ICT within the Court in the E-justice Era

By

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1. **Introduction**

Many of the current debates in the e-Justice field focus on the development and implementation of e-filing, organizational and cross national borders data exchange and systems integration. In this short paper I will instead address the role and some of the dynamics and emergent problems related to the development, implementation, maintenance and evolution of ICT within courts of justice, using examples from numerous European studies. These technologies can be divided into four groups based upon their technological but also organisational characteristics and functions. The first group consists of basic computer technologies such as desktop computers, word processing programs, spreadsheets and both internal and external e-mail for judges as well as administrative personnel. The second group consists of applications used to support the court’s administrative personnel, which include automated registries and case management systems. The third group consists of technologies supporting the judges’ activities, such as law and case law electronic libraries, and sentencing support systems. Finally, the fourth group includes the technologies used in the courtroom. This paper is structured around these four categories adding, in the final part, concluding remarks.

Quantitative data has been mostly provided by the Cepej Report “European judicial systems – 2008 Edition (2006 data)” and by the individual Country Replies. The Cepej data was complemented and combined with qualitative data from several of the IRSIG-CNR’s research projects. The research projects ‘Judicial Electronic Data Interchange in Europe: Applications, Policies and Trends’, ‘Information and Communication Technology for the Public Prosecutor’s Office’ and ‘ASTREA, Information and Communication for Justice’ were particularly useful.

2. **Basic computer technologies**

Nowadays, basic computer technologies are widespread in courts from around Europe. According to the Cepej’s 2008 data collection exercise, out of 46 European countries surveyed, 41 had basic computer and word processing facilities in 100% of the courts, and 5 in more than 50%. Diffusion of such technologies started during the 1980s. It is only over the course of the 1990s that many European governments started to supply the courts equipment and office applications in large quantities and in a more systematic way. In Belgium, for example, ‘during the early eighties, PCs with word processing software were made available to members of the administrative court registry...

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1 A previous version of sections 2, 3 and 4 has been previously published in Section 2 of M. Velicogna “Justice Systems and ICT: What Can Be Learned From Europe?” Utrecht law review, 3, 1, 2007, pp.130-137.

2 It is of these days the news that after some delay (Council of the European Union, PRESS RELEASE 3018th Council meeting, Justice and Home Affairs, 10630/10, PRESSE 161, PR CO 1 Luxembourg, 3-4 June 2010 http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/jha/114900.pdf pp.24-25 ), the European e-Justice portal will be launched on 16 July 2010, at the meeting of the European Union Justice and Home Affairs Ministers in Brussels (http://legalinformatics.wordpress.com/).

3 The project is a joint effort of the Research Institute on Judicial Systems of the Italian National Research Council in partnership with the Institute of Constitutional and Administrative Law, Faculty of Law, Utrecht University, The Netherlands, the Interdisciplinary Centre for Law and Information Technology, Faculty of Law, Catholic University, Leuven, Belgium, the Norwegian State Information Technology Court Service, Norway, and the Research Centre of Judicial Studies, Department of Organization and Political Science, University of Bologna, Italy. The project received two grants from the Grotius Civil Program (JAI/GR-CV/16/01/IT) and Grotius II (Criminal: 2001/GRP/031), of the European Commission and a grant from the Italian Ministry of Education, University and Research (FIRB Program)

4 Funded by the AGIS program (Project number: JLS/2005/AGIS/175). The project partners are: the Research Institute on Judicial Systems of the Italian National Research Council, the Institute on Constitutional and Administrative Law, University of Utrecht, The Netherlands; the London School of Economics, United Kingdom and the Finnish Ministry of Justice

5 "ASTREA, tecnologie dell'informazione e della comunicazione per la giustizia", funded by the Italian Ministry for Research and University (MIUR)

6 Of the Council of Europe countries, only Albania, Liechtenstein and San Marino did not reply to the question
upon personal request to respond to urgent demands. At the beginning of the 1990s, the government started to ‘invest more substantially in ICT for courts and tribunals’. This project’s aim was to supply the entire Belgian court system. Furthermore, as a result of an ICT promotional project in 1997, all judges were provided with a laptop computer from the Ministry of Justice.

