

Case Management System Using Web Application

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Abstract : This research introduces a Web-Based Case Management System designed to enhance and streamline the process of managing cases across diverse domains. Traditional case management often involves manual and disjointed processes, leading to inefficiencies and errors. The proposed system offers a centralized platform accessible through web browsers, providing an efficient and secure way to handle cases. Key features include user authentication, case creation and tracking, document management, and a communication module for real-time collaboration. The system is implemented using modern web development technologies, ensuring a user-friendly interface and robust functionality. Through iterative development and testing, the Case Management System aims to significantly improve the efficiency, collaboration, and security of case management processes.

1. INTRODUCTION

The idea that courts should have mechanisms for actively controlling and dealing with their cases beyond the rules applicable to procedural law is relatively new the United States is the country that the first to recognize the need for rigorous proceedings in the court setting. Since the 1970s, courts have been opened there.

To use litigation techniques—or more accurately, litigation. Based on workflow strategies developed by professional adjustment specialists in other fields, courts began to develop mechanisms to help track cases, thereby ensuring a smooth navigation through the court system, as well providing information for allocating time and resources based on the needs of the subject (Steelman 1997, 158–60) was written. Ireland and Australia. The first state law in the 1980s.

The powers that employed these strategies were the advanced democracies in Latin America, which as a result of U.S. development assistance. greatly influenced and since then, especially since the beginning of the 21st century, information.

Track Record

Case management techniques were first applied in the United States in the late 1970s. Today, these techniques are applied in courts on every continent and in countries that follow different legal traditions and have different judicial needs. This includes countries such as Chile and Mexico, Jordan and Egypt, Nigeria and South Africa, Macedonia and Ukraine, Singapore and Hong Kong, and Mongolia and the Philippines.

2.WHAT IS CASE MANAGEMENT WITHIN A COURT ENVIRONMENT?

Case management consists of a set of principles and techniques that maximize the efficiency of the process, thereby reducing delays and case backlogs and promoting efficiency in general for courts Case management commands the priority of court services on cases and an active court role in cases ranging from initial filing to settlement of Yati disposition, such as appeals and enforcement.¹ It makes court proceedings more predictable, potentially increasing public confidence, and makes courts more transparent and accountable because they follow deliberate steps in procedure and for better reporting capabilities.

Although courts vary in their application of case management concepts based on their own needs and local legal culture, courts around the world have used standard principles to deal with cases well designed as the formalized information management strategies are successfully implemented Through the process how to manage overcomes that In order to establish a reasonable rule of thumb for handling cases, courts must first

review their operations and then define operational goals and procedures, such as a timeline for the handling of cases there is a solution.

Case management also means that the court develops business policies and tools to guide and monitor new processes, measure and adjust resources needed to handle cases effectively, monitor processes and outcomes to ensure quality good and fair, and will effectively incorporate performance standards and requirements internally and externally.

3.WHAT ARE CASE MANAGEMENT INFORMATION SYSTEMS?

Case Management Information Systems (CMIS) are tools that support case processing manually or on paper or more through automation with advanced technologies A good CMIS is designed to support the above case management processes and associated organizational functions about throughout the court system. When appropriate case management strategies are developed and translated into CMIS, they effectively track the content and status of cases in the court system, contribute to caseload and possibly workload data and activity reporting, and it manages information systems, all of which contribute to operational management .Statistical data on trends were collected routinely Procedural bottlenecks and case delays can be identified through the litigation process, which in combination can lead to important identifications and policy changes.

3.1 CORE FUNCTIONS TO PROMOTE EFFICIENCY

There are special practices that CMIS often supports to ensure that cases pass through the courts smoothly, regardless of the type of case or the legal system in which the courts operate (USAID 2001; Gramckow 2005). These include:

1)*data processing and to describe electronic, paper, and other media*3 input to the media :- The system provides control over the format and content of documents to be placed in court records. It describes the information and case sheet that must be submitted to create a fair and complete court record and the process, ensuring the integrity of data items entered into the CMIS and ultimately the completeness of the record.

