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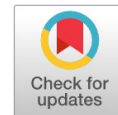
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## Sustainable Electronic Court Records Risk Management: Conceptions and Development of Framework

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# SUSTAINABLE ELECTRONIC COURT RECORDS RISK MANAGEMENT: CONCEPTIONS AND DEVELOPMENT OF FRAMEWORK

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**Abstract.** The institutionalization of technologies in the Malaysian judicial setting is conducted through e-Court application since 2009, in line with the government inspiration of Vision 2020. The Case Management System, Electronic Filing System and video recording system are employed to decrease “backlog” of cases & accelerate existing cases of administration, which give a facelift to Malaysian judiciary reputation. However, the system is not implemented properly because e-courtd applications do not proceed according to a system to reduce disaster preparedness. The main objective of the current study is to formulate a “sustainable risk management framework” for e-court records three layers. The first layer keeps records of management risks & life cycle as well as risk management procedure. The second layer fulfils four legal requirements, i.e., ISO, legislation, national and organization policy rely upon sustainability, backup process, and risk administration. And third layer, the jurisdiction-specific e-court risk administration system, straightens the risk of noncompliance resulting in damaging consequences. Numerous E-court “related conceptions” are addressed e.g., modify administration and ICT infrastructure. The proposed sustainable risk management framework for electronic court records management is proposed to be tested in other jurisdictions and other settings because it relates to overall risk countrywide and global stage.

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## INTRODUCTION

importance of Court technology usage is increasing worldwide (Bettina, 2007; Galves, 2000). Mostly countries are enjoying higher ling standard due to ICT technology. According to court laws, ICT technology is essential for boosting performance of court (Bhatt, 2005; Cranfield School of Management, 2011). Literature review exhibit sifting of traditional system to e-court in most of countries for enhancing its efficiency (Langbroek, 2009). Today most countries around the world have already embarked on e-justice, introducing differentkinds of “electronic court case management applications”.

‘E-justice’ refers to employ “Information and Communication Technology” in courts to improve the services rendered to the users (Ibarrola & Liz, 2012). The utizilzation of modern technology is rising from past fifteen years (Fabri & Contini, 2001; Lederer, 2005; Saman & Haider, 2013; Wiggins, 2006). Most lawyers, judges, legal administrators and support personnel long ago adopted word processing, electronic legal research, time and billing programs as well as varying forms of case management software. The following systems are widely employed in courts: Audio video court hearing recordings,

automated transcribing systems, queuing systems and online case registration and filing systems (Saman & Haider, 2011). The evidence has overwhelmingly shown that employing immersive virtual environment and interactive reality adds significant value as a simulation of experience to enhance courtroom practice (Bailenson et al., 2006).

## Electronic Court Records Management System around the Globe

In the United States, during 1998, intecgrated technology programme was employed by Los Angeles and Indianapolis In Europe, the entire EU countries contains case management systems with varieties of functions and performances (Contini & Lanzara, 2009). Case management system of Norway consists of complete work frame of court, cases, criminal, police and verdict of courts. Other countries are also promoting management system e.g. Austria and Italy stated redesigning of e-justice system. E-court system of Italy is at initial stage and Spain reaches at “Ministry of Justice and Autonomous Communities”. At the same time as having technology in court administration,

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there should be written policies regarding implementation of technology for existence of reliable system.

The Michigan Supreme Court initiated and established file management system to enhance its reliability (Michigan Trial Court Case File Management Standards, 2011). This standard covers the development as well as layout and design of Michigan court case file management.

In addition to the courts, technological instruments were employed by lawyer initially thirty years ago through TV and VCR (Quigley, 2010). Now a days innovative instruments e.g., camera, laptop, trial Pro and Microsoft power point and others are employed (Quigley, 2010; Lawyers Guide, 2002). Computer formulate reliable and authentic evidence as well as witness through animation and simulation (Bailenson et al., 2006).

Specialist authorities of United States, Europe, Australia and Singapore produced Consortium for court efficient performance. Consortium started "International Framework for Court Excellence". Main aim of this consortium was excellent performance achievement in seven areas. Several modifications are made in this framework to raise its efficiency (National Centre for States Courts, 2009). This "International Consortium for Court Excellence" consist of:

- (1) The Australasian Institute of Judicial Administration (AIJA),
- (2) U.S. Federal Judicial Centre,
- (3) U.S. National Centre for State Courts (NCSC),
- (4) The Subordinate Courts of Singapore,
- (5) The European Commission for the Efficiency of Justice (CEPEJ),
- (6) Spring Singapore, and
- (7) The World Bank (Hall, 2009).