Unfortunately, the dissemination of such technologies, if unaccompanied by supporting actions, such as training and new work practices, has often a very limited impact on efficiency. Hardware has sometimes become obsolete while still in its packaging. On the other hand, the provision, and most importantly, the active use of basic technologies, is a necessary condition to enable the use of other technologies. This is true in two ways. Firstly, the use of basic technologies allows people working within the courts to discover what ICT is and to start experimenting with it. This is particularly important as courts often possess a very low level of technological competence. The mere fact that courts are starting to use computers for drafting and printing simple documents, using e-mail for informal communication and surfing the internet helps acquiring the basic computer knowledge required for adopting more advanced systems. Secondly, such technologies constitute the ‘installed base’ upon which other technological innovations may be implemented.

3. Case-tracking and Case Management Systems

One of the first applications developed in the courts, is the automated Case-tracking System. The Case-tracking System was designed to automate court docket and other court register activities. Traditional court docket books and other court registers are one of the pillars of the court activities. They are generally huge books which need to be kept not only to formally comply with procedural rules, but also for the functions that such tools perform. For example, the case history recorded in the registers provides a quick reference to the case’s progression and the documents that have been received by the court. It is double-checked against the case file to determine its completeness. The court register is a guarantee that the formal procedure has been respected, (e.g. for computing any period of time prescribed or allowed by regulation). Furthermore, it allows a quick review of the status of a case without having to physically access and read the case file. On the other hand, paper docket and other register books are cumbersome tools with many limitations. ‘The docket is placed in the clerk’s offices … and just one office worker at a time can work with it’. Substituting the paper docket, the now widely diffused Case-tracking Systems have ‘revolutionised’ this aspect of the court offices’ activities. According to the data collected by Cepej, of the 44 countries studied,
25 had case tracking systems in 100% of the courts, twelve in more than 50% of the courts, four in less than 50% and three in less than 10%. Among the many advantages of the Case-tracking Systems, two are especially striking. Repeated data over several register is often automatically entered (e.g. Automatic recording of the registration date of assignation of a case to a judge). This system allows multiple synchronous data entries. Data retrieval functionalities have also been improved. If Case-tracking Systems are correctly updated, information can now be retrieved within a few taps of the keyboard. The clerk no longer needs to wade through the pages of the court docket books. However, if data quality is low, because data-entry inspections are not performed regular, mistakes in the case files would drastically reduce the system's efficiency.

A well-kept Case-tracking System databases contains ‘virtually all the important information … [concerning] every action, cause or matter filed in the court, including parties’ particulars, the nature and quantum of the claim, the document filed and the outcome of hearings’ and more. Having all this data in electronic format opens up a number of options to further enhance the efficiency of the court. Office automation functionalities have been developed to allow the user to automatically fill standard documents, (e.g. notification tickets), extracting data directly from the database, (e.g. the date of the event that is notified, name and addresses of lawyers and parties). This not only reduces the workload of personnel but also probability of making mistakes. In most cases, once generated, these documents are printed, signed and sent by mail or by other means of transmission. In Finland, where no signature is required, the documents are sent electronically to the post office in the area where the addressee lives, then printed and delivered physically.

In some cases, applications have been developed to speed up the data entry in the databases. Previously, applications based on optical character recognition (OCR) of standardized paper forms had to be printed by the parties before being submitted to the court. The court of first instance in Milan (Italy) uses software storing date from claims' forms in 2D bar code format. Developed in 2006, this software was freely provided to lawyers. The process the instances of justice follow is similar to that in other countries. When a lawyer wants to file a claim, she can use the software to print a claim form (nota di iscrizione a ruolo). The claim form document comprises the usual data in a readable format but also stores the same information in a 2D barcode. The court staff uses an optic scanner to read the barcode and to upload the data in the case management system database. This tool helps improving the speed and accuracy of computer data entry. Incentives to use such software have been provided, but an evaluation of the functioning of the system is not yet available.

A number of applications based upon Case-tracking date are in use across Europe. Some of these applications have a more strategic focus. For example, the provision of management information and statistical reporting can play an important role in the organisation and administration of court offices. To this end, court management systems, or at least statistic packages, using the Case-tracking and the case management systems’ data, have been developed in most countries reviewed. Furthermore, the operation of courts generates a significant volume of financial transactions including fines, bail, fees, etc. Courts acquire goods and services and in some

