

# E-justice: experiences with court IT in Europe

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Across Europe, information technology implementation levels vary widely. It appears that so far, most courts have largely used IT to assist their paper based processes. They have not used technology to radically improve their processes.

The first part of this paper will discuss levels of IT implementation in courts in Europe. The second part will look at court IT from a different perspective, that of case processing as a process of information. The two parts provide both an understanding of what courts have achieved and a perspective on their processes as information processing. Taken together, they can help judiciaries make decisions about developing and implementing IT.

## Part 1: Comparing court IT in Europe

With the surveys done by the European Commission on the Efficiency of Justice (CEPEJ), we can learn about IT implementation in courts in Europe.

Finland, Austria and the United Kingdom, but also Estonia, Slovakia and Hungary, are in the very high implementation group. High levels of implementation can be found in France, Germany, Sweden, Latvia, Bulgaria and the Netherlands. Belgium, Ireland and Croatia are in the moderate level group. In the low level group we find Cyprus, Ukraine and Russia.

In the very high level group, technologies providing direct support for judges and support staff are fully functional, and countries in this group are ahead of the other groups with digital access and communication. They use web forms, special web sites and other forms of electronic communication more than the others. Austria has developed the Elektronischer Rechtsverkehr (ERV) or Electronic Legal Communication, a system that is updated periodically with new technical capabilities (Fabri 2003 p. 112-116). This system was initially developed for communication between lawyers and the courts, but it has gradually been opened up for other user groups. In England and Wales, a special court was set up to process small money claims for large claimants such as energy companies and banks. This procedure is now accessible to everyone living in England and Wales. It is used frequently by small businesses and the self-employed (Fabri 2003 p. 176). The functionality of this court, Money Claim On Line (MCOL), was extended to another simple procedure, that of repossession: Possession Claim On Line (PCOL).

IT for courts can be distinguished into technology for:

- The back office, supporting the processes that are related to case administration, document production and court management: word processing and databases.
- The courtroom, supporting what happens in the courtroom itself:
- External communication, supporting all communication with parties and the general public outside the courts.

## Office technology

### Word processing

Office automation is the most widespread form of information technology generally. It is also the most prevalent functionality used in the courts. It includes mostly word processing, but also some calendaring, and simple spreadsheets bundled in an office automation package. Word processing to produce paper documents is the most prevalent form of IT in courts. All

courts in Council of Europe member countries have word processing for most of their staff. Judges now more and more write decisions on computers, using models or templates

## **Databases**

The functionality underlying automated registers is database technology. It is used in courts for registration and management of cases. *Case registration* systems replace the functionality of traditional court dockets. On top of the case registration systems, *court and case management* systems have additional functionality. They can provide non-judicial and judicial case management support for case tracking, case planning and document management. They can also generate information on the performance of courts. The purpose of case management systems is to ensure cases are disposed properly and promptly. Finally, there are systems supporting the financial management of the courts (CEPEJ 2008 p. 82). Over half the court systems in Europe have case registration systems. They can constitute a major change since they give us much better information about the way our cases run.

## **Jurisprudence databases**

Electronic databases of jurisprudence are available in a large majority of CEPEJ countries. However, we do not know which type CEPEJ actually measured. Jurisprudence databases deserve some special attention because the functionality and capabilities behind them can be very diverse. Therefore, we need a conceptual clarification. Nowadays, jurisprudence databases can be accessed online. But there were early versions in the stand-alone functionality group. Here is a list of the chronology:

- The first jurisprudence databases were installed in court libraries. They could be consulted on media like diskettes or CDs, or over a telephone line. They most resembled a searchable copy of the paper version of the jurisprudence collection.
- Repository of interesting or innovative decisions. People can supply decisions on an ad hoc basis. Not every decision goes into the repository. Some infrastructure is needed, for example a framework on who decides what goes in. But that does not need to be any different from the processes that went into producing the paper version.
- Collection of all decisions in an electronic archive. All decisions need to go in. There is a process in place that ensures they do. This type of decision database belongs in the enterprise technology group discussed below.

These are actually ideal types. The second category is very much like an electronic version of the first one.

Jurisprudence databases have had a major impact on the position of courts in the public arena from the moment they became publicly available on the Internet. For instance, reporting in the public press on court decisions has become more accurate. The databases have also enhanced the transparency of the decisions that have become available since decisions that need to go public require greater clarity. Finally, the public jurisprudence databases have strengthened the courts' role as the guardian of norms, its "shadow function."<sup>1</sup>

## **Courtroom technologies**

In common law court systems, like the U.S. and the U.K., in both civil and criminal justice, cases are ultimately decided by trial if they are not settled in an earlier phase. Very few cases actually come to trial, and trial rates vary widely across countries. Some of those trials are conducted in front of a jury.

In those trials, the principle of immediacy of evidence is very important. This means the evidence itself needs to be presented in the courtroom: witnesses making a statement, exhibits like original documents and objects. This has given rise to implementation of information technology to

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<sup>1</sup> This discussion is limited to publicly available jurisprudence collections. It does not cover collections that are available only to subscribers.

support conducting trials. The Federal Judicial Center in the United States (FJC) surveyed trial support technology in 2003. The results show that in 2003, a large percentage of U.S. federal district courts have access to such technology, either via a permanent installation in one or more courtrooms or equipment that is shared among courtrooms (FJC 2003). The equipment includes sound amplification; an evidence camera; monitors on the bench, the witness stands, the counsel table, outside the jury box or built into it; and monitors targeted at the audience. It also includes an interpreting system, audio and video conferencing equipment and equipment to support production of a transcript of the proceedings. These functionalities are stand-alone technology; they do not require a network to function.

