trial. The instructing legal officer for the CDPP had also instructed at both a committal hearing and at a District Court trial in which LSS was used to assist with the presentation of evidence. In each of these matters, the CDPP had provided its own computer equipment, along with a screen for the judge. It had also provided and set up a large screen at the front of the courtroom. The system was operated by the instructing legal officer, and was used to

7 J. Lewenberg and A. Wallace, *Technology for Justice 2000 Report* (AIJA, 2001) 13.

display documents to all in the courtroom. However, these trials could not be regarded as fully electronic trials,[8] as all documentary evidence was still tendered in paper form and marked by the judge's associate as exhibits. Further, both the CDPP and the judge's associate retained a paper exhibit list. Because of their familiarity with the LSS, the representatives for the prosecution submitted that it should use LSS to assist with evidence presentation at the trial.

Fryberg J was keen to adopt the court-provided system for several reasons. His Honour noted, in particular, that the use of the court-provided system rather than LSS removed the need for any paper documents to be tendered, and ensured the evidence presented in electronic form was in the control of the court. It was ultimately agreed that the court's e-trial system would be adopted. After almost a week of deliberations, the jury were discharged on 20 April 2009 without reaching a verdict. The re-hearing of the matter took place between 18 January and 7 March 2010.

III. The Technology

i. Court Set-up and Hardware

The trial was conducted in the Brisbane Supreme Court. The judge's associate was provided with a computer and two monitors. Only the associate could view one of these monitors. The second monitor, also controlled by the judge's associate as operator of the eCourtbook,[9] was the 'Court View' monitor. The documents displayed on that monitor were displayed on all monitors in the courtroom which were set to display the Court View.

There were separate computer monitors located on the judge's bench, on the witness box, on the bar table for each party, in the dock for each of the three accused persons, and in front of the transcript writers. Seven computer monitors were also provided for the use of the jury,[10] and two additional monitors for the press. Each of these monitors could be used to show the Court View as controlled by the Courtbook operator. The Court View was also displayed on a large screen at the front of the courtroom.

The judge and his associate were supplied with their own personal computers (PCs), which were connected to the Department of Justice

8 S. Jackson, 'New Challenges for Litigation in the Electronic Age' (2007) 1 *Deakin Law Review* 101 at 105; A. Stanfield, *E-Litigation* (Thompson Legal and Regulatory Group, 2003), 71; A. Stanfield, *Computer Forensics, Electronic Discovery and Electronic Evidence* (LexisNexis Butterworths, 2009) 252–68.

9 See discussion under Section III.ii 'The eCourtbook' below.

10 Each monitor was shared between two jurors. Because of the scale of the matter, the empanelled jury included two reserve jurors.

network. The PCs used the court's wireless internet access,[11] rather than being connected by cable to the court. Stand-alone computers were also provided for each of the parties' legal teams. The display for each of the stand-alone computers could be switched easily between the personal computer, and the Court View.

There was a visualizer at the end of the bar table beside the prosecutor, for use by counsel for any party.[12] This was connected to the Court View, allowing it to be used for the display of documents or other physical evidence. It could also magnify evidence, with the use of the zoom and auto focus controls.

ii. The eCourtbook

As has been the case for civil trials conducted with the court-provided technology, the eCourtbook[13] provided the central reference point as the collection of documents to which the judge, the witness and the parties' representatives referred.

In this case, however, all the evidence to be loaded into the electronic database for the trial was that of the prosecution, which had assembled a vast array of documentary material. The information technology staff from the CDPP liaised directly with the court's information technology staff to load the documents from the LSS into the eCourtbook. The documents on the LSS system, other than a small number of scanned handwritten documents, were in text-searchable Tagged Image File Format (TIFF). Although the eCourtbook will support any format, it was decided, at the judge's recommendation, that the documents to be loaded into the eCourtbook should be converted into text-searchable Portable Document Format (PDF). PDF is the format adopted in the previous trials which have been conducted with the use of the court-provided technology. An advantage of the PDF format is that viewers for searchable PDF are freely available, whereas the necessary viewing software for text-searchable TIFF is proprietary software.

The CDPP had also created spreadsheets and tables of overt acts[14] from the data. These were intended to assist as jury aids. They were hyperlinked to relevant documentary evidence. The CDPP had just updated to Windows Vista so the documents were in Microsoft Office 2007 format, whereas the court system runs on a Microsoft Office

11 The Queensland courts provide free broadband internet access using wireless technology in more than 120 courtrooms throughout Queensland, including all courtrooms in the Brisbane Law Courts Complex. Further information on the court's wi-fi service is available at: http://www.courts.qld.gov.au/3892.htm, viewed 7 July 2009.

12 Fryberg J reflected after the trial that the court set-up would have been improved if a visualizer had been placed at each end of the bar table.

13 The Court's 'eCourtbook' utilizes Microsoft Windows Sharepoint Services, a web-based collaboration and document management platform available from Microsoft. This software runs on a Microsoft Windows 2003 Server Platform.

14 See Criminal Code Act 1995 (Cth), s. 135.4(9).

2003 server platform. This meant some conversion of the hyperlinks was required before the spreadsheet hyperlinks would work correctly. This caused minor difficulties, but the information technology staff with the CDPP developed appropriate macros which assisted with the necessary conversion.

The representatives for each party, and the judge and his associate, were all provided with passwords, enabling 24-hour on-line access to the eCourtbook. The parties were also provided with the court's user manual relating to the eCourtbook.

There were four sections within the eCourtbook: all documents; exhibits; documents marked for identification; and transcript. It was the role of the judge's associate, as operator of the eCourtbook, to display documents as requested by counsel on the Court View, to assign exhibit numbers to documents admitted into evidence and maintain the exhibit list, and to identify and mark documents marked for identification.

The Courtbook operator was able to expand or reduce the size of any document being displayed. This facilitated clear viewing of parts of documents, such as the entries in particular rows and columns of spreadsheets. It was also possible to call up two documents and place them on the screen side by side, to enable the drawing of comparisons between documents.[15]

The witnesses were provided with a mouse, which enabled them to scroll through documents displayed in the Court View and bring up any date, or page of a document as asked, and to point to any part of the document with the cursor.

iii. Real-time Transcript

Three laptop computers were provided on the bar table for viewing real-time transcript. A laptop with the real-time transcript was also provided for the judge. The laptops were provided for the use of the legal representatives because of time constraints, as ordinarily the parties would be required to bring in their own equipment and load on the appropriate software.

The real-time transcript was produced by a process involving one real-time court reporter in court at any time, with one operator in the office of the Court Reporting Bureau (CRB) on level 5 of the Supreme Court Building. The person in the office of CRB would check the output produced by the operator in court, and make corrections and

15 These facilities within the eCourtbook may be contrasted with those available in *Emanuel Management Pty Ltd* v *Fosters Brewing Pty Ltd* [2003] QSC 205. This trial was one of the first attempts in Queensland to adopt trial technology. The commercially provided technology employed in that case did not include these capabilities, and this was one of the reasons the presiding judge (Chesterman J) was sceptical about the potential for the adoption of trial technology in long and complex cases. See: see Justice R. Chesterman, 'Managing Complex Litigation', address to the Queensland Law Society's Continuing Legal Education Program, 22 October 2003: http://archive.sclqld.org.au/judgepub/2003/Chesterman221003.pdf.

fill in any omissions as necessary. The court reporters had access to the eCourtbook and so were able to check anything they needed to. This meant the version on the screen in the courtroom as real-time transcript was a provisional version, rather than the final official version.

