

Justice Systems and ICT What can be learned from Europe?

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1. Introduction¹

Reducing delay, improving economy, efficiency and effectiveness and the more general objective of promoting confidence in the justice system through the use of new technologies 'are laudable aims and are unlikely to generate much dissent.'² However, given the nature and importance of the judiciary as the third pillar of the State authority, and compared to other public services, due process, impartiality and independence should also be carefully taken into account. This is especially so when structural and procedural changes, such as the ones driven by the introduction of the new technologies, take place.

The use of information and communication technology (ICT) is considered one of the key elements to significantly improve the administration of justice.³ The rapid development of technology opens up new opportunities that were unthinkable only a few years ago. Around the world, several statutory reforms have been introduced to allow the use and the exchange of electronic data and documents within national judicial systems, but also between them and with supranational courts. The availability of web services, the possibility of consulting on-line legislation and case law, the use of electronic filing, the electronic exchange of legal documents, are only some examples that are spurring the judicial administrations around the world to rethink their current functions and activities. ICT can be used to enhance efficiency, access, timeliness, transparency and accountability, helping the judiciaries to provide adequate services. New possibilities are emerging for the integration and automation of court procedures and practices. In addition, the use of the internet, can offer the chance to open the judiciary to the public, providing both general and specific information on its activities, thereby also increasing legitimacy.

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2 B. Loveday, 'Address to EGPA Conference, Cape Sounion, Greece', in M. Fabri *et al.* (eds.), *The Challenge of Change for Judicial Systems*, 2000 p. 23.

3 Confronted with the inability of managing the constantly increasing caseload, Ministries of Justice have typically adopted three main strategies: (1) the increase of administrative personnel and judges, (2) a change of norms and procedures and (3) the investment in information and communication technologies. M. Fabri, 'Gli affanni dell'amministrazione della giustizia italiana', 1998 *Politica e Organizzazione* 1, pp. 47-60.

However, many empirical studies show that the results achieved do not often coincide with the anticipated ones.⁴ High failure rate is a result of the fact that ‘the complexity of ICT solutions have grown rapidly and that existing Software Engineering and Information Systems Design methodologies do not tackle this adequately’.⁵ More research is needed to better comprehend such phenomena and to improve ICT innovation methodologies in courts. From this perspective, the European continent offers an important opportunity.

‘The diversity of institutional settings within Europe provides contrasting examples of the use of technology to support the administration of justice. The variety of solutions adopted, both from a technical and managerial point of view, provides a unique insight into judicial applications of ICT and these solutions should be disseminated and discussed in-depth.’⁶

This article seeks to provide a thorough overview of ICT developments that have taken place in Europe in recent years.⁷ The article is based mainly on data collected by the Research Institute on Judicial Systems of the Italian National Research Council (IRSIG-CNR) through several research projects.⁸ This data has been updated, whenever possible, in order to provide the most recent information in a rapidly changing landscape. Cases have been selected from a number of European countries in relation to their potential to provide concrete examples of the issues discussed. Through these examples the reader will be able to better appreciate the different trends, implementation approaches and problem-solutions, as well as gain a more realistic vision of the different uses of information and communication technologies that characterise the ICT development in the justice field.

In the first section the article will analyse the use of ICT within the courts to support court administrative personnel and judges. In the second section, the use of technology to exchange information between courts, parties and the general public will be addressed. Finally, some of the implications emerging from the analysis of the different experiences will be dealt with in the conclusions.

2. ICT within the court

Justice is the product of the combined effort of a plurality of actors. Some of these actors, such as administrative personnel and judges, operate within the court organisation, while others, such as lawyers, litigants and witnesses, but also the community and public institutions, constitute the environment within which the court traditionally operates. The technologies which are discussed

4 F. Contini *et al.*, *Information System and Information Infrastructure Deployment: The Challenge of the Italian E-Justice Approach*, Twelfth European Conference on Information Systems, Turku, 14-16 June 2004; F. Contini, ‘Processi di innovazione e context making: l’adozione della tecnologia dell’informazione negli uffici giudiziari’, in C. Ciborra *et al.* (eds.), *Labirinti dell’innovazione*, 1999; G. Di Federico *et al.*, *Office automation e organizzazione degli uffici giudiziari penali. Studio di tre casi*, 1995; C. Ciborra *et al.*, ‘Formative Contexts and Information technology: Understanding the Dynamics of Innovation in Organizations’, 1994 *Accounting, Management and Information Technology* 2, pp. 3-27.

5 O. Hanseth, ‘Integration – Complexity – Risk: The Making of Information Systems out-of-control’, in C. Ciborra *et al.* (eds.), *Risk, complexity and ICT*, forthcoming, p. 3.

6 M. Fabri *et al.* (eds.), *Judicial Electronic Data Interchange in Europe: Applications, Policies and Trends*, 2003, p.2.

7 Countries that have been considered for this paper and to which reference will be made when describing general European trends are: Austria, Belgium, Croatia, the Czech Republic, Denmark, England and Wales, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Slovenia, Spain, Sweden and Switzerland.

8 In particular, the research project ‘Judicial Electronic Data Interchange in Europe: Applications, Policies and Trends’ and the research project ‘ASTREA, Information and Communication for Justice’ have provided most of the initial information resources. The findings, interpretations, and conclusions expressed in this article are entirely those of the author and should not be attributed in any manner to the organisations or programmes that financed the research projects.

in this section are the ones adopted within the court. Such technologies can be divided in three groups based on their technological, but also organisational, complexity. The first group consists of basic technologies such as desktop computers, word processing, spreadsheets and both internal and external e-mail for both judges and administrative personnel. The second group consists of applications used to support the administrative personnel of the court, which include automated registers and case management systems. Finally, the third group consists of technologies used to support the activities of the judges, such as law and case law electronic libraries, and sentencing support systems.

2.1. Basic technologies

Basic technologies are standard products that can be easily acquired on the market. They mainly consists of hardware and software used to create, collect, store, manipulate, and relay digital information needed for accomplishing basic office tasks. Diffusion of such technologies started during the 1980s, but it is only during the 1990s that many European governments started to supply equipment and office applications to the courts in large quantities and in a more systematic way. In Belgium, for example, ‘during the early eighties, PC’s with word processing software were made available to members of the administrative court registry upon personal request to respond to urgent demands.’⁹ At the beginning of the 1990s though, the government started to ‘invest more substantially in ICT for the courts and the tribunals’,¹⁰ starting the so-called ‘mammoth project’, to cover the entire Belgian court structure. Furthermore, within the framework of an ICT promotional project in 1997, all judges were provided with a laptop computer from the Ministry of Justice.¹¹

This is the typical trend for the diffusion of basic technologies in the courts all over Europe.¹² Unfortunately, the dissemination of such technologies, when not followed by other actions, such as training and redesign of working practices, has often resulted in a very limited impact on efficiency. Hardware has sometimes become obsolete while still in its packaging.¹³ On the other hand, the provision, but 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 the people working within the courts to discover what ICT is and to start experimenting with it. This is particularly important as courts have often been characterised by 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 with the sharing of a basic computer knowledge much needed for the adoption of further systems. Secondly, such technologies constitute the ‘installed base’¹⁴ on which other technological innovations may be implemented. For example, without a computer and an internet connection, a judge cannot access on-line legal information services.