### **Capabilities of stand-alone functional technologies**

These stand-alone, functional technologies can increase precision and enhance experimentation capacity (McAfee p. 144). This, it should be kept in mind, is what they **can** do. They do not automatically produce these results without involvement and effort by the users.

Displaying actual evidence and exhibits increases precision in the courtroom. Keeping data that record events supports experimentation. For example: my study Technology for Justice uses a lot of statistics to examine court processes, particularly in Part 3 on case delay. Those statistics are available because cases are registered using database technology. We now know so much about our processes because databases keep the data for us and make them available in ways we can use. We can study them and see where bottlenecks in case processing are. We can evaluate whether experiments to improve case processing are producing the desired results. Databases can produce correlations that we could never find otherwise. Justice G.C. Bharuka, who headed the India judiciary's IT committee, told me how he first tracked case delay in Bangalore by using a self-constructed database.<sup>2</sup> For the policy research needed to develop routines, databases to compare and analyze court decisions and statistics are an indispensable tool. They can be used for sentencing support and automated decisions in very simple cases.

When word processing began to be introduced, it was implemented primarily as a tool for support staff. Professionals like lawyers and judges would at first dictate to a typist, just as they had done in the age of the typewriter. Nowadays, professionals largely write their own documents. The databases for the case and court management systems, too, mostly copied the paper based registration process. They are still mostly used by support staff only.

For successful implementation, functional information technologies do not require major changes toward better-skilled workers, higher levels of teamwork, redesigned processes and new decision rights (McAfee p. 141). They do not need networks or electronic communication to do their jobs. In summary, because they do not require much organizational change, they are easy to implement, at least compared with the network and enterprise technologies discussed in the next two sections.

### **Network information technologies**

Historically, network technology was introduced after stand-alone functional technologies had been in use for some time. Network technologies facilitate interactions between users, but without specifying their parameters. They allow people to interact, but do not define how they should interact. This means users can modify how they use them they allow users to implement and modify them over time. People can communicate and experiment with ways of communication that suit them.

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<sup>2</sup> Interview in New Delhi, July 2005.

Network technologies provide a means by which people can communicate with one another. This group includes email, internet connections, sharing documents, electronic files, groupware and audio and video conferencing. Email and videoconferencing are discussed explicitly below.

## **Email**

As almost everywhere else, the killer application of networking IT in courts was email. Email's great advantage, over more traditional communication means like the telephone, is asynchronous communication. The recipient and the sender do not need to communicate at the same moment in time, as is needed with the telephone. Email is used on a large scale in justice networks for informal communication. However, email is not used on a large scale in official communication with court users yet. According to Velicogna, this is due to requirements for official communications. For instance, legislation in Belgium, France, Greece and Italy would require both certified email and digital signature for official communications. Velicogna maintains that the absence of these technologies explains why email is not used for official communication (Velicogna 2007 p. 136). Although I agree that having those technologies in place is a condition, I do not think that is the only reason. The technologies themselves are available. However, implementing the technology also requires changes in the business processes that have apparently simply not been developed yet. I will come back to this point later in this chapter.

## **Internet connections**

Where court staff and judges have access to the Internet, they use the connection mostly for email and to access information. The connection facilitates access to sources of legal research such as laws, court decisions or jurisprudence.

## **Video conferencing and other networking/communication technologies**

Strictly speaking, participation technology, audio and video conferencing do not need the use of a computer network. They can both be conducted over a telephone line. But because they are so clearly communication technology, I have included them in the networking group. FJC 2003 surveyed them both. Both audio and video conferencing were common technologies in federal district courts in the United States in 2003. 93% of surveyed courts replied they had audio conferencing equipment, and 85% had video equipment. They are mostly of the moveable type. In the 2007 survey, quite a few users report technical difficulties with videoconferencing equipment.

Video conferencing is used by courts in Europe more and more. European legislation has made it compulsory, that helps. It is used a lot in Australia, mainly because distances are so enormous there. So, the advantage is in not having people travel long distances. Just for witnesses, or also for experts and parties.

Technically, video conferencing is easy to implement. It is a stand-alone facility that does not need much adaptation of work processes.

## **Networking databases and word processing: decisions models**

Although word processing and database technology do not require a network to function, their combined use over the court network gave rise to a major innovation. Office automation, merging data from the case registration system with text in the word processor has become a very

common process for producing bulk decisions in small claims and debt recovery cases. It is used in many courts where the technologies were implemented. The Dutch courts use a system called JustWord that supports use of standard texts and smart merges by using Visual Basic programming. This system was developed first by users in the courts at the end of the 1990s when networks with central databases were starting to be implemented. It was re-developed when the courts were given a different word processing system, and rolled out to all the courts.

### **Capabilities of network technologies**

The capabilities of network information technologies are:

- Facilitating collaboration
- Allowing expressions of judgment
- Fostering emergence (patterns).

Again, whether the capabilities are realized depends on the users. There is an interesting emerging process in collaboration in Dutch courts. Where judges work in panels, or where their support staff draft decisions, review of those documents is beginning to be done increasingly over the network, in the electronic document on the court network drive. Presentations at the FJC round table reported on already more developed forms of collaboration in case management and writing court decisions (FJC 2007, presentation handouts, my notes from the meeting).

With regard to implementation of network technology, some observations can be made on requirements. Users are free to experiment with ways to use the technology, as can be seen in the examples of JustWord and the document sharing. Some standards, such as a code of conduct for Internet and email use for the users and standardization of email addresses, are needed. Some of the standardization is external, but some, like the code of conduct, need to be developed inside the justice system. On the whole, network technologies do not restrict the users' freedom as much as the enterprise information technologies discussed in the next section. However, the network itself needs to be managed and maintained with standards for email addresses and for making information accessible.