2)*Establishing Records Control* :- The system establishes a framework for records management by assigning numerical identifiers; by indexing the article by number, date, or section name; and creating a folder located in the record system.

3)*Monitoring case processing and updating records* :- The system constantly monitors and updates records and case histories to track case status and progress and identify delays This also provides judges and court staff with an overview of the activity in each case, helps manage cases, and provide transparency and external accountability.

4)*sending case event and action plans and reports* :- The system can include tools to facilitate calendar and scheduling functions for events, such as hearings, calendars provide notice of court events to disseminate information to relevant persons or prosecutors to ensure that judges, prosecutors, and time management by all involved. Informal judicial activities can help assure impartiality and build public confidence in the court system.

5)*handling and retention of final records* :- Case information systems also ensure that a case history is loaded when a case is completed, and stored as a closed case.

Varying Degrees of Computerization

Case management information systems are not always computerized. In fact, the degree of sophistication varies among case management systems applied in courts across the globe, as does the degree of automation. Case management and related data collection does not require automation, since the focus is on realistic rules for moving cases forward and solid mechanisms to track and enforce adherence to these rules. Still, automation can greatly enhance the speed, reliability, monitoring, and tracking of case processes, resulting in better reporting and analytical capacities to guide the management of cases.

3.2 EXTENDED FUNCTIONALITIES

In addition to these basic applications, there are other technological applications that support court operations :

electronic documentation :- This service provides for the archiving and preservation of documents, as well as the creation of standardized and automated documents (i.e. for decisions, reports, forms, etc.) that increase efficiency and accuracy for court staff and judges, which also can increase the number of procedures completed and hearings held per day , reducing errors and limiting arbitrary procedure, reducing opportunities for corruption by submitting paper documents to all these courts a it will be converted to an executable and searchable text file. These services may be part of a case management system, or they may be used independently in court, sometimes as a precursor to more complex case management systems (NCSC 2004).

e-filing and paperless courts :- Electronic filing can greatly enhance the exchange of forensic electronic data and documents Reporting systems However, an appropriate legal framework is needed to develop procedures and implement procedures to ensure the authenticity and integrity of electronically held court proceedings (Fabri 2001). In order to implement paperless courts, where parties, court personnel, and judges work with and produce electronic documents, it is necessary to develop an electronic control system with storage costs around electronic documents, relationship databases, and software needed to manage the system. The process involves scanning paper documents for conversion into photo documents, and indexing photo documents for better accessibility (Abdulaziz and Druke 2003).

3.3 DIFFERENT SYSTEM FUNCTIONS AND TERMINOLOGY

As courts have been automated, with the increasing use of modern case and court procedure techniques, the systems that support them have evolved and as a result have emerged as terminology for teaching policy of these species has changed to exhibit more complex performance. The simultaneous use of different terms is not always consistent which can lead to a misunderstanding of the functionality that a particular system actually supports The following table provides some clarity on the terms used in this system in the 19th century.

information management systems :- Post-case management provides information to track the status and location of a case from filing to settlement. Manual processes store data in registers and docket ledgers or registers of actions that provide information about case status, documents received, case events, and case outcomes Automated case tracking systems often compiles and organizes this information by case type, incident, judge , or location and presidency For referrals to judges, individual judges, and/or court personnel. Summaries provide an overview of case activities and a complete case record, and can also identify time delays. Today, at least most courts in high-income and even low-income countries have an automatic follow-up system.

As noted above, a more sophisticated electronic CMIS system will include all information and functions as well as other functions to ensure a smooth flow of information through the system. This may include not only informal referrals, but also implementation and reminders for staff and referees; Not only creating documents, templates and checklists to support efficient and accurate data and input but also creating case files and court records and simply sending information and staff reports and court data a going further as well. Where electronic files are available, the system will direct data entry to external parties and this externally provided information will be included in the case file. The new system may also include a storage feature that makes archived court documents easier to access.