Technology has a valuable role to play but on its own will not deliver significant benefits. In order to understand how technology plays a crucial role in an organisation, one needs to understand the underlying theories underpinning the concept of technology institutionalisation.

In this study, the author decided to incorporate a number of related theories to form the basis of this research, since there is no one theory that would provide all-arching support for an entire organisation. Each theory has issues that in a complex system like a court of law, no one theory can completely explain

what happens in the court environment. It is a fact that ICT per se cannot solve all current challenges; however, it can offersolutions to the many problems that confront the judiciary (Ibarrola & Liz, 2012).

### **Electronic Court Management System in Malaysia**

E-court was initiated during 2002 but it cannot proceed further due to mismanagement, poor guidance, lack of finance and execution issues. E-court project covers "Electronic Filing System (EFS), Queue Management System (QMS), Case Management System (CMS), Court Recording and Transcribing (CRT) and video conferencing". E-Court of Malaysia works in supervision of "Legal Affairs Division (BHEUU)".

BHEUU monitor and supervise e-court system and also administer financial issues. Project is alienated into four stages summarize in "Court's ICT Strategic Plan (ISP)" during 4th July 2003 in Malaysia. E-Court was developed during 27th, Sep 2004 through 3rd party "Solsis (Malaysia) Pte. Ltd", and "KPMG" was allocated as consultant.

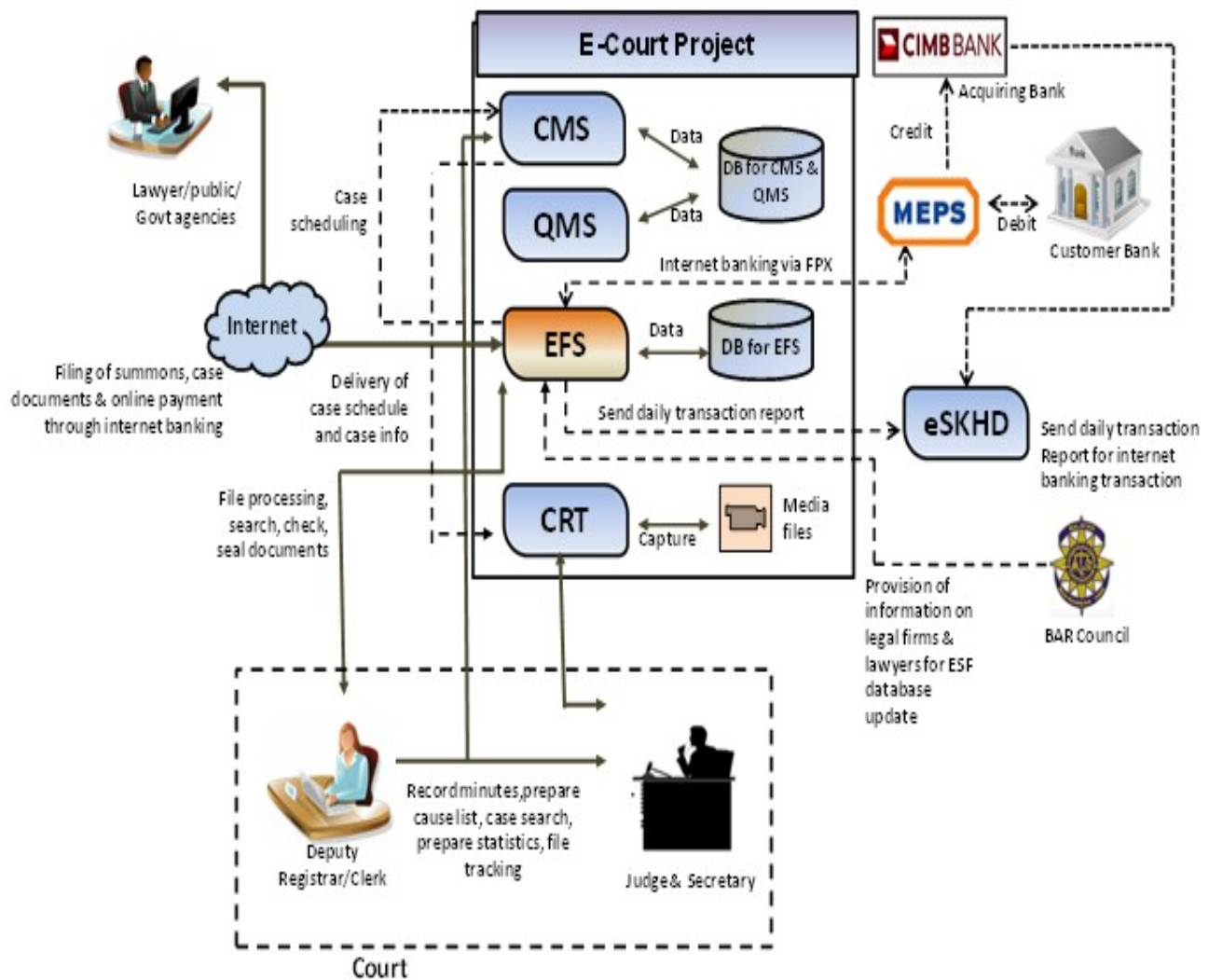
E-Court was put into operation in 11 courts and relocated towards Judiciary during 11th jan 2009 for proper operation. Full Range project consist of Court Recording & Transcription System (CRT), Case Management System, E-Filing System (EFS), development of Data Centre and Data Recovery Center (DRC) and ICT education of Courts' members.