### **The E-Court : Enterprise information technologies and external communication**

The technologies in this group include work flow management systems, customer relations management systems and external electronic interaction with customers. This group does not include any courtroom technologies.

The ideal type for this group is an entirely electronic management process: cases are filed electronically, they are managed as electronic files by electronic work flow systems, both individually and according to load, outputs are filed in an electronic archive. In this ideal type, it is the management process that has gone completely paperless. The process of adjudication can still consist of physical court hearings.

The capabilities of the technologies in this group are: redesigning business processes and standardizing work flows, monitoring activities and events efficiently. This means that processes can be redesigned and standardized much more easily, and that reports on events and activities are much more readily available.

In order for these functionalities to work, business processes need to be specified in advance (McAfee p. 145). This means their implementation is very much top-down. They prescribe new interdependencies, processes, and decision rights. They restructure interactions among groups of employees or with business partners. In other words: from the outset, they depend on those new interdependencies, processes and decision rights, because they cannot work without them.

## **Electronic files**

An electronic court file is a collection of information regarding a specific court case. This electronic file replaces the paper file. That means it is not necessarily a “file” in the strict sense of computer terminology. The collection can contain electronic information as well as information that was scanned from a paper document. The e-file will also have a shell that manages the information in it. This enables quick searches and annotations. With such a shell, handling complex information in a large case file will become much easier. So far, no court system in Europe has abandoned paper files. There is also no evidence that courts have done away with printing altogether.

## **Workflow and case management systems**

Case management includes management of single cases as well as managing case flow and managing courts. It includes managing time standards and case load, as well as analysis of court workload trends to improve planning and monitoring strategic actions (Velicogna 2007 p. 134-135). The system supporting these activities uses case data from the case administration as well as information about work processes for case processing. The more sophisticated the system, the more it requires standardizing. For instance, for planning and monitoring purposes, data need to be the same and to steer work processes, those processes need to be standardized as well. The federal district courts in the United States have a case management/electronic filing system called CM/EFS. In FJC 2007, judges in federal district courts remark how CM/EFS does not support the functionality they need. For instance, calendaring is supported for the district judges, but the magistrate judges have different case flows that cannot be calendared using CM/EFS. The case management systems reported to CEPEJ and listed above in the functional technology category may qualify for inclusion in this group. There is not enough information in the report to determine what level of sophistication the case management systems have reached.

## **Electronic interaction with external partners**

Courts’ external communication occurs with very different counterparts:

- non-users and users
- lawyers and other regular professional court users
- non-professional court users.

Another way of looking at external communication is to look at the level of the interaction. The approach below follows the four-stage model for benchmarking e-government projects in the European Union (EU Benchmarking p. 16):

- |          |   |
|----------|---|
| Stage 1: | Information online about public services  |
| Stage 2: | Communication/interaction: downloading of forms                                   |
| Stage 3: | Communication/two-way interaction: processing of forms (including authentication) |
| Stage 4: | Transaction: case handling, decision and delivery (payment).                      |

Based on the CEPEJ data on electronic web forms, it appears that quite a few European courts have reached the European Union’s stage 2. It is difficult to ascertain from the CEPEJ data whether any court systems have developed beyond stage 2.

## **Online court access: First experiences**

This section looks at IT functionality for providing online access to courts. Courts in the United States have experimented with Internet technology for helping self-representing litigants navigate their way to and through court. The pilots, presented regularly at the bi-annual Court Technology Conferences of the National Center for State Courts in the United States, are a response to what has been called the access to justice crisis: the realization that many people, particularly those with low income, do not get the help that would make their legal problems go away because they are resolved (Hough 2007). The philosophy of the access to justice pilots is that courts, as a justice institution, should ensure decisions are not made on defaults or lack of knowledge, that decisions are followed because litigants understand how to comply, and people have a right to their day in court. Information technology can provide different functionalities to achieve these goals.

Below is an analysis of the ways in which those functionalities have been mobilized to provide access to justice. The examples range from one-sided information service to increasingly interactive forms of communication. Some of these functionalities are still experimental. They are discussed in the final section. First, the next section discusses and analyzes functionality for providing information. This is the activity with the largest body of experience available of all the functionalities discussed here.

### **Providing Information**

This section looks at experience with providing information on the Internet. It first lists some requirements for this type of information service. Next, it compares some web sites providing information on divorce. The information is analyzed for web readability and effectiveness. The section closes with some specific conclusions for court information services.

Providing information is generally regarded as a one-sided activity. Information is “pushed” to the recipient. This does not mean the receiver of the information is irrelevant. For information to be effective, it needs to meet four major requirements:

- The recipient can understand it.
- The recipient can act on it and will know what to do next.
- The recipient feels confident that the actions he or she undertakes will achieve the result envisaged.
- The information must, of course, be correct. This criterion is not examined further in this context.

The general problem with any professional communication is that it tends to presume a professional, post-graduate level of understanding. Information for members of the general public needs to be specifically targeted.

For legal information service on the Internet to be effective, the first requirement means that people with limited knowledge of the law or even limited education in general must be able to understand it. The second requirement is that they must also be able to follow up on it.

If courts choose to provide information on facts about taking cases to court through a web site for the entire legal system, this information needs to be consistent for the whole of the legal system, usually the country, in question. This means the information from one single source needs to be correct for all courts. This has two implications: (1) the court practices need to be the same, and (2) the information service needs to be vested in a central agency.