9 J. Dumortier *et al.*, *The Challenge of the Information Society: Application of Advanced Technologies in Civil Litigation and Other Procedures; Report on Belgium*, XI World Congress on Procedural Law, Vienna, 23-28 August 1999.

10 J. Dumortier, ‘Judicial Electronic Data Interchange in Belgium’, in M. Fabri *et al.* (eds), *Judicial Electronic Data Interchange in Europe: Applications, Policies and Trends*, 2003 p. 127.

11 *Ibid.*

12 According to the data collected by CEPEJ, of the 46 Member States of the Council of Europe, 40 have basic computer and word processing facilities in 100% of the courts, 5 in more that 50% of the courts, and only one in less than 50%; CEPEJ ‘European judicial systems’ 2006 p. 68, available at: http://www.coe.int/t/dg1/legalcooperation/cepej/evaluation/2006/CEPEJ_2006_eng.pdf. See also national reports available at: http://www.coe.int/t/dg1/legalcooperation/cepej/evaluation/2006/Table2006_en.asp

13 M. Velicogna, *Local Initiative in Hyper-regulated Organizations: A Frail Way to Innovation*, PISTA conference, Orlando, 21-25 July 2004.

14 O. Hanseth *et al.*, *Theorizing about the design of Information Infrastructures: design kernel theories and principles*, work in progress, available at: <http://heim.ifi.uio.no/~oleha/Publications/ISRinfrastructurefinal05-12-05.pdf>; O. Hanseth *et al.*, ‘Developing information infrastructure: The tension between standardization and flexibility’, 1996 *Science, Technology and Human Values* 21, pp. 407-426.

2.2. *Technologies for the administrative component*

The role of the administrative component of the court is to perform a number of tasks that range from case-tracking and keeping official records of all court matters to official court notifications.¹⁵ Furthermore, court personnel carry out an important role as an interface, and at the same time a buffer between the judge and the other actors that participate in the judicial process. As lawyers very well know, the judicial proceeding starts long before a case reaches the courtroom.¹⁶ The administrative personnel of the courts file and keep registers and documents in compliance with codes of procedure, laws and regulations. For example, a civil action is commenced when a plaintiff (or a plaintiff's attorney) files a summons or a complaint with the clerk of court in any manner prescribed by law. A series of actions are linked to such procedures, such as the collection and formal control of the filed documents by the clerk,¹⁷ the documentation at the time of collection, the registration on a court register of the event and the issuance of a receipt. All these actions require time and resources. In supporting the clerks activities, technology can play an important role in saving much needed resources at the earliest stage of the trial.

Traditional court docket books and other court registers are one of the pillars of the court activities. They are generally huge books, that need to be kept not only to formally comply with procedural rules, but also for the functions that such tools perform. The case history recorded in the registers, for example, provides a quick reference on the status of the case and the documents that have been received by the court. It is double-checked against the case file to determine its completeness.¹⁸ It 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.¹⁹ On the other hand, paper docket and other register books are cumbersome tools and present many limitations. 'The docket is placed in the clerk's offices ... and just one office worker at a time can work with it'.²⁰ For these reasons, one of the first applications that have been developed in the courts, is the automated register. Automated registers have 'revolutionised' this part of the court offices activities. The possibility of multiple synchronous data entries and the absence of a need to enter the same data again and again for each different register or when adjourning the file, are just some of the many advantages of automated registers. Some activities are now totally automated. In many cases there is a reduced need for manual data entry as the systems automatically populate some of the database records (*e.g.* automatically recording the date of the registration or automatically assigning a case to a judge). Data retrieval functionalities have also been improved. Lawyers can easily observe the difference when asking for information on case status from a clerk. If automated registers are well kept, the clerk can now provide the information with a few taps of the keyboard. He or she does not need to go searching through the pages of the court docket books.

A well kept automated register databases contains 'virtually all the important information ... [concerning] every action, cause or matter filed in the court, including parties'

15 Keeping original records and copies of written orders; original summons and complaint and subsequent pleadings, which includes answers, counterclaims, cross claims, replies and amended complaints; written motions, written notices; discovery requests and responses; appearances; demands; offers of judgment; designations of record or case; grounds or exceptions on appeal; and other similar papers.

16 A. Wallace, 'Australia', in A. Oskamp *et al.* (eds.), *IT Support of the Judiciary*, 2004, p. 40.

17 For example, the procedure may require the plaintiff or his or her attorney to sign the summons, to include the names of the parties etc. or to provide the proof of service of a summons or complaint. When the case is filed, the clerk collects and checks such documents.

18 J.E. McMillan, *Case Management Systems: The Four Bubbles*, 1995, p. 5, available at: http://www.ncsconline.org/WC/Publications/KIS_CasSysCTB1995McMillanPub.pdf

19 *Ibid.*

20 F. Contini, 'Reinventing the Docket, Discovering the Database. The Divergent Adoption of Information Technology in the Italian Judicial Offices', in M. Fabri *et al.* (eds.), *The Challenge of Change for Judicial Systems*, 2000, pp. 253-267.

particulars, the nature and quantum of the claim, the document filed and the outcome of hearings²¹ 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, such as court notification tickets, extracting data directly from the database, such as the date of the event that is notified, name and addresses of lawyers and parties. This reduces not only the workload of personnel but also the risk of mistakes. In most cases, after being generated, such 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, which prints it and delivers it physically.²²

In some cases, applications have been developed to speed up the data entry in the databases. An example of this are the applications based on optical character recognition (OCR) of standardized paper based forms that have to be printed by the parties before being submitted to the court. In the case of the court of first instance in Milan, Italy, software to create a barcode has been developed in 2006 and provided freely to the lawyers. 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 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 available yet.²³

In courts across Europe, a number of other applications have been developed that use automated register data. 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. For this purpose court management systems, or at least statistic packages, that use the data of the automated registers and of the case management systems, have been developed in most of the countries considered. 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 cases also hire personnel; in several countries software applications have been developed or are under development to help process and account for such transactions.²⁴ In other cases, applications have been developed to solve more limited problems. In several courts, various systems have been developed to keep track of the physical location of the case folder. In some cases, Excel spreadsheets have replaced informal registers used by the clerks to record the passage of the documents. In other cases more sophisticated approaches have been used.²⁵ Several court offices have introduced procedures in order 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. A limit to this technique is the limited reusability of the data contained in the documents. Although these

21 T.Y. Sze, 'Singapore', in A. Oskamp *et al.* (eds.), *IT Support of the Judiciary*, 2004, p.48.

22 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>

23 On the subject, Ministero della Giustizia – D.G.S.I.A., *Implementazione evolutiva del sistema di iscrizione a ruolo con il codice a barre: Documento di analisi e progettazione del software applicativo*, Ver. 1.1 2006, available at: http://www.ordineavvocatimilano.it/html/contentore.asp?pagina=layout.asp&idlayout=124&idsezione=112&idsotto_sezione=233&bott=ok&idmacro=12

24 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*, 2006, p. 31. available at: [http://www.courts.ie/Courts.ie/library3.nsf/\(WebFiles\)/75704E3E1D4B1E048025716800557865/\\$FILE/ICT%20Strategy%202006-2010.pdf](http://www.courts.ie/Courts.ie/library3.nsf/(WebFiles)/75704E3E1D4B1E048025716800557865/$FILE/ICT%20Strategy%202006-2010.pdf)

25 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.