The final transcript, as edited and checked, was uploaded at the end of each day, so that the eCourtbook website each day had the up-to-date and corrected transcript. The full transcript also included counsels' opening addresses.

The real-time transcript as it appeared on the laptops in the courtroom had only that day's provisional transcript. The software enabled users to go back to earlier passages of the transcript at any time, or conduct transcript searches and then return to the current real-time evidence. One limitation of the transcript facility identified by some of the participants, however, was that it lacked the capacity for Boolean searching, and required the transcript for each day to be searched separately. To overcome this limitiation, the judge used ISYS search software[16] on a separate copy of the transcript, and this was also made available for use by the jury when it retired.

IV. Challenges Overcome

i. Ability to Rely Completely on eCourtbook

In their feedback about the court-provided technology in the civil trial in *Covecorp,* the legal teams reported that the most significant of the problems or limitations of the system that they encountered related to:

- issues which resulted from non-compliance in some respects with the document protocols agreed between the parties which meant it was not always possible to locate or identify documents within a database simply and accurately;[17] and
- an inability to rely completely on the eCourtbook, which meant that the parties' representatives ultimately found it necessary to take to court paper copies of all or almost all of the documents which had been disclosed in the matter, and on a number of occasions to tender paper copies of documents as exhibits, instead of digital versions.[18]

16 For features of ISYS search software, see: http://www.isys-search.com/resources/brochures/sharepointsearch.pdf.

17 See, for example *Seven Network Limited* v *News Limited* [2007] FCA 1062 at [49].

18 See Jackson (2008), above n. 3 at 66–7. For similar views in relation to the trial in Queensland in *Emanuel Management Pty Ltd* v *Fosters Brewing Group Ltd* [2003] QSC 205; see Justice R. Chesterman, above n. 15 at 7–8.

These were not issues at the trial in *Hargraves*. The representatives for all parties reported that they could locate documents on the eCourtbook without any significant difficulty. The defendants' representatives attributed this to the fact that in this matter, as is usually the case in criminal matters, all or almost all of the documentary evidence was produced by the Crown. It was that documentary evidence which was loaded onto the eCourtbook. Even if documentary evidence is to be produced by the defence, the different disclosure obligations imposed upon the prosecution and the defence[19] mean that it will not be necessary or appropriate for documentary evidence for the defence to be included in a central database to which all parties have reference. In this case the CDPP had adopted their own protocols for managing the documents on the LSS and had done so consistently and accurately. There had been no need to agree to a protocol with the defence and therefore no issues resulting from any non-compliance with that agreed protocol.

The judge's associate, as Courtbook operator, confirmed that she did not encounter any difficulties resulting from errors in coding or in the way the documents had been loaded onto the eCourtbook. She also attributed this to the fact that the database had effectively been prepared entirely by the prosecution.

It was possible for documents to be added to the eCourtbook during the trial. The process adopted was for the party wishing to add documents to email the required documents to the judge's associate for loading onto the database. As the system enables a document to be uploaded in less than 30 seconds the task of adding documents as the trial progressed was not onerous and representatives for both parties found it simple and convenient. There were no more than 30 documents added into the eCourtbook during the course of the trial.

A small number of exhibits (fewer than ten) were tendered at the trial as physical exhibits. These comprised: key spreadsheets that were A3 in paper form and were difficult to read on a computer screen, credit cards, a DVD,[20] and brochures which were relevant not only for their information content but also because of aspects such as their glossy colour and the quality of the paper on which they were printed. There was no attempt by the parties' representatives to tender paper documents simply because they were not included in the eCourtbook.

Counsel for each party had one folder with paper copies of a small number of key documents in court. Beyond this, neither party had paper documents in court and neither reported any difficulties to have flowed from this. A solicitor for one of the defendants attributed the reliance by the defence on the eCourtbook to judicial control. He

19 See discussion under Section VI.ii below.

20 In the view of some of the participants, including Fryberg J, it was unfortunate that the DVD was not on the database, as audio recordings were on it. The separate DVD was regarded as having complicated things unnecessarily.

noted that the judge had made it clear that as this was an electronic trial, he would not regard it as appropriate for either party to be referring to, or relying on, paper documents. Jackson[21] considers the importance of discipline and judicial control in ensuring the effective and efficient use of trial technology.

The prosecution had sought to have hard copies of its evidence in court, although conceding this was really as a 'security blanket' if there was a problem with the eCourtbook, the defence called for the original of any paper documents, or the jury asked to see original paper documents. The agreed compromise was for the prosecution to be provided with a key to a witness room, where they stored their evidence in paper form. This evidence was contained in 55 ring binders, and comprised approximately 3,000 documents. The prosecution accessed this room on a couple of occasions during the trial to locate original documents called for by the defence, such as original colour brochures subsequently tendered by the defence. The prosecution's representatives confirmed, however, that had these documents not been at court it would have been possible to have them found at the office of the CDPP and delivered to court within about five minutes, and that this would not have caused any significant disruption to the flow of the trial.

ii. Simple Referencing and Tendering Method

One of the criticisms made by Justice Fryberg about the process of tendering documents at the trial in *Covecorp*, related to the need for counsel, when referring to a document, to refer to its full document identification number, for example, 'Cov dot zero zero one dot zero one two dot zero zero six'. As the judge reflected, this was a very unnatural way to address witnesses and the court. In line with the judge's recommendation following that trial, documents referred to in the course of evidence in *Hargraves* were referred to by reference only to the letter and number of the unique identifier, but without the additional zeros.[22] Counsel would, for example, ask: 'Could the witness be shown the spreadsheet numbered X21?'

As document numbers always had nine characters, the Courtbook operator added the appropriate number of zeros. Counsel found this convenient, as it significantly improved the flow of their presentations, and did not cause any delay in the display of the document. On most occasions the Courtbook operator was able to display the documents requested almost instantly. As Fryberg J observed after the trial, however, it was not necessary to have nine characters in the document identification numbers, and the process could have been simplified even further with better planning: each document had

21 Jackson (2008), above n. 3 at 156.
22 *Ibid.* at 75.

multiple zeros in its identification number, and some could have been dropped.

V. Further Refinements?

i. Exhibit Numbering

There was considerable discussion at the briefing session before the start of the trial about the numbering system to be used for exhibits. Senior counsel for the Crown indicated a preference for keeping the unique numbers by which the documents were entered into the eCourtbook. He suggested this would mean the exhibit list had the original number of the document in the database, with its description, and could be called up quickly.

Fryberg J preferred to adopt a sequential numbering system, commencing at '1', and it was ultimately determined that a sequential numbering system would be used for exhibit numbers. In operation, however, a number of practical problems arose:

- *Marking exhibits*. On a number of occasions, the prosecution tendered a bundle of documents with the agreement of the defence. This was achieved by the prosecution tendering an excel spreadsheet listing the document numbers of all of the documents that were tendered by agreement. As the trial involved a large amount of documentary evidence, this was a very efficient manner of tendering evidence because it avoided the need to call up each document in court and have an exhibit number allocated.