Ministry of finance approved project and implementation task was forwarded to "Sarawak Information System Pte. Ltd". Importance of project (discussed above) is equivalent to west Malaysia project. This project finished during December 2010 (EGCOM Annual Report, 2010). Current study analyzes e-court of west Malaysia.

E-Court project consists of online case filing to avoid paper work, reliable and instantaneous availability of files, evade fake documents and storage accumulation.

The four applications in the civil court electronic systems are; "Electronic Filing System (EFS), Case Management System (CMS), Queue Management System (QMS) and Court Recording and Transcribing (CRT)". Full description of all system is depicted below;

**FIGURE 1**  
e-Court System



After incorporation of E-Court, an “electronic network and communication” between E courts are established. The technologies in place in courts in the E-Court scheme consist of four components as follows.

**Risk Management Policy in Malaysia**

In Malaysia, the risk management standard is based on ISO standard which is ISO 31000:2009, Risk Management Principles and Guidelines. It provides principles and generic guidelines on how the organizations should apply risk management on their records. It can be used by any public, private or community enterprise, association, group or individual and not specific to any industry or sector. Besides, this standard can be implemented throughout the life of an organization, and to broad range of activities, including strategies and decisions, operations, processes, functions, projects, products, services and assets.

Even though the standard provides vague guidelines, the design and implementation of risk management plans and framework will need to take into account based on the needs of specific organizations. Based on their particular objectives, context, operations, structure, functions, projects, products, services or assets and specific practices employed. It is because the standard is not intended to promote uniformity of risk management across organizations but, it is developed to harmonize risk management processes in existing and future standards. It does not replace current standard but act as a supporter and provides a common approach in dealing with specific risk in the organizations.

Besides, to strengthen the existing standard, several guidelines have been applied throughout the organizations in Malaysia for example Guidelines for Hazard Identification, Risk Assessment and Risk Control (HIRARC). This guideline has become