procedures often generate a burden to the court, they may produce efficiencies in cases where frequent photocopying is required or when a scanned document can be stored in place of a paper one.²⁶ Some applications have been developed only in countries that have specific institutional settings. Traditionally, in countries that use juries, the selection and management of jurors has been a time consuming manual process in the hands of the court clerk. Applications to automate such activities have been implemented.²⁷

Today automated registers and related applications are often taken for granted and well integrated in the court practices but in many cases their introduction has been all but easy and plain. The development of these applications was often carried out locally, in many cases to meet specific and urgent business needs within specific offices, or within ad interim pilot projects (e.g. Italy,²⁸ Ireland,²⁹ Belgium³⁰). ‘As an agent of automation similar to the machines introduced by manufacturing firms during the industrial revolution’,³¹ the purpose of this technology is to improve ‘efficiency through the automation of human activities within work processes.’³² Developed to substitute paper based registers, automated registers were often introduced in offices where people had worked all their life with paper, pens and stamps and where the ‘modern technologies’ were photocopy and faxes machines. In many cases and for a long time after their introduction, automated registers did not substitute the paper based ones as official documents, thus requiring clerks and administrative personnel to deal with parallel procedures and the duplication of work. Even in 1999 in Belgium, after several years of efforts, as Dumortier and Goemans note, ‘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.’³³

An evolution of the automated registers is the case management system (CMS). Such applications are not limited to providing an electronic copy of the paper-based register, but introduce functionalities to help the management of the cases. It is clearly an important task since ‘Time is the court most critical resource’,³⁴ and CMS helps manage time. ‘Effective caseload 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

26 The use of electronic documents from the outset could appear a better solution, when technically and normatively possible. The topic will be discussed in Section 3.2. The scanning of documents, though, does not just represent the past. David Benichou (Magistrate, responsible for mission near the general secretary of the French Ministry of Justice and representative of the Commission of the data processing of the networks and the electronic communication) in his note (written in 2006) concerning the possible reforms for a modernisation of the French judicial systems where he proposes the systematic use of scanners for digitalisation of files within the criminal system which are currently in paper format (Cédric Trassard, *Report on Information and communication technology for public prosecutor’s office: France*, Agis seminar, Bologna, 13-14 April 2007).

27 In Ireland, for example, the Courts Service has several stand-alone systems in place for the purpose. At the moment there is also an ongoing project for the development of a 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*, 2006, p. 30. available at: [http://www.courts.ie/Courts.ie/library3.nsf/\(WebFiles\)/75704E3E1D4B1E048025716800557865/\\$FILE/ICT%20Strategy%202006-2010.pdf](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.*).

28 D. Carnevali *et al.* (eds.), *Tecnologie per la giustizia. I successi e le false promesse dell’e-justice*, 2006, pp. 99-113.

29 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).

30 J. Dumortier, ‘Judicial Electronic Data Interchange in Belgium’, in M. Fabri *et al.* (eds), *Judicial Electronic Data Interchange in Europe: Applications, Policies and Trends*, 2003, p. 126.

31 F. Contini *et al.*, *Information System and Information Infrastructure Deployment: The Challenge of the Italian E-Justice Approach*, 2007, draft, p. 2.

32 *Ibid.*

33 J. Dumortier *et al.*, *The Challenge of the Information Society: Application of Advanced Technologies in Civil Litigation and Other Procedures; Report on Belgium*, XI World Congress on Procedural Law, Vienna, 23-28 August 1999.

34 J.E. McMillan, *Case Management Systems: The Four Bubbles*, 1995, p. 6, available at: http://www.ncsconline.org/WC/Publications/KIS_CasSysCTB1995McMillanPub.pdf

and equal protection.³⁵ '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 ensure that all cases progress swiftly without unnecessary delay'.³⁶

The introduction of case management systems has often coincided with the attempt to standardise ICT applications already in place 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. In many cases, strong resistance to the use of these applications have come from the courts. Courts that already used their own systems had them customised to their needs and had developed skills and practices that the introduction of a standardised tool would disrupt. Furthermore, while local initiatives had been grown locally and nurtured by enthusiasts, the new applications were often introduced as off-of-the-shelf, un-customisable, plug-and-play systems, with the result of decreasing user motivation and participation.

Some of the functions performed by the CMS are strictly related to the management of the single case. These functions include the support and automation of the back-office and the administrative work of court staff, case tracking, case planning, document management, scheduling of hearings and support of judicial activities. For example, after the receipt of a pleading the event needs to be registered, the case needs to be allocated to a judge, notices need to be sent, a hearing must to be set, as well as time allocated for the judge to review the pleading before the hearing. If a response is not received from the opposing party, a reminder may be sent by the clerk. In the paper based system, the flow of cases is carried around in the heads of court personnel, or is ingrained in procedures and material artefacts such as to-do lists.³⁷ 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.

Other functions are more related to the case flow and court management. CMS may help to monitor the output and performance of the courts, helping the planning and organisation of court activities and the allocation of resources. The more sophisticated CMS packages summarise the court workflow on a daily, weekly and monthly basis. They are able to display the aggregate information on the court activities in different graphical views. A monthly calendar can show the number of actions and the time allocated in the courtroom for each day. Alternatively, bar charts can be produced to show each day of the week and the number of matters, by type, scheduled for the court and help plan court activities.³⁸ Tracking of case typologies considering time to disposition 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, hence improve planning and monitor more strategic actions.

Finally, CMS can help court staff process many cases which are not disposed of judicially.³⁹ A number of systems have been designed to provide support to ancillary, but time-consuming functions that in different countries are assigned to the courts. In many cases, stand-alone low-cost applications have been developed and implemented to speed up such

35 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

36 T.Y. Sze, 'Singapore', in A. Oskamp *et al.* (eds.), *IT Support of the Judiciary*, 2004, p. 48.

37 J.E. McMillan, *Case Management Systems: The Four Bubbles*, 1995, p. 7 available at: http://www.ncsconline.org/WC/Publications/KIS_CasSysCTB1995McMillanPub.pdf

38 *Ibid.*

39 R. Susskind, *The Challenge of the Information Society: Application of Advanced Technologies in Civil Litigation and Other Procedures: Report on England and Wales*, 1999, available at: <http://ruessmann.jura.uni-sb.de/grotius/english/Reports/england.htm>

work.⁴⁰ Increasingly, the trend is towards the integration of such systems within the CMS, with the creation of applications that incorporate all these functions.

2.3. Technologies for supporting judges

Several applications have been designed to support and to automate judges' activities. While many of the tools described in the previous section are 'organisational tools', most of the technology for supporting the judges' activities are 'individual tools'. This is for a number of reasons, including the independence and nature of the task judges perform. Moves to introduce new technologies may radically affect the very nature not only of the organisation of the justice administration, but, in some cases, also affect the exercise of the jurisdiction itself. For these reasons, the adoption of a new tool often depends on the choice of a single judge to do so. While this is adequate with individual tools, it often generates problems with technologies that require organisational adoption. Furthermore, due to their functional independence, judges often develop very individual working practices. The plurality of working practices dramatically increases the complexity of the task of providing organisational tools that take them all into account. In general, organisational tools tend to require standardisation. This, in turn, may lead to a higher resistance to the use of such technologies.