  One spreadsheet involved some 1,400 documents. Approximately 1,900 documents were tendered in this fashion during the trial. Each spreadsheet was given an exhibit number, and each document it listed was also separately numbered as an exhibit. For example, if the spreadsheet was exhibit 76, the documents it listed would be exhibit numbers 76.001, 76.002 etc. For these documents to be marked as exhibits, it was necessary for the judge's associate, as operator of the eCourtbook, to copy each document number into the search function, pull up the editing page of the document, and then make the exhibit marking.[23] The judge's associate found it difficult to make the necessary recordings on the database and the exhibit list while the court was in session, and accordingly she had to attend to this task at other times: commonly before and after court each day, and additional times after hours at nights and on week-ends. Further, the task of manually labelling a large number of exhibits meant that the process was prone to omissions or mistakes, and

23 Some documents on the spreadsheets were hyperlinked but this did not assist because the links would only bring up the documents, and not the editing page for the document that enabled them to be marked as exhibits.

it was necessary to subsequently check all the entries and correct any mistakes made.

- *Separate task*. The system adopted had required the undertaking of a separate task to match up the identifier number of documents on the eCourtbook with the exhibit numbers which had been allocated to them. The representatives for the prosecution had maintained a separate list which matched their identifier numbers with the exhibit numbers, but they found that the process of taking this extra step created a margin for error. On the couple of occasions when the court's wi-fi system was down, the CDPP's legal officer was unable to rely on the eCourtbook and had to rely on her separate paper list. At times, this resulted in delays in identifying exhibits because there had been several lists containing items that had been tendered in bulk.
- *Effect on existing knowledge of document identifiers*. Through the course of their case preparation, the prosecution's legal team had become very familiar with the unique identifier numbers of key documents. Once those documents had been tendered and different exhibit numbers allocated to them, the legal representatives had to become familiar with a completely new set of numbers. They found this challenging and unnecessarily confusing.
- *Ease of reference*. The 'short-hand' method of referring to the unique identifier number for documents by omitting reference to the zeros, as discussed above,[24] did not apply when referring to exhibit numbers. When the documents were part of the exhibits tendered in bulk, the exhibit numbers did include a number of zeros, for example; '76.001' and there were occasions when there were difficulties in pulling up the exhibit because counsel had not included the right number of zeros when referring to it.

The divergent views about the appropriate exhibit numbering system were also reflected in the feedback from the participants following the trial. All of the legal representatives for the prosecution expressed a strong preference that in any future trial using the court-provided system, the exhibit numbers should be the unique numbers which had already been allocated to the documents on the prosecution's electronic system. In their view, the potential for confusion would be minimized and time efficiencies could be achieved by using the existing barcodes as exhibit numbers.[25] The legal officer indicated that she had been involved in a matter where the CDPP had used its LSS for committal and the identifier numbers were used as the exhibit numbers, though the actual exhibits were tendered in paper form. She

24 See discussion under Section IV.ii above.

25 If the exhibit number were to be the same as the existing barcode number, the simplest method of marking exhibits would then be to add a new field into the eCourtbook, to be checked if the document becomes an exhibit.

found no difficulties or confusion had resulted in that matter, and no objection had been taken by the defence.

Fryberg J, however, remained of the view that a sequential numbering system is of critical importance. While acknowledging the difficulties which had been occasioned with the marking of bundles of documents, his Honour was confident this difficulty would have been overcome had the prosecution advised in advance of the trial of its intention to tender exhibits in bulk. This would have enabled appropriate arrangements, such as the pre-allocation of exhibit numbers, to be made. There was no apparent reason why this could not have been done. The judge was understandably concerned to ensure the method used meant that the only documents that went into the exhibit lists were documents that had been tendered as exhibits, and he emphasized the potentially horrendous costs consequences of a mis-trial that could result if a document wrongly goes to the jury. The judge was also unpersuaded that a numbering system devised to assist preparation for trial was necessarily appropriate for use during the trial.

The issue of the appropriate method of exhibit numbering warrants further exploration. It may be possible to address the concerns expressed by all of the trial participants by devising a hybrid method involving a numbering system which focuses attention on the process of making each document an exhibit, and which makes errors of omission or insertion obvious.

ii. Security

All participants in the trial were given access codes which enabled them to access all parts of the eCourtbook. This had a number of implications which had to be kept in mind by the parties.

- *Accommodating different disclosure obligations*. One of those implications may fairly be regarded as a consequence of the differing disclosure obligations imposed in criminal matters upon the defence and the prosecution.[26] Although the documentary evidence produced by the defence was minimal when compared with that produced for the prosecution, the defence legitimately did not wish to provide the prosecution with documents which they were not obliged to disclose, until such time as those documents were to be shown to witnesses in examination or cross-examination. Once the documents were loaded to the eCourtbook, the Crown would be aware of them. The defence dealt with this issue in one of two ways:

  (a) For some of those documents, the defence placed their reliance on the diligence of the judge's associate, as operator of the eCourtbook. They scanned and emailed the documents to the judge's associate, with a request about the timing for

26 See discussion under Section VI.ii below.

the upload of the document. They may, for example, have requested that it not be uploaded until the prosecution had finished in chief and defence counsel was cross-examining.

(b) For one document regarded by the defence as a key document, the document was not loaded onto eCourtbook at all, but rather was displayed on the visualizer and then tendered in hard copy. The use of the visualizer in this way caused some delay, as it required the eCourtbook to be shut down and re-started while the document was displayed. The prosecution believed this gave the particular document added impact which it would not have had if displayed and tendered in the same way as the other documentary evidence.

- *Powerpoint presentations.* At the judge's suggestion, counsel for the prosecution, and counsel for two of the accused, supported their addresses to the jury with presentations in Microsoft Powerpoint. These were loaded into the eCourtbook and displayed when required by the Courtbook operator. This meant they could be viewed by the other parties immediately they were loaded to the eCourtbook. Although neither party obtained a tactical advantage in the particular circumstances of this case, the representatives for all parties regarded the possibility that such an advantage might be obtained as undesirable.

The representatives for all parties suggested the eCourtbook would be enhanced if provision could be made for a part of the site to be secured to each party so that the access code for the court and the Courtbook operator would provide access to the entire site, but that there was a part of the site which each party could access via their access code that was not open to other parties. Documents which parties were entitled to withhold from other parties could be called up by the Courtbook operator upon request, and at that point transferred to the 'open' part of the eCourtbook where it could be viewed by all the participants in the trial. Fryberg J agreed this facility would be a valuable enhancement to the eCourtbook.

Proprietary trial-presentation software[27] includes advanced security features, but this aspect is not currently available through the court-provided system. The court's information technology staff advised that it would be possible, though not simple, to modify the eCourtbook in this way by developing these security features. It is suggested that, if this enhancement may be made without enormous cost, the investment would be justified. For the present, however, it remains necessary for parties to be aware of the security implications,

27 Commercial applications commonly used in Australian courts include 'Ringtail Courtbook', part of the Ringtail suite of products: <http://www.cchworkflow.com.au/WFSResource_DocumentLibrary/Ringtail%20.pdf>, and 'Court' from Systematics Pty Ltd, <http//www.systematics.com.au>.

and to take steps such as those adopted in *Hargraves* to accommodate them.

iii. Other Minor Issues

The various participants in the trial identified a small number of minor matters which might be considered for future electronic trials. In general terms these issues may be resolved quite simply:

- *Full database search function not operating*. As the documents in the eCourtbook were in fully searchable PDF, it was possible to conduct a text search for a word or words in any individual document in the eCourtbook. Several of the participants in the trial found this function to be very useful. The representatives for both parties indicated, however, that it would have been of benefit if they were able to conduct a text search over the entire eCourtbook. This would have enabled them, for example, to find any document in which a particular document of interest was mentioned.