Court Service Schedule :- Such systems support broader court administration activities in addition to those focused on case management. Modules emphasizing finance and budgeting, human resource management, facility and asset management, and internal and external affairs and knowledge management can be provided Courts often have a variety of software applications for these purposes. The inclusion of these components in the case plan is desirable and cost-effective in the long run, but requires the courts and other stakeholders to invest significant time and effort to develop and deliver them have been used primarily to integrate information exchange with courts and other agencies And if desired, special work is needed to ensure that all agencies share a common vision of data integration and are willing to share data systems.

Integrated Justice Information System :- Case management systems can also be designed to link with other courts and related judicial systems or municipal offices for information transfer and administrative purposes. Deploying information systems and case management strategies in courts and other related agencies has many advantages, but has legal, institutional, managerial, technical, and security barriers such as differences in organizational culture, information sharing as well as in privacy policy (Judicial Assistance Services 1999). Another issue that arises is data security concerns or the need for reliable and acceptable systems to assure the security and integrity of court cases stored and transmitted electronically (Fabri 2001, 10).

4. PLANNING FOR, SELECTING, AND IMPLEMENTING NEW CASE MANAGEMENT SOFTWARE

As explicated above, case handling mechanisms are instruments that endorse case manipulation techniques and organizational modifications aimed at rendering the court procedure more effective, foreseeable, and translucent. Before computers were affordable enough to be utilized extensively in courts, this encompassed solely a meticulously contrived handbook system of registries, chronicles books, ledgers, calendars, forms, and index cards. Mechanization of these "mechanisms" implies that manual processes and paper-based intelligence are transformed into software programs that enormously amplify the swiftness, dependability, and tracking of case processes, ensuing in superior reporting and analytical capabilities for the administration of cases. Innately, the foundation for a commendable automated system is a well-organized and streamlined manual system, as mechanization alone will not ameliorate inefficient processes.

The sundry strides implicated in developing and implementing a case handling system can be dissected into four primary phases, some of which overlap. (1) assessment and planning, (2) procurement, (3) development and testing, and (4) implementation.

4.1 ASSESSMENT AND PLANNING

Initiating automation to process information requires careful planning, effort, and time, each of which will vary according to the complexity of the system. Before embarking on any automation enhancement program, courts must have a clear vision of the automation goal, and fully understand what is involved and the impact of the desired changes. The court must clearly define its needs, goals and objectives, as well as what changes in processing automation can be made to existing legal frameworks and resources and where modifications will be required.

Ideally, the court reviews its operating procedures, maps the case within the court, analyzes and evaluates operations and procedures, and determines whether procedures should be redesigned is preceded by the commencement of large-scale automation projects or. Additionally, reliable court data collection will be needed to determine where and what automation will have the greatest impact. Tasks should be prioritized for automation. The court may decide to focus first on its civil cases, which typically represent the majority of cases from multiple courts. The greater the percentage of automation-supported court work, the greater the impact of a well-designed system. The evaluation should also consider staff capacity and training needs as well as the needs and capabilities of other end users, and whether current courtrooms and other infrastructure can support the envisaged automation. IT development costs and potential future costs of implementation and maintenance of the system must be accurately considered.

4.2 PROCUREMENT DECISIONS

The functions supported by information management systems and how important they are will be influenced by the choice of software, as well as by other factors such as the availability of human and financial resources to develop, maintain, and they have continued to improve.

Depending on what the court needs and accepts, courts may turn to off-the-shelf case management information system software packages which then have to be adapted to the court's needs, or, like commercial courts in Morocco are able to create their own Customized case management information software customized from scratch.