ICT supports the work of the judges in several areas, including the organisation of the activity, the information management and retrieval, document production and the decision-making. One of the aspects of the judge's activity that has been probably most affected by the use of ICT is that of legal research. Various technological support tools ranging from cds to local intranets, to the internet provide access to constitutional material, laws, appellate decisions, rules, statutes, local ordinances and much more. Conducting on-line legal research and surfing the growing number of websites has become more and more a part of a judge's daily activity. The use of search engines and text mining techniques has highly increased both quality and efficiency of legal research.⁴¹

Another important innovation is the use of e-mail and forums or areas to share electronic documents. Although e-mail technology has been diffused between the judges all around Europe, in most cases it is used as an informal means of communication. This is mainly due to the fact that, in many countries, the law requires both certified e-mail and digital signature for official communications (e.g. Belgium, France, Greece, Italy).⁴² In most of the cases, such technologies are not provided, while several countries have run pilot projects experimenting with such technologies (e.g. Belgium, Italy).⁴³ Forums and discussion groups in which judges can 'virtually' meet and discuss legislation, procedures and cases, have been an important development. In some cases, with the reduction of opportunities for judges to work in panels (e.g. in The

40 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.

41 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.

42 Cf. D. Carnevali et al. (eds.), *Tecnologie per la giustizia. I successi e le false promesse dell'e-justice*, 2006; M. Fabri et al. (eds.), *Judicial Electronic Data Interchange in Europe: Applications, Policies and Trends*, 2003.

43 *Ibid.*

Netherlands), electronic forums and discussion groups have been thought to be a tool providing an opportunity for judges to share information and receive support (and training).

Some effort has been made to produce applications to support the judges in drafting sentences. In many cases, 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 CMS (such as the name of parties, of attorneys, facts, procedure) can be retrieved automatically. In Finland, the CMS (Tuomas) allows judges to access the data contained in the electronic documents the courts receive to produce decisions. The Tuomas database and the document editors are integrated.⁴⁴ Such experiences have not, however, always been so successful. In Italy, an application has been created to support the writing of sentences and court orders, their classification and their retrieval (Polis).⁴⁵ Despite the great effort made by the IT Department of the Ministry of Justice, only a few judges used the tool, favouring the use of common word processors or the handwriting of the sentences.

Another direction that ICT investments have taken is the development of sentencing support and automated judgment systems. These systems should help improving the quality and timeliness of judgements, and leading judges to impose sentences which are more consistent over time.⁴⁶ One of the most successful examples is the Sentencing Information System for the High Court of Justiciary of Scotland.⁴⁷ The system 'uses computer technology to 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'.⁴⁸ In general, however, the development of such systems seems to pose serious problems. This is probably related to the nature and complexity of the tasks compared to the present state of technologies.⁴⁹ '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.'⁵⁰ The complexity, variability, flexibility and discretion that are typical of judicial decisions⁵¹ are not easily tackled by computer automated systems. Only in the most simple cases computer automated decisions are possible⁵² and even then, human contribution and supervision are still required.⁵³

3. ICT and communication exchange between courts, parties and general public

This section deals with judicial data interchange between courts and the network of actors with whom the courts interact in pursuing their institutional functions. All European countries studied have made some effort to improve smoothness and rapidity of services and communication

44 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.

45 Minerva, an application developed to simplify and support prosecutors' routines activities and the management of case files.

46 Scottish Summary Justice Review Committee, *The Summary Justice Review Committee: Report to Ministers*, 2004, pp. 208-211, available at: <http://www.scotland.gov.uk/Resource/Doc/47171/0031637.pdf>

47 *Ibid.*; U.J. Schild, 'Criminal Sentencing and Intelligent Decision Support', 1998 *Artificial Intelligence and Law* 6, pp. 151-202.

48 Sentencing Information System for the High Court in Scotland, available at: <https://www.cis.strath.ac.uk/research/e-communities/dim.html>

49 Cf. D. Carnevali *et al.* (eds.), *Tecnologie per la giustizia. I successi e le false promesse dell'e-justice*, 2006.

50 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.

51 *Ibid.*, p. 316.

52 Cf. R. van den Hoogen, *E-Justice, Beginselen van Behoorlijke Elektronische Rechtspraak*, 2007, p. 153. available at: <http://www.e-justice.nl/>

53 G. Lanzara *et al.* 'Gli e-services per gli uffici giudiziari', *Tecnologie della informazione e della comunicazione per la giustizia* conference, Rome, 23 March 2007, available at: <http://www.radioradicale.it/schede/view/id=221211/>

between the courts and their users promoting the use of electronic data and documents transmission.⁵⁴ In order to better analyse the phenomenon, a distinction has been made between electronic information provision (court to the world, general information provision and informal communications) and official electronic communication (E-filing, official communications and on-line proceedings, world to the court and two way official communications).

3.1. Electronic information provision

The more widespread method for provision of electronic information is the use of internet websites. Four core elements have been proven to be very useful in analysing and comparing the electronic exchange of information between courts and other parties through the internet. These elements are: the organisation of the web service provision, access to information (graphics, structure etc.), users (people, parties, lawyers, experts and other frequent users) and content (service typology).⁵⁵

The organisation of web information provision by courts varies widely across Europe. In some cases, web information organisation and provision is centralised, with the highest courts, ministries of justice, and judicial councils playing a prominent role. In other cases, information provision is delegated within common frameworks. Finally, in some cases, complete freedom and local initiative are the rule. In Austria, for example, 'single court web sites are not allowed and information about the courts is made available only through the official web site of the Ministry of Justice.'⁵⁶ In The Netherlands, the Council for the Judiciary provides a single point of access to information on courts, judicial organisation, functions and processes. Very limited initiative is granted to individual courts.⁵⁷ In other countries, such as Belgium and France, each court can develop its own website, following the guidelines established by the Ministry of Justice.⁵⁸ In some other countries (e.g. Finland, Italy), courts can create their own website without following any specific rules.

As access to information is concerned, the European landscape is quite heterogeneous both between countries and within them. The Dutch judiciary, for example, provides a single point of access to information on courts, the judicial organisation, functions and processes. The use of a template creates a standard graphic and content disposition, which allows minimal discrepancies between court websites in terms of content presentation. In other countries, the graphics of court websites vary from very simple ones, some even archaic, to good quality ones, relatively fresh and modern, thanks to ongoing work of restyling and renewal. The possibility for users to find the information they are looking for, as well as the reliability of such information can vary a great deal from case to case. In more than one of the observed cases, the lack of a linear logical

54 The Finnish Act on Electronic Services and Communication in the Public Sector 13/2003 clearly states such effort. Similar documents can be found in other countries legislation and acts.

55 M. Velicogna *et al.*, 'Legitimacy and Internet in the Judiciary: A Lesson From the Italian Courts' Websites Experience', 2006 *International Journal of Law and Information Technology* 14, pp. 370-389.

56 M. Fabri *et al.* (eds.), *Judicial Electronic Data Interchange in Europe: Applications, Policies and Trends*, 2003, p. 7.

57 M. Velicogna *et al.*, 'Legitimacy and Internet in the Judiciary: A Lesson From the Italian Courts' Websites Experience', 2006 *International Journal of Law and Information Technology* 14, pp. 370-389.

