The Use of Technology in Dispute Resolution

CHARLOTTE PACHE
Managing Director, Merrill Legal Solutions (Asia)

This article provides an overview of the different types of technology which are available to support in-house counsel and law firms engaging in dispute resolution. As a practical guide, it first looks at the growing area of online dispute resolution and then the discovery process, including the capture of documents in both hard copy and electronic format; the management of documents once they have been captured by use of specialist document management software or in ‘e-bundles’; the use of digital audio recording technology; video-conferencing; real-time transcription; evidence presentation; and finally assesses the development of the necessary infrastructure to support the use of technology during court or arbitration hearings.

Introduction

Technology is increasingly used as an essential part of the dispute resolution process. From forensic analysis and collection of evidence to evidence management and presentation, software and services exist to enable the dispute resolution process to be conducted ever more efficiently – up to and including resolving the entire dispute online using online dispute resolution (ODR) tools. Law firms are being expected to demonstrate to their potential clients that they are able to employ the latest technology and in-house counsel are familiarising themselves with the technology used by law firms and within their own departments to facilitate better communication and more efficient handling of huge volumes of information.

Clearly this is an enormous topic so this article gives only a brief overview of the technology that is available and its use in the dispute resolution process which will hopefully be a useful introduction and which will enable in-house counsel to prepare for and respond more effectively to the implications of impending disputes.

Online Dispute Resolution

The narrow definition of online dispute resolution, or ODR, describes the process whereby disputes are resolved online, whether by means of a dispute resolution mechanism provided by a particular website for its users, such as eBay’s disputes process, which has handled almost six million disputes since its inception1; or by a separate commercial website run for the purpose of resolving disputes between parties either entirely automatically (as by settling the matter when one party enters a settlement amount within 20% of the figure required by the other party) or enlisting the services of mediators, which is the process used by, for example, the Asian

Domain Names Dispute Resolution Centre, where the parties submit their claim online, it is adjudicated offline, and the decision is published online.

Clearly the development of online technology has outpaced legal developments in this area and there are considerable obstacles posed in prosecuting or litigating information fraud or intellectual property breaches where the fraud or breach may have taken place online and across hard-to-identify or multiple jurisdictions. In addition, it may be neither feasible nor desirable to use this methodology to resolve disputes involving considerable sums of money, dealing with complex issues or requiring oral evidence to be given by witnesses, although in China, for example, an innovative online arbitration project organised by CIETAC is currently under way which could develop mechanisms for the interviewing and cross-examination of witnesses.

However, there are areas where there is great potential for cost savings, one of which would be the online resolution of workplace disputes. An easily accessible facility for employees to register grievances would encourage early resolution of issues and cut down on management time spent dealing with problems once they have already progressed too far. In the US, the National Mediation Board is examining the use of ODR in resolving workplace disputes.

**Document collection**

In cases involving a large amount of documentation, it may be necessary to convert hard copies into electronic format to enable effective review of the materials, not least to cut down on the amount of information that is likely to be used in the course of the dispute resolution process and which will end up as evidence. Clearly the costs involved can be prohibitive and it will be desirable to conduct a preliminary assessment of the documents to establish whether all of the materials need to be captured. Once this has been carried out and the capture process is initiated, careful thought needs to go into the requirements for the desired output and what will happen to the documents which have been captured. The agency responsible for collection will be instructed as to the logical organisation and reconstruction of the documents. Someone familiar with the subject matter of the case will need to make key decisions as to ‘unitisation’, ie what comprises a document unit (is it a bundle of papers held by a bulldog clip, a folder, a stapled bundle of sheets, a single document, or a mixture of all of the above?). Do post-it notes need to be removed or captured in situ? Do the words on the spine of a bound document need to be captured? Are there outsized documents such as maps which will need special handling? Are colour copies required?

To be able to facilitate effective searching of the documents once they have been converted into electronic format, the materials may be subjected to an optical character recognition (OCR) process which captures the text on the page and enables it to be searched for. The accuracy of the latest OCR software is extremely high, but poor source material such as faded or illegible faxes or pages covered with handwritten comments may affect the final result and an additional quality checking process may need to be employed.

Once the material has been captured it can then be de-duplicated, organised and coded according to what the search requirements may be. Coding may be either

---

1 http://www.hkiac.org/HKIAC/HKIAC_English/main.html.
subjective (the key features of the document or ‘metadata’, e.g. that it is a contract, the dates, the author, the addressee, the document title, etc) or objective (the contextual relevance of the document, the issues that it touches upon, and other elements not necessarily apparent on the face of the document).

**E-discovery and forensics**

The proliferation of material now held only in electronic format, and regulatory developments governing the discovery process, such as the amendments to the US Federal Rules of Civil Procedure in December 2006, requires a thorough evaluation of policies and procedures regarding the storing and collection of material. The costs of trying to obtain electronic information prior to litigation can be extraordinarily high and it is essential to evaluate well in advance what will be required.