When choosing software that will ensure effective and efficient case management in any court system, it is critical that the software best meets the needs and resources of the court and supports important organizational changes now and in the future. To be successful, case management information software should be selected only after a thorough review of automation needs and resources for design and maintenance and continuous improvement. This has implications for hardware requirements, e.g server capacity, and administrator capacity to deploy and maintain the application over time. Ideally, a court-wide or jurisdictional IT system is in place or in place to ensure that the software is properly supported and accurately suited now and at least two years into the future. The court's operating procedures should be reviewed for opportunities to streamline operations, and only after the personnel data requirements have been established should the actual arrangements occur.

4.3 DEVELOPMENT AND TESTING

Process and organizational assessments during the planning phase will determine interventions and timing, as well as how data will be captured for performance management, information exchange and communication needs. In addition, this section will specify the capabilities that the software must provide and the data it must manage. Ideally, this process would also lead to the development of policy and information standards. More importantly, full performance standards and technical specifications.

Main Data Groups for a Case Management Information System

Case	Person	Event	Financial	Document and Report Generation	System and Utility
Case data type by key case categories. Depending on the jurisdiction this may include: <ul style="list-style-type: none"> • Tort • Contracts • Real property • Small claims • Family • Traffic • Misdemeanor • Felonies • Other 	Information on litigants, judges, attorneys, and other individual and organizational participants	Information on past and future events in a case <ul style="list-style-type: none"> • Filings • Scheduled events • Hearings Disposition • Post-trial activity 	Financial data on activities in cases i.e. payments, financial obligations, accounting activities (fees, judgments), etc.	Information on official court documents <ul style="list-style-type: none"> • Summons and other served processes • Forms and other documents issued by the court • Management and statistical information 	Information on functions ancillary to case processing <ul style="list-style-type: none"> • Exhibits (property management) • File management • Document management

4.4 IMPLEMENTATION

As mentioned above, using a few pilot trials to test new applications, determine if the system and its operations need further changes, gain a better understanding of the training and support needs of users about it, it is a good way to plan and budget for actual use other courts. When implementing a case management automation project, it’s important to monitor and evaluate progress and results. Detailed and accurate performance milestones and outcome indicators should be established to measure project performance and implementation quality.

5. CONCLUSION

Case management and support systems are at the core of effectively managing courts that deliver fair and just decisions in a timely manner. The foundation of any system is scheduling – a basic requirement of any court that wants to be efficient even though materials and automation may be temporarily unavailable. Considering the advances in technology and computers for steadily declining system costs, we have a stable power grid, relatively good infrastructure, and a staff that can manage simple electronic data. These basic programs are relatively simple, greatly improve the efficiency and accountability of the

court, and are no longer significantly expensive; If done right, operating costs can be reduced. At the same time, they need a rigorous assessment of current operations, a desire to develop best practices, and a commitment to providing quality court services They need time and commitment to good policy from the court itself inside – no software developer can do a good job system Not including, testing and roll-out. And no information system, even the most sophisticated automated one, can deliver consequences if the data it collects is not translated into performance reports that are actively used by those in charge and respond to the a. That’s good case management – putting effective processes in place, checking to see if procedures are being followed, and taking action when things don’t go as they should.