58 In Belgium, within this framework, 'the Ministry of Justice has always been very anxious to permit the decentralised development of websites by individual courts and tribunals. To keep things coordinated a central portal has [...] been created on the website of the Court of Cassation (http://www.cass.be/pyramide_fr.php) Under this portal the various courts and tribunals have the possibility to build and to maintain their own website following a common, but more or less open template. Courts and tribunals are starting to make use of this possibility and begin to develop their own websites.' J. Dumortier, 'Judicial Electronic Data Interchange in Belgium', in M. Fabri *et al.* (eds.), *Judicial Electronic Data Interchange in Europe: Applications, Policies and Trends*, 2003, p. 128.

structure of access to specific contents can mislead the user, thereby generating a consistent waste of time.⁵⁹

Judicial institutions and courts interact and exchange information in order to provide their services or because they are seen as their stakeholders (lawyers, parties, the population in general etc.). ‘Different groups of users have different information exchange needs. Furthermore, different groups have different technical and legal competences. Specific phrasing and short hand conventions employed by specific groups of users to facilitate communication with the court, on the one hand allows easy exchange of information between those groups and the court, but on the other hand, creates a barrier to access to other groups who do not use these short hand conventions or specific jargon’.⁶⁰ In some cases all the information is provided through multipurpose websites (portals), while in other cases there has been a trend towards focusing on providing services dedicated to specific groups of users.

Information provided by judicial websites can be divided into four groups with respect to their content: general information, information on court activities and organisation, legal information, and case information.⁶¹

- General information provides details on the mission, addresses, and opening hours, possibly some official documents of relevance to the public. Other services could include search capabilities, host forms and applications to download, and links to other sites, as well as e-mail addresses of offices, court administrative personnel and, more rarely, judges.⁶² Information on court activities and organisation provides data on statistics of the courts’ productivity, different divisions, organisation of the work, and publication of judgments. A very limited number of websites provide this kind of information. Typically, websites of higher courts, Ministries of Justice, Judicial Councils and court services provide such data.⁶³
- Legal information can be divided into general, specific and case law. General legal information concerns general rules, procedures, practices, examples of forms or pleadings for the guidance of litigants, the explanation of terms and documents used in court process etc, which can be applied to each and every court.⁶⁴ As an example of procedure information, several Italian courts’ websites provide information on tariffs/fees due for copies of judgments and files and other court documents. Specific information pertains to an individual court’s rules, procedures, practices, forms etc. Although many websites provide forms for downloading, there are just a limited number that provide more detailed information on completion of forms or on general court procedures. Furthermore, although many court websites provide electronic forms to be filled, usually the forms have to be printed out and submitted in paper format (Belgium, Italy). Case law provides on-line access to decision-databases. While information related to legislation, court procedures and practices is generally free of charge, for case law it is not always the case. Some countries offer free of charge and free access case law (e.g. England and Ireland, BAILII; Norway, Lawdata)

59 M. Velicogna *et al.*, ‘Legitimacy and Internet in the Judiciary: A Lesson From the Italian Courts’ Websites Experience’, 2006 *International Journal of Law and Information Technology* 14, pp. 370-389.

60 *Ibid.*, p. 381.

61 *Ibid.*

62 In England and Wales, for example, through CJS Online is it possible to make virtual ‘walking tours’ of Crown Court centres around the country.

63 The Italian Ministry of justice website for example, provides statistical information at <http://www.giustizia.it/statistiche/statistiche-indice.htm> and the Italian Judicial Council at <http://www.csm.it/> in the sections *Uffici giudiziari* and *Gli uffici giudiziari d’Italia*.

64 J.M. Greacen, ‘Legal Information Vs. Legal Advice, Developments During the Last Five Years’, 2001 *The Judicature* 4, pp. 198-99.

- but other countries restrict the access to specific categories of users through technical means (e.g. lawyers in the case of PolisWeb in Italy) or require the anonymisation of the parties, such as in Belgium, Finland, France, Germany, Greece, Italy, and Spain.⁶⁵
- Case information provides information contained in docket reports, case files, indexes, and other court documents. In the few cases in which this kind of service is provided, for security reasons access is usually allowed to mirror court databases to consult court registries and/or sentence archives. In several countries courts provide public access to their schedules in order to see when a particular case will be dealt with. Due to privacy issues, in general, the data is provided without mention of the names of the parties. Reference is often made to the enrolment number.⁶⁶ In Austria, the public ‘is able to get access to the Austrian Land Register, the Austrian Company Register, the Legal Information System, the Edicts Database and the Database for Auctions for Real Estates. Only lawyers are additionally able to do a query at the data base of enforcement cases.’⁶⁷ In Italy, the service *Sentenze on line* allows the lawyers of the Milan bar association, to receive communication of the judgement docketing (*pubblicazione della sentenza*) by e-mail. The downloading of the .pdf files of the sentences is also allowed. Such sentences are not true copies, which still have to be provided on paper by the court. Since 1st January 2007 downloading requires smart-cards and digital signatures while before only id and password were required.⁶⁸

Other means of electronic communication

Electronic informal communication exchange is not limited to the internet. In cases in which normative restrictions and privacy issues do not allow the publication of sensitive information on the web, other alternatives have been adopted. In Finland, the electronic records of the courts cannot be made available on-line. On the other hand, the information of the case (docket) is regarded by law as a public document. The solution is simple: ‘any person can have an access to the public information in the case management systems in the courts using a dedicated workstation located in the courts.’ Although not as comfortable as consulting the data directly from home, this solution helps to save time both to the user and to the court personnel. A similar solution has been adopted in several courts in Italy, allowing lawyers with ID and password authentication methods to access data concerning their cases through dedicated workstation located in the courts.

The Court Service in England and Wales began a pilot project in 2000 for the development of an information kiosk. Partners in this joint venture were a local Council and its ICT supplier, the Libraries Department, a local university, the Citizens’ Advice Bureau (CAB) and the Court Service. The kiosk ‘is a touch-screen information facility providing information about the Court

65 F. Contini *et al.*, ‘Judicial Electronic Data Interchange In Europe’, in M. Fabri *et al.* (eds.), *Judicial Electronic Data Interchange in Europe: Applications, Policies and Trends*, 2003, pp. 1-26. E.g. through the website of the Court of Appeal of Antwerp, it is possible to search a selection of decisions and sentences of Belgian courts and tribunals, using various criteria such as index terms, article numbers or dates. The selection is made by the documentation centre of the Court of Cassation. J. Dumortier, ‘Judicial Electronic Data Interchange in Belgium’, in M. Fabri *et al.* (eds.), *Judicial Electronic Data Interchange in Europe: Applications, Policies and Trends*, 2003, p. 128.

66 In England and Wales XHIBIT, a computer system was introduced ‘to improve the daily business of Crown Courts in England and Wales by providing quick access to hearing information for those who need it. XHIBIT enables member of the public such as victims and witnesses, together with professionals such as the police, barristers, solicitors, the probation service and the Crown Prosecution Service to view a hearing’s progress. Potential benefits of the system include fewer unnecessary case adjournments, fewer ineffective hearings and an improved experience in court for witnesses.’ http://www.judiciary.gov.uk/about_judiciary/judges_it/index.htm

67 P. Bauer *et al.*, ‘Judicial Electronic Data Interchange in Austria’, in M. Fabri *et al.* (eds.), *Judicial Electronic Data Interchange in Europe: Applications, Policies and Trends*, 2003, p. 104.

68 Interesting to notice, the passage from id and password to smart card does not seem to be linked to concrete security issues. Furthermore, smart card are still being diffused and not many lawyers in Milan have them.

