CONTINUING STUDY OF FEDERAL AGENCY RECORDKEEPING TECHNOLOGIES
2008

A Records Management Study Prepared by:

National Archives and Records Administration
National Records Management Program

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1.0   Executive Summary

On February 1, 2008, the National Archives and Records Administration (NARA) published the results of a 2007 study of Federal agencies who are implementing Records Management Application (RMA) software products to manage their electronic records.   The full 2007 RMA Study report can be found at (http://www.archives.gov/records-mgmt/resources/rma-study-07.pdf)

A follow up study was completed this year for three additional agencies:

Environmental Protection Agency (EPA)
U.S. Department of Defense, U.S. Navy
U.S. Department of the Treasury, Office of the Comptroller of the Currency (OCC)

Additionally, we conducted a study of one agency, **U.S. Department of Defense, Office of the Secretary of Defense (OSD)** that has implemented Electronic Archiving Software (EAS) technology for e-mail.

The results presented in this report have increased relevance in the current climate of Federal electronic records management. Congress, the public, and the media are paying special attention to what they perceive to be serious deficiencies in the way Federal agencies are maintaining their electronic records.

Agencies in this year's study employed a variety of strategies to achieve their own particular goals in acquiring and implementing recordkeeping technology:

- Upgrading the existing records management program including studying the variety of recordkeeping practices being used in business units, modifying existing written policies, and developing high-level, functional records control schedules;

- Carefully assembling technical and functional requirements for the system, using rigorous project and risk management planning to carry out the implementation, and running testing and pilot phases;

- Instituting "change management" to mitigate potential user resistance to change, coupled with providing intensive training and individual help to users to acclimate to the technology;

- Getting management to fully support the use of the technology for everyday recordkeeping;

- In most instances, overcoming user resistance through the use of business rules and structured processes to ease filing, and communicating the benefits of good recordkeeping.

There is no 'perfect' software solution for successfully managing electronic records, but there are more choices, and software products continue to evolve and become more robust. An RMA definitely offers compliant electronic recordkeeping, but it can be expensive to acquire, time consuming to prepare for and implement, requires user intervention to file records, and can be costly over the long haul for data migration and system upgrades. The newer Electronic Archiving Software (EAS) technology provides greater transparency to users, but EAS solutions are not (at this time) fully compliant with NARA and DoD requirements for life-cycle management.

Agencies who are considering RMA and EAS technologies can benefit from the experiences of the study agencies as described in this report. Additionally, this report provides a number of recommended guidance products and tools in Appendix D that should be consulted before starting any type of electronic recordkeeping initiative.

The lessons learned from those Federal offices that have "taken the plunge" will be important to those who someday may be legally compelled to acquire software. It is suggested that NARA regularly check with those agencies it has identified that are actively using RMAs (or other e-recordkeeping technologies) to obtain feedback, best practices, and additional lessons learned, and share these things with the rest of the Federal community.

2.0   Purpose and Methodology

One of the recommendations in the 2007 study was for NARA to further survey the use of technologies by Federal agencies; not just their records management applications, but any other technology that they use to store and search their electronic records and e-mail messages. The agencies studied in 2008 are all based in Washington, D.C., are positioned at department and agency levels, and most have significantly large employee populations located in headquarters and field offices.   This cross-section allowed NARA to document implementations of recordkeeping and e-mail archiving software on a larger scale in offices that direct the operations of the entire agency.

The agencies who participated in the 2008 study were chosen based on contacts with agency records officers by NARA staff in the course of scheduling and appraisal or other technical assistance activities. The study questionnaire (see **Appendix A**) was sent to each of the four national records officers of the study agencies to elicit factual information about the agency itself and the particular technology being used. In most cases, NARA staff also received demonstrations of the technology and performed on-site interviews to review the answers to the completed questionnaires. Follow up e-mail contacts and phone calls were made in order to validate the data collected from the questionnaires and interviews.

The reader will find useful information in Sections 4.0 and 5.0 which document the responses that each agency provided to the questionnaire. The NARA team did not attempt to further validate the information that was provided other than observing demonstrations of some of the software products.   The information appearing in these two sections was provided and approved by each of the study agencies and does not reflect NARA opinions. Each of these sections contains detailed background information on what products each agency chose, what problems they encountered, and what things they learned from their experience.

3.0   How the Technologies Work

The 2008 study examines the use of two different technologies being used by the agencies in the study: Records Management Applications (RMAs) and E-mail Archiving Software (EAS).