## **Forms and document assembly**

The simplest functionality for user interaction is that of online forms. Forms provide a streamlined channel of communication: the recipient of the information, in this case the court, specifies what they need to know; the sender of the information, the court user, can be sure that a completely filled out form will produce the required outcome. It can be a court order of some sort, or a decree formalizing a divorce or a decision granting a money claim. A practical example is the use of forms in the uncontested divorce procedure in the United Kingdom. Including forms on a web site can be the next step in developing digital access, after pushing information. The simplest form of digital access can be downloadable forms that have to be printed, filled out by hand, signed and returned by mail or fax (stage 2). They fit into the paper-based process most courts still have. More sophisticated types of forms can be filled out electronically (stage 3). They may have a help function, they can have embedded calculation functions and analytic tools, and some can even be filed electronically. Even more developed forms provide the function of interactive, for instance question-based, document assembly. These forms can fit into electronic file processing, but they can still be printed out and processed through a paper based process. For this type of digital access service, full electronic processing in court is not a necessity.

## **Experiments with more interactive access**

Beyond forms and document assembly, there are experiments with a few more functionalities. They also require more developed electronic case processing systems in the courts. There is not much documented experience with them yet. I list them here for completeness.

- **Customer friendly e-filing:** Beyond forms and document assembly, this modality allows for electronic filing. It replaces coming to court to fill out paper forms to file a case. It is expected to free up court staff for other tasks.
- **Case management systems:** Functionality in the systems can capture data on self-represented litigants, for instance from previous cases. It can connect cases, especially in family law to avoid conflicting orders. It allows courts to provide orders to litigants after the procedure.
- **Records access:** This provides self-representing litigants, but also legal service organizations that give them advice and assistance, access to their court records.

For people who find problems difficult to deal with on their own, human support should be available. Some people will always need human help. In all the functionalities listed here, there is a human help backup function. Here are some examples of providing such human help using technology:

- **Videoconferencing** is used in the United States to give self-representing litigants legal counseling over distance using existing court video networks, normally used for court hearings over distance. The existing court video networks are used to give people access to lawyers over distance, to allow them to consult those lawyers in order to be better prepared to present their case. This facility allows for multi-lingual service and specialized forms of legal counseling.
- **Online chat functionality** can assist users to find information and resources and assist users of automated forms. It ensures that users can find and understand the information. As a backup facility, it presents an opportunity to learn more about user needs as well.

## **Digital access: Some indicative conclusions**

This discussion has explored of different forms of online access to courts that have been tried, but not yet widely implemented. The more advanced forms of online access are still experimental. However, for judiciaries wanting to expand their services for self-representing litigants, it is quite

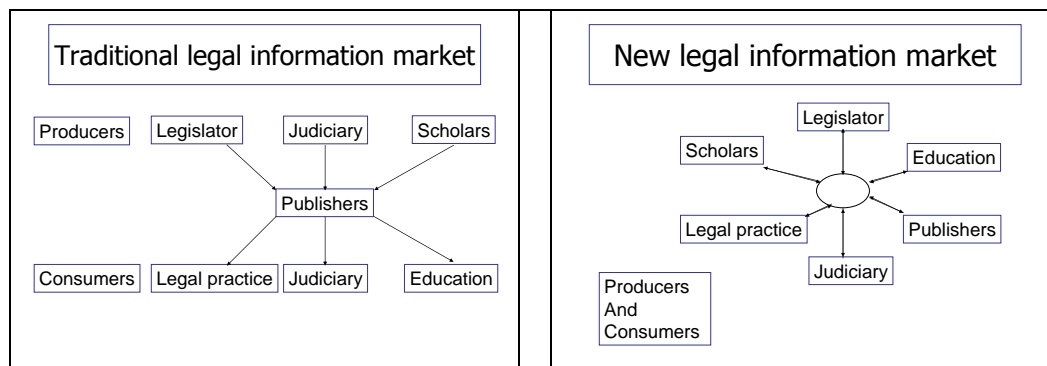


possible to provide simple forms of access without having a sophisticated system for receiving electronic information directly. Full e-filing capability in courts, like electronic filing, case management and electronic case files, is not an absolute condition for providing more digital access. However, human help should always be available in case a user cannot manage the instruction provided independently. The examples of experimental IT-supported human help given here are not necessarily limited to cases that come to court. They are also useful for information and advice services.

### Summing up Part 1

IT has led to dramatic changes in the way courts do business. Communication over distance, particularly video conferencing, is becoming more and more common. It is easy to implement. However, the paperless e-court is still far away. No court has yet abandoned paper files entirely. E-files are not yet common.

IT has also revolutionized the way the law is shaped. Courts and other parties in the field of legal information can now publish their own products directly on the Internet. This has blurred the distinction between producers and consumers of legal information. It has also changed the position of publishers in this market. These changes in the market for legal information are visualized in the figures below.



Direct availability of legal texts, case law and court decisions has enabled improved quality of court decisions and more equal administration of justice (Van Opijnen p. 9).

### Implementation

Functional technologies have been implemented by most courts. Networking technologies seem to have been implemented in a fair number of courts systems. Different factors influence those implementation levels.

One factor is early implementation. Early starters, such as the United Kingdom and the United States, have progressed further than later starters, like some countries in Western Europe. This, however, should be nuanced for the really late starters, for example in Central and Eastern Europe. Velicogna observed how countries newly adapting to automation moved very quickly because of reform pressures from the European Union and available funding and assistance (Velicogna CEPEJ p. 48).

Another factor seems to be the approach that is chosen. Velicogna observes how in European courts, the more successful approaches to electronic administration of justice have been to choose simple procedures and to simplify more complex ones. Developing full online proceedings, where effort is centered on translating all the complexity of the paper based

procedures into the electronic ones, has been characterized by never-ending piloting and mounting costs (Velicogna CEPEJ p. 48). There is a world of IT development experience behind these observations. However, if replicating existing processes is not the way to IT success for courts, what else is needed? In my opinion, the first necessity is an understanding of court processes in terms information. That is the subject of Part 2.

