



TECHNICAL REPORT

REVISED FRAMEWORK FOR INTEGRATION OF ELECTRONIC DOCUMENT MANAGEMENT SYSTEMS AND ELECTRONIC RECORDS MANAGEMENT SYSTEMS.

November 6, 2006

ANSI/AIIM/ARMA TR48-2006

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Technical Report for Information and Image Management

Revised Framework for Integration of Electronic Document Management Systems and Electronic Records Management Systems

An ANSI Technical Report prepared by
AIIM and ARMA International

November 6, 2006

Abstract:

This technical report provides a revised framework for the integration of Electronic Document Management Systems (EDMS) and Electronic Records Management Systems (ERMS). This report deals with what is required for EDMS and ERMS to integrate and interoperate. Revisions consist principally of changes to the parts of Sections 7 and 9 pertaining to metadata.

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Foreword

Origins of the Committee and Shaping of the Report

The AIIM/ARMA Standards Committee on Integration of Electronic Document Management Systems (EDMS) and Electronic Records Management Systems (ERMS) Functional Requirements—known more commonly as Integrated EDMS/ERMS Functional Requirements or simply Integrated EDMS/ERMS—came into existence in 2002. At that time, interested parties in government, industry, and academia recognized the need to bridge the gap between EDMS and ERMS in a generalized manner. Functional requirements exist for electronic document management systems and for electronic records management systems. What had not existed were functional requirements for integrated EDMS/ERMS. Perceiving a growing need for such functional requirements, the interested parties petitioned the AIIM International Standards Board to establish a standards committee on functional requirements for integrated EDMS/ERMS. The AIIM Standards Board approved the proposal and the committee held its initial meeting on May 23, 2002.

The initial objective of the Committee was to produce a single set of integrated EDMS/ERMS functional requirements, those that must be shared in common between the two types of systems as well as those that are unique to each kind of system. Early discussions resulted in a consensus that attempting to produce a full-fledged standard for integrated EDMS/ERMS functional requirements was too ambitious a goal as a Committee starting point. Hence, the Committee revised its scope to produce a short-term AIIM framework publication reflecting the current state of thinking in the field about how best to integrate EDMS/ERMS before moving on to the longer-term initial goal of producing a standard. Also, the Committee chose to concentrate on EDMS rather than the full panoply of information management and knowledge management systems. The choice was motivated by a consensus that this course would simplify the short-term work and by the conviction that a large percentage of the records that an ERMS deals with originate in EDMS. The Committee also agreed to deliver a short-term product that would stimulate valuable discussion and contributions from other interested parties in the U.S. national and the international communities. Such discussion might lead to a more rigorous ANSI/AIIM standard and eventually to an international standard. The TR48-2004 technical report was the initial product of the AIIM/ARMA Integrated EDMS/ERMS Committee operating under its revised project scope. After the publication of TR48-2004, the Committee undertook further work on the metadata necessary for EDMS/ERMS integration. TR48-2006 incorporates the further work, which resulted in substantial changes to Section 7.3, Overview of Metadata, and Section 9, Metadata.

Industry Background

The historical development of the EDMS/ERMS field over the past decade shows that software vendors have had differing approaches to incorporating ERMS into EDMS and other enterprise applications.

- Some companies developed paper based RM systems to which ERMS functionality was added.
- Some companies developed EDMS systems to which ERMS functionality was added.
- Some companies provided ERMS software and toolkits for integrating ERMS with other applications.
- Some companies have recently developed fully integrated EDMS/ERMS by migrating EDMS or ERMS code into their original application.
- Some companies are now offering an ERMS model in which ERMS functionality is partially embedded in enterprise applications, while reserving some ERMS functionality for a metadata server.
- Some companies are now offering ERMS and EDMS as components of larger Enterprise Content Management systems that include other information content management applications.

Some software vendors that initially provided ERMS functionality and toolkits now offer sophisticated integration options that combine the functionality of both ERMS and EDMS. Over time some EDMS

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software vendors have purchased or developed ERMS software to actually create this level of integration between their two products. Another approach for ERMS integration incorporated some records management functionality into native applications while separating some records administration activities into a separate metadata server. Some vendors now offer ERMS and EDMS as components of Enterprise Content Management systems.