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15 Data concerning Albania, Liechtenstein, Moldova, Montenegro, San Marino is missing.
17 K. Kujanen, E-services in the courts in Finland, Presentation at the Seminar on Law and Informatics, Bern, 26 October 2004, p. 4; see also http://www.oikeus.fi/15955.htm and http://www.oikeus.fi/15956.htm
cases also hire personnel. In several countries, software applications have been developed or are currently under developed to help process and account for these transactions. Some applications focus upon solving smaller problems. In several courts, various systems were introduced to keep track of the case folder's spatial/physical location. In some cases, Excel spreadsheets have replaced the informal registers upon which the clerks recorded documents. More sophisticated approaches have been used. Several court offices installed procedures to scan both the documents filed to the court and the sentences. This allows the creation of an electronic docket in the first case and archives of digital sentences in the second. Although these procedures are (often) a burden for the court, they may prove efficient in cases where frequent photocopying is required or when a scanned document being stored. Specific institutional settings have also been a factor influencing the creation of new practices and applications. In countries where juries pass verdict, the selection of the jury was a long and time consuming process. Today, these activities are automated.

Today, Case-tracking systems and related applications are often taken for granted and well integrated in the court practices. However, their introduction was all but simple. Often, they answered specific and urgent local business needs within specific offices, or within ad interim pilot projects (e.g. Italy, Ireland, Belgium). ‘As an agent of automation similar to the machines introduced by manufacturing firms during the industrial revolution’, the purpose of this technology is to improve ‘efficiency through the automation of human activities within work processes’.

Created to substitute paper-based registers, Case-tracking Systems were often introduced in offices where people had previously worked solely with paper, pens and stamps. ‘Modern technologies’ meant photocopy and faxes machines. In frequent cases and long after their introduction was all but simple. Often, they answered specific and urgent local business needs within specific offices, or within ad interim pilot projects (e.g. Italy, Ireland, Belgium). ‘As an agent of automation similar to the machines introduced by manufacturing firms during the industrial revolution’, the purpose of this technology is to improve ‘efficiency through the automation of human activities within work processes’.

19 In Ireland for example, the Courts Accounting System (CAS) has been piloted in a small number of District Court offices, and is now being extended to all the 44 District Courts. Irish Courts Service, ICT Strategy 2006-2010 for the Courts Service, p. 31. available at: http://www.courts.ie/Courts.ie/library3.nsf/(WebFiles)/75704E3E1D4B1E048025716800557865/$FILE/ICT%20Strategy%202006-2010.pdf
20 In Milan, a pilot project that uses a radio-frequency identification (RFID) has been implemented to avoid the loss of documents. An RFID tag is attached to the folder, allowing its identification and tracking using radio waves.
21 The use of electronic documents from the outset could appear a better solution, when technically and normatively possible. The scanning of documents, though, does not just represent the past. Still today possible reforms for a modernisation of judicial systems proposes the systematic use of scanners for digitalisation of files within both civil and criminal procedures which are currently in paper format (i.e. Cédric Trassard, (2007), The Race for the Adaptation of Justice to New Technologies: Information and Communication Technology in the French Prosecutor’s Office, in Fabri, M. (Ed.) Information and Communication Technology for the Public Prosecutor’s Office, Clueb, Bologna, pp.185-227).
22 In Ireland, for example, the Courts Service has several stand-alone systems in place for the purpose. At the moment there is also and ongoing project for the development of an unified system. The system should ‘assist the court clerk to track and monitor attendance, assign jurors to panels, print badges, panel lists, court information etc.’ (Irish Courts Service, ICT Strategy 2006-2010 for the Courts Service, p. 30. available at: http://www.courts.ie/Courts.ie/library3.nsf/(WebFiles)/75704E3E1D4B1E048025716800557865/$FILE/ICT%20Strategy%202006-2010.pdf). Furthermore, ‘The system should also provide the capability to identify non-attendees and the subsequent follow-up process.’ (ibid.).
24 This seems to be the cases for the interim Civil Case Management systems developed and implemented in the Dublin Circuit Civil Court office, the Wards of Court office and Dundalk Circuit Civil Court office (Irish Courts Service, The Irish Court Service Annual Report, 2000, p. 77).
27 Ibid.
introduction, Case-tracking Systems were no substitution for paper-based registers like official documents. Clerks and administrative personnel had to deal with parallel procedures and producing duplicates. Goemans notes: ‘the introduction of electronic internal documents has not suppressed the paper-based system yet: documents are currently processed electronically and on paper, even in cases where there would be no legal obstacles to suppress the paper based version.’

Moving away from purely providing an electronic copy or alternative to paper-based register, the CMSs expanded to include functions helping case management. This was a critical innovation as ‘Time is the courts' most critical resource’. Effective caseflow management makes justice possible both in individual cases and across judicial systems and courts, both trial and appellate. It helps ensure that every litigant receives procedural due process and equal protection.