## **Part 2: Case processing as a process of information**

The first part of this paper has clarified some issues regarding developing and implementing court IT, based on evidence from experience of courts in Europe. However, this understanding is only part of the story. What also needs to be understood is at the other end of the spectrum: how courts process information.

Therefore, I have studied the way courts process information and what this means for IT. I have studied IT for courts since the early 1990s. I use a conceptual framework developed to (1) help IT specialists understand more about court processes, and to (2) help judges and court staff grasp what IT can do in their case processing. It has become a nifty tool showing how IT functionalities can help to implement improved case processing. It also shows innovative ways of handling information, towards more timely and adequate judicial decisions and increased access to justice. Traditional approaches to improving court performance and reducing case delay have turned out to be of limited usefulness. Besides, most court systems have not changed their traditional processes under the influence of information technology. This article presents a fresh look at how *knowledge about what goes on in a court can help us to understand what can be improved*. The model I use helps judiciaries, court managers and other with insights on case management, standardizing processes, information service to court users and the general public, and IT policy making. This article shows four ways to use the model. There is, of course, much more in my book. Before looking at the model itself, we need to set out some concepts related to what courts do.

### **1 Court roles, processes, products and outputs**

The role of courts in general is to produce enforceable decisions, in other words: to provide title. The enforceable decision, therefore, is their product. The first question we explore is, how the enforceable decisions produced by the court are of value to the court users. The framework used here explores how what courts do is useful for their users. It was first introduced by Blankenburg in a comparative study of German and Dutch courts in the light of access to justice and alternatives to courts (Blankenburg 1995). I have adapted it somewhat, but the roles allocated to the court remain the same (Blankenburg p. 188). Four specific roles fulfilled by courts can be identified: (1) title provision, (2) notarial role, (3) settlement, and (4) judgment. Each of these roles brings with it a specific product and output. The products affect the way information is used in the primary judicial process. That makes them relevant for our discussion. Two factors affect court processes in a major way:

- the *uncertainty of the outcome*
- the *relationship* between the parties.

The outcome is the *content* of the decision: the divorce arrangement is in keeping with regulations, the claim is unfounded.

The outcome of a process can be completely certain and certain from the outset, or it can be more or less uncertain at the outset. In that case, events happening along the way can affect the outcome. In terms of information: the information available at the outset of the process can be either sufficient or insufficient to produce the outcome.

In terms of game theory, the outcome is either zero-sum or win-win. Zero-sum describes a situation in which a participant's gain or loss is exactly balanced by the losses or gains of the

other participant. The relationship between the parties is irrelevant to the outcome. In win-win, parties can achieve the best result by cooperating. In this case, cooperation can affect the quality of the outcome. Figure 1 shows how these factors relate to each other.

**Figure 1 Matrix of Judicial Roles**

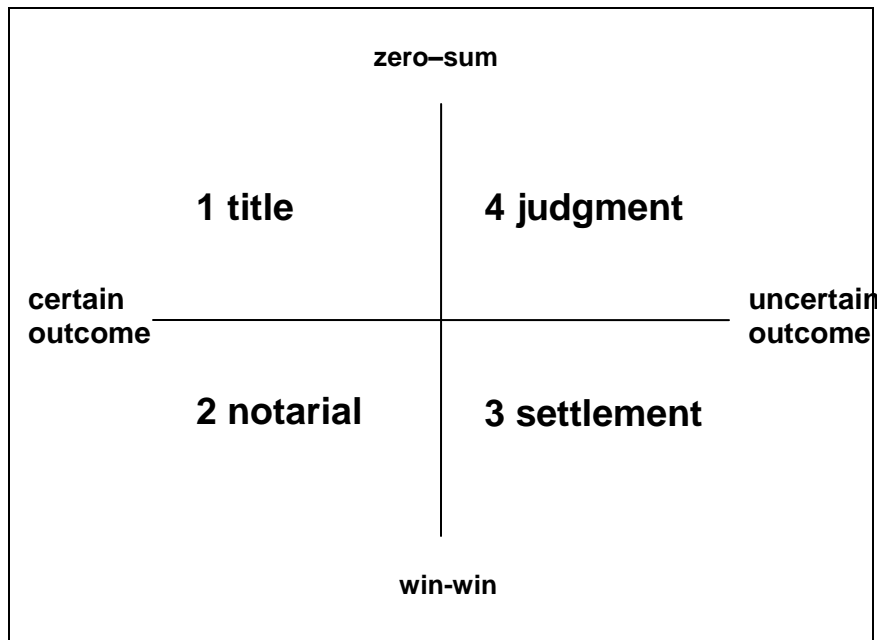


Figure 1 shows roles and factors in a matrix. In this matrix, the role of the court and the ensuing products are arranged along two axes: the relative uncertainty of the outcome from left to right, and the parties' relationship in terms of zero sum and win-win from top to bottom. Individual cases are on a continuum, both vertically and horizontally. A case or a decision can be mostly notarial with a little judgment, or mostly judgment with a little settlement. The next step explores how court cases fit into the groups in our model.

### **Introducing the groups and their characteristics**

*Providing title* is the role in the first group. The product of the judicial process is always a title. However, it is the output of this group in particular. Here, we deal with a process that does no more than producing that title. The case is "cut and dried" (Galanter 1983b). The outcome is zero-sum because one party gains and the other party loses. The process in this group is characterized by a very low level of uncertainty. Undefended money claims come to mind as an example.

The *notarial role*, group 2, produces an affirmation, a formal declaration that the arrangement proposed by the parties is legal. It also entails little uncertainty. The outcome is win-win. By cooperating, the parties can achieve an optimum result. This process is also characterized by low uncertainty. Ideally, parties propose an arrangement they have worked out among themselves. The arrangement is examined by the court only marginally. Family cases and plea bargaining are some of the examples for this group.