The above generalizations only loosely describe how companies move from one category to another over time as the field rapidly evolves. Mergers and acquisitions occurring in the industry further blur the lines, making it virtually impossible to characterize any specific company as dedicated to one approach over another.

Yet it is not too much to say that all industry software companies offering solutions to records management business processes are moving towards enabling customers to enjoy integrated EDMS/ERMS. Integration is moving towards a shared or federated repository approach and breaking down some of the traditional differences in functionality between ERMS and EDMS products. The shared/federated repository approach allows organizations to build a content management framework within a secure collaborative environment by leaving electronic records for longer term retention in the applications in which the records were created. This approach increases the potential value of the information held in the shared/federated repository by making it available for deployment in multiple enterprise applications.

This report is a living document that will evolve as others comment on its contents, as the industry continues to change, as integration experience is gained, and as business needs are assessed.

Suggestions for improvement of this technical report are welcome. They should be sent to Chairman, Standards Board, Association for Information and Image Management, 1100 Wayne Ave., Suite 1100, Silver Spring, MD, 20910.

This document was developed under the auspices of the Standards Board which approved it as an AIIM technical report. The Standards Board had the following members at the time it processed and approved this technical report:

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This technical report was prepared by the Integrated EDMS/ERMS Functional Requirements Committee, which had the following members:

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U.S. Department of Treasury
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EDS
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Information Technology Decisions
Westbrook Technologies
U.S. Mint, Dept. of Treasury
Millican & Associates
Office of the Comptroller of the Currency, U.S. Treasury Dept.
City of Toronto
National Archives and Records Administration
Independent Consultant
Department of Interior
Independent Consultant

Organization of the Report

Section 1 sets forth the scope of the report. Section 2 describes the purpose of the report and the audience for which it is intended. Sections 3 and 4 include references and acronyms and definitions. In Sections 5 and 6, the report defines, describes, and differentiates the two most common types of information systems used to manage electronic document-based information using current technology—Electronic Document Management and Electronic Records Management Systems. The report next treats the potential and necessity for integrating EDMS and ERMS, both from a business and technical view, so that an organization's information management systems can best serve their intended business and mission purposes.

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In Sections 7, 8, 9 and 10, the report presents a framework for integrating EDMS and ERMS systems. After a general discussion of integration issues, an Integrated EDMS/ERMS Top-Level Reference Model is presented, and described in detail. Finally, the report describes general approaches to implementing the model.

Annex A contains a bibliography of additional references for further information on the topics discussed in the report. Annex B combines into one table all the functional components detailed in Section 8 of the report and provides a checklist format for use in evaluating current or proposed systems.

Revised Framework for Integration of Electronic Document Management Systems and Electronic Records Management Systems

1 Scope

The scope of this report is a framework for the integration of Electronic Document Management Systems (EDMS) and Electronic Records Management Systems (ERMS). The report deals with what is required for EDMS and ERMS to integrate and interoperate. The report describes the integration framework in three key areas:

- Metadata Management – Unique and Common
- Functionality – Unique and Common
- Typical Implementation Approaches

EDMS and ERMS are key components in an enterprise's Information Management solution. At the time of printing, the term Enterprise Content Management (ECM) describes the full range of systems used to manage content regardless of application, electronic media, purpose, or audience. Key components of an ECM solution include:

- Electronic Document Management (EDMS)
- Electronic Records Management (ERMS)
- Imaging
- Workflow
- Collaboration
- Web Publishing
- Digital Asset Management (DAM)
- Electronic Forms Management (E-Forms)

Ideally, all components of an ECM solution will be integrated with the ERMS component as illustrated in Figure 1.

The committee decided to confine the scope of this Technical Report only to the integration of EDMS and ERMS plus workflow because EDMS are the most common and mature of all ECM components.

In practical terms, this also limited the scope of work for the committee and thereby shortened the time to deliver this report.

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Figure 1: ECM Components

(Source: ECM 101 poster, produced by AIIM International and DocuLabs)

Out of Scope

This Technical Report does not provide functional requirements for systems development. Any agency/organization developing an integrated EDMS/ERMS will need to address the regulatory environment in which it operates.