  This is a feature that was available for the trial in *Covecorp* and was a feature highly valued by the participants in that trial.[28] Although the eCourtbook uses Microsoft Windows Sharepoint Services, the Master Index functionality which enables a search to be conducted across the entire database was a custom-designed feature of this software that had been prepared for the trial in *Covecorp*. This feature of the software did not function correctly when the eCourtbook was uploaded with the documents for the trial in *Hargraves* and there was insufficient time before the trial commenced to correct the problem. The court's information technology staff advised, however, that the problem was a technical misconfiguration, and that the feature could be restored for future e-trials which adopt the court-provided technology.
- *Implications flowing from witness control*. The witness was provided with a monitor, which displayed the Court View. The witness was also supplied with a wireless mouse, which connected to the computer of the judge's associate. This allowed the witness to take control of the mouse to scroll through, or point to particular parts of documents. As noted below, all the parties' representatives regarded this feature as extremely valuable.

  However, some difficulties arose because both the witness and the judge's associate could control the cursor at the same time. As operator of the eCourtbook, the judge's associate would use her private computer screen for other activities, such as queuing documents that might then be needed to be moved to her Court View screen. When asked to scroll through or refer to particular parts of a document in the Court View, a witness

28 See Jackson (2008), above n. 3 at 68.

would sometimes start clicking on the cursor before the associate had moved the cursor to the document in Court View. This meant that the witness might click on a link on the associate's screen, with the result that the operator's work might be inadvertently altered, and also posed the possibility that the jury and the public might see a document they ought not to see. Whenever a problem arose with the witness's use of the cursor, the associate would guide the cursor to its proper position as quickly as she could. The issue was not noticed by the legal representatives in the trial.

It is suggested this difficulty reflects a lack of understanding by the witnesses that they were sharing the cursor with the eCourtbook operator, and that it was necessary for their cursor to be on the Court View screen before they took control. As the parties' representatives did not fully understand this situation themselves, it is suggested the issue could be easily resolved by ensuring that a clearer explanation of the operation of the eCourtbook in this regard is provided to the parties' representatives, who may in turn include appropriate explanations and instruction in their witness preparation.

An associated limitation from the perspective of the judge's associate was that when the witness had control of the mouse, sometimes for long periods of time, the judge's associate was unable to continue working on her own computer. This was the same difficulty reported by the judge's associate in *Covecorp*.[29] A possible resolution of this difficulty would have been to make a second PC or laptop computer available for the associate's use when the witness had control of the mouse and the associate was waiting for counsel to request that a new document be called up, although there was little available space on the bench.

- *Maintaining exhibit list*. No more than ten of the exhibits in the *Hargraves* trial were documents or other items that were not included in the eCourtbook. As the Courtbook operator was not aware of any mechanism by which these documents or other items could be incorporated into the eCourtbook exhibit list, she maintained a separate exhibit list in Microsoft Word for the purpose of the trial. This listed both electronic and physical exhibits. She found this to be quite time-consuming.

  There was, however, a mechanism by which the physical exhibits could have been included in the electronic list. The simplest way to do this would be to prepare a blank document as a Word or PDF document for the exhibit. This document would be numbered and could be labelled, for example, 'physical exhibit—

29 *Ibid*. at 77.

credit card No. . .'. This would create a file or place for the physical exhibit in the eCourtbook, and the electronic exhibit list would then be complete. The difficulty encountered here could accordingly be overcome simply by ensuring instruction about methods for including physical exhibits in the exhibit list is incorporated into the training provided for the eCourtbook operator, and also in the instruction manual relating to the eCourtbook.

- *Large screen for public view*. The large screen at the front (judge's end) of the courtroom was intended to enable documents displayed in the Court View to be seen by all in the courtroom, including those in the public gallery. A number of participants in the trial, including the judge, found this location to be unsuitable, and suggested that a large monitor near the public gallery would be more useful.
- *Availability of IT support staff*. The Courtbook operator expressed her gratitude to the court's information technology staff for the helpful training provided, and the clarity of the instruction given when called upon for assistance. She noted, however, that there were occasions when it was difficult to obtain immediate assistance from the court's information technology section, as there was no individual allocated to assist with e-trials. She suggested that although there were only a few occasions during the trial when issues arose about the technology, it would assist greatly if there were dedicated personnel responsible for the support of e-trials.

Senior counsel for the prosecution regarded it as imperative that an appropriately trained expert be available, and responsible for resolving any issues that might arise with the technology during the trial. He noted that, when he had conducted trials with the aid of the LSS system, the office of the CWDPP had allocated an IT expert for this purpose, and this was invaluable in ensuring the smooth and efficient conduct of the trial. It has been recognized in the context of e-trials conducted with technology supplied by a commercial service provider that it is imperative that desktop and helpdesk services be available in the hearing room, or at least at very short notice.[30]

VI. Demonstrated Benefits

i. Time and Costs Savings

There is now a substantial body of evidence elsewhere to support the view that the use of trial technology can generate very substantial overall costs savings, particularly flowing from a shortening of the

30 See Stanfield (2009), above n. 8 at 268.

time involved at trial and in trial preparation.[31] However, *Hargraves* is the first Queensland trial in which the representatives for all of the parties have acknowledged, without reservation, that the use of the eCourtbook at trial produced considerable overall efficiencies and costs savings.

The aspects identified as contributing significantly to costs savings flowing because activities were undertaken more quickly included the following:

- *Document retrieval and distribution*. All of the participants in the trial noted that the courtbook operator was able to call up any document requested and that it would be displayed on all 'Court View' screens in the courtroom almost instantly. This was contrasted with the usual process in which documents may be handed between counsel before presentation to a witness, are handed to witnesses via the bailiff, and are physically passed around by the members of the jury. In more complex matters, instructing solicitors could first be required to search through volumes of archive boxes to retrieve the required documents. All trial participants agreed the efficiencies generated were very significant.

  The representatives for the defence also identified significant time and consequent cost saving involved in preparation for the trial. Until they were provided with access to the eCourtbook, they had access only to hard copies of the documents that had been disclosed to them by the prosecution, contained in a large number of archive boxes, and CDs containing electronic copies of discovered documents. They were able to locate any document much more quickly by accessing the eCourtbook than would otherwise have been the case.
- *Bulk tender of exhibits*. Approximately 1,900 documents were tendered into evidence by the process in which the prosecution tendered an excel spreadsheet listing documents which were tendered by agreement. Although the process of allocating exhibit numbers to these documents and compiling the exhibit list was somewhat burdensome for the judge's associate,[32] she acknowledged that this was far more efficient than the usual manual process by which exhibits are stamped manually with an exhibit stamp. The overall savings for the trial was obvious, as in the ordinary course a significant amount of court time would have been consumed by the manual tendering of these documents into evidence. Further, as Fryberg J observed after the trial, the bulk tender process adopted in *Hargraves* could have

31 See S. Jackson, 'Reflection not Rejection: Harnessing the Benefits of Trial Technology' (2008a) 29 *Qld Lawyer* 139 at 140–6; Stanfield (2009), above n. 8 at 272–3.

32 See discussion under Section V.i, 'Marking exhibits' above.

produced even greater efficiencies if the prosecution had notified in advance of the trial of the intention to tender exhibits in bulk. This would have enabled the making of appropriate arrangements, such as the pre-allocation of exhibit numbers.