REFERENCES

1. Institute of Medicine. Crossing the quality chasm: A new health system for the 21st century. Washington DC: The National Academies Press; 2001. [[PubMed](#)]
 2. Wolff JL, Starfield B, Anderson G. Prevalence, expenditures, and complications of multiple chronic conditions in the elderly. Arch Intern Med. 2002 November 11;162(20):2269–76. [[PubMed](#)]
 3. Berry-Millett R, Bodenheimer TB. Care management of patients with complex health care needs. Synth Proj Res Synth Rep. 2009 December;19:1–36. [[PubMed](#)]
 4. Hickam DH, Weiss JW, Guise JM, et al. Outpatient Case Management for Adults with Medical Illness and Complex Care Needs. Comparative Effectiveness Review No. 99. Rockville, MD: Agency for Healthcare Research and Quality; Jan, 2013. (Prepared by the Oregon Evidence-based Practice Center under Contract No. 290-2007-10057-I.) AHRQ Publication No. 13-EHC031-EF. www.effectivehealthcare.ahrq.gov/reports/final.cfm. [[PubMed](#)]
 5. Baker LC, Johnson SJ, Macaulay D, et al. Integrated telehealth and care management program for Medicare beneficiaries with chronic disease linked to savings. Health Affairs. 2011 Sep;30(9):1689–97. [[PubMed](#)]
 6. Brown RS, Peikes D, Peterson G, et al. Six features of Medicare coordinated care demonstration programs that cut hospital admissions of high-risk patients. Health Affairs. 2012 June 1;31(6):1156–66. 2012. [[PubMed](#)]
 7. Hines D. Using quality improvement principles and concept analysis to refine the role of HIV case management. Care Management. 2011;17(5):7.
 8. Hughes J, Reilly S, Berzins K, et al. Emergent Approaches to Care Coordination in England: Exploring the Evidence From Two National Organizations. Care Management Journals. 2011;12(4):194–201. [[PubMed](#)]
 9. Peikes D, Peterson G, Brown RS, et al. How Changes In Washington University's Medicare Coordinated Care Demonstration Pilot Ultimately Achieved Savings. Health Affairs. 2012 June 1;31(6):1216–26. 2012. [[PubMed](#)]
- Schmidt, Aernout. 2001. “Re-Engineering Independence and Control: ICT in the Dutch Judicial System.” In *Justice and Technology in Europe: How ICT is Changing the Judicial Business*, ed. Marco Fabri and Francesco Contini, 147–161. The Hague: Kluwer Law International.
- Steelman, David C. 1997. “What Have We Learned about Court Delay, ‘Local Legal Culture,’ and Caseflow Management Since the Late 1970s?” *The Justice System Journal* 19 (2): 158–60.

Steelman, David C., James E. McMillan, and John C. Goerdt. 2000. "Caseflow Management: The Heart of Court Management in the New Millennium." National Center for State Courts, Williamsburg, VA.

USAID (U.S. Agency for International Development). 2001. "Case Tracking and Management Guide." Center for Democracy and Governance, U.S. Agency for International Development, Washington, DC.

Velicogna, Marco. 2009. "Use of Information and Communication Technologies (ICT) in European Judicial Systems." European Commission for the Efficiency of Justice (CEPEJ), Strasbourg.

Webster, Lawrence. 1996. "Automating Court Systems." National Center for State Courts, Williamsburg, VA.

World Bank. 2007. "Croatia - Court and Bankruptcy Administration Project." Implementation Completion and Results Report ICR0000536, World Bank, Washington, DC.

Abdulaziz, Mohyeddin K., and William E. Druke. 2003. "Building the 'Paperless' Court." Paper presented at the Eighth National Court Technology Conference, Kansas City, MO, October.

Bauer, Peter. 2001. "A Show Case for the Future: E-Justice in Austria." In *Justice and Technology in Europe: How ICT is Changing the Judicial Business*, ed. Marco Fabri and Francesco Contini, 45-66. The Hague: Kluwer Law International.

Bork, Katrine, and Rune Schroeder. 2001. "The Development of Case Management Systems: ICT in the Danish Judicial System." In *Justice and Technology in Europe: How ICT is Changing the Judicial Business*, ed. Marco Fabri and Francesco Contini, 163-173. The Hague: Kluwer Law International.

Bureau of Justice Assistance. 1999. "Report of the National Task Force on Court Automation and Integration." Bureau of Justice Assistance, U.S. Department of Justice, Washington, DC.

Cooper, Caroline, Maureen Solomon, and Holly Bakke. 1993. "Differentiated Case Management: Implementation Manual." Bureau of Justice Assistance, U.S. Department of Justice, Washington, DC.

Fabri, Marco. 2001. "Introduction: State of the Art, Critical Issues, and Trends of ICT in European Judicial Systems." In *Justice and Technology in Europe: How ICT is Changing the Judicial Business*, ed. Marco Fabri and Francesco Contini. The Hague: Kluwer Law International.