The *settlement role*, group 3: here, the overriding objective is for the parties to reach agreement. This agreement is the output. The outcome is win-win. The process is characterized by uncertainty about the outcome, and by communication and negotiation. Very complex information, needed to help the parties to reach agreement, can be the object in this process.

The *judgment role*, group 4, is widely regarded as the judiciary's main function. The outcome of the process is dependent on all sorts of events that may occur during the process. The parties are in opposition. The court decides. This process may involve large amounts of complex information. It should be noted here that the difference between groups 1 and 4 is relative, in the sense that the outcome is more or less uncertain. If no or almost no legal issues need to be decided, the case is regarded as a title group case. As the number of legal issues to be decided increases, the case moves in the direction of the judgment group.

In the next section, I have taken the actual caseload of civil justice in the Netherlands and sorted the cases into the groups according to the model developed above. We can determine the relative share of each group in the total caseload. The resulting picture is primarily important to determine where efforts at implementing IT can be most effective.

## 2 Cases into groups

The next step in our exploration is to apply the matrix to civil justice in the Netherlands. The purpose of this section is to learn how different processes use information in order to understand what they need by way of specific IT functionality.

The Dutch court system has some of the characteristics of the classic Napoleonic civil justice (as opposed to common law) system. It has three tiers of jurisdiction. The Netherlands has a legal culture in which settlement plays a substantial role. Civil procedural law instructs judges to attempt settlement before deciding a case on its merits. It will be interesting to see whether other legal cultures have demonstrably different patterns, and whether those patterns show up in the matrix.

In 2007, all instances together disposed more than 900,000 civil and family cases. Statistically, appeal and Supreme Court figures do not influence the distribution in the groups we will be looking at below<sup>3</sup>. That is why, from here on, only the statistics for the first instance of civil justice in the Netherlands are taken as our object of study. The first step is to find out which case types are in each group, relative to the total caseload.<sup>4</sup>

The counts were done, based on disposed case statistics, as follows:

- Group 1: Final dispositions and summary dispositions of undefended money claims, both for the local court and the district court.
- Group 2: Dispositions in parental authority, supervision and settled employment termination cases in the local courts, and dispositions in divorce related family cases in the district courts.
- Group 3: Cases withdrawn at the parties' request or struck off the record.
- Group 4: Final dispositions of contested civil claims, including those going through a phase of fact-finding by hearing witnesses and viewing locations, for both local and civil courts<sup>5</sup>.

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<sup>3</sup> In my book, there is a statistics table for all instances from 2002 to 2007 on page 119.

<sup>4</sup> In many countries, courts also keep various registers, like the commercial register or the land register. It is safe to assume that the register role is an area in which use of information technology can be of great help to improve performance. However, case processing, not the register function, is our subject here, so this category of court work is not discussed here.

<sup>5</sup> The full table is in the book on page 120.

**Figure 2 Matrix of Judicial Roles and Caseloads**

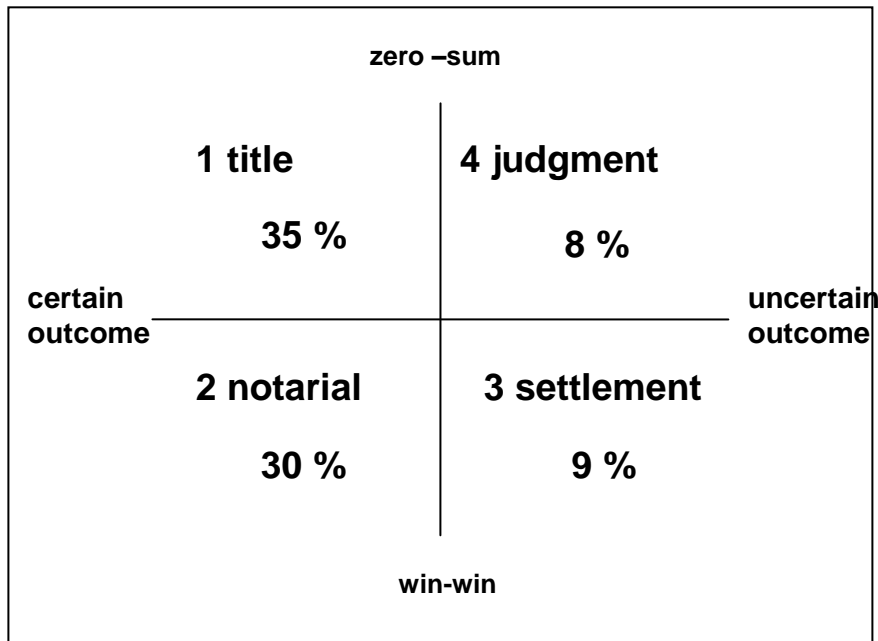


Figure 2 shows the matrix with the distribution of cases over groups, as a percentage of total civil case dispositions in 2007.<sup>6</sup> The numbers vary slightly over the years, but the variation in distribution is not significant.

Group 1 is the largest with 35 percent of the total case production. Group 2 is only somewhat smaller at 30 percent. Groups 3 and 4 are much smaller. Group 3 is 9 percent of the total caseload and group 4 is the smallest, at 8 percent. Group 4, in which defended cases are decided by the court, is normally considered judicial work *par excellence*. Yet, it is only 8 percent of the case production.

Relatively few cases, need more information during the court procedure in order to bring a resolution of the dispute closer. Half of those cases are most probably resolved with a settlement (role 3). What is left after that is a small fraction of the total caseload in which disputes are decided by a judicial decision (role 4).