- *Location of part of document*. All participants in the trial reported that the ability of the courtbook operator to go immediately to a particular page of a document was much more efficient than undertaking the task of finding particular pages or parts of documents manually. It also ensured that time was not wasted, as sometimes occurs, because counsel, the witness, or the jury are looking at different parts of a document.
- *Jury deliberation*. The jury was provided with a CD with the exhibits, the transcript, a hyperlinked index of exhibits, and an ISYS index to the transcript. The representatives for the CDPP suggested additional time savings probably resulted in the time taken for jury deliberations, although this was not something that could be quantified.

The original trial ran for 24 sitting days, with the jury then deliberating for a further four days. All of the representatives for the CDPP agreed it would have taken considerably longer if it had been conducted as a paper-based trial. The legal officer for the CDPP suggested that the actual trial time was likely to have doubled if the matter had been conducted as a paper-based trial. Fryberg J considered that if the trial had been conducted purely as a paper-based trial, without even the visualiser, it would have taken at least six months.

The solicitors for the defence regarded the resultant time and costs savings as 'huge'. They agreed that the estimates elsewhere[33] that overall savings in the vicinity of 25–30 per cent were achievable through the use of trial technology were realistic and had been achieved in this trial.

For this matter, it was anticipated that the time and costs savings which may be attributed to the adoption of the eCourtbook at trial were doubled by the time the re-trial was completed in March 2010. Many of the tasks associated with preparing documents and loading them into the eCourtbook did not need to be repeated, and yet there was an equivalent saving in actual trial time as that which occurred for the original trial.

33 Justice J. Slattery, AO, QC, 'The Kalajzich Inquiry: Harnessing Technology' (1994) 6(11) *Judicial Officers Bulletin* 81; Justice J. Bleby, 'The First Electronic Trial, South Australian Supreme Court', paper prepared at the request of the Historical Collections Librarian of the Supreme Court Library for the purpose of recording some of the judge's reactions as trial judge to the electronic aspects of the trial in *Southern Equities Corporation Ltd* v *Arthur Andersen* (the trial began on 21 November 2001 but settled in May 2002), October 2002, at 1. See also the views of Tamberlin J in *Visa International Service Association* v *Reserve Bank of Australia* [2003] FCA 977.

(a) Other cost reductions

- *Reduction in copying costs*. Representatives for all parties identified very significant costs savings because the e-trial almost totally removed the need to make multiple copies of all of the documents in the eCourtbook. Had this been a paper-based trial, copies of these documents would have been made for counsels' briefs, and file copies would have been made and retained for reference after the original documents were tendered in evidence. Additional costs would be associated with the delivery of the copies to counsel and to the court.
- *Implications for re-trial*. The representatives for the prosecution noted that the eCourtbook reduced the time and consequently the cost involved in preparation for the re-trial, which took place in between 18 January and 7 March 2010. Had the trial been conducted in hard copy form it would have been necessary to restore the documents, which would have been provided to the jury for their deliberations, to their original order. The ease of electronic manipulation of the documents meant they could quickly and conveniently re-arrange the documents as appropriate to deal with adjustments needed for presentation of their case or to respond to changes in approach by the defence.
- *Implications for appeal*. Access to the eCourtbook, complete with transcripts, exhibits, particulars etc, will simplify and reduce the costs of obtaining counsel's opinion on the prospects of success on an appeal. Further significant costs reductions will surely flow if there is an appeal to the Court of Appeal.

  The Criminal Practice Rules 1999 (Qld), and the practice direction relating to appeals to the Court of Appeal,[34] proceed upon the assumption that the trial will have been paper-based, and they specify that multiple copies of an appeal record book must be prepared. It is suggested, however, that a common-sense approach will be adopted: if the relevant trial was conducted electronically it may be anticipated the appeal will also proceed in that way.[35] There is an obvious need for consideration to be given to modernizing the applicable rules and practice direction.

ii. Compliance with Prosecution's Disclosure Obligations

The prosecution was confident it had complied with its disclosure obligations well in advance of the trial, by providing copy documents

34 Supreme Court of Queensland, Practice Direction 1 of 2005, issued 18 March 2005.

35 The Queensland Court of Appeal conducted it first wholly electronic civil appeal in *AGL Sales (Qld) Pty Ltd* v *Dawson Sales Pty Ltd* [2009] QCA 262 (hearing dates: 5 August 2009 and 6 August 2009). The court-provided technology had been adopted at trial (*AGL Sales (Qld) Pty Ltd* v *Dawson Sales Pty* Ltd [2009] QSC 8) and the Court of Appeal dispensed with any requirement for hard copy appeal record books.

both in paper form and in electronic format on CD. However, the defence stated that one outcome of the adoption of the eCourtbook was the complete compliance by the prosecution with its disclosure obligations before the trial. The defence had not initially anticipated that this outcome would be attributable to the adoption of the eCourtbook, however the representatives for the defence regarded this as an enormously significant consequence. Certainly the representatives for all parties agreed that the e-trial format would be most beneficial to the defence team, and efficient for their trial preparations.

(a) The Prosecution's Duty to Disclose

In *R* v *Brown*[36] Lord Hope of Craighead referred to the common law obligation on the prosecution to disclose:

> The great principle is that of open justice. It would be contrary to that principle for the prosecution to withhold from the defendant material which might undermine their case against him or which might assist his defence.

In the Court of Appeal in *R* v *Brown*[37] Steyn LJ (as his Lordship then was) spoke of the common law position in these terms:

> [In] our adversarial system, in which the police and prosecution control the investigatory process, an accused's right to fair disclosure is an inseparable part of his right to a fair trial.

The prosecution now has a statutory obligation to disclose, expressed in Division 3 of Chapter 62 of the Criminal Code Act 1899 (Qld).[38] The legislation acknowledges that it is a fundamental obligation of the prosecution to ensure that criminal proceedings are conducted fairly with the single aim of determining and establishing truth.[39] It requires the prosecution to give an accused person full and early disclosure of all evidence the prosecution proposes to rely on during the proceeding, and all things in the possession of the prosecution, other than things the disclosure of which would be unlawful or contrary to the

36 [1998] AC 367 at 377. The statement was adopted with approval by the Queensland Court of Appeal in *R* v *Rollason; ex parte A-G (Qld)* [2008] 1 QdR 85 at 91; [2007] QCA 65 at [17].

37 [1995] 1 Cr App R 191 at 198; the statement was adopted with approval by the Queensland Court of Appeal in *R* v *Rollason; ex parte A-G (Qld)* [2008] 1 QdR 85 at 93; [2007] QCA 65 at [26].

38 The Division was inserted by Evidence (Protection of Children) Amendment Act 2003 (Qld), s. 15. For consideration of the extent to which the statutory requirements reflect the common law position, see *R* v *Rollason; ex parte A-G (Qld)* [2007] QCA 65. See also Commonwealth Director of Public Prosecutions Statement on Prosecution Disclosure at: http://www.cdpp.gov.au/Publications/DisclosurePolicy/DisclosurePolicy.pdf.

39 Criminal Code Act 1899 (Qld), s. 590 AB(1).

public interest, that would tend to help the case for the accused person.[40] The specific things the subject of the mandatory obligation to disclose include the following:[41]

(a) a copy of the bench charge sheet, complaint or indictment containing the charge against the person;
(b) a copy of the accused person's criminal history, and of any statement of the accused person, in the possession of the prosecution;
(c) a copy of any statement of any proposed witness for the prosecution in the possession of the prosecution, or if there is no such statement a written notice naming the witness;
(d) a copy of any test or forensic procedure relevant to the proceeding in the possession of the prosecution, and a written notice describing any test or forensic procedure on which the prosecution intends to rely;
(e) a written notice describing any original evidence on which the prosecution intends to rely at the proceeding; and
(f) a copy of anything else on which the prosecution intends to rely at the proceeding.