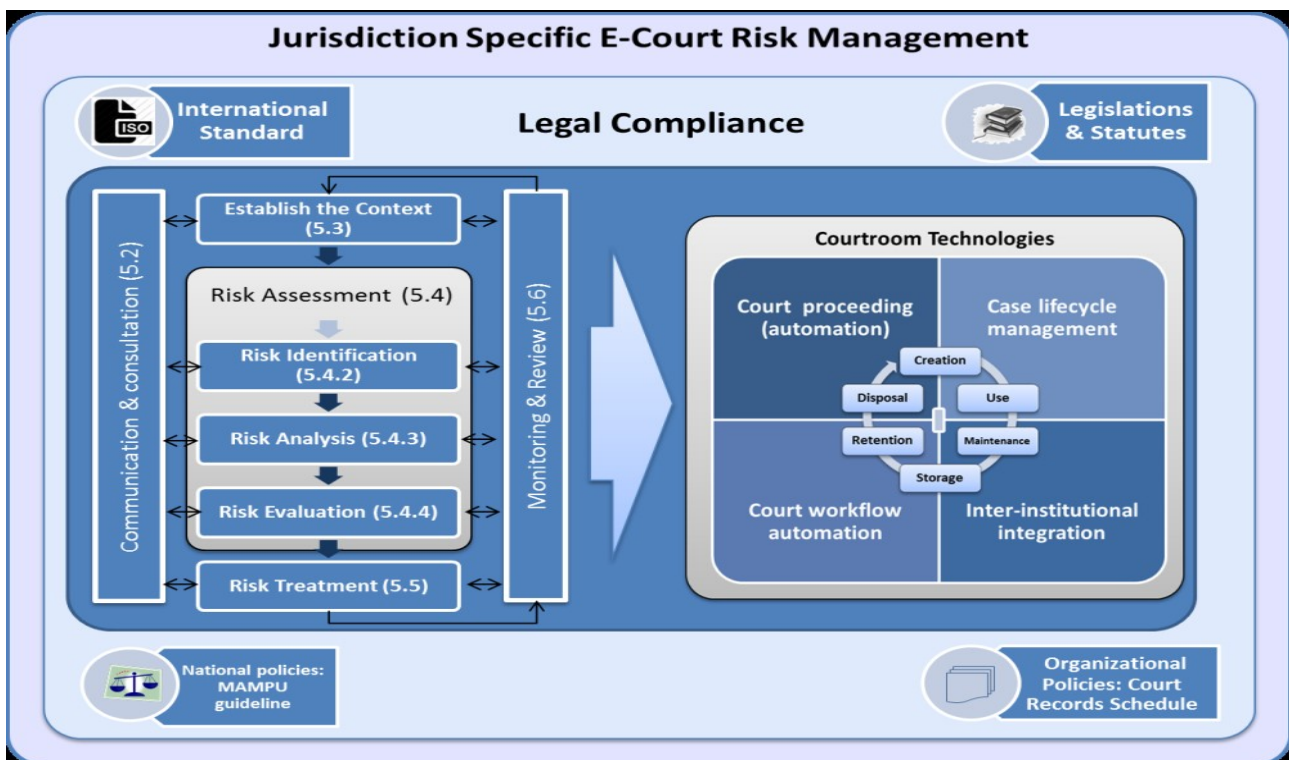
fundamental to the practices of planning, management and the operation of a business as a basic of risk management. It is reported that the organizations that have carried out risk assessment at the work place have noted numerous changes in their working practices, they recognize substandard act and working condition as they develop and take necessary corrective action. Furthermore, the process of risk assessment should be continuous and should not be regarded as one-off exercise. All the corrective actions should be analyzed and documented to ensure that the corrective actions can become lesson learned.

Apart from that, to promote the awareness regarding risk management, in February 2015, Malaysia creates a partnership with the government of UK in capacity building instrument to counterdamages. The CARE-RISK: UK Malaysia collaboration employed capacity building rule to enhance flexibility of particular group to avoid damages. It is hoped that the collaboration of ideas from both countries through research will contribute to local and regional attempts to prevent impacts of disasters which can result in large scale devastation of assets including organizational records.

Talking about the judicial setting in Malaysia, the institutionalization of technologies in that field was adopted during 2009 whilst e-Court applications were implemented. Na-

tional Archives of Malaysia, The Malaysian Administrative Modernization & Management Planning Unit (MAMPU) and Malaysian Judiciary are in the process of developing standards of procedures for court management. According to Rusnah Johare in her paper; Trusting Court Records: Recordkeeping Functional Requirements Framework for the Superior Court of Malaysia (2012), the only available procedures and policies that are applicable for managing electronic records are Retention Schedule for Court Records (2010), ICT Security Policy (2009) and Classification of Civil Codes (2008). The policy is developed to identify the functions of electronic civil records which contain eleven functional requirements that have been analyzed. This is because there were no comprehensive electronic records management functions for courts along with the risk management of the particular system. All the systems for example The “Case Management System, Electronic Filing System, Queue Management System and Court Recording and Transcribing System” are employed to raise speed of case managing procedure. However, the research on judicial system in Malaysia showed that the this system is not accurate because e-court application were not peopely proceed according to rules of system. Figure 2 proposes “framework for sustainable electronic court record risk management”.

**FIGURE 2**  
A Framework for Sustainable Electronic Court Records Risk Management (Saman, 2015)





The framework consists of three layers. One layer keeps records of management risks & lifecycle. Second layer keeps record of court laws, policy of law and management system for sake enhancing domain sustainability and reducing risk. Third, the jurisdiction is specific to Malaysia because the former two layers are discussed in the light of Malaysian jurisdiction. This framework can be tested and applied in other jurisdiction to study the differences of understanding and practices E-Court risk management in each jurisdiction.