It is also important to understand other matters that are out of scope in this report. The following topics are *not* within the scope of this report.

- Specific integration requirements between ERMS and other non-EDMS components of the ECM environment.
- Specific integration requirements between one ERMS and another ERMS.
- Recommended specific technical standards.
- Recommended policy, procedure, or best practice.
- Any new technical standards.
- Specific technical architectures (example: client/server or N-tier).
- Archival management of records. The report reaches only to the point of transfer of records to archives.

In summary, the implementation approaches are general, high-level, and independent of technical implementation.

2 Purpose and Audience

The purpose of this technical report is to present a framework for integrating EDMS and ERMS.

The primary audience for this report is the policy and decision makers within an organization who deploy document-based information systems to meet *both* productivity *and* regulatory requirements. In typical organizations these may be Chief Information Officers, Chief Technology Officers, Chief Financial Officers, System Architects, and Business Analysts.

A secondary audience of Contracting Officers, System Developers, Systems Producers (e.g., software vendors), Industry Analysts, Records Managers, and End Users will also find this report useful.

3 References

The following documents are referred to directly in this report. Additional informative references are listed in the bibliography in Appendix A.

ISO 15836:2003, *Dublin Core Metadata Element Set*.
<<http://www.niso.org/standards/resources/Z39-85.pdf>>

Black Forest Group, *Requirements for Document Management Services across the Global Business Enterprise*, AIIM International, April 1999. Available from Techstreet:
<http://www.techstreet.com/cgi-bin/detail?product_id=224618>

Web Distributed Authoring and Versioning (WebDAV) SEARCH, Internet Engineering Task Force Draft (in development). <<http://greenbytes.de/tech/webdav/draft-reschke-webdav-search-latest.htm>>

DoD 5015.2-STD, *Design Criteria Standard for Electronic Records Management Software Applications*, June 19, 2002. <<http://jitc.fhu.disa.mil/recmgt/p50152s2.pdf>>

The Technical Reference Model (TRM), version 1.1, U.S. FEA Program Management Office, August 2003. <http://feapmo.gov/resources/fea_trm_release_document_rev_1.1.pdf>

ISO 15489-1, *Information and documentation – Records management – Part 1: General*

ISO/TR 15489-2, *Information and documentation – Records management – Part 2: Guidelines*

Model Requirements for the Management of Electronic Records (MoReq), IDA Programme of the European Commission, March 2001. <<http://ec.europa.eu/idabc/servlets/Doc?id=16847>>

Open Document Management API, Version 2.0, September 19, 1997.
<<http://www.infonuovo.com/odma/downloads/odma20.htm>>

Stein, Greg and Whitehead, Jim, *WebDAV Resources [website]*. <<http://www.webdav.org/>>

U.K. National Archives, *Requirements for Electronic Records Management Systems*, 4 parts, 2002-2005.
<<http://www.nationalarchives.gov.uk/electronicrecords/reqs2002/>>

WFMC-TC-1003, *The Workflow Reference Model*, version 1.1, Workflow Management Coalition (WfMC), January 19, 1995. <<http://www.wfmc.org/standards/docs/tc003v11.pdf>>

4 Acronyms and Definitions

This section defines terms and acronyms used in the report. The section incorporates by reference ANSI/AIIM TR2-1998, *Glossary of Document Technologies*. Additional related glossaries are included in the bibliography in Appendix A.

Application Program Interface

API

Interface between the application software and the application platform, across which services are provided. The API primarily supports application portability, but system and application interoperability are also supported by a communication. (ANSI/AIIM TR2-1998)

archive

A collection of records stored for preservation purposes.

Commercial-Off-the-Shelf

COTS

Common reference to a product that can be purchased from retail sources.

conversion

Process of changing records from one medium to another, or from one format to another. (ISO 15489)

document

Recorded information that can be treated as a unit. The term is employed here to include information in prose form plus maps, databases, technical drawings, audio and video objects, and other information content saved by a computer.

Document Management

DM

The management of documents in order to manage, control, locate, and retrieve information in a system.