The prosecution also has an obligation to disclose a range of additional materials if requested.[42] The legislation specifies the time within which the Crown is to comply with its obligations of mandatory disclosure,[43] and disclosure upon request,[44] and there is an ongoing obligation to disclose if the prosecution cannot comply with a time requirement.[45]

The only disclosure obligation imposed directly upon accused persons applies if they intend to adduce expert evidence at their trial. In that case they are required to give the other parties written notice of the name of the expert, and any finding or opinion he or she proposes to adduce, and copies of the expert report on which the finding or opinion is based.[46] In addition, however, a judge may give directions on the exchange of expert reports, or to encourage the parties to

40 *Ibid.*, s. 590 AB(2).
41 *Ibid.*, s. 590 AH(2). The obligation applies to a 'relevant proceeding'. The term is defined in s 590AD to mean—a committal proceeding, a prescribed summary trial; or a trial on indictment.
42 Criminal Code Act 1899 (Qld), s. 590AJ. The materials the subject of the obligation to disclose on request under this section include: a copy of the criminal history of a proposed witness for the prosecution in the possession of the prosecution; a copy or notice or anything in the possession of the prosecution that may reasonably be considered to be adverse to the reliability or credibility of a proposed witness for the prosecution, or that may tend to raise an issue about the competence of a proposed witness for the prosecution to give evidence in the proceeding; and a copy of any statement of any person, or a copy or notice of any other thing, relevant to the proceeding and in the possession of the prosecution but on which the prosecution does not intend to rely at the proceeding.
43 Criminal Code Act 1899 (Qld), s. 590AI.
44 *Ibid.*, s. 590AK.
45 *Ibid.*, s. 590AL.
46 *Ibid.*, s. 590B.

assist the speedy resolution of the trial.[47] These directions may be given, regardless of whether the defence has yet formed the intention of adducing the evidence at the trial.[48]

It may be noted that in his recent Review of the Civil and Criminal Justice system in Queensland, Hon. M. Moynihan AO, QC[49] recommended that the statutory provisions for disclosure be re-drawn to make them more coherent and consistent. He emphasized, in particular, that there must be disclosure of the evidence relied on by the prosecution, and that there must also be disclosure of all information or material known to, or in the possession of, the prosecution bearing on the case which is capable of rebutting the prosecution case or advancing the defence case. The government has announced a number of reforms in response to the Moynihan Review, with stage 1 of the reform package to include simplification of prosecution disclosure provisions.[50]

(b) Disclosure in Practice

Each of the solicitors for the defendants is a Queensland Law Society accredited criminal law specialist.[51] They reported that in their experience one of the significant problems with the criminal justice system in Queensland is that the Crown's disclosure obligations are rarely complied with, particularly before the prosecution is referred to the State or Commonwealth Director of Public Prosecutions. They described the process of obtaining the documents required by law to be disclosed as one of 'drip-feed', and one in which most documents the subject of the obligation to disclose were not provided until actively sought, and one which frequently left the defence to bring court applications to force the Crown to disclose.[52] In their view this is 'completely unacceptable' when the mandatory nature of the Crown's obligation is considered, and in light of the consequences of the criminal justice system for accused persons.

47 *Ibid.*, s. 590AA.

48 See, for example: *R* v *Ward* [2009] QSC 38.

49 Hon M. Moynihan AO, QC, *Review of the Civil and Criminal Justice System in Queensland*, December 2008: http://www.justice.qld.gov.au/files/AboutUs/_of_the_civil_and_criminal_justice_system_in_Queensland.pdf.

50 Hon C. Dick, 'Sweeping Court Reforms to Streamline Qld Justice System', Queensland Government Ministerial Media Statement, 21 July 2009: http://statements.cabinet.qld.gov.au/MMS/StatementDisplaySingle.aspx?id=65265.

51 There are only 19 Queensland solicitors holding specialist accreditation in Criminal Law. At the time of the trial in *R* v *Hargrave, Hargrave and Stoten,* six were partners or solicitors with *Ryan & Bosscher.* See http://www.qls.com.au/content/ss/accredited-specialists?location-match=contains &location=&specialist-accreditation=CL&name-match=contains&surname=&given-name=&language=&other-admission=&commissioner=&CONNECTFORMGET=TRUE.

52 There had been an earlier interlocutory application by the defence in *Hargraves* for disclosure of complete copies of the transcript of the evidence of a prosecution witness, and of all exhibits referred to in that transcript: *R* v *Hargraves, Hargraves & Stoten* [2008] QSC 267.

The concern expressed by the defence in this regard was subsequently reflected strongly in the Moynihan Review,[53] which reported:

> There has been a substantial body of information in submissions, consultations and proceedings at the round tables convened by the Review to found concern that disclosure obligations are not being met. In particular it has been said that s. 590AB(2)(b) which requires disclosure of 'all things in the possession of the prosecution . . . that would tend to help the case for the accused', is deliberately not being carried out or is being 'overlooked' in a concerning number of cases. It is open to conclude that there is a pattern here rather than the presence of exceptional omissions.
>
> The Queensland Law Society, the Bar Association of Queensland and Legal Aid Queensland were unanimous in expressing concerns about the persistent and pervasive problem of non-compliance by the Queensland Police Service with the statutory disclosure obligations. The ODPP also expressed concerns about the need for timely compliance of disclosure by police.

The recommendations of the Moynihan Review[54] included a number of measures designed to increase prosecution compliance with disclosure measures and these measures are to be included in stage 1 of the government's reforms in response to the Moynihan Review.[55]

During the trial in *Hargraves*, it became apparent to the solicitors for the defence that, by insisting upon the adoption of the eCourtbook, and having his associate operate it, Justice Fryberg had ensured that the Crown complied completely with its obligation to disclose. These representatives found this to be an immensely valuable and positive outcome. The prosecution was confident it had complied with its disclosure obligations by supplying material in hard copy and in electronic format in advance of the trial, but it agreed that the provision through the eCourtbook of a complete version of discoverable documents in the same format as it would be used in court would have been very beneficial for the defence.

iii. Jury Fully Resourced

The only physical evidence given to the jury was one A4 folder of documents. This was initially provided by the prosecution for the assistance of the jury, with the leave of the judge. The folders were comprised of documents the Crown regarded as key documents, in the sense that they were likely to be referred to many times in the course of the trial. They also included spreadsheets which had been prepared by an expert witness for the prosecution, which were difficult to view on screen, and transcript of conversations recorded on telephone intercepts. Some additional documents were distributed

53 See Moynihan, above n. 49 at 96.
54 *Ibid.* at 98–103.
55 See Dick, above n. 50.

during the course of the trial for inclusion in the folder, such as the indictment, list of particulars, and the judge's directions.

At the end of the trial the jury was provided with a CD with all exhibits, and redacted versions of the transcript from which any legal argument or inadmissible evidence had been removed. The transcript was indexed with ISYS. The CD also included the list of overt acts provided by the prosecution, hyperlinked to the relevant exhibits. The Powerpoint presentations used by counsel in their addresses to the jury were not included. So they could access these documents in the jury room the jury were provided with four laptops to share.[56] They were also provided with a large plasma monitor to which one of the laptops was connected, for viewing the DVD recording of a house search, which had been tendered into evidence.