Case management involves the monitoring and managing of cases in the court docket from the time the action is filed to the moment it is finally disposed of by way of trial, settlement or otherwise. It ensures that all cases progress swiftly without unnecessary delay.

CMSs are less widespread than Case-tracking Systems. According to Cepej data, only 20 countries (out of 42 surveyed) have Case Management Systems in 100% of their courts, thirteen in more than 50%, three in less than 50% and six in less than 10%. In general, the introduction of case management systems has often coincided with attempts to standardise existing ICT applications and to integrate existing databases. A top-down approach has often been used for the development and diffusion of the newer and more advanced applications. The courts have oftentimes expressed strong resistance to the use of these applications. Courts already versed in ICT applications had customised them to their needs and had developed skills and practices where the introduction of a standardised tool would disrupt. Furthermore, whereas the first initiatives had developed locally, nurtured by enthusiasts, the new applications were often introduced as off-the-shelf, un-customisable, plug-and-play systems. As a result, motivation and participation levels comparatively decreased.

Some of the CMSs functions are devoted to managing a single case. These functions include the support and automation of the back-office and court staff’s administrative work, case tracking, case planning, document management, scheduling of hearings and support of judicial activities. For example, after the receipt of a plea the event is registered, the case allocated to a judge, notices sent, a hearing set, and a time allocated for the judge to review the plea before the hearing. If the opposing party is unresponsive, the clerk may send a reminder. Under the paper-based regime, the court personnel kept a track of the cases' progress through material artefacts (i.e. To-do-list), ingrained procedures or simply thanks to gargantuan memories. The CMS embeds such knowledge and automatically performs most of these tasks, providing support to others (e.g. tracking events and generating reminders of deadlines) and thus helping to improve the service.

The CMSs other functions focus on facilitating the case flow and court management. CMS can monitor the court's output and performance. As a result, planning and organising the court's

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30 See ‘Caseflow Management’, 2003 Court Manager 2, p. 16, or at the NACM website on the Internet, see: http://www.nacmnet.org/CCCG/cccg_3_corecompetency_cfm.html
32 Data concerning Albania, Iceland, Liechtenstein, Moldova, Monaco, Montenegro, San Marino is missing.
activities and allocating its resources efficiently are far simpler. The more sophisticated CMS packages summarise the court workflow on a daily, weekly and monthly basis. They are able to display the aggregate information of court activities in different graphical formats. For example, a calendar of the court's monthly output shows the number of actions and the time allocated in the courtroom on a daily basis. Alternatively, bar charts can be broken down into days to show the scheduled number of tasks, by type, thus ameliorating the planning of court activities. Tracking case typologies and considering the time available can be used to highlight critical situations and later the allocation of personnel, judges and other resources accordingly. The analysis of court workload trends may also be used to foresee future trends and needs.

Finally, CMS can help court staff process cases which are not disposed of judicially. A number of systems provide support to ancillary, but time-consuming court functions. In many cases, stand-alone, low-cost applications have been developed and implemented to speed up these instances. Increasingly, the trend is towards the integration of such systems within the CMS. The latest systems incorporate all these functions.

To reduce maintenance and evolution costs, CMSs and other information systems have been at times centralized using single technological infrastructures (e.g. Italy). Because of this unification, the databases and applications of several courts are available via the internet. While providing concrete advantages, especially in a period of budget cuts like today, such innovations may present problems. These problems arise not only in terms of ownership and control over data, but also in lower performance from an end-user perspective, for example in relation with net connection problems.

Opening Case-tracking and Case Management System databases to external users like lawyers and parties is another area in which CMSs are innovating. The external users can check their case's progress without having to go to court. Since 2004, the French administrative justice has been experimenting with a system called: « Sagace ». This web interface permits litigants and their lawyer to consult the court CMS data via a code provided by mail when the case is filed. In other cases, such as the Italian Polis Web, only lawyers can access the CMS available through a more complex PKI infrastructure.