Any user of a laptop, PDA, mobile phone, USB drive or other electronic device is creating, in addition to anything they knowingly save, a series of traces of their activity, which will show where they have been, what they have looked at, and what they have attempted to erase. Much of this cannot be permanently deleted and as a result it may be resurrected to provide conclusive evidence of such activity.

Prior to litigation, commercial decisions must be made as to how much evidence will require to be collected. This may involve the reconstruction of data, and the restoration of tapes, or hard drive imaging to provide vital clues about deleted files, websites visited and other signposts of past activity. Specialist software and hardware has to be employed to capture images of disk drives or copies of documents while ensuring that the original data stays intact without the addition of new metadata related to the investigation or collection process and to preserve the chain of custody in case of challenge.

This latter point is particularly important: in an internal investigation, checking of files or documents belonging, for example, to an employee under suspicion should be avoided as far as possible because such checking may alter the data and cast doubt on the veracity of the evidence. From the moment suspicion is raised to the point at which it is presented as evidence the data must be preserved intact. This requires a whole new set of protocols to be drawn up within the organisation as to the handling of such potential evidence.

Other difficulties which arise relate to the proof of time (what was the time setting of the machine in question?); proof that the user under suspicion was actually using the machine in question; and proof of authorship (metadata created by someone’s machine or under their user ID may indicate, but is not proof, that they are in fact the author, and other supporting information such as CCTV footage may be required).

Clearly the collection of such evidence is a highly specialist exercise and to avoid a scattergun approach, careful planning needs to take place in consultation with skilled agencies.

**Document management**

Once the documentation, whether in hard or soft copy, has been collected, a protocol for information exchange should be agreed between the parties in advance so that any information requested by another party can be quickly and efficiently supplied.

---

Such a protocol must define the data formats to be used, e.g. formats such as TIFF, ASCII, CSV and XML which, because of their generic nature, are more likely to be able to be imported by parties into their own databases.

Commercial providers have developed an increasingly sophisticated range of document management databases, such as Lextranet®, Summation®, and Ringtail®, which originally were installed on internal networks but are now available online. Security concerns regarding the vulnerability of commercially sensitive data have meant that service providers have had to implement 128 bit encryption, file and field-level security and multiple levels of user rights and permissions to limit access, as well as provide comprehensive tracking histories indicating what users have accessed, printed or amended.

Common features of such software are the ability to organise, search, review, redact and comment on electronic, image and ‘native’ (original) files. Teams across multiple boundaries can retrieve and collaborate on shared information. Workflow managers enable legal teams to create sophisticated document flows and then visualise the structure of the information through data flow diagrams. Customised reports can show user activity or chronological timelines to assist in planning and collate comments or updates across multiple teams.

‘E-bundles’

When a dispute proceeds to the hearing stage, an electronic court book or trial bundle may need to be compiled. Document bundles are loaded on to DVDs in a searchable format which is accessible within the hearing room via a local area network and/or a video-distribution system; telecommunications links (telephone lines or broadband internet access) enable external connections. Increasingly, court buildings or specialised technology courts have the facilities readily available for the use of such systems.

Digital audio recording systems

There are two main applications of digital audio recording in the dispute resolution process: firstly, for the capture of witness interviews and other important events pre-hearing, which enables the efficient production of transcripts either within a day or two or at a later date; and secondly, during the hearing itself, for the recording of proceedings.

Increasingly, law firms are investing in digital audio recording technology to replace old-fashioned analogue dictaphones. A user can simply dictate notes into a digital recorder which is then e-mailed, as an audio file, to be transcribed. Sophisticated workflow technology can route the audio to the nearest available transcriber. All that is required is access to the internet so this can be done anywhere in the world. Within hours, a verbatim transcript is then e-mailed back. Many firms have outsourced this process altogether but some major firms have created their own offshore facilities. Either way, significant cost savings can be made.

The second important development regarding digital audio recording technology is its increasing use in the courtroom itself. Many courts in Asia are currently looking at installing digital recording and transcription systems (“DARTS”). Hong Kong has led the way in this respect with the instalment of DARTS in the District Courts in 1994 and then subsequently in every court in Hong Kong from 1995. Digital recording may be used in preference to a tape system for many reasons, for example archiving and management of audio is easier and less demanding of space, and
segments may easily be marked and played back, either during the hearing or afterwards, or earmarked for transcription, meaning that it is no longer necessary to pay for a full day’s transcript. It is now also possible to use software to search the audio for keywords – an invaluable option where many hours of audio are involved.

**Real-time transcription**

For immediate interactivity, real-time transcription is more appropriate. Real-time transcription, using software such as LiveNote® or Transcript Analyser®, produces a streaming transcript created by a court-reporting team in the courtroom, within a few seconds of the words being uttered. The advantage of using real-time transcription is that judges, lawyers, paralegals and clients can view, code and annotate what is being said as it happens, cutting both preparation and hearing time by up to 25 per cent. Live transcripts of proceedings from the courtroom can also be transmitted to parties’ offices, or indeed to anywhere in the world, through a secure Internet connection. In addition, a secure messaging facility allows users to send messages within the courtroom, as well as to and from users at remote sites. Users can also receive streamed audio, allowing remote users to both hear and read a testimony in real-time.

By using the real-time service each user receives a draft transcript onscreen as the day proceeds. This is supplemented by a final, perfected transcript each evening which is then used to update the draft. The court reporting firm should also be able to provide links within the perfected transcript to images of exhibits at the point at which each exhibits was introduced. In addition, if proceedings have been recorded digitally (either audio or video), the recording may be synchronised to the perfected transcripts. When exhibit linking is included, this process creates a complete record of proceedings, which may be fully searched, annotated and reported upon.

In addition, users working from remote sites can keep up with proceedings via a live feed to their computers and are also able to send messages to one other. Users receive the synchronisation of transcripts, audio and video recordings and scanned images of exhibits as part of the service, delivered on DVD. Previously, clients would have received all these different elements separately in video cassette format or in hard copy.

**Video conferencing**

A further useful tool is video conferencing. This is of particular benefit where, for example, people in far locations are required to appear as witnesses, experts or indeed counsel. Utilising this technology enables all parties in the case to examine, cross-examine and perform all tasks which previously could take place only when participants were able to be present in the hearing. During the SARS outbreak in Asia in 2003, for example, this technology was widely used in situations where due to travel restrictions witnesses were not able to be present. There are some potential hurdles to overcome such as unavoidable time lag during transmission, variability of picture quality, the logistics of providing documents for the remote attendee, and other implications of either side not being able to see each room in its entirety.

**Evidence presentation**

As an alternative to filling up the courtroom with folders and bundles of documents, if documents in a case are all available in electronic format they can be displayed,
referred to, or marked up using document management software, provided court-
rooms which support the technology are used. Document management software
enables parties to arrive at the courtroom without having to deliver hundreds of fold-
ers of documents but still have direct access and reference to all relevant documents.
These documents can be displayed on screens at a hearing so that when a document
is referred to all parties can view the correct document and save time by not having
to consult their individual copies of the document bundle.

Bespoke evidence presentation systems such as Trial Director®, Sanction® and
Visionary® are also widely used, particularly for large cases. These enable evidence
to be presented in a sequential way, using reconstruction and animation to show the
sequence of events leading to an accident or injury; evidence can be annotated, high-
lighted and marked and the annotations saved to the record. The litigation support
service provider will usually provide an operator to run the software to its best effect:
in the long-running Bloody Sunday Inquiry6 in the UK, trial presentation technology
was used to recreate the streets of Derry in January 1972 as an aide-memoire for
witnesses, who were effectively guided through virtual streets to give their evidence.

Courtroom infrastructure

Increasingly, courts and arbitration centres worldwide are also responding to these
rapidly-developing trends by putting in place the necessary infrastructure to enable
their users to benefit from cutting edge technology, resulting in savings in both time
and cost for all parties involved, as well as improving access to justice for members
of the public. Specialist technology courts have been built inside existing court build-
ings and in new constructions attention is being paid to the necessary specialist infra-
structure to support technology such as wireless microphones, electronic
whiteboards and video-conferencing.

Conclusion

The proliferation of new technology can be daunting and it is often easier for people
to rely on tried and tested methods of processing information. However, with support
from some of the many companies which now offer expert advice on technology, and
with plenty of time for preparation in advance, technology can be used to reduce the
quantity and improve the comprehensibility of the information gathered; to present
often large amounts of information in a manageable way; to share information across
multiple locations and to deliver such information instantaneously; to show complex
arguments in a powerfully visual style; and to utilise different technologies in
conjunction with each other to impressive effect.

Charlotte Pache has a legal background and worked in legal publishing for many
years as an editor and manager before joining Merrill Legal Solutions’ London office
in 2000. Charlotte joined the Asia office as Managing Director in January 2003. She
regularly carries out professional training to law firms, barristers and others, in Hong
Kong and elsewhere, on the use of technology in dispute resolution.

---

Merrill Legal Solutions

Formed by Merrill Corporation's acquisition of WordWave, the world's largest court reporting and transcription firm, Merrill Legal Solutions offers a wealth of resources, expertise and experience in litigation support. From pan-global scanning and forensic collection projects to real-time court reporting and evidence presentation services at trial, Merrill Legal Solutions provides high-technology, cost effective support to law firms, corporations, government agencies and investigation teams.