Service and, ultimately, the local authority. There are also audio and video links to the local CAB.⁶⁹ It contains electronic versions of civil forms & leaflets currently issued by courts that are presented on-screen to the kiosk user. If necessary, those forms and leaflets can be printed and taken away. Kiosk users unfamiliar with legal terminology can also search using an A-Z index facility.⁷⁰

3.2. Official electronic communication

In judicial proceedings, the formal communication between the court and parties is generally 'paper based and rooted on a complex set of formal rules, work practices and local adaptation and it is strategically used by the parties in an attempt to gain some advantage in the trial.'⁷¹ In the last decade, judicial administrations around Europe have examined the feasibility of providing court services electronically. Specific areas being considered include the electronic payment of fines, electronic filing, electronic means for notification and communication to attorneys and parties and full electronic trial. Many countries have launched pilot projects. The aim of these projects has been 'to radically change the paper based infrastructure underlying the formal communication exchange within judicial proceedings';⁷² to improve and enhance access to justice, and to reduce inconvenience and the cost (in terms of time, resources, money) of justice to parties and their legal representatives. In theory, where e-justice is implemented, a lawyer, using a computer from work, home or even from a vacation location, can electronically file a claim, get information on a case, receive court e-notices, download electronic documents concerning the case. He or she can search for the next court appearance in a case, of the occurrence of a number of relevant events on the cases she is following, or be automatically reminded by the court of any impending deadline. The court front office became open 24 hours a day, 7 days a week, both for the consultation and for submission of documents. In some cases attention has been focused on small claims and on simple, undisputed debt-recovery cases, for which simplified procedures could be designed and which at the same time often constituted the most numerous cases dealt by first instance courts (England and Wales, Finland, Ireland⁷³). Despite the efforts and the large amount of resources often invested, 'all over Europe these projects are faced with difficulties and unsolved problems. Only Money Claims on Line in England, the Austrian Electronic Legal Communication System, the Finnish *Tuomas* and *Santra*, and more recently the Automated order for payment procedures in Germany are currently using ICT solutions, that can be envisaged as e-justice.'⁷⁴

Three paths have been followed by these e-justice efforts: selection of simple procedures, procedure simplification, and full on-line proceedings. The first two approaches are aimed at reducing the complexity of the system before trying to develop and implement the technology. In the third approach, effort is centred on translating all the complexity of the paper based

69 <http://www.hmccourts-service.gov.uk/docs/9900titlepg.pdf>

70 P. Timms *et al.*, 'Judicial Electronic Data Interchange in England and Wales', in M. Fabri *et al.* (eds.), *Judicial Electronic Data Interchange in Europe: Applications, Policies and Trends*, 2003, pp. 171-184.

71 F. Contini *et al.*, *Information System and Information Infrastructure Deployment: The Challenge of the Italian E-Justice Approach*, draft, 2007, p. 8.

72 *Ibid.*, p. 3.

73 <http://www.hmccourts-service.gov.uk/onlineservices/mcol/index.htm>; K. Kujanen, *E-services in the courts in Finland*, Presentation at the Seminar on Law and Informatics, 26 October 2004; Irish Courts Service, *Annual Report*, 2005, available at: <http://www.courts.ie/courts.ie/library3.nsf/f0e0a24268c0a3da80256da500428fb8/63c9da3620c14c5a80256f2a006732ad?OpenDocument>; Irish Courts Service, *Annual Report*, 2000 available at: <http://www.courts.ie/courts.ie/library3.nsf/f0e0a24268c0a3da80256da500428fb8/63c9da3620c14c5a80256f2a006732ad?OpenDocument>

74 F. Contini *et al.*, *Information System and Information Infrastructure Deployment: The Challenge of the Italian E-Justice Approach*, draft, 2007.

procedures in to the electronic ones. Successful examples come from the first two approaches while, except for the Austrian case, never-ending piloting and mounting costs seem to characterize the third.

1. Selection of simple procedures

The first approach for dealing with the complexity of designing and implementing the electronic exchange of formal electronic documents is to focus on simple tracks. The aim is to simplify the task focusing on tracks characterized by easy procedures and a large number of cases. This was the choice made in England and Wales with Money Claim Online (MCOL). Using this system, ‘claims and responses to the court can be made electronically using the Internet’.⁷⁵ Money claims are in general simple and homogeneous cases. Furthermore, a number of conditions that reduce the complexity have to be met in order to start or proceed with a electronic claim.⁷⁶ The respondent is notified by post of the claim that has been made against him and may decide to respond to the claim using this on-line service or, alternatively, the response pack. At any point during the procedure, if the case fails to meet the simplification requirements, it moves from the electronic track to the traditional, paper-based one. This method, while providing a service to a large number of court users, selecting a relatively simplified functional environment,⁷⁷ dramatically reduces the task complexity the technology has to deal with and, consequently, the difficulties of its development and establishment.⁷⁸ The development of MCOL was also simplified and made possible by the presence of an already established technological infrastructure, and in particular by the presence of the County Court Bulk Centre (CCBC). The CCBC, which become the administrative-technological backbone of MCOL, had been in place for over 10 years.⁷⁹

2. Procedure simplification

The second path, somewhat related to the first one, is directed towards simplifying the complexity of the rules and procedures that concern the document exchange. In Finland, for example, during the studies conducted for the planning of new civil procedure legislation, it was realised that the main obstacles to the official exchange of electronic documents came from the formal requirements for the submitted documents.⁸⁰ Taking this into account, the law on civil procedure that came to force in 1993 was written to allow the use of electronic messages for the application for a summons and, at the same time, limit the need of using written original documents to the minimum.⁸¹ According to the Act on Electronic Service in Judicial Matters in Finland,⁸² ‘an application for a summons, a response and another comparable document may be delivered to a court of law, or to a person designated by the court to receive documents, also by telefax,

⁷⁵ <http://www.hmccourts-service.gov.uk/onlineservices/mcol/index.htm>

⁷⁶ In order to start a claim, the only remedy claimed must be a specified amount of money, of less than £100,000, the procedure under Part 7 of the Civil Procedure Rules (CPR) must be used; the claimant can not be a child or patient; or funded by the Legal Services Commission; the claim must be against a single defendant; or two defendants, if the claim is for a single amount against each of them; the defendant is not the Crown; or a person known to be a child or patient; and the defendant’s address for service is within England and Wales.

⁷⁷ N. Luhmann, *The sociology of risk*, 1993; N. Luhmann, *Social system*, 1995; J. Kallinikos, *ICT in Justice: The case of Money Claim Online Service in England and Wales*, Workshop on ICT and Justice, Bologna, 7-8 April 2006.

⁷⁸ J. Kallinikos, *ICT in Justice: The case of Money Claim Online Service in England and Wales*, Workshop on ICT and Justice, Bologna, 7-8 April 2006, p. 43.

⁷⁹ *Ibid.*, pp. 18-19.

⁸⁰ Mainly the requirements of original signature and submission of paper documents. K. Kujanen, *E-services in the courts in Finland*, Presentation at the Seminar on Law and Informatics, Bern, 26 October 2004, p. 4.

⁸¹ Presence of long established, enabling elements, such as the principle of free evaluation of evidence, adopted in 1943, has probably played an important role.

⁸² 594/1993, amended by 199/1998.