An RMA is a software system that performs electronic records management according to an accepted Electronic Records Management System (ERMS) standard. The U.S. Department of Defense, DoD 5015.2, Electronic Records Management Application Design Criteria Standard, serves as the required standard for DoD agencies, and versions 1, 2, and 3 of the standard have been recommended by NARA as a standard for other (non-DoD) agencies. Following are examples of how RMAs are used to facilitate electronic records management:

- Managing records from desktop applications where the electronic version of the record will be the recordkeeping copy;
- Maintaining electronic records in a format suitable for recordkeeping purposes;
- When automating a business process that necessitates the records to be collected, organized, and categorized to facilitate their retrieval, use, disposition, and preservation, including records generated in e-Government processes, if records management capabilities have not otherwise been built into the design of the system.

E-mail Archiving Software (EAS) generally refers to applications that remove e-mail from the mail server and administer it in a central location also known as an archive. Information technology professionals use the term "archiving" to mean the copying or transfer of files for storage. In general, these applications collect in a central repository the e-mail (which may include attachments, calendars, tasks lists, etc.) of some or all agency users. E-mail Archiving applications typically require little or no action on the part of the user to store the e-mail records. Once messages are stored, authorized users are able to search the repository.

NARA Bulletin 2008-05 addresses this technology and cautions agencies that there are recordkeeping issues associated with e-mail archiving applications. For one thing, these applications are not fully compliant with the DoD 5015.2 standard (any of the three versions). They perform some recordkeeping functions well (such as capturing metadata and allowing for robust searches) but other required functionalities are lacking, such as grouping related records and maintaining records in a usable format for their full lifespan. NARA recommends that agencies that use EAS as the only means of storing Federal records should do so *in conjunction with additional controls* that ensure compliance with Federal records management requirements.

4.0   Study Results – Agencies using RMAs

The following section is broken down by agency and summarizes the responses from the questionnaires and interviews.

4.1   Environmental Protection Agency (EPA): Study Results

Category	EPA Response
Agency Information	U.S. Environmental Protection Agency, National Records Management Program, MC-2822T, 1200 Pennsylvania Avenue, NW Washington, DC 20460 John Ellis, Records Officer
Product	EMC Documentum 5.3
RMA only or Hybrid	Content Management System including document and records management
No. Employees	Approximately 18,000 plus 5,000 onsite contractors (23,000 desktops)
No. Users	Approximately 9,500 currently
When Implemented	March 2007
Deployment	Enterprise-wide (still being rolled out in some regions)
DoD 5015.2 Compliance	DoD 5015.2, June 2002 version

Background

EPA leads the nation's environmental science, research, education and assessment efforts. The mission of the Environmental Protection Agency is to protect human health and the environment.

In 1997, EPA began developing requirements for a records management system. With a renewed effort in 2003, final requirements were completed. As the proposed functionality expanded to include document and content management, the system became known as the Enterprise Content Management System (ECMS). EPA used internal Agency records experts in early testing and incorporated user feedback during production. On a business unit level, the Office of Information Collection was used as a testing ground during the development of ECMS. The goal was to create a flexible, DoD 5015.2 compliant system ready for deployment by June of 2007. The presidential mandate issued in the aftermath of hurricanes Katrina and Rita in 2005 moved the management of e-mail to the forefront of the ECMS project. Under this mandate, EPA was charged with effectively gathering and capturing hurricane related records that

were contained in Agency e-mails. This resulted in rolling out ECMS in March of 2007 for e-mail records only. EPA intends to complete the deployment of ECMS for all remaining electronic records sometime in 2009. Although the prioritization of hurricane related records accelerated the necessity for ECMS, other factors included the large number of case files EPA creates and the frequency in which it is involved in litigation. This environment created the business need for ECMS to manage electronic records. The ECMS Coordination Committee (ECC) was established as a new governance board to oversee ECMS and explore additional capabilities of the system in the future. Funding for ECMS comes from all EPA Programs and Regions.

In seeking to implement an Enterprise Content Management System to all 23 of their programs and regions, EPA had a number of challenges:

- Existing Agency system architecture was inconsistent;
- EPA is a federated Agency with 13 programs and 10 regions tasked with different functions and often working independently of one another;
- No EPA standard for employee desktop layout;
- Documentum needed to be enhanced to accommodate EPA's use of Lotus Notes and Agency records requirements;
- In preparation for ECMS, 1,700 different file plans had to be gathered. (One for every business unit in EPA);
- A ten member team had to be created by the project management office (PMO) to work with each of the 23 organizations within EPA to act as ECMS liaisons and address change management issues.