Electronic Document Management

EDM

The electronic management of electronic documents contained in an information technology system, using computer equipment and software to manage, control, locate, and retrieve information in the electronic system.

Electronic Records Management

ERM

The electronic management of electronic and non-electronic records contained in an information technology system using computer equipment and software according to accepted principles and practices of records management.

enterprise

An organizational unit. The enterprise may be a government agency, business, or non-profit organization; and may be large, medium, or small in size.

Enterprise Content Management

ECM

The technologies, tools, and methods used to capture, manage, store, preserve, and deliver content across an enterprise.

information

Data and documents that have been given value through analysis, interpretation, or compilation in a meaningful form. (ANSI/AIIM TR2-1998)

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information technology

IT

The application of methods and scientific knowledge for the collection of information. IT is commonly associated with the use of electronic principles and devices for the development and implementation of electronic systems.

integration

The combination of several software applications such that data can be transferred from one application to others through a consistent interface so as to better coordinate tasks and merge information.

International Organization for Standardization

ISO

International agency for standardization in all fields, except electrical and electronic engineering.

life cycle

The course of developmental changes through which information or an information system passes from initial creation through mature uses to final disposition or replacement.

media refresh

The copying of the contents of a piece of media to fresh media (possibly using a different storage technology or density). (ISO 15489)

metadata

Data describing context, content, and structure of documents and records and their management through time. Literally, data about data.

middleware

The software that connects applications, allowing them to exchange data in a distributed computing system.

migration

Act of moving records from one system to another, while maintaining the record's authenticity, integrity, reliability, and usability. (ISO 15489)

preservation

Processes and operations involved in ensuring the technical and intellectual survival of authentic records through time. (ISO 15489)

record

Information created, received, and maintained as evidence or information created by an organization or person in pursuance of legal obligations or in the transaction of business. (ISO 15489)

Records Management

RM

The planning, controlling, directing, organizing, training, promoting, and other managerial activities involved with the creation, maintenance, use, and disposition of records in order to achieve adequate and proper documentation of organization and agency policies and transactions and the effective and economical management of the organization or agency operations.

Records Management Application

RMA

A software system that performs electronic records management according to an accepted ERMS standard.

reference model

An identification of the top level abstractions that underlie IT systems, defining common terminology and concepts that allow the architectures of existing and future systems to be described and compared. The reference model provides a conceptual and functional framework within which independent experts may proceed with discussions and agreements.

repository

A direct access device on which the electronic records and associated metadata are stored. Also a synonym for archive.

retention schedule

A description of classes or groups of records according to their archival value together with instructions for how long they should be maintained and whether they should ultimately be destroyed or transferred to an archive for permanent retention.

user interface

Software that allows users to interact with a computer.

vital records

Records identified as essential for the continuing conduct of an organization's business, including the recreation of its legal status and determining the rights and obligations of its stakeholders.

5 Overview of Electronic Document Management and Electronic Records Management Systems

This section describes:

- Electronic Document Management (EDMS) Systems (description and examples)
- Standards for EDMS Systems
- Electronic Records Management (ERMS) Systems (description and examples)
- Standards for ERMS Systems

5.1 Electronic Document Management Systems (EDMS)

An Electronic Document Management System (EDMS) is a set of software/hardware applications that electronically manages electronic documents contained in an information technology system, using computer equipment and software to manage, control, locate, and retrieve information in the electronic system. The focus of an EDMS is to support the processes of creating, editing, and reviewing work-in-progress documents.

EDMS can uniquely identify each individual document's versions, providing the ability to view, capture, maintain, and edit documents. Often EDMS can manage a variety of document types, including audio, video, hypertext markup language (HTML), Adobe Portable Document Format (PDF), and other file types. They also effectively provide the ability to reuse electronic information. On the debit side, EDMS do not effectively handle inactive business information whose maintenance and retention is required for legal and historical purposes. Maintenance and retention demands specific functions and facilities for classifying some documents as records. This is the reason why EDMS alone cannot ensure that an electronic version of information is the properly maintained record version. EDMS provide the immediate functionality required to manage non-record documents during daily use.