As the solicitor for one of the defendants explained: 'There could not have been in the history of Queensland criminal trials a better-resourced jury than this jury.' There was a resulting practical difficulty, in that the room for court 3 could not accommodate all of the jurors, as well as the equipment (which had to be put in place before the jury retired) and the largest available room was still a tight fit. However, the legal representatives for all parties, and Fryberg J, believed that resourcing the jury in this way gave its members the best possible chance to reach a just verdict, and so contributed to ensuring a fair trial for the accused men.[57]

The participants in this trial believed the inclusion of the transcript of the proceeding in the materials provided to the jury was particularly significant. Their reflections were consistent with the views expressed in the Queensland Court of Appeal in *R* v *Tichowitsch*[58] One of the grounds of appeal in that case was that the trial judge erred in providing the jury with a transcript of the evidence at trial. Williams JA (with whose reasons on this ground Keane JA and Philippides J agreed) found that submission could not be sustained. His Honour recognized the provision to juries of copies of the transcript of evidence was not usual practice, but found there was no legislative provision preventing a judge from giving the jury a transcript of evidence.[59]

Williams JA further explained that the usual practice was that juries were advised that, if they wished to be reminded of any part of the

56 The laptops were stand-alone, reconfigured by the court's information technology staff so that they could not connect either to the court networks or to the internet. They contained only the necessary programs, such as Adobe Reader, Microsoft Office, and ISYS. The other peripheral programs (including games) were removed.

57 See also, Justice R. Atkinson, 'Juries in the 21st Century: Making the Bulwark Better' (2009) 29(4) *Proctor* 23 at 24.

58 [2007] 2 Qd R 462; [2006] QCA 569.

59 [2007] 2 Qd R 462 at 467–8; [2006] QCA 569 at [2]. The judge noted such a provision had been introduced into the Jury Act 1977 (NSW), by the insertion in 1987 of s. 55C of the Act, consequent upon a report of the New South Wales Law Reform Commission. He also referred (at [4], [7]) to the decision in *R* v *Taousanis* (1999) 146

evidence, it would be read to them, and that this would be done by the judge reading the relevant evidence, sometimes at considerable length. His Honour explained that the reason for this practice developing was 'undoubtedly the fact that until relatively recently a transcript of the evidence was not available at the time the jury retired to consider their verdict', along with an associated concern that it was undesirable for the jury to be given in permanent form one part of the total evidence, as they may then give it disproportionate weight or attention.[60]

Williams J concluded that the overriding considerations must be that of ensuring the jury are in the best position to arrive at a true verdict, and ensuring that the accused receives a fair trial. As was the position in the trial in *Hargraves*, the jury in *Tichowitski* had been given the entire transcript, edited only to exclude any inadmissible evidence. It was concluded that the appellant had not demonstrated that he was deprived of a fair trial, or a reasonable chance of acquittal because the jury was provided with a transcript of all the evidence.

iv. Real-time Transcript

The real-time transcript was of enormous benefit to both the judge and to counsel, enabling them to refer immediately to any answer given by a witness if and when in doubt about exactly what the witness had said, without waiting for the State Reporting Bureau to produce the official transcript. Although this is a separate feature which has not been used in all trials involving the adoption of the eCourtbook, the representatives for the parties were in agreement that the real-time transcript 'value added' to an enormous degree, describing it variously as 'brilliant', 'awesome', and 'superb'.[61]

It is currently the usual position that an accurate record of what a witness has said is not available until after that witness has left the witness box, because the transcript of each day's proceedings is not usually available until after 5 pm. Access to the real-time transcript (though provisional) surely has positive implications for ensuring a

A Crim R 303, in which Sperling J had summarized the position in New South Wales prior to 1987 and confirmed (at 305) that a judge had a discretionary power, as part of the court's inherent or implied power to control its own processes, to make a transcript of any part of the record of the proceedings available to the jury.

60 [2007] 2 QdR 462 at 468–9; [2006] QCA 569 at [4]–[6], [8]. His Honour referred to the observations of Lord Taylor of Gosforth CJ in summing up the position in England in *R* v *Rawlings* [1995] 1 All ER 580 at 582–3, to the statement of Gibbs J in *Driscoll* v *The Queen* (1977) 137 CLR 517 at 542, and to the decision of the Court of Criminal Appeal in *Lowe* (1997) 98 A Crim LR 300.

61 For other consideration of the advantages offered by real-time transcript, see: Couper, above n. 3 at 6; F. Lederer, 'The Effect of Courtroom Technologies on and in Appellate Proceedings and Courtrooms' (2001) 50 *Defence Law Journal* 773; A. Paliwala, 'Computers, Videotape and Justice' (1993) 4(1) *Journal of Law and Information Science* 20 at 25; Justice B.T. Granger, 'Using Litigation Support Software in the Courtroom—Better Lawyer, Better Judge, Better Justice—The need for Judicial Leadership', 5 August 2005, http://www.practicepro.ca/practice/PDF/UsingLitigationSupportSoftwareinCourtroom.pdf, 10–11.

fair trial. This is particularly so when the witness is a key witness, and an accused person may be facing a penalty as severe as mandatory life imprisonment.

Some criticisms have been raised in the past about the use of real-time transcript. One objection has been that it slows proceedings because it encourages counsel to wait until the answer given by a witness appears on the screen. Another has been that it encourages participants, including the judge, to look at the screen, rather than at the witnesses, and that this has implications for cross-examining counsel in particular. It also has implications for the judge, in arriving at an overall assessment of the evidence in a case.[62] Neither Fryberg J, nor any of the legal representatives thought that either of these outcomes were evident in the *Hargraves* trial. The representatives for the defence, however, were quick to point out that only the judge and legal representatives were given access to the real-time transcript. Those representatives would have been concerned if access had been provided to the jury.

v. Document Integrity and Retention

The representatives for all parties, and the Deputy Registrar, District Court Appeals, recognized a number of important practical benefits relating to document integrity and retention, which flow from the use of the court-provided e-trial system.

The use of the eCourtbook preserves the integrity of documentary evidence, by removing the need for the jury or others in the court to have contact with any of the original paper documents, with the exception of the very small number of documents which might for good reason be tendered in tangible form. This is particularly significant in cases such as *Hargraves*, which required a re-trial, or for trials which become the subject of an appeal.

The use of the eCourtbook also facilitates the long-term protection of original evidence. The usual procedure for documentary exhibits is that the exhibits are returned to the person who tendered the exhibit once the appeal period has expired,[63] or the final decision has been given on the appeal.[64] The primary reason provided for this approach was that the court could not archive the enormous volume of evidentiary material tendered at trial beyond this period. This is not necessary in the case of trials which use the eCourtbook. It is a simple and inexpensive process to burn all the documents on the eCourtbook, including the trial transcript, to CD and to retain back-up copies. In cases requiring a re-trial, as in *Hargraves*, the documents on the eCourtbook could conveniently remain on the server for the re-trial.

62 Justice R. Chesterman, above n. 15 at 16–18. See also Justice S. Morris, 'Where is Technology Taking the Courts and Tribunals?' (2005) 15 *Journal of Judicial Administration* 17 at 20.
63 Criminal Procedure Rules 1999 (Qld), r. 55.
64 *Ibid*. r. 100.