E-mail or electronic data interchange into the IT system of the recipient (electronic message)⁸³. Therefore, an application for a summons may be filed by the plaintiff to the registry of the District Court also by e-mail or fax.

‘The application for a summons must contain the name of the court, the names of the plaintiff and defendant, the attorneys and the witnesses, as well as their contact information. In the application for a summons, the plaintiff explains what he or she demands of the defendant and on what grounds’.⁸⁴ Although the contract or other agreement the demand is based on must be appended to the application,⁸⁵ according to the principle of free evaluation of evidence,⁸⁶ ‘an electronic “document” can in many cases be as valid as evidence as a paper document or the testimony of a witness’.⁸⁷ Furthermore, the Finnish Ministry of Justice may grant permission to deliver the information required of an application for a summons by way of the message exchange system, known as Santra, into Tuomas, the case management system used by the District Courts.⁸⁸

‘A plaintiff, who has been granted this permission, sends the electronic applications for a summons as a file transfer from its own system to the mainframe, which distributes the applications to the Santra mailboxes of the various district courts. When cases have been filed through Santra, the district court may also send the decision data through Santra to the plaintiffs, so that they have it directly in their information systems. However, the official hard copies of the judgments by default are still sent by the district court to the plaintiffs as well’.⁸⁹

This system is used by professionals and organisations that file large numbers of applications for summonses, such as collection agencies, because the party must acquire or develop, at its own cost, software for the compilation of application records that meet the set format criteria. The file format descriptions are available at the Information Technology Bureau of the Ministry of Justice. As a consequence, this kind of electronic filing is normally used for simple (and undisputed) summary debt collection cases.

3. On-line proceedings

The development of information systems needed for the implementation of on-line proceedings ‘is a complex and intricate task that requires the understanding and management of a large number of interdependent factors. Information infrastructures are characterized by being shared among different organisational units and organisations, grounded on other complex and networked IT hardware and software platforms, and evolving over time and space.’⁹⁰ Given the technical, organisational and normative complexity of the systems needed for full on-line

83 594/1993, amended by 199/1998 Section 1, Par.1.

84 <http://www.oikeus.fi/15955.htm>

85 *Ibid.*

86 ‘After carefully considering all facts that have come to its attention, the court shall decide what is to be considered the truth’ – K. Kujanen, *E-services in the courts in Finland*, Presentation at the Seminar on Law and Informatics, Bern, 26 October 2004. See also *Taking of evidence and mode of proof – Finland*, available at: http://ec.europa.eu/civiljustice/evidence/evidence_fin_en.htm

87 K. Kujanen, *E-services in the courts in Finland*, Presentation at the Seminar on Law and Informatics, Bern, 26 October 2004.

88 594/1993 Section 1, Par.2.

89 <http://www.oikeus.fi/15959.htm>

90 F. Contini *et al.*, *Information System and Information Infrastructure Deployment: The Challenge of the Italian E-Justice Approach*, draft, 2007, p. 4.

proceedings,⁹¹ 'it is essential that the systems are planned in co-operation with users and other public or private agencies'.⁹² The Austrian implementation effort seems to have been directed in this direction, with the inclusion of the lawyers, notaries and other official authorities in the system as part of the organisation for justice service provision. Austria uses a dedicated system for communication of official documents between the court and professional users for formal communications and resort to the e-mail for more informal communication and information exchanges. 'Although 98% of lawyers all over Austria are communicating with courts via e-mail, the electronic communication between court and the public inclusively lawyers, notaries and other official authorities especially the Austrian Social Insurance is not done by e-mail but by the Electronic Legal Communication (ELC).'⁹³

On the other hand, examples such as the Italian struggle in the Civil Trial On-line paint a different picture. This system aims at reproducing traditional paper-based civil procedures, as defined by law, in an electronic medium. At present, the system allows the on-line consultation of case status, court clerks' registers, as well as relevant jurisprudence. The on-line filing of legal deeds, transmission of communications and notifications is currently under experimentation. Digital signature, PKI, certified mail and a number of other requirements are thought to be essential for security and reliability of data interchange.⁹⁴ The use of such technology should allow an exact electronic replica of the traditional paper based requirements. The problem is that,

'despite the conspicuous investments and the strong support of the IT Department and of all Ministers that have been in place in the last 7 years, the project is still stuck in a piloting stage while the full deployment was expected in June 2003 (Ministero della Giustizia, 2001). Just in the court of Milan, in December 2006 within the Civil Trial On-line pilot, have been exchanged data and document for issuing 73 money claims. The ambitious results of improving the administrative efficiency up to 40% and to speed up the pace of civil litigation of 20% expected in 2005 (Ministero della Giustizia, 2003) are still a dream'.⁹⁵

Problems keep surfacing at every step; judges not using the system for writing sentences, as well as the private enterprises that should develop the software through which the lawyers should access the On-line Civil Trial not being able to do so with the data provided by the Ministry of Justice. The use of pilots and the experimentation of prototypes helped solve some of the problems the development had been confronting with the initial top-down approach. The effort to perfect reproduction of the traditional formal procedures seems to be doomed. This follows, on the one hand, from the difference between paper-based practices and formal procedures, which often differ quite a bit, and on the other from the changes the use of the new medium is

91 The sixteen principles a fair electronic trial should guarantee, as proposed by Van den Hoogen, provide an idea of the complexity of the development that an online proceedings system must tackle. Such principles are: 'continuity, co-ordination for non-professionals, traceability, durability, reliability, press freedom and privacy protection, public accessibility, online publication, anonimization, the correct nature of the proceedings, chain control, responsibility, transparency, the automated judgement, well-reasoned decisions and equivalence'. (R.H. van den Hoogen *E-Justice, beginselen van behoorlijke elektronische rechtspraak*, 2007, p. 152) The technical, organisational and normative challenge posed by dealing with all these principles (and others which are not related to fairness but nevertheless quite relevant such as efficiency etc.) is clearly high.

92 K. Kujanen, *E-services in the courts in Finland*, Presentation at the Seminar on Law and Informatics, Bern, 26 October 2004, p.3.

93 P. Bauer *et al.*, 'Judicial Electronic Data Interchange in Austria', in M. Fabri *et al.* (eds.), *Judicial Electronic Data Interchange in Europe: Applications, Policies and Trends*, 2003, p. 104.

94 S. Brescia, *Dai Sistemi Informativi Giudiziari al Processo Telematico*, Giustizia e Telematica, Rome, 8-9 September 2003; F. Contini *et al.*, 'Information System and Information Infrastructure Deployment: The Challenge of the Italian E-Justice Approach', draft, 2007, p. 8.

95 F. Contini *et al.*, 'Information System and Information Infrastructure Deployment: The Challenge of the Italian E-Justice Approach', draft, 2007, p. 8.

producing. The electronic medium is simply different from the paper one. What we are noticing is not limited to the mere substitution of one technology for another that does the same things, only better. The change is affecting the very nature of the relationship between the court and the network of actors with which it interacts. For example, lawyers directly interact with the court registers. It is they who input the data, who search for information when it is required. The boundaries of the court are becoming more blurred⁹⁶ and traditional procedures are failing to keep up with unexpected, and often unforeseeable, changes. All things considered, the complexity of creating an exact electronic replica of the paper based system seems to be too much for the present governance capabilities of the organisation.

4. Conclusions

This paper has provided an overview of the use of information and communication technologies by courts around Europe. It is now time to sum up and consider, on the one hand, the results achieved by all these years of ICT innovation efforts, and on the other, the implications that can be drawn from such experiences.