5.1.1 Typical EDMS Functions

Typical EDMS functions include:

- Check-in / check-out control from an electronic repository
- Integration with electronic document editing or capture applications
- Search / retrieval capabilities
- Access controls (security)
- History / audit trails

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- Document review and approval workflow

The EDMS can typically store many types of electronic documents.

5.1.2 Examples of EDMS

The following are examples of EDMS.

- Document management systems that interface to Office Automation systems and other editing packages (such as CAD systems or imaging systems) but provide a wider range of EDMS functions
- Correspondence management systems
- Email management systems
- Electronic forms systems
- Disclosure / Freedom of Information systems
- Case file management systems
- Customer relations management systems
- Computer assisted design/computer assisted manufacturing (CAD/CAM) systems

For additional information concerning functions commonly associated with EDMS, refer to Annex B, *Summary Comparison of EDMS and ERMS Activities*.

5.2 Standards for EDMS

The existence of ERMS standards allows knowing with some certitude what is meant by an ERMS. There is no such certainty with regard to what is meant by an EDMS. The Integrated EDMS/ERMS Committee was therefore in the position of attempting to integrate two kinds of systems, one with a relatively fixed set of functional requirements and the other with a more nebulous set. The committee has proceeded by surveying the literature and developing a descriptive set of functional requirements for an EDMS, including its components and terminology.

5.2.1 Open Document Management API (Application Program Interface)

The ODMA is a broad purpose tool that simplifies the integration and interoperability of common desktop applications with EDMS. Using ODMA, desktop applications access and manipulate documents carried in EDMS as easily as if they were residing in the locally accessible file system. ODMA is part of AIIM's DMware or Document Management Interoperability Exchange.

5.2.2 Web-based Distributed Authoring and Versioning

Web-based Distributed Authoring and Versioning (WebDAV) is a set of extensions to the HTTP protocol that allows users to collaboratively edit and manage files on remote web servers. Its goal is to complete the original vision of the World Wide Web as both a readable and writeable, collaborative medium. WebDAV is an Internet Engineering Task Force (IETF) working group. WebDAV has produced a network protocol for creating interoperable, collaborative applications.

The WebDAV working group has published the following products:

- A requirements document: "Requirements for a Distributed Authoring and Versioning Protocol for the World Wide Web," RFC 2291.
- A base protocol document: "HTTP Extensions for Distributed Authoring – WEBDAV," RFC 2518.

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- The ordered collections protocol: "Web Distributed Authoring and Versioning (WebDAV) Ordered Collections Protocol," RFC 3648.
- The access control protocol: "Web Distributed Authoring and Versioning (WebDAV) Access Control Protocol," RFC 3744.
- A quota specification: "Quota and Size Properties for Distributed Authoring and Versioning (DAV) Collections," RFC 4331.
- A redirect specification: "Web Distributed Authoring and Versioning (WebDAV) Redirect Reference Resources," RFC 4437.
- "Datatypes for Web Distributed Authoring and Versioning (WebDAV) Properties," RFC 4316 (approved as Experimental).

The DAV Searching and Locating (DASL) protocol was not approved by IETF but multiple implementations of the protocol exist. "Binding Extensions to Web Distributed Authoring and Versioning" is expected to be approved as an RFC in 2006.

5.2.3 Requirements for Document Management Services Across the Global Business Enterprise

In 1999, the Black Forest Group published *Requirements for Document Management Services Across the Global Business Enterprise*. The report "provides essential information for considering how enterprise document management services 'fit' within today's modern infrastructure computing environments." It sets forth the *Document Management Reference Model* and describes the role of document management standards using the reference model. In addition, the report provides enterprise document management functional requirements.

5.2.4 Dublin Core Metadata Initiative

The Dublin Core Metadata Initiative (DCMI) is an open forum engaged in the development of interoperable online metadata standards that support a broad range of purposes and business models. DCMI's activities include consensus-driven working groups, global workshops, conferences, standards liaison, and educational efforts to promote widespread acceptance of metadata standards and practices.

5.2.5 Workflow Management Coalition

The Workflow Management Coalition (WfMC) provides a common reference model for workflow management systems, identifying their characteristics, terminology, and components. The WfMC's mission is to promote and develop the use of workflow through the establishment of standards for software terminology, interoperability, and connectivity between workflow products. For document-centric workflow as opposed to process-centric workflow, the management of the documents is related to a particular business process and provides the access to document repositories for the retrieval, editing, and routing of those documents or even separate parts of the documents. In addition, the workflow object and associated attributes are treated as a document.