In the criminal context, the long-term preservation of original evidence resulting from the use of the eCourtbook is particularly beneficial for all stakeholders in the light of recent changes to double jeopardy law.[65] It clearly has the potential to reduce the likelihood that it would be necessary to stay proceedings on the basis that the loss of significant evidence would mean that the accused could not receive a fair trial.[66]

vi. Flexible Control of 'Court View'

A particular benefit, identified by the instructing solicitor for the Crown, related to the control of the Court View by the judge's associate. The Crown had opposed the adoption of the court-provided technology, preferring to adopt the LSS with which all of the members of its legal team were familiar.[67] The adoption of the LSS system would have left control of the technology to the instructing legal officers for the Crown, rather than with the judge's associate. However, the instructing legal officer for the Crown found that the control of the Court View by the judge's associate worked extremely well. She preferred this system to one in which she assumed control of the technology while her counsel was presenting evidence, because it enabled her to attend to other matters which required her attention in the course of the trial, such as using the laptop provided to her to locate other documents on the eCourtbook as appropriate, reviewing the real-time transcript, or locating documents such as original brochures when they were called for by the defence. She indicated she would prefer to adopt the court-provided system in this way again if the opportunity arose.

This was one matter on which the views from participants in the trial in *Hargraves* differed. The solicitor for one of the defendants argued that in a hard copy environment, the role of the instructing solicitor would include responsibility for ensuring that the next document required by counsel in the course of examination or cross-examination was available. Though very happy with the technology as it was adopted in *Hargraves*, that solicitor believed that it would improve the continuity and flow of the case presentation if this was replicated in the e-trial environment so that the instructing solicitors, who would be aware of what documents would be required next,

65 The changes were effected by the Criminal Code (Double Jeopardy) Amendment Act 2007 (Qld), s. 4. The amendments insert a new chapter into the Criminal Code: ch 68. The new chapter creates two exceptions to double jeopardy protection by allowing a retrial for a charge of murder where there is new evidence, and allowing a retrial for a crime that would attract a maximum penalty of 25 years or more imprisonment, if the original acquittal is 'tainted' because of the commission of an 'administration of justice' offence.

66 For recent consideration of the principles to be applied in determining whether proceedings should be permanently stayed because evidence has been lost, see *The Queen* v *Edwards* [2009] HCA 20.

67 See discussion under Section I.iii above.

controlled the Court View display when their counsel were presenting.

Fryberg J noted in response to this suggestion that it would always be possible to provide the associate with a list of documents in advance, but his Honour thought that as the documents came up so quickly, it was unlikely there would be any difference in the flow of the presentations if the instructing solicitor had controlled the eCourtbook.

Most of the counsel in *Hargraves* also used Microsoft Powerpoint as visual aids to their addresses to the jury. The instructing solicitor for one of the defendants indicated it would have also have been preferable for this stage if the instructing solicitors could have controlled the Court View and moved to the next Powerpoint, rather than rely on the judge's associate to do this. Counsel instructed by that solicitor was not totally comfortable with the technology, and for this reason did not use a Powerpoint presentation. It was suggested a Powerpoint presentation could still have been used if the instructing solicitor operated the eCourtbook for the address, as the solicitor would have been familiar with the arguments being presented, and could have operated the Powerpoint without interrupting the flow of the presentation.

It is interesting to note in this context that a facility was in place for the *Hargraves* trial which enabled the control of the Court View be passed over to any of the PCs provided for the bar table. The relevant video-switching mechanism was under the bailiff's control and it would have been a simple matter for counsel to advise the bailiff at a particular point that he would like the Court View to display what was on his instructing solicitor's monitor, rather than that of the judge's associate. Such a request could have been accommodated at the flick of a switch. This flexibility in control of the Court View means that the specific preferences of legal teams can be accommodated, although clearly better information about this should be provided to the parties as part of their training in the use of the technology in preparation for trial.

vii. Other Benefits

The participants in the trial in *Hargraves* reported a number of other benefits which were consistent with the reported experiences of legal representatives involved in civil trials conducted with the use of the eCourtbook.[68] These included:

- *24 hour Access to eCourtbook*. This meant the legal representatives were able to access materials any time day or night and from any location. This is obviously not possible in the usual trial situation, particularly in a trial of the nature of *Hargraves* where there was so much documentary material. This was regarded as

68 See Jackson (2008), above n. 3 at 67–70 and Couper (2009), above n. 3.

of enormous benefit, particularly by the representatives for the defence.

- *Witness control.* Although the judge's associate controlled the documents shown on the Court View, the witness was also able to use a mouse to scroll through any document in the Court View to any particular part of that document. This feature was commonly used by the witnesses, enabling them to view any relevant parts of document to understand their context and to locate quickly any part of the document to which counsel was referring. All the legal teams found it valuable that the witness could do this, and also that the witness could then use the cursor to point to particular parts of documents. The legal representatives reported that the simplicity of the system meant that witnesses were able to do this very easily, and that explaining the process to them was not onerous and did not add any time or complexity to the usual conferencing process.

  This feature was also regarded as important because it ensured that the witness and the jury were all focussing on the particular part of any document to which counsel was referring.

VII. Conclusion

As has generally been the case in the matters which have adopted the court-provided trial technology,[69] this trial proceeded as an electronic trial with the use of the court-provided technology because Fryberg J identified it at a trial review as one ideally suited to be conducted as an electronic trial. This demonstrates the present importance in practice of early allocation of the trial judge, who then takes responsibility for reviewing the matter. It also highlights, however, that the adoption of technology at trial is currently dependent almost entirely on the competence of the trial judge in the use of trial technology, and the willingness and enthusiasm of the judge to employ that technology at trial.

It has been widely recognized that the real challenge in bringing about the broad adoption of technology in the litigation process is that it requires a change in a culture that has evolved over centuries.[70] This requires strong judicial leadership[71] and 'drivers' of the technology, i.e. champions for technology who are able to see the benefits it

69 See Jackson (2008), above n. 3 at 62.

70 K. Quistgaard, 'Order in the Court' (1999) *Wired*, http://www.wired.com/wired/archive/7.03/courts.html. See also Justice L.T. Olsson, and I. Rhode, 'Coming Ready or Not: Courts and Information Technology' (1997) 71 *Reform* 10 at 15.

71 R. Suskind, *The Future of Law: Facing the Challenges of Information Technology* (New York: Oxford University Press, 1996) 67–8. See also Justice B.T. Granger, above n. 61 at 14–15.

brings and who showcase and promote those benefits.[72] The Queensland courts are to be applauded for their vision and proactivity in developing the court-provided technology. The trial in *Hargraves* has now provided very persuasive evidence that the skilful adoption of the court-provided technology generates considerable efficiencies. It has also demonstrated the technology presents opportunities to enhance the fairness of trials for accused persons.[73] It is incumbent on the government, the courts and the judiciary in all jurisdictions to continue to promote change, and to introduce mechanisms to facilitate more broadly a shift from the entrenched paper-based approach to both criminal and civil procedure to one which embraces the enormous benefits trial technology has to offer.

72 See Stanfield (2009), above n. 8 at 303.

73 See also Justice R.D. Nicholson, 'The Paperless Court? Technology and the Courts in the Region' (2002) 12 *Journal of Judicial Administration* 63 at 68. The author there argues in the context of the Family Court of Australia that if courts fail to keep pace with change brought by technology and remain paper-dependent, they will fail to deliver justice.