Several goals have been achieved throughout Europe. Firstly, the large diffusion of basic office automation technologies, but also of automated registers and case management systems through the courts in most of the European countries. Computers and printed material have substituted large, hand-written docket books. In the communication between courts, parties and general public, there is an increasingly competent use of internet websites and informal electronic data interchange. Several successful attempts of e-filing and official electronic communications have been implemented.

Apart from these concrete results, there has been also a change in the perception of the ICT within the courts. From being a guest in a few courts, or a stranger in most during the 1980s and part of the 1990s, ICT has spread widely, becoming an element taken for granted and integrated in many courts' activities, procedures and practices (even if not always utilised to its full potential). The presence of the technology in the courts is not disputed. On the other hand, most of the illusions surrounding it have disappeared. Even though still limited, there has recently been a change in public perception of technology and of its potential to improve justice in several countries. Despite all the achievements mentioned above, and in spite of the huge amount of resources and efforts that have been invested in the development of communication and information technologies, the use of such technologies often fails to bring the promised 'huge efficiencies and productivity gains'⁹⁷ to the judicial administration.

With few exceptions, what Susskind said in 1999 speaking of England and Wales, 'Almost all major IT projects are late; and few systems meet all users' requirements in their first versions'⁹⁸ is still applicable to the majority of European countries. ICT is no longer regarded as a *modernising tool per se*. Investment in the development of software and infrastructures is no longer enough to satisfy public opinion and the court users. Increasingly, judiciaries are required to be more efficient and to provide better services, yet at the same time be more transparent and

96 F. Contini *et al.*, 'Techno-institutional Assemblages: ICT and administrative innovation in the judiciary', draft, 2007.

97 R. Susskind, *The Challenge of the Information Society: Application of Advanced Technologies in Civil Litigation and Other Procedures: Report on England and Wales*, 1999, p. 5, available at: <http://ruessmann.jura.uni-sb.de/grotius/english/Reports/england.htm>

98 *Ibid.*

accountable for their organisation and technological choices. The Dutch judicial organisation reform of 2002 is a good example of the results of such requests.⁹⁹

A number of general lessons can be drawn from the European experiences. Such lessons need to take into account the presence of institutional and cultural factors that need to be considered when an ICT experience is evaluated from an international perspective. These factors range from the pragmatism of court procedures in England and Wales,¹⁰⁰ to the high degree of trust in the Finnish courts,¹⁰¹ to the cumbersome formal requirements in the Italian courts.¹⁰² Although often taken for granted in ex-post analysis, these elements deeply influence both the innovative path and the possibility of success of such innovation attempt.

The first lesson to be learnt concerns the need to design and implement practices coherent with the complexity of the task. The introduction of individual stand-alone applications is complex and requires strategies quite different from the introduction of organisational applications or of inter-organisational communication infrastructures. It is intuitive that providing desktops for personnel is simpler than providing an e-mail which in turn is simpler than providing an on-line sentence service automatically fed by the judges. The problem is related, on the one hand, to the technology that has to be designed (or, in the more complex cases, cultivated, some authors would say¹⁰³), but also, on the other, to the legal, organisational and technological installed base and the competences and attitudes of the actors that should adopt it. While each individual who receives a PC can switch it on and use it to improve his or her work, if the same person sends an e-mail and the addressee does not use his e-mail account the technological innovation will not work. In the case of an on-line sentence service, all judges must learn to use the sentencing technology to feed the database. Moreover, in order for it to work, parties and their legal representatives, external to the court organisation, must also use it too.

In some cases, judiciaries have found themselves facing a level of complexity that goes beyond their abilities.¹⁰⁴ The solution seems to be to simplify their task; Finland, on the one hand, England and Wales, on the other. These two countries show two different strategies that go in this direction. Procedural simplification and selection of simple procedures for the development of on-line proceedings have reduced the complexity of the task to a manageable level.

Apart from the more simple cases, the problem is not limited to the design of technology, but to its adoption. The interaction between technology and highly regulated organisations, such as the courts, may have unpredictable results. In particular, the difference between theory and practice that is normally present in court procedures can produce negative consequences in case of rigidities introduced by technology developed not considering the practices in use, but only the word of the law in the books. This problem seems to be particularly true in countries with codified procedures and bureaucratic organisation of the judiciary, such as Italy and France, where uniformity and strict respect of formal procedures fixed by law is often taken for granted.

99 The institution of a Judicial Council (Judicial Organisation Act 2002, Part 6) with the task of supporting and supervising ICT innovation *inter alie* is a clear demonstration of increasing efficiency, transparency and accountability of courts technological investments.

100 J. Kallinikos, *ICT in Justice: The case of Money Claim Online Service in England and Wales*, Workshop on ICT and Justice, Bologna, 7-8 April 2006, p. 51.

101 In particular, their comprehensiveness and reliability, plus the fact that the data is only collected once, after which it is available to other authorities by means of information service. K. Kujanen, *E-services in the courts in Finland*, presentation at the Seminar on Law and Informatics, Bern, 26 October 2004, p. 2.

102 D. Carnevali et al. (eds.), *Tecnologie per la giustizia. I successi e le false promesse dell'e-justice*, 2006.

103 F. Contini et al., *Information System and Information Infrastructure Deployment: The Challenge of the Italian E-Justice Approach*, Twelfth European Conference on Information Systems, 2004; F. Contini et al., *Information System and Information Infrastructure Deployment: The Challenge of the Italian E-Justice Approach*, draft, 2007.

104 M. Fabri et al. (eds.), *Judicial Electronic Data Interchange in Europe: Applications, Policies and Trends*, 2003, p. 16.

A final implication that can be drawn from the ICT experiences that has been described is that innovations often become the infrastructure on which new innovations are built upon. This is not limited to the technological artefacts, but also extends to practices that have been adopted and experiences made using such technologies. Where automated registers are in place, the CMS that are introduced tend to be strongly influenced by them. This influence emanates from the structure of the database, which is often developed to be compatible with the previous system, to the adoption process, which is strictly linked to the previous experiences and practices. A clear example of this is the success of MCOL as a development of CCBC. In this perspective, technologies that are adopted may become useful tools and open opportunities for further development. On the other hand, such technologies may also become a legacy, and may not be as easily substituted by new ones as previously expected. Specific knowledge, procedures and local modifications developed by the users may generate resistance in the use of new tools. In some cases, the extended use of an application made in a court office has generated more problems for the introduction of a newer one than the lack of computer competences in the office that were still paper based. Only part of the specific competences acquired with the daily use of an old program can be reused on a new one. The more the new system differs from the old one, the more such competences are lost.

New specific knowledge needs to be acquired and this can only happen over time and with practice. Whilst this takes place, the new system tends to perform poorly as compared to the old one. Furthermore, old databases often cannot be abandoned as the data is much needed for office automation, data migration procedures. Moreover, courts miss the resources to enter the data in the new databases.¹⁰⁵ In this sense, contrary to common opinion, investment in technologies that do not produce visible results may be not just a waste of resources, but may also generate a limitation to future innovation opportunities.

¹⁰⁵ An interesting research on the subject is being conducted at the moment. It concerns the development of a new CMS for the over 800 Italian offices of the justice of the peace. The old system had been implemented in only a limited number of offices.