5.3 Electronic Records Management Systems (ERMS)

An Electronic Records Management System (ERMS) is a set of hardware/software applications that electronically manage electronic and non-electronic records contained in an information technology system according to accepted principles and practices of records management. The policy, rules, and approved retention schedules are developed by the organization and are based on the business activities of the organization.

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An ERMS provides an agency/organization with a vehicle for tracking the life cycle functions of electronic records from the point at which work-in-progress documents become records until final disposition (transfer to archives or destruction).

The goal of an ERMS is to manage the organization's records from cradle to grave by offering retention-relevant functionality to guarantee the preservation of official records over time.

5.3.1 Typical ERMS Functions

Typical ERMS functions include:

- Marking an electronic document as a read-only electronic record
- Protecting the record against modification or tampering
- Filing a record against an organizational file plan or taxonomy for categorization
- Marking records as vital records
- Assigning disposal (archival or destruction rules) to records
- Freezing and unfreezing disposal rules
- Applying access and security controls (security rules for electronic records may differ from the source electronic document in the EDMS)
- Executing disposal processing (usually an administrative function)
- Maintaining organizational/historical metadata that maintains the business context of the record in the case of organizational change
- History/audit trail

For additional information functions commonly associated with ERMS, refer to Annex B, *Summary Comparison of EDMS and ERMS Activities*.

5.3.2 Examples of ERMS

The applications software marketplace offers many products that perform as ERMS. Within the United States, many such products have undergone testing and certification that they comply with the U.S. Department of Defense standard DoD 5015.2-STD, *Design Criteria Standard for Electronic Records Management Applications*. Any product so certified will fulfill the functions enumerated in Section 5.3.1 above.

5.4 Standards and Guidelines for ERMS

While records management as a business practice/profession is relatively mature, only one widely accepted standard defines the field, ISO 15489 (see below). ERMS is younger and is dominated by one standard and two widely respected guidelines. In addition to those cited here, other governmental bodies have issued standards and guidelines in recent years. Australia, Germany, Italy, the Netherlands, Norway, New Zealand, South Africa, and Switzerland are among the countries that have done so. The Dublin Core Metadata Initiative (see Section 5.2.4) also applies to ERMS.

5.4.1 International Standard: Information and Documentation – Records Management (ISO 15489)

ISO 15489 is an international standard published in 2001 by the International Standards Organization to provide guidance on determining the responsibilities of organizations for records and records policies, procedures, systems, and processes. It applies to the management of records, in all formats or media, created or received by any public or private organization in the conduct of its activities, or any individual

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with a duty to create and maintain records. ISO 15489 provides guidance on the design and implementation of a records system, but does not include the management of archival records within archival institutions. Part 1 of the standard defines records management, and Part 2 provides implementation guidance.

5.4.2 U.S. Department of Defense Standard: Design Criteria Standard for Electronic Records Management Applications (DoD 5015.2-STD)

DoD 5015.2 was first published in 1997 to set forth mandatory baseline functional requirements for records management applications software for U.S. Department of Defense components in the implementation of their records management programs. The standard defines required system interfaces and search criteria to be supported by ERMS and non-mandatory features, and describes the minimum records management requirements that must be met, based on U.S. National Archives and Records Administration (NARA) regulations. DoD 5015.2 also identifies non-mandatory features that are deemed desirable for ERMS. Version 2 of the standard was published in June 2002 to incorporate requirements for security classification markings, access controls, declassification and downgrading instructions, and other issues. Version 3 of the standard is to be published in 2006.

5.4.3 United Kingdom National Archives

The UK National Archives specification, *Requirements for Electronic Records Management Systems*, was originally published in 1999 to form a baseline of generic functional requirements necessary for a credible electronic records management system. The 2002 revision was published as a three-part document. Part 1: *Functional Requirements* identifies the functional requirements for ERMS in two sections. Section A defines the core requirements for an ERMS in some detail. Part 2: *Metadata Standard* defines the core metadata elements referenced in Part 1. Part 3: *Reference Document* provides a glossary of terms, description of entities and their relationships, user roles, access control model, and example disposal schedules. Part 4: *Implementation Guidance* was added in 2004, and an Optional module, B.4: *Case management and workflow*, in 2005.