**Legal Issues in Electronic Court Records Management System**  
**Technology Use** In the beginning of its use, the CRT system was not applicable to the criminal courts. The Criminal Procedure Code does not provide the platform for the application of CRT for criminal cases. The Criminal Court was in the first instance unable to implement the ERMS in its criminal cases as the provision of the Criminal Procedure Code provides that recording of evidence must be in the Magistrate's handwriting. The Criminal Procedure Code (Revised 1999) Act 593, Section 266 provide: "In summons cases tried before a magistrate, the magistrate shall, as the examination of each witness proceeds, make a note of a substance of what the witness deposes, and such note shall be written by the magistrate with his own hand in legible handwriting and shall form part of the record." The problem is now resolved when the new Act (Act 1350, 2009) sections 272C & 272D under Chapter 25 was amended which allows note taking of court proceeding by mechanical means.

### **Technology Implementation**

This issue deals with IT capacity, hardware and software development. The judiciary has only 30 IT staff, where 15 of them are technicians responsible for maintaining hardware and the rest are responsible for programming, training and system analysis. They are all located in a central office in Putrajaya and are subjected to be transferred anywhere in the public sector. This situation needs review and serious modification. More IT staff members are needed who are able to be decentralized to other courts across the country. Courts also need to have permanent IT staff of their own. The IT agreements for initiating CMS do not cover source code transfer used for modification in applications. This is a serious mistake where a court needs to pay the vendor when any upgrading or improvement is done. Moreover, the vendor argued that the CMS is the company's intellectual property. This means that a corporation can advertise a modified version of system to other countries' judiciaries. Keeping in view weak points of current system, a court should consider its future strategies. These include, namely: whether to continue the present practice and continue the existing contract and reliance upon the vendor for future modifications, or

negotiate a transfer of the source code and build up a strong IT department to ensure it can manage the systems, or enhance ICT capacity so as to be able to develop its own applications, or, finally, work out a second generation of contracted software that includes the delivery of a source code.

Above all, any decision taken should be based on future management of ICT development. It should acknowledge infinite life of software and that many organizations normally change IT vendors and software or both in less than a decade. Software may last longer than computers, but in the IT environment, changes are constant.

### **ICT Infrastructure**

The problem of unsteady ICT infrastructure is a major problem in the effort of integrating information between and among courts and other government departments. This issue has been brought up by the Chief Justice of Malaysia to the attention of the Secretary-General of Malaysia during his visit to the Kuala Lumpur Court Complex on 23rd September 2010 (Malaysian Administrative Modernization and Management Planning Unit 2010a). There is a special change management program for court staff by MAMPU.

A proper network design is targeted in all new buildings built by BHEUU. Despite this problem, the E-Court project has been executed and any problem faced is tackled along the way. The IT team has a regular meeting every 2 weeks to report and solve any arising issues related to IT and networking, as well as appropriate legal compliance.

### **Change Management**

When adopting IT, change management aspect needs to be well taken care of. The end users need to be prepared to use the new technologies. It is hard for anybody who has been used to working in a traditional method for a long period of time to adopt changes easily. Training sessions need to be arranged to meet their needs. Addressing this issue, a judge respondent said:

"We can have a very expensive machine but you are not minding that. Alternatively you ask an interpreter whose job is to interpret some complicated thing; so, the efficiency is not there in all the courts. You will find one person very up to date with the system; you will find some people who are not. So there is no uniformity. This is one of the defects. This efficiency is nothing. It does not work. We have a system but then we do not have experts to deal with it. Who is actually running the system? Court interpreter? Secretary? We do not have specialized people who do it".

This paper discussed the vital role of technology in the implementation of court system by giving the current scenario of technology used in global perspective, followed by a case study focusing on the implementation and institutionalisation of technology in Malaysian courts. The discussion is leveraged with the insights into the proposed sustainable risk management framework for electronic court records management. The whole discussion on the case of Malaysia reflected that technology has not been fully institutionalised as yet. The major issues identified in this paper are legal and organizational issues of non-compliance with the existing legislations, network stability, ICT infrastructure and change management,. These issues posed

challenges that need to be tackled towards achieving the utmost benefit of technology implementation and institutionalisation in courts.

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