Feedback

EPA achieved its main objective of standing up a system that met its e-mail requirements by June of 2007. Additional goals included teaching the staff to use ECMS, ensuring that EPA was meeting their recordkeeping requirements and reducing costs to the Agency. Although EPA did not establish pre-defined benchmarks to measure success, they had delivered a system that was up and available Agency-wide with some end-user flexibility available. From that point forward, the responsibility for implementation shifted to each organization, with particular responsibility on the records management staff within that organization. To accomplish this, a combination of general records management and ECMS specific training was provided to staff. EPA provided on-site training on records management and an introduction to ECMS at headquarters and in every region. In addition, open monthly meetings and online training tools

including user scenarios were also made available. The PMO assembles monthly reports on the number of individuals who have registered in the system and number of records saved per user and organization in ECMS to monitor use of the system. The goal now is to increase usage across the Agency. EPA reports that the average time to file a record in ECMS is 5 to 10 seconds. The system is designed so that filing a record can be accomplished in as few as three clicks for the user.

While the broader goals of the implementation date and providing training for ECMS remained the same over time, the technical goal for successfully implementing ECMS became more difficult. Along with resistance to change among the staff, EPA cites ongoing technical issues such as the lack of a standard desktop environment and the time intensive enhancement of Documentum as the biggest challenges to implementation.

Positive outcomes of the ECMS implementation:
- EPA began to capture e-mail records;
- Technological inconsistency across the Agency was identified;
- File Plans from each organization within EPA were obtained and verified;
- Staff and managers became more aware of records management requirements;
- Records management training needs were addressed.

Negative outcomes of the ECMS implementation:
- Staff resistance to change;
- ECMS viewed by some as more work;
- Hand-holding among 23 different organizations was difficult;
- Gathering 1,700 File Plans took a significant amount of time;
- Ongoing enhancement of the selected software posed delays.

Most useful information resources that made ECMS implementation successful:
- The system requirements as determined by EPA for selection of the tool.
- Internal records experts used for production, testing and user feedback.
- EPA's system integrator that acted as a consultant regarding DoD 5015.2 requirements and on the product itself.

ECMS Content

The use of ECMS is not currently mandatory at EPA. Staff members still have the option to print and file. Due to the voluntary, office-by-office method of

deployment it is difficult to determine the percentage of all Agency documents created and filed by users into ECMS. EPA believes they are still in the early stages of ECMS and no numbers were captured previously for comparison. EPA tracks the number of e-mail records saved in ECMS by organization and individual on a monthly basis. This information is documented in the monthly reports on system usage. Users are advised to focus on the filing of mission related material into ECMS.

Category	EPA Response
Volume	64,000 records captured as of 08/07/08; percentage of overall volume unknown.
Formats	E-mail messages and attachments only at this time. Other formats will come later. Plans are to capture all e-record formats in FY 2009, and eventually track hard media and paper records. Unstructured data only – no database system records.
Metadata	Used Dublin Core metadata as a baseline; added two EPA-specific elements. 17 metadata elements ranked as mandatory, mandatory where applicable, and recommended but not mandatory. Creator, date, title, document type, and retention policy (from EPA schedules) are the five mandatory elements.
E-mail Management Process	Number of clicks to capture a message varies. The first time you log into ECMS at the beginning of the day, you have to enter the normal security settings (user ID and password, etc.). From then on, it takes about three mouse clicks to file a message including populating metadata. About 5-10 seconds. Intuitive. Use of common folders. 1,200 EPA series are loaded into the system. There is a "favorites" feature for commonly-selected folders. Methods exist for filing sensitive documents. User selects a folder (which assigns the retention policy) when he/she saves an e-mail record. Profile comes up. Attachments must be saved with messages. There is no YES/NO Capture Prompt in Documentum though there is a "SEND and SAVE" option. They trust the users to deliberately go back and save sent and received e-mail records into the ECMS repository. Can save messages from any part of Lotus Notes – inbox, sent box, etc. You can bulk file messages but they all have to be under the same disposition series.
Actual Use of ECMS for E-mail Management	Some organizations have either not rolled out the ECMS yet, or have users who have been slow to enroll in the use of the system. ECMS is not mandatory in all organizations – it is an office-by-office decision. Those not using it are expected to print their e-mail records. Where organizations are mandating ECMS, they do believe people are using the system to file messages and are being selective, filing mission-related messages as records. Those not using ECMS are keeping messages in Lotus Notes, which for EPA, has no settings for auto-deletion of messages after a certain period of time. Messages can stay in Lotus Notes "forever" if people choose, although those in headquarters programs are archived after one year. There is a lack of pressure from senior management to enforce records requirements and push