5.4.4 Model Requirements for the Management of Electronic Records (MoReq)

The Interchange of Data between Administrators (IDA) program of the European Commission sponsored the development of *Model Requirements for the Management of Electronic Records* or MoReq in 2000-2001. MoReq describes functional requirements for the management of electronic records by an ERMS. The specification was written to be equally applicable to public and private sector organizations that wish to introduce an ERMS or to assess the ERMS capability they currently have in place. Other closely related requirements, such as the electronic management of physical records (e.g. paper files and microfilm), are also addressed.

6 The Business Case for Integrated EDMS/ERMS

6.1 Introduction

The business decision to acquire or develop integrated EDMS/ERMS results from the need to ensure that documents in an EDMS that qualify as records will be designated as records and given the special treatment and protection records require.

To be able to capture electronic records for records management effectively and efficiently, a level of integration must exist between:

- a) document creation systems;
- b) document management/storage/retrieval systems (EDMS); and
- c) any final systems for capturing and managing records (ERMS).

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EDMS and ERMS functions overlap. EDMS and ERMS perform some functions unique to each and yet also perform other functions common to both. Both EDMS and ERMS must be able to retrieve, view, and print documents or records. Neither system's approach completely satisfies the need for full life cycle management of document based information. The merging of the functionality of the EDMS with the requirements of the ERMS provides for the reuse of electronic information and ensures the integrity and retention of the electronic records.

Enterprise software applications are typically weak in the areas of capturing actively created documents or email messages and any associated metadata that qualify any type of document as a record. Many enterprises lack thoroughly implemented policies and procedures governing websites, emails, engineering drawings, and other valuable electronic records. Addressing these issues takes IT managers beyond technical implementation details and into the challenge of analyzing an enterprise's business processes. Managing both documents and records requires education for IT managers, information content creators, and records managers who are often unfamiliar with one another's disciplines. They use common terms such as "document," "record," and "archive" with very different meanings. These professionals will need to grow toward sharing a common language when designing implementation strategies. Managers will find that the more attention given up-front to integration issues, the lower the corporate impact and higher the productivity gains from introducing EDMS/ERMS.

The overall value of integrating EDMS and ERMS, when considering the document creation applications from which records originate, will be to lower implementation costs long-term, assure that documents can be created productively, and preserve records according to official retention requirements.

6.2 Relation to Enterprise Architecture and Systems

Integrating EDMS/ERMS with other software application systems in which the enterprise has substantial investment and to which business units have become committed is crucial to smooth current operations and long-range IT planning. IT strategists must ask themselves how a prospective EDMS/ERMS will impact other valued existing systems and how much time and money will be needed to integrate a given EDMS/ERMS with enterprise-wide IT resources and systems.

Some organizations seek enterprise EDMS/ERMS solutions that optimize the systematic control, analysis, organization, and management of all information created, received, maintained, or used by the organization in the course of its activities. EDMS/ERMS is one integral part of the total information management architecture and can be integrated to fit seamlessly with the enterprise IT environment while supporting enterprise strategic goals and initiatives.

The U.S. Office of Management and Budget is constructing the *Federal Enterprise Architecture* (FEA), a business-based framework for U.S. Government-wide improvement, through a collection of interrelated "reference models" designed to facilitate cross-agency analysis and the identification of duplicative investments, gaps, and opportunities for collaboration within and across U.S. federal agencies. These models are:

- The *Performance Reference Model* is a standardized framework for measuring the performance of major IT investments and their contribution to program performance.
- The *Business Reference Model*, the first layer of the FEA, is the main viewpoint for the analysis of data, service components, and technology.
- The *Service Component Reference Model* is a business- and performance-driven functional framework that classifies Service Components with respect to how they support business and/or performance objectives.
- The *Data and Information Reference Model* describes at an aggregate level the data and information that support program and business line operations.