The title group is the largest group, and its outcome is zero-sum and certain. That makes this a good candidate to start automation, that is, developing routines for electronic processing. The notarial group comes in a close second because of its certain outcome.

Starting from this information about Dutch court practice in each group, the next section examines each of them to understand the implications of its characteristics. Each discussion of a group wraps up with conclusions for information technology support for that group.

<sup>6</sup> The remaining 23 percent cannot be categorized meaningfully for the purpose of this study. It includes supervision of bankruptcies, juvenile justice, other case groups that are very small but very diverse, and various supervision activities. Most of them are not dispute resolution in any sense of the word.

## Group 1 – Title role

The outcome of the cases in this group is both zero-sum as well as highly certain. Because the outcome is certain and zero-sum, generally speaking the information that is available at the outset is sufficient to decide the case. It seems reasonable to assume that this process should be the easiest one to automate. Automation means: creating a process that can be handled by a machine without human intervention, translating policies and routines into programs for electronic processing. The other opportunity is in the interaction with the parties submitting cases. If the parties file their cases by submitting structured data electronically, and the internal court process receives those data, manual data entry by court staff is avoided. If court routines are translated into programs to handle those data, the titles that are the product of this process can be produced (almost) without human intervention.

An example that is relevant for group 1 cases comes from the United Kingdom. It consists of three online systems: the Claims Production Centre (CPC), Money Claim On Line (MCOL) and Possession Claim On Line (PCOL). These systems are the best known examples of online title provision. makes claiming far simpler and faster: fees are paid electronically, claims issued straight away and hearing dates scheduled automatically. Entering a defense online has been possible via the MCOL system for all claims issued via either MCOL or the CPC since December 2002. If claims are defended, they are automatically transferred to the court that is competent according to the normal rules.

There are some particular features in civil procedural law in England and Wales that enable, or at least facilitate, the use of online claim processing: No summons, no obligatory court competence, and no lump sum court fees.

### IT for the title group

In these zero-sum, low unpredictability cases, there is no dispute. Consequently, there is also not much judicial dispute resolution activity in this group. Judicial activity in individual cases is very limited. The case volume in this group can be quite a large part of the total caseload. For small claims courts, it is a group worthy of attention.

The information that is available at the outset is usually sufficient for producing the final product. The IT processing activity in this group is mostly merging data with text to produce decisions. That activity is supported by office automation, such as word processing and case registration databases.

The information opportunities for such zero-sum, low unpredictability cases are in:

- Online case filing and/or data entry by court users, including data transfer from frequent users,
- Internal processes processing data without the need for human intervention.

If users fill the case database, time consuming data entry work is reduced.<sup>7</sup> Moreover, when standardized, parts of case processing can be automated. Consequently, cases will move to the left in the matrix.

The opportunities were developed in different ways. The Mahnverfahren was piloted in one *land* (state), and then implemented gradually in the other states. MCOL was developed in stages.

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<sup>7</sup> Technically, users do not have direct access to the live case registration database. Data entry is done through an extranet where data are checked before they are allowed to populate the database itself.

## **Group 2 - Notarial role**

The outcome of the cases in this group is both highly certain and mostly win-win. The notarial group includes dispositions in parental authority, supervision and settled employment dissolution cases in the local courts and dispositions in family cases in the district courts. The win-win aspect points to a new opportunity: guidance for the parties to help them achieve the best result in working out the terms of the request to the court.

### **IT for the notarial group**

In the notarial group, there are two main opportunities for applying IT.

The first already emerged in the title group. The second opportunity is in web functionality to inform parties on bringing cases to court, and on the information the court needs to deal with the case expediently. The Internet is a vehicle for this information. Courts can help parties by specifying the information they need, and what criteria they use to judge incoming requests. Parties may also use this information to settle their differences.

A more advanced opportunity for this group combines both data entry and guidance in online forms for filing both data and substance.

## **Group 3 – Settlement role**

In the settlement group, the outcome is relatively uncertain as well as largely win-win. There is a dispute, but if the parties cooperate to settle it, they may be able to produce an outcome that is beneficial for both, and their relationship may be saved. The dispute need not necessarily be resolved exactly according to the rules of the law.

This group comprises about 9 percent of the total civil caseload. It consists of very diverse cases that are either withdrawn or struck off the record before or after a hearing.

The Netherlands have a long tradition of settlement. The civil procedural code instructs judges to try settling a case before resolving it in the legal manner. In recent years, court practice has focused on less formal ways of dispute resolution. The gap between dispute resolution by courts and informal mechanisms like mediation is narrowing.

Internationally, various informal and formal ways of court-supported dispute settlement are in practice, for example conciliation, mediation, and neutral case evaluation. In *The Future of Law*, Richard Susskind suggests that publishing general rules of thumb as to how things can be arranged and resolved in general may prevent disputes from breaking out (Susskind 1998 p. xlviii). It can also guide solutions in case of settlement.

### **IT for the settlement group**

The first example of IT for this groups is software to support negotiation, where parties themselves resolve their dispute. It can be done with dedicated software, but it can just as easily be done using email. The court acts as a go-between. Asynchronous communication used in email may give parties time to think. However, it does not particularly favor cooperative behavior. Another example is to use the court's web site and online forms.

These examples show how, using the functionalities of email and a web site with information and online forms, a potential dispute is moved down, as well as to the left in the matrix. The result contains costs and avoids a complex, lengthy procedure. These opportunities do have a limit: communication over distance may not be enough, so face-to-face contact may still be necessary to broker an agreement.

Another potential opportunity, guidance for parties negotiating a settlement, already came up in the notarial group.