4. Technologies for supporting judges

Whereas a majority of the tools described in the previous sections are ‘organisational tools’, -i.e. they require to be adopted and consistently used by a plurality of people within the court in order to produce visible results-, many technologies to support judges’ activities are ‘individual tools’, -i.e. They are designed to contribute and ease the activities of a judge. Organizational tools have been more difficult to introduce to judges. The reasons behind this phenomenon are several. Judges' independence and the nature of the tasks they perform is a central explanation. Efforts to introduce new technologies may radically affect not only the organisation of the justice administration, but, in some cases, can also affect the exercise of the jurisdiction itself. Adopting a new tool often depends on a judge's decision to do so. While this is not an issue for individual tools, it is problematic when adopting organisational tools. Furthermore, due to their independence,

34 Ibid.
36 In Finland, for example, courts tasks include registration of titles and mortgages over real property. Such registrations are made on court automated systems. The data is then automatically forwarded to the other interested authorities.

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judges often develop very individual working practices. The plurality of working practices dramatically increases the complexity of providing organisational tools that take into account these differences. Organisational tools require a high degree of standardisation. This, in turn, may lead to a higher resistance to the use of these technologies.

ICT supports the judges’ work in many areas: organizing their tasks, information management and retrieval, document production and decision-making; to name a few. One aspect of the judge’s activity which has generally been most affected by the use of ICT is legal research. Cds, local intranets, internet access to constitutional material, laws, appellate decisions, rules, statutes, local ordinances along with other technological support tools are responsible for the changes in conducting legal research. A greater portion of judges’ daily time is spent conducting online research. The use of search engines and text mining techniques have permitted legal research to reach new levels of excellence both in terms of quality and efficiency.

Another important innovation is the use of e-mail and forums to share electronic documents. Although e-mail technology was widely diffused among judges around Europe, it is essentially used as an informal means of communication. This is primarily because, in many countries, both certified e-mails and digital signatures are required by law for official communications (e.g. Belgium, France, Greece, Italy). This kind of legislation has been in place in many countries for almost a decade. In many cases, the required technologies are currently being introduced (e.g. Italy). Forums and discussion groups where judges can ‘virtually’ meet and discuss legislation, procedures and cases, have been an important development.

Because judges have fewer opportunities to work on panels (e.g. in The Netherlands), electronic forums and discussion groups are viewed as a possible contingency for judges to share information and receive support (and training). Efforts were made to produce applications to support the judges in drafting sentences. Often, standard decision models are pre-programmed in the computerised system. Data used in the course of litigation and stored in the automated registers or in CMSs (e.g. the name of parties, of attorneys, facts, procedure) can be retrieved automatically. In Finland, the CMS (« Tuomas ») allows judges to access data contained in the electronic documents courts receive to reach decisions. The Tuomas database and the document editors are integrated. Similar experiences have not, however, always been so successful. In Italy, an application, « Polis », was created to support writing judgments, sentences and court orders, their classification and their retrieval. Despite the Ministry of Justice's IT department's considerable efforts, only a few judges used Polis, preferring common word processors or handwritten sentences and judgments.

Since, new software interface developed for the management of the « Trial Online » seems to be achieving better results.

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38 In Ireland, for example, the ‘Electronic Bench book is a Lotus Notes application, updated on an ongoing basis, with various rules, statutes and regulations.’ Through this system ‘Judges have on line access a number of sources of electronic legal information services, Butterworths, Lexis-Nexis and Justis.Com’. In England and Wales ‘eLIS (electronic Library and Information Services) provides legal information for the judiciary, the DCA and the Her Majesty’s Courts Service. It also provides a portal service to key legal information on the Internet.’ It provides information in the following areas of law: United Kingdom, Human Rights, European, International; subject areas: Current Awareness, Legislation and Treaties, Case Law, Commentary, Organisations (http://www.hmcourts-service.gov.uk/elis/35.htm). The Italian Centre of Documentation of the Supreme Court provides free on-line access to the database of the jurisprudence of the Supreme Court, of the Consiglio di Stato, of the Corte dei Conti and of the sentences of the Constitutional Court and the European Court of Justice to the judges.


40 Ibid.

41 This is particularly useful because 65% of the documents filed to the court are electronic documents. They are structured so that they can be stored in relational databases and their information can then be used.

Yet another direction that ICT investments have taken is the development of sentencing support and automated judgment systems. These systems should improve the quality and timeliness of judgments and result in more consistent sentences in the long run. In theory they should “allow sentencers quick, easy access to relevant information about past sentencing of the court in 'similar' cases, without placing any formal restrictions on the exercise of judicial discretion”. The experience of the various judicial systems (and even within a given single system) shows that judicial decision-making includes an almost infinite range of variations in the craft of sentencing itself. The complexity, variability, flexibility and discretion that are typical of judicial decisions are not easily tackled by computer automated systems. Nonetheless, improvements in semantic technologies and data mining fosters hopes for the future, at least in the areas characterized by more predictable, repetitive and bulk cases.