	the use of ECMS. The technology issues (inconsistent desktop architectures) and lack of a mandate for the software are resulting in the mixed-use situation in EPA organizations.
E-mail Export Formats	Lotus Notes e-mail message formats only at this time. Planned formats for exporting and transferring permanent records to NARA: XML (for the messages) and Adobe (PDF) for the messages and attachments.
Other	No plans to eventually switch to another e-mail system from Lotus Notes

Technical Aspects of the Implementation

The Superfund Document Management System (SDMS) and Correspondence Management System (CMS) are examples of current systems that EPA plans to integrate with ECMS. Although SDMS and CMS will continue to be used as front end tools, the records will reside in the ECMS repository.

Along with some support from the Documentum vendor, the contracted software integrator was responsible for a great deal of the customization of Documentum. The full functionality of Documentum is not exposed to the general user community. System administrators and records management staff have access to expanded features within ECMS. For access security purposes, the Identity Self Service (ISS) system was built as the vehicle to identify organizational staff and user profiles within the Agency. ISS is a Documentum workflow that allows users to request access to a particular portion of an organization's file plan, which that organization's supervisor must approve. No auto-categorization feature is enabled for e-mail records, but some "content intelligence" services are available, and will be used for the Web CMS project. While there are some stand alone scanning projects in operation at EPA, they are not linked to the ECMS records application at this time. A few EPA offices are currently using Versatile® software to track their non-electronic records.

EPA reported that ECMS had a heavy impact on both its IT infrastructure and staff. The staff at EPA's National Computer Center (NCC) in North Carolina spent many hours supporting the installation effort as well as the migration of data into ECMS. Also, sending e-mail messages to the NCC via EPA's LAN/WAN infrastructure has added significantly to existing network traffic. Finally, EPA is currently using Documentum 5.3 and testing 6.5.

Staffing

System administrators, records management staff and IT specialists, including both Federal and contractor personnel, are all necessary to operate ECMS. EPA

established the ECMS Coordination Committee to assure that emerging technology and standards are used. This committee is comprised of staff members from across the Agency. With approval of the ECC, a subgroup, the Metadata Taxonomy and XML Workgroup develop, coordinate and maintain taxonomies and metadata for records, naming conventions and controlled vocabularies. The PMO developed communication templates to address change management as the ECMS E-mail application was rolled out. In addition, regular communications regarding ECMS status and other information are sent out by the ECMS PMO to all programs and regions.

In preparation for the implementation of ECMS, records management staff were required to have either a Certified Records Manager (CRM) certification or certification from NARA for completion of its five Knowledge Area records management workshops. EPA provided onsite instructor-led training in all of their regions. These sessions were videotaped and streamed on the intranet. In addition, the PMO conducts ninety minute training sessions online on a weekly basis. Records training staff have instituted a simple approach to instruction by creating online comic books on various records management subjects such as records schedules and file plans.

Lessons Learned

1. It is necessary to clarify records management policies when guidance is established for users in order to ensure the completeness of the official record.
2. Survey the variety of recordkeeping practices being used in Agency organizations; they are often different in each office.
3. Determine the level of competency of potential users.
4. "Translate" paper-based records policies to electronic processes (such as collaboration and electronic supervisory review).
5. Modify existing written policies to ensure they are media neutral.
6. Institute "change management" to mitigate potential user resistance to change, especially if the organizational culture has been heavily reliant on traditional paper processes.
7. Ensure use of the system is in conformance with or enhances the ability to conduct the organization's mission.
8. Include a variety of users in the testing and pilot phases.
9. Engage the policy staff earlier in the process when reviewing the differences between electronic and traditional program documentation.

10. Look to in-house information resources to support the initiative: end-users, Document Management Applications Support staff, and the vendor's software engineers (who helped EPA to integrate the DM and RM modules and adapt the product to Agency business practices).
11. When developing the requirements, focus on the usability and configurability of the system. How flexible is it?
12. Will the system allow for cost effective modification over time?
13. Begin with a small pilot when implementing to gather user feedback and make adjustments prior to Agency-wide rollout. A small pilot containment approach may reduce the amount of resources required to make adjustments to