#### **Group 4 – Judgment role**

In the judgment group, the outcome is uncertain as well as zero-sum. There is a dispute. The parties are in opposition. Events during the process influence the outcome. The case is decided on legal merit. The court decides. In this group, both processes and substance can be complex. Cases in this group are relatively few in relation to the total case load. Nevertheless, they take up the most judicial time. Time to disposition is considerable.

#### **IT for the judgment group**

Judgment group cases are complex to very complex. There is an expressed need for structuring complex information. Electronic case files are a functionality that could be helpful in this group. They can be used to structure large quantities of information using electronic search capability. Electronic case files also support multimedia evidence. Some U.S. courts have introduced electronic case files for difficult, complex cases involving many parties or large amounts of information. Their experience shows results such as increased efficiency and accuracy of information. Knowledge management is the other functionality for this group. Increasingly, courts already have experience with jurisprudence databases and decision support systems. They help judges take legally correct, consistent decisions.

#### **Case processing as information management**

Looking at case processing as a process of information management helps to see opportunities for information technology applications in order to improve case processing. We have uncovered some actions that will result in cases moving to the left and/or down in the matrix.

*Simplification:* Creating routines and standards will move cases to the left. This reduces unpredictability through reducing the number of individual decisions that have to be taken in each case. Cases may even be moved out of court entirely when the parties are given enough information to resolve their dispute by settlement. Thus, problem solving by the parties is encouraged. If, like the Dutch peacemakers in Voltaire's letter in the footnote above, we think this is a useful and socially desirable objective, these are ways to move cases down in the matrix.

*Early intervention:* Early intervention in individual cases can have two effects: reduced complexity moves a case to the left; facilitating settlement moves the case down. The example of the online pre-action protocols illustrates how a complex, lengthy process is avoided. A potential dispute is moved down, as well as to the left in the matrix to such an extent that it never gets to court.

### **3 IT needs and opportunities**

The matrix demonstrates how a court caseload can be grouped into four distinct categories. For each group, the matrix brings up specific IT opportunities and needs. For all groups, but particularly for the *title* group, electronic filing is an opportunity that will save processing time. Most claimants are firms, and most claims are filed by either law firms or bailiffs. Most of them mostly have an automated client administration. If they could supply those data to the courts, like in the bulk claim center in the United Kingdom, data entry in courts can be avoided.

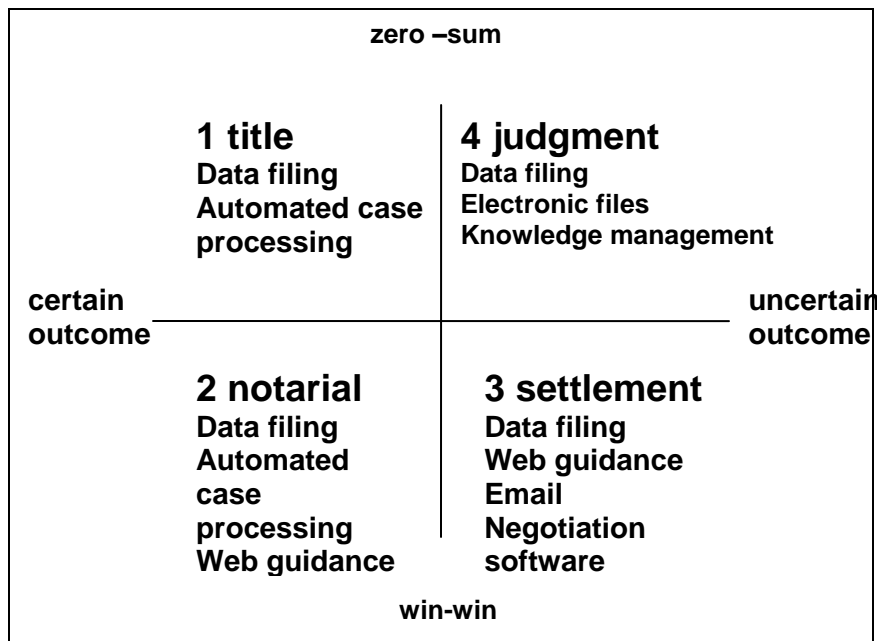


In the *notarial* group, the main opportunity is web functionality. Information on the court web site, online forms and information for settlements can be ways of stimulating the parties to work together to resolve their own disputes.

In the *settlement* group, communication technology, either email or dedicated software, can help parties settle disputes with a less certain outcome.

In the *judgment* group, the foremost need is for managing complex information. The opportunity of electronic case files presents itself here. Electronic files open up new opportunities themselves with multimedia storage of evidence and hearing recordings.

**Figure 3 – IT for the groups**



The matrix predicts that electronic filing of claims, online data entry and electronic case files will reduce processing time, and possibly disposition time, for all cases. Automating routines can speed up processing for the title group. Internet functionality for public information and electronic forms supports the notarial group. Likewise, public information and software supporting negotiations can support processing specifically for the settlement group. Electronic files and knowledge management are the main tools specifically for the judgment group.

### **Concluding**

The two parts of this paper have each shed some light on court IT. From what has been achieved, we learn that courts have not radically changed their internal processes. The most decisive change has come in the field of legal information. The distinction between producers and consumers of legal information has blurred. The edge of innovation is in external communication over the Internet. Implementation where the entire complexity of the judicial process is included has not been successful.

Successful implementation can be seen in areas that lend themselves to automation, such as order of payment procedures. The matrix and the groups reveal distinct IT opportunities. The groups have different information processes, and therefore different IT needs as well. Groups with predictable outcomes have processes that lend themselves more easily to automation. Groups where parties work together can benefit from information on the Internet. Groups with a relatively high level of unpredictability and therefore complexity in the process need more internal knowledge and information management.

Courts and court systems that take these insights into account can use information technology to improve their performance, and thereby the administration of justice.

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