5. Courtroom Technologies

ICT technologies and applications were experimented with and are beginning to be better integrated in the court room structures and practices. Normative changes have been introduced in several countries to allow the use of these technologies. A recent document published by the Slovenian Ministry of Justice on the subject of e-Justice and videoconferencing states that legislation already exists concerning the use of videoconferencing for criminal proceedings in 27 member States -20 in civil proceeding and 7 in administrative proceedings regulating taking evidence through videoconferencing.

Starting with Audio recording devices to keep track of the hearing, courtrooms have been provided with a wide variety of differing technologies, such as computers and multiple screens, video recording and videoconference systems, internet and intranet infrastructures, exhibit support systems for presenting evidence electronically. Tools have been developed in order to automatically transcribe audio and video recording into text and to manually or automatically indicize the contents.

Whereas systems like audio and videoconference systems or internet connections can simply be installed in a courtroom, other technologies such as videoconferencing applications, to be

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45 Cf. D. Carnevali et al. (eds.), Tecnologie per la giustizia. I successi e le false promesse dell’e-Justice, 2006.
46 M. Taruffo, ‘Judicial Decisions and Artificial Intelligence’, 1998 Artificial Intelligence and Law 6, pp. 311-324. According to the author, ‘the factors influencing the ways in which judicial decisions are made are numerous and include for instance the format and size of the court (single judge or panels, and so on), the composition of the court (professional and/or lay judges), several procedural rules, the factual circumstances of cases, the form and content of the substantive rules governing the case, the evidence available and the methods and standards used to decide on facts according to the proofs and to solve legal issues according to the relevant rules and principles.’ p. 311.
47 Ibid., p. 316.
effective, must be more widely diffused. An example of the latter is provided by the Estonian Judicial System Videoconference Network.\textsuperscript{51} Through this system, criminal cases may demand long-distance hearings of witnesses, suspects or the accused. In a civil proceeding, the long distance participation of a party, witness or expert is possible. In Portugal, the « Tribunal XXI » initiative, which began in 2005 as the 7\textsuperscript{th} Congress of Portuguese Judges\textsuperscript{52} This integrated system includes digital video recording of court hearings, simultaneous transcription, use of tablet PCs, preformatted documents, agenda, access to relevant norms.

A recent study on Dutch videoconference tests\textsuperscript{53} underlines that developing this kind of technological infrastructure raises other than just technical, normative and organizational problems. Beyond the courts, the development and implementation of these projects confronts policy makers and administrators with the challenge of motivating the diverse organizational actors both within the Justice administration, (e.g. courts and prisons), and without (e.g. law firms and lawyers).\textsuperscript{54}

6. Concluding Remarks

Political discourse and the most advanced technological innovation efforts concentrate on ICT integration to justice systems and cross border data and e-document exchange. However, empirical research shows that ICT innovation in the court need further study. At the minute, the integration of ICT systems in this domain require sustained efforts to reach optimum levels of efficiency. Court technologies are the pillar, the installed base upon which further development must build. Whilst many technical, organizational and normative solutions have been found, and individual and organizational skills have adapted to these innovations, much remains to be done. Integration and standardization may increase data sharing capacity and reduce the need for repetitive tasks such as data-entry. However, it may also reduce flexibility and increase reliance on outside resources to perform day-to-day tasks. Accessing remote databases may result in significantly less rapid networks than previous local ones. Problems in data migrations and other features in the newer version of the court CMSs may bring with them problems in data migrations or in other features which would result serious organizational problems and consistent delays in the delivery of justice. In the past, these kinds of problems were related with the court's administrative competence, the increasing integration of the work of the judges with court level and external computerized support tools and the growing importance of courtroom technologies; make them more relevant for the efficiency, timeliness and quality of the court core activities. The result is a growing need for the capability of finding viable solutions, based on a basic understanding of the many levels of complexity of ICT implementation in the courts. It also requires a vision of what is taking place in other courts, within and without national borders, if one is to learn from the experience of the others and not try once again to reinvent the wheel.

\textsuperscript{51} http://www2.just.ee/KHT/videokonv/EST_videoconf_network(Jan2007).pdf
\textsuperscript{52} www.asjp.eu/siteanterior/congressos/7congresso_comunicacao1.doc
\textsuperscript{54} Ibidem