E-Justice Projects – Distinguishing Myths from Realities

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Imagine you are associated with a proposal to develop a new e-justice system, perhaps an e-justice project that you successfully persuade a ministry of justice to approve. But for reasons you are totally innocent of, things start to go wrong.

Imagine that the computer software developer spends all the money allocated for writing software that the judges are unhappy with. Imagine that the hardware purchased for the program works satisfactorily, but in fact is not used that much by the judges and their staff, who complain that it makes their job harder than it was before. Imagine that lawyers criticize the e-justice project because it makes their jobs harder or more expensive, or makes no difference at all. And imagine also that someone wants to blame you for the disastrous decision to develop an e-justice project. In this hypothetical case there may be powerful people who have no interest in your career or prosperity and who may decide that your e-justice project is not a winner, but a loser; and are planning to make you take the blame for it.

Let us also take this imaginary situation a little further by suggesting to you today that in reality, not just in our imagination, e-justice truly earns the mark of disaster when applied in many countries; and that looking to find scapegoats to take the blame is a common way e-justice projects meet their ends. Consider a news story that appeared in the USA only last month in the state of California, USA, the home of the global information technology revolution[1]. The article reported that the state court system in California has spent the better part of two billion dollars over the last ten years in developing a fully integrated justice information system to link all courts of that state - a project that an official audit was reported to have declared to be a failure in actually linking those courts.

Like many government-funded projects, where an e-justice project is proposed to be funded there are usually some good reasons offered to justify the expense. Sometimes the reasons can be quite explicit, but more often they are kept vague and general in the hope of getting a generous budget approved. Often it is argued by e-justice project protagonists that the gains to be made are so great that it is easy to justify spending a lot of money in implementing e-justice systems. Justifications might be that e-justice will eliminate case backlogs, reduce the cost of justice, offer new sources of services and better revenues. The trouble is, once promising to deliver these kinds of claims of dramatic improvements, there will be expectations down the track that those outcomes are actually fulfilled. And when they are not, there are often regrets that the expected benefits were over-stated when they might have been made with greater care. Even where a project achieves, say, 50% of what was promised, it will always tend to carry with it the mark of underachievement for the money spent. Naturally, the challenge for an e-justice project protagonist is to offer justifications describing future benefits that are sufficient to gain funding approval to the project, but not so great as to be practically unattainable or significantly disappointing. It is good to be an e-justice project protagonist, but only if the project ultimately succeeds.

[1] See the web media article at The Sacramento Bee, *Computer mess jeopardizes court's political clout,* by Paul Elias, Associated Press, Mar. 12, 2011 - http://www.sacbee.com/2011/03/12/3470225/computer-mess-jeopardizes-courts.html#

Consider the range of justifications and arguments that may be put forward in support of developing an e-justice system in the courts of justice in your country. Let us start by considering how we might finish the following sentence:

"E-justice will benefit the courts of justice in my country because……."

To help finish that sentence, here is a list of possible e-justice justifications. This list is based on justifications that have been used before and the risks associated with using them. Remember, the aim of this list is to consider justifications that are sufficiently attractive as to persuade a funding authority to spend the generous e-justice funds that might be considered necessary. To be avoided is the temptation to overstate or over generalize benefits that people might later judge to be exaggerated.

"E-justice will benefit the courts of justice in my country because …

"… it will enable us to link up all our courts electronically, to exchange information about cases."

It is understandable that the leadership of a court institution that operates through numerous court locations would want to have access to a computer network that is capable of providing information about any case at any location. This appears to have been a goal of the California court leadership, which was willing to commit a very large budget to link all of their many courts. It is difficult to dispute that there are advantages to be gained by linking up the case databases of different courthouses when they are each a part of some larger unitary system of courts. A network of that kind would enable a national chief justice or a peak judicial council to examine any case record, whether or not the case file was physically at hand. It would enable statistics to be quickly compiled about system-wide case management trends. It would allow judicial inspectors to investigate complaints about the conduct of judges in particular cases, without the need to necessarily visit the court to examine the court files. And perhaps most conveniently, in cases where a decision of a lower court is appealed, networked information systems would allow the electronic record of the lower case to be readily accessed and re-used by the relevant appeal court. These things are attractive. But the question for e-justice protagonists should be whether these kinds of advantages are worth the cost of producing the infrastructure necessary to do the sorts of things the Californian judiciary evidently still wants to achieve.

All courts in California have some kind of electronic case information system in use. But among those systems there are 130 different kinds of software and 70 independent operating systems serving courthouses in 58 counties and over 2,100 judges[2]. Yet despite their frustrations in not being linked, the Californian court system continues to do its work, with each court busily processing caseloads in a more or less satisfactory way, using their non-networked e-justice systems. [3] With an annual total caseload exceeding ten million new cases, the Californian county-based superior trial courts manage to process 99% of civil cases within 24 months and 86% of criminal cases within 12 months.[4] With results like that, one might ask how much better the system would perform if all courts were fully networked.

The answer to that question may be that improvements in performance of courts might not change at all, merely by being electronically linked, at least in terms of the speed at which cases might be disposed. Consider that in most court systems of middle income countries, the vast majority of cases filed in a

[2] See facts listed in California Courts at a Glance, http://www.courtinfo.ca.gov/presscenter/ataglance.htm
[3] Judicial Council of California, News Release 05, February 25, 2011: *Judicial Council Hears Report on Cost Benefits of Court Technology System*, http://www.courtinfo.ca.gov/presscenter/newsreleases/NR05-11.PDF
[4] 2010 Courts Statistics Report, Statewide Caseload Trends 1999-2000 Through 2008-2009, Judicial Council of California, page x, http://www.courtinfo.ca.gov/reference/3_stats.htm

single courthouse are processed to finality at the same courthouse, without reference to other parts of a court system. Even when there are high proportions of case decisions being appealed to other courts, the advantage of the appeal record being created electronically in a networked court system may have no impact at all on the speed at which the appeal is processed and heard. And while the capacity to see records at any point in a networked system may be attractive for a judicial council or judicial inspectors, it seldom offers much utility to a judge who is responsible for processing a single case. So, in quantifying the cost benefit of providing a single networked court system across a country, it may be difficult for an e-justice protagonist to establish a causal link between the high project investment costs and direct improvements in the operational effectiveness of that court system.

… it will give us electronic filing, which will help speed up the disposition of cases

Accepting a document electronically implies savings in time and effort, at least to the point of initiating a new case record in a court registry. But consider the limitations of e-filing when it is implied that it will speed up the duration of a trial or the production of a final judgment. To e-file a document means to provide the document to a court in an electronic form, either in lieu of a paper document or in addition to it. Many courts introduce e-filing facilities as a service to litigants, but do not necessarily relax the obligation either that the paper version also be filed or that the court itself print a paper version from the electronic version that is lodged. It is still relatively rare for courts of general jurisdiction to abolish using a paper version of the original claim document that is lodged. The court may still process paper in the old way, but use e-filing to speed up the registration process alone.

Of course, e-filing allows a court to capture data from an original document to be used to create an electronic summary of the court case for later case tracking, thereby improving case management. Those benefits, however, will not be the direct result of e-filing, as an electronic case record can be created by court registries regardless of whether initial filing is electronic or by paper alone. E-filing is good only to a certain point in time; a point that occurs well before a case is actually heard and determined. So it is misleading, if not incorrect, to suggest that e-filing will reduce case disposition times. It can produce net benefits to the lodging party; but a corresponding benefit will accrue to the court only when the court also decides that it neither requires the filing of a paper document, nor later asks that the document be printed for use in court. But even in these cases of paperless lodgment, the direct benefit is limited to savings that accrue to the lodging party, i.e. the cost of printing the document and delivering it to the court registry, usually a small cost saving compared to the overall costs of litigation. Cost savings for the court registry are similarly modest, being limited to the effort required to record summary information about the case and process any paper record that is to constitute the court record – tasks normally performed by the lowest paid court employees.

"… it will overcome the problem of errors being made in the court registry in recording the details of cases."

One of the great benefits of electronic lodgment of new cases is that it provides the means for more accurately recording summary information about the case. Courts that do not have e-filing will need to transcribe summary information from a newly filed paper document to either a paper register book or to an electronic case tracking system (sometimes both). This process can give rise to transcription errors, as it is ordinarily performed by court staff working from paper to computer screens. Where there is electronic filing, on the other hand, it is the lodging party who would provide summary information about the case when lodging the electronic document; and that can be processed by software rather than by court staff. Thus transcription of summary information to a computer record will be as accurate as the standard of care applied by the lodging party, which is ordinarily likely to be better than that which court

staff can provide; and that standard can be improved further by using software to validate the data that is recorded. So it may be said that e-justice systems, including e-filing and electronic case tracking systems, do help reduce errors in the accuracy of recording case summary information. But it may be disputed whether this benefit is so significant when used as a justification for developing e-filing. Having a higher prospect of accuracy is only a significant benefit when inaccuracy is perceived to be a significant problem. In practice, a simple manual checking system applied in court registries to ensure against manual transcription errors may often be as much expense as the problem may require. It is sometimes difficult to argue that a complex electronic system is justified by solving a problem that, for most courts, is seldom considered a problem at all.

"…. it has the support of lawyers, who see the value of saving costs for their clients."

While lawyers are motivated to reduce costs for their clients, they are not necessarily motivated to reduce their own fees that they charge to their clients. In the case of costs of filing a document in a court or paying a court fee, these are costs that lawyers typically pass directly on to their clients. They naturally applaud innovations by courts that reduce court fees or reduce the costs associated with filing documents, a task that is normally performed by a legal secretary, rather than a lawyer. It is because those kinds of costs are small in comparison with the costs of a lawyer's advocacy services that lawyers are supportive of court efficiencies, as those savings have no impact on the primary sources of lawyer incomes. Only when the number or duration of hearings might be reduced, or when the number or length of court documents are reduced, will it be likely that lawyer incomes will be affected. So it is likely that lawyers will be instinctively supportive of reductions in court costs, but will be more muted in their support for fewer, faster and less complex hearings. Consequently, it may be said that the greater the support of the legal profession to proposals for new technology in courts, the greater the probability that those improvements will have little effect on the costs to the parties of litigating.

"…. it will overcome the problems we are having in court registries, where staff sometimes deliberately go slow in registering cases and ask for bribes."

One of the greatest advantages of electronic case tracking systems, usually a core element of any e-justice innovation, is that it can provide a level of transparency and information quality control that is not available to the same degree in systems that lack computers. Computerized data is more likely to be recorded promptly, accurately, completely and transparently than otherwise. This has the advantage of thwarting low level corruption in court registries where court staff may be in the habit of seeking additional and secret payments from lawyers and others to register documents. These may be in the form of *speed payments* made on behalf of plaintiffs to speed up the normal processing times (or to line-jump the normal order of processing) or *slow-down payments*, usually on behalf of defendants, to postpone processing of the court file, or even to make the file disappear indefinitely.

Under electronically managed systems, it is harder for court staff to sustain corrupt practices that are based on their ability to lose records or otherwise restrict access to information about case files and documents. Again, however, as a justification for introducing computerization in courts, its role as an anti-corruption measure should be proportionate to the extent of the problem. If there is a problem of there being corrupt judges willing to sell the outcome of a case to the highest bidder, then it is unlikely that computerization will have an impact on that problem. But it will have an impact on registry corruption in those court systems in which low level staff corruption is considered to be a problem. The benefit will be significant and worthwhile, but not necessarily measurable in terms of direct cost savings on a scale that an e-justice protagonist might suppose.

"… it will overcome problems in processing the assessment of court fees to be paid and the methods for collecting those fees."

Software can reliably calculate court fees where court fees are determined by a formula that is based on the type of court action to be registered or the amount of money in dispute. In courts that lack computerization, the scope for low level corruption is significant where court staff have the role of calculating the correct court filing fee. The need to calculate a fee firstly poses an additional stage of processing that can be used to demand a bribe; and secondly, there is an opportunity for court staff to understate the calculated amount in order to keep the difference of the actual fee collected. Computerization can overcome these risks by using software to both calculate the correct fee and to supervise checking that the fee is collected and recorded in the proper accounts. In cases where internet services are used to lodge documents and pay associated fees, the option of online payment by credit or debit cards overcomes the need for courts to directly account for funds collected in this way; that role passing to the online credit provider and software, whose computerized systems normally leave little room for fraud. The use of computers thereby offer distinct advantages to courts and significant improvements in options for protecting revenue and reducing embezzlement of court funds in those court systems that have poor accounting systems. In advocating the advantages of e-justice systems, however, it may be worthwhile researching the likely savings and revenue gains that may flow when software serves to cap the flow of stolen court fee revenues.

"… it will overcome the problem of accurately recording what is said in court, by giving us an audio recording and a transcript."

Many court systems across the world suffer from a limited capacity to record formal court proceedings in the courtroom, either by verbatim records of what is said or by production of summarized minutes of the main events. In poorly developed systems, the judge will record minutes by pen in longhand, or there will be a stenographer using a keyboard or shorthand. The constraint imposed by these options is that each is vulnerable to human error arising from fatigue or prejudice. Most people readily recognize the likelihood that court proceedings recorded by pen and longhand are not likely to be very complete or very accurate. And when court minutes are recorded exclusively by a presiding magistrate or judge who is corrupt or incompetent, then the lack of a more reliable form of independent recording is likely to facilitate that corruption. Furthermore, any attempt by a judge or stenographer to record verbatim proceedings in longhand or by speed typing will usually significantly slow down the pace of court hearings, adding to the cost of justice overall. So the introduction of audio visual technology offers the prospect of improving reliability and completeness of court recording; and it will also speed up court proceedings.

The problem with introducing audio recording as a feature an e-justice project is that, unless it also produces a printed text record of what is said in court, it is likely to create new problems. E-justice protagonists sometimes like to paint the picture of the advantage for lawyers and judges of listening to an audio recording or, better still, watching and listening to an audio visual recording of court proceedings. The implication of this is that e-justice will enable a court to rely on the recordings, rather than on verbatim transcript or summarized minutes of court proceedings. But the problem with this assumption is that usually judges and lawyers will not be happy, just to listen or to look – they almost always want to read the record as text. This is preferred because highly literate people can speed read, scan and re-read very quickly when studying a transcript, which is an archetypical feature of the art of being a good lawyer or judge. But that is not a skill that the judge or lawyer can readily apply when listening to an audio record or viewing a video record. In law, the printed word is king; and this is unlikely to change for a very long time. While e-justice protagonists sometimes suggest that voice recognition software will be the answer to this problem (i.e. software that produces text from audio recordings), so far no one has developed software capable of producing an accurate court transcript without a well trained and well paid

human editor to correct it. In introducing better systems for recording court proceedings, an e-justice project will fail unless it also addresses the need for transcript production.

The advantage of the old system of long hand pen recording is that, despite all its shortcomings, it produces an immediate record in writing; whereas audio visual recordings do not. This means that while installing recording equipment in a courtroom, it will also be necessary to install computer terminals with headsets and foot controllers somewhere outside the courtroom where a staff officer will transcribe the record on a keyboard (a staff role commonly known as a *transcriber*). In important trials where a transcript needs to be produced within hours, transcribers will produce transcript in real time or soon after, typing each word after a delay of only seconds or minutes. But for most other kinds of court hearings, the transcript will be produced days or weeks later, if at all. Each of these options carries a significant cost, implying the need to establish rooms, equipment and staffed units for no purpose other than the production of transcript. And if a court has hopes that it will transcribe everything that is said in court, it will be disappointed unless it is well cashed. Very few courts that use audio visual recording actually transcribe everything. Some will impose rules to limit transcript to certain kinds of cases, such as murder trials and cases that are appealed, leaving other recordings un-transcribed until someone offers to pay for the cost of a transcript from outside the court budget (in civil cases some courts make the parties pay for the transcript production at market rates). E-justice protagonists need to consider the prospect that installation of audio recording may, in practice, result in no more than a third of proceedings ever being economically transcribed by the court. The consequences of this for the management of trials and appeals needs to be factored into the assumed benefits of the new technology. If a court is planning to fund the production of transcript for all its courtroom proceedings, there will be a significant additional cost that cannot be expected to be offset against any likely savings.

A further dimension of the court recording issue is that under the old system of long hand court recording, there are usually two types of records made in practice. One is the official record that produces minutes or transcripts; and the other is the set of private notations made by a magistrate or judge for his or her own private use in reaching a judgment, sometimes referred to as *judge's notes*. An experienced judge will typically not rely on a verbatim recording prepared by others, but will also take contemporaneous notes to help summarize what is said or to highlight the points that, in the judge's opinion, are pertinent to deciding the case. In courts where judges are responsible for taking the court minutes, those minutes serve both purposes. But where a court decides to introduce audio recording, then the judges will then need to continue their habit of taking notes, whether or not a transcript of the audio recording is to be provided. It is sometimes the case that e-justice protagonists fail to realize this when suggesting to judges that audio recording will allow them to stop taking notes. A good judge is always holding a pen when listening to evidence.

"… it will give us the option of video conferencing, so that witnesses and prisoners need not physically attend a court to give evidence."

Up until the relatively recent explosion in the use of Skype and other voice-over-internet services, the prospect of courts using audio visual equipment to link people to a courtroom from a remote location was regularly proffered as a revolutionary way of overcoming the cost of running trials and avoiding security risks. Now video conferencing is commonplace in many courtrooms in middle income countries and is within reach even of smart phone users for person-to-person video conferencing. But while usage of video conferencing in courtrooms is undoubtedly advantageous, its impact is seldom revolutionary. Magistrates and judges will consistently prefer that those who are bound to attend a court hearing are physically present, video conferencing being used when physical attendance is impractical or unreasonably expensive. Courts will regularly use video conferencing to conduct hearings on procedural matters, such as between the presiding judge and lawyers who are based in different cities or countries. Courts will also take video evidence from expert witnesses, such as physicians who are too busy to leave their surgeries.

And video conferencing is effectively used for vulnerable witnesses who might be unreasonably intimidated if present in a public courtroom, such as child victims of sexual assault. Video conferencing has also been used to arrange for prisoners to virtually "appear" in a court hearing that is considering the prisoner's bail application or a procedural hearing, thereby avoiding the expense to the state in bringing a prisoner to a court only for a short court appearance.

But courts are usually reluctant to embrace the prospect that a hearing of a trial might be compromised into little more than a common Skype session for trial hearings. In listening to a witness, or engaging in argument on technical matters, few judges will see advantage in preferring the virtual over the real. This means it is unlikely that courts will use video conferencing facilities much more often than they might already use telephone conferencing facilities – i.e. it is likely to be used merely as an extra tool that is often handy, but hardly impacting much on the way courts prefer to work. The significance of this for e-justice protagonists is that while the cost of video conferencing technology is readily calculated, the benefits will be harder to quantify. Savings for court budgets will certainly be rare, the benefits largely accruing to the costs of transport and accommodation of those who might otherwise attend court in person, being costs that courts do not normally bare in any event. So while it is true to say that video conferencing is a major tool for courts, it represents a net cost to courts that is unlikely to be offset by economies a court would normally directly benefit from.

"… it will enable us to record all court decisions and make them available for all to see on the Internet."

Only in recent years have courts in most middle income countries had the benefit of stable and reliable internet services. Also, only from the last few years, have courts had access to purpose-designed low priced software for publishing information at relatively low usage costs, such as for publishing court decisions. Over the last 20 years or so, courts in high income countries have gradually built up online collections of their decisions, including decisions that pre-date the use of computers in justice administration. This initially occurred haphazardly, when only decisions of special public interest were offered; but were later expanded to include larger and larger ranges of decisions, effectively graduating from occasionally publishing a few decisions, to routine publishing of almost all decisions. There is a big difference between courts that seek to publish some judgments they believe the public would be interested to read and systems that effectively account for the full range of case decisions given. The former is promotional and usually of arbitrary scope; and the latter is an instrument, not only of public legal education, but constitutes an merging commitment to sustaining a heightened level of institutional accountability and transparency. In some courts there is an expectation that every decision the court gives will be published on its website very soon afterwards, unless the court orders with usually explicit reasons that it should not be published. In developing e-justice systems for web publishing of court decisions, it is important that the policy objectives be defined to make clear the purpose of the system. A system that is only intended to be used for occasional publishing will remain simple. But a system that is intended to enable efficient publishing of most court decisions will require significant changes to the ways that court decisions are produced.

The value of e-justice projects in the production of court decisions is that it can enable the use by judges of software that can help them produce judgments. The functionality of a case tracking system can be enhanced so that the system offers word processed templates for a judicial decision that incorporates summary data drawn electronically from the case record. Word processing features can include tools to help judges and their typing assistants to produce a standardized format for publishing, such as automatic paragraph numbering; standardized fonts, margins and heading formats; automated footnoting; and hyperlinks to other published decisions. Software can also be readily developed to finalize a decision, encrypt it (against tampering) and send it to a website for publication after the judge has affirmed online that the decision is authentic. This kind of software can, when made available to all judges in a court,

enable the comprehensive online publication of all decisions of that court, without the need to print more copies of a decision than are needed for the parties in each case. This ease of publication will, if applied to all case decisions in a court, help to increase overall transparency of the court because of its tendency to accelerate and facilitate the publication online of all but a minority of decisions.

So it is reasonable for an e-justice protagonist to argue that new computerized systems can produce enhanced transparency of a court's processes by automating the production of court decisions and by publishing them via websites. Although the benefits are readily demonstrated, however, it will be more difficult to quantify them in financial terms. Better quality through web publishing, though it may be economical, will not necessarily produce budget savings.

"… it will provide our court with a tool that judges may use to research law and improve the quality of their decisions."

As a tool for educating judges, there can be no more practical substitute for law books than giving judges generous access to computers and the wealth of information accessible over the Web. A network of computers that judges may use will enable them to access information produced by the court and also information that is available via the Internet.

A perennial challenge for judiciaries across the world has been the difficulty in giving judges access to law books they need for their work. A major impediment for some decades has been the high cost of law books for judges. Yet the current wave of the information technology revolution offers the prospect of overcoming that cost handicap by the introduction of low cost access to e-books, i.e. by the delivery of published textbook material by means of electronic reading devices instead of the printed word. When judges cannot get access to an up-to-date set of law books, the next best thing must surely be access to use an electronic reading device and a subscription to law books, usually at a much lower cost than purchasing the books themselves. To give judges that kind of access, all that is often required is to provide wireless internet services to them in courthouses and the budget necessary to give them access to commercially published law books.

As a feature of an e-justice project, this kind of access to e-books and other Web published materials for judges is a relatively small expense, because most of the material a judge is likely to read will have already been published by third parties. It is therefore a relatively low risk justification for pursuing an e-justice project. It also offers the bonus of engaging judges individually with the benefits of e-justice systems, a byproduct of which includes improved communication with and between judges. As is suggested later in this paper, the role of judges as agents for e-justice reforms, in addition to being beneficiaries of those reforms, is an important feature that is likely to help assure the success of e-justice initiatives.

"… it will utilize email and other messaging services, which will overcome our problems in delivering paper claims on defendants and in notifying parties of court hearings."

The need to deliver a copy of a claim on a defendant in any civil or criminal case is the first, and usually essential, preliminary step before courts can validly do their work. Usually referred to as "serving" or "service" of initial court process, this step can delay the active engagement of courts in dispute resolution, sometimes for many years when there are difficulties in finding a defendant. Service is usually achieved by handing a copy of the initial court document to the defendant in person or, in certain circumstances, sending the document by courier or through a reliable postal service. In an age of widespread email and mobile phone usage, e-justice protagonists sometimes speculate that electronic media can be used as a

substitute for traditional means of service. But the problem is that it is rare for a court to accept that the initial service of a claim may be served by email or phone text message. This is because the whole purpose of service is to ensure that the correct person is served. In no country is there legal recognition of email addresses as a valid means of serving formal documents on individuals unless the recipient accepts that form of notification. And it is probably equally rare that email addresses are a valid means even of serving documents on registered companies. So as a potential substitute for serving initiating process, access by courts to email and other electronic messaging systems cannot be considered likely to make much impact on the efficiency or speed of initial service of court claim documents.

There is little doubt that where opposing parties in a court case are already engaged in the litigation, communication between them can be made simpler by their using email and other electronic message medium. Effectively, opposing parties may agree to communicate in this way because they have reason to engage in the litigation and they may find electronic communication to be mutually more convenient than the post or courier services. But of course, a court gains no budgetary advantage from the use of email between the opposing parties except as a possible recipient of a copy of those communications. There is neither a cost, nor a saving for the court.

It is common for courts that have electronic case management systems to record the email addresses of each party, or at least each party's legal representatives, in the event that the court needs to send a notification to the parties. The most common type of communication is a notice from the court about the scheduling of a hearing date. Where email is used by the court instead of a postal or courier service, then it is likely to provide the court with a time and cost benefit. However, in practice the savings in most courts are likely to be modest, as not all courts will necessarily issue written notifications of court hearing dates – often the obligation is on the parties to find out from the court registry the details of dates allocated for hearing. So, the prospect of courts having the use of email notification facilities, while convenient from time to time, may not necessarily produce benefits either in reduced costs to their budgets or in improved speed of service. In many courts that have no automation at all, it is a well established and convenient practice to notify parties of short notice changes in hearing times by simply calling them on a telephone, i.e. by using technology that already exists.

"… it will help us reduce our staffing costs, as computer systems need fewer operators than paper systems."

There is little doubt that new technology can offer enormous economies of scale, such that fewer staff are required to perform the same tasks as under entirely manual systems. But it is practically rare for courts to actually reduce their staffing costs when new technology is introduced. The trend in high income and in middle income countries is that new technology tends to free up staff to be redeployed to other, usually more highly skilled duties, and to be paid higher salaries. Combined with the new costs of technology, i.e. hardware, software and continuous training, the overall operating costs of new technology is often greater than the overall costs of prior manually administered systems. In low income countries there are often also additional practical constraints placed on courts to prevent them from retiring staff who become redundant. Unemployment is a pressing political and social issue in low income countries that is often addressed by governments pumping up numbers of low skilled (and usually low paid) staff on public payrolls, including the courts. It may consequently be difficult in these deliberately over-staffed courts for ministries of justice to lay off staff on the ground that new technology has made them redundant. There may also be constraints in low income countries on the facilities available for re-training existing staff to use new technology for the lack of skilled people to train and supervise them.

A further practical issue for e-justice protagonists is the risk associated with advocating the adoption of new technology in courts as a measure for reducing staff costs. In that event, whether or not the court is in a high income country or a low income country, the likelihood of active resistance from court staff,

fearful of losing their jobs, is likely to be assured, putting at risk the prospects of the new technology being satisfactorily introduced. A court should consider itself lucky if it can gain operational advantages from new technology without its overall salaries bill becoming significantly larger.

"…it will give us digitized court files (scanned records), which will allow us to get rid of paper files."

In high income countries that benefited from the introduction of computer systems development during the 1980s and 1990s, it was often suggested that those changes presaged a new era of the *paperless office*. Some businesses have actually achieved that result today, especially those that have been able to develop internet-based services. But for courts, even in high income countries, while some categories of archived documents have been made paperless, the bulk of documents that judges need to give most attention to have continued to be processed and used in their original form.

Some computerized courts have collected high value summary information about cases in their electronic systems and often also compile more accessible scanned versions of paper documents that are submitted as court forms or evidence. But these kinds of electronic records are most commonly created as convenient duplicates, rather than substitutes, for the original paper documents. Manual processing of the salient court documents and paper evidence submitted by the parties remain the mainstay of court management processes in most courts across the world.

The use of scanned versions of original documents may be feasible in cases where a court chooses to use the original only when it is necessary to verify it to be authentic – possibly only during a contested hearing, when the document is scrutinized as part of the evidence. But this will still require that the court accept and store the original document, to be referred to when needed. Having gone to the effort of accepting the original copy for safe keeping and authentication, there will seldom be incentive for the court to then rely on an electronic version of it during a courtroom hearing. The view will likely be taken by the presiding judge that the court ought to consider the original copy, just in case there is an argument about its authenticity. On the other hand, sometimes there are so many documents that a court is asked to examine, that the only feasible way of the court processing them is by means of scanned versions made available via computerized databases used in the courtroom. Complex commercial disputes sometimes entail thousands of pages of documents in evidence. But this kind of dispute is exceptional in all countries, including high income countries, representing only a tiny percentage of overall court disputes.

E-justice protagonists need to factor into their plans the possibility that the scanning of court documents may not achieve more than the duplication of documents that will otherwise continue to be filed in and processed by courts. There is a risk that new e-justice systems will introduce new processes without abolishing the old ones – offering new costs, but few savings.

"… it will give us a paperless office, so that judges and staff work entirely using computer screens to save on printing costs."

In high stakes commercial litigation where many thousands of documents may be in evidence before a court, it is common for a judge to agree that the best way to conduct the trial is to view the evidence entirely on computer screens, sometimes described as an *electronic trial*. But in almost every other kind of court case one could imagine, there is a high probability that the judge, and the opposing advocates, will demand to have access to a printed copy of the documents they are expected to read. E-justice protagonists sometimes describe the benefits as allowing an electronic trial in every case. Consider for a moment, however, what it might take to have an electronic trial in every case.

Firstly, it would be necessary either to make every lawyer produce every document in electronic form or to establish a facility in the court registry for scanning paper records. While courts sometimes dabble in scanning paper documents they receive, as a service to their clients, such schemes seldom last very long because they entail more paper movement and costs than courts that do not scan documents. Also, scanning is a highly error prone activity, as it assumes that low paid court staff will not overlook a document to be scanned or will not misfile the scanned version or will have the time to scan the thousands of documents often lodged as evidence in a court case. Even electronic records can be incomplete or contain the wrong documents with the same consequences as lost or incomplete paper records. As a long term solution, there is really no economic alternative to requiring that all documents be filed by electronic means, at the expense of each party, without the paper versions being filed at all.

Secondly, it would be necessary to equip every courtroom and every lawyer with the equipment to conduct a trial electronically. In high stakes electronic trials over commercial disputes it is common for the parties, rather than the court, to pay for the infrastructure for the trial, as courts seldom have it in place. That infrastructure not only entails elaborate hardware, but also purpose-designed software and management systems for filing, sorting and presenting evidence in ways that will facilitate the hearing; systems that often include off-site storage of files and managed websites by which the parties and the court exchange documents. Even in courtrooms that already have basic hardware for managing and presenting electronic trials, they will seldom have the software, management protocols and trained staff to conduct a trial without a significant budget that is specific to that trial.

Thirdly, electronic trials are highly vulnerable to equipment failures, power outages and communications glitches, even in major capital cities. Mostly importantly, it is difficult and expensive, even in high income economies, to recruit, train and retain staff who are skilled in operating sophisticated litigation software.

Finally, consider small claims, criminal and simple civil disputes that need to go to trial. The cost of processing those types of cases in a courtroom using computers instead of relatively small volumes of paper is unlikely to offer a significant cost or practical advantage for the either the court or the parties.

The ultimate problem with the paperless court concept is that when finally confronted with the cost and effort required to use a computer rather than a modest quantity of paper, almost all those concerned will prefer paper as simpler, cheaper and most likely not to fail when it needs to work.

"… it will put all our services on the Internet, so that we will not have to provide services to those who will not use a computer."

It would be idyllic to be able to conduct any kind of business using only Blackberries and IPads, without the need to write letters or even have in-person meetings or courtroom hearings. It is a very attractive option to suggest that litigants might just use websites to file their claims and defenses and that one day, even judges will hear trials and give decisions over the Web using virtual hearings. But courts are not in the business of booking airline seats or theatre tickets or other types of e-commerce. Their business is resolving disputes for people who cannot resolve them without the assistance of the state. These include people with disabilities; people who are poor and socially and politically disempowered; and those who do not have the use of phones, the Web or lawyers. This reality is well understood by any trial judge or lawyer, but may be less clear to others.

It is not realistic to imply that e-justice systems will lead to virtual justice systems. There is, however, the prospect that virtual justice systems might be effectively used by some litigants who are not disempowered and who could fairly afford to use computerized systems instead of traditional court services. But even if a range of virtual services was provided by a court for some litigants, the court could

not practically cease to provide services for those litigants who do not use computers. So, even if a virtual court environment is made available, the old style real court range of services and facilities will still need to be maintained and paid for.

"… it will help the court to take control of its large caseloads, using databases and up-to-date case information to make better decisions about case management."

A final justification to be offered for developing e-justice systems is their value in compiling case information for better case management. This is typically done by developing an electronic database that contains summary information about each case, including information about the way each case is processed. It is still relatively rare for courts in low income countries to have a case information database that does much more than record summary data and produce word processed documents from that data. Courts in middle and high income countries, however, will often have this basic functionality and considerably more: sometimes the capacity to automate judge rostering and case scheduling; to use artificial intelligence to manage each step of case management; to make use of the Internet and email media for communicating with litigants; and to give increased public access to information about cases. Among all the justifications that may be offered for developing e-justice systems, the most useful is likely to be a case information management database of these kinds – databases that may be used strategically by judges for initiating planned improvements in case management methods.

Case management databases have a poignant feature that distinguishes them from other e-justice initiatives, such as e-filing, courtroom recording systems, public information websites and electronic notification systems. That feature is their value in collecting case data and presenting data in a form that may be used intelligently by judges and court administrators to improve case management generally. Databases naturally produce data, usually in the form of case statistics that reveal trends and patterns. In turn, trends revealed in statistics can be used by judges to make strategic decisions for better use of judicial resources and time. In a sense, courts can use computerized systems to convert caseload *data* into caseload *intelligence*. Caseload statistics can reveal to a court the precise age of its pending caseload along with very detailed data about the characteristics of cases that suffer from delay, including data about how cases can be most effectively disposed. Sometimes the data reveals special causes of delay that may be remedied by special interventions.

To offer an example, when I studied criminal caseload data in the city of Delhi in India in 2005, the figures revealed that a significantly large percentage of basic trial court cases related to the offense of writing a private check when the writer of the check did not have sufficient funds in their bank account. Those cases, generally referred to as *bounced check cases*, were effectively debt recovery proceedings pursued by creditors against debtors as criminal actions. Most of those cases related to checks used to pay for rent, consumer purchases and other items that, in another country, might have been paid for with a credit card and enforced through civil courts. The value of this discovery about the criminal caseload of the court is that it offered useful intelligence about the possible solutions to that particular case backlog problem. It suggested that a way to produce a significant impact on the delay problem of that court was to target consumer credit laws and associated enforcement procedures, rather than leave the problem in the criminal courts where almost all the costs are borne by the state, rather than the parties. To solve this problem, the only option available to the judiciary was to just work harder, deploying more judges in an attempt to process the caseload satisfactorily, possibly by taking judicial resources from other kinds of criminal trial work. But the data revealed another option that was more likely to offer an enduring solution. It revealed that bounced check cases were diverting judicial resources intended to deal with crimes in processing claims that in most high income countries would be considered appropriate to process only in a civil court. The Indian authorities might have passed legislation to transfer bounced

check cases to the civil courts as a means of relieving the backlog problems of the criminal courts (possibly in conjunction with broader consumer credit regulatory reforms). This example shows that the capacity to generate detailed case data can empower judges and other policy makers to consider broader options in managing cases, options that would not be available without access to the kinds of data that court case information management systems can give.

Conclusion

The challenge for a court that has a case information management database is in using it strategically. Often judges are unaccustomed to acting creatively to process their caseloads in more effective ways, even when the technology for generating case intelligence is available to them. Statistics may be compiled and annual reports published with detailed data about caseloads, but judges may not necessarily use that data in reaching decisions they make about case management. The cost of technology may be substantial, but there will still be a question as to whether the expected benefits will be actively pursued in practice.

Similarly, E-filing systems may be introduced, but cases may then take their place in a long line of backlogs, without a discernable improvement in delays or the cost of litigation. Courtroom recording systems may take advantage of the best levels of available recording and transcript production, without any change in the time it takes for a court to complete the trial and deliver its verdict. And information systems for the education of judges may become fully accessible using technology, without necessarily revealing improvements in the quality of judicial decisions or rates of appeals to higher courts. In justifying the development of e-justice systems it is prudent to consider the likely cost against the likely benefits and the risks that, after all the effort is over, courts may simply carry on as they have always done. Because of these risks, e-justice system protagonists ought to consider the role of judges and the judicial leadership.

Most of the justifications for e-justice projects described in this paper may be put forward irrespective of the views or intentions of the judiciary. It is possible that each of the justifications might be offered, even when the judiciary explicitly opposes it or is indifferent to whether it is introduced or not. If this is so in your country, then you have good reason to expect that your project will fail. No matter how powerful a ministry of justice or a ministry of finance may be, it is unlikely to be able to influence the way courts behave, merely be conferring on them the funds to develop new technology systems. Success is only likely to arise when the judicial leadership, along with the judges who administer every court, effectively commit to contributing to the success of an e-justice solution and agree to make full use of the benefits it may offer. Consequently, no matter how many of the justifications you might consider to be applicable to your e-justice project, perhaps the most important one to include and realize is this:

"… because the judges of our courts are committed to the value of this e-justice initiative and have agreed to participate fully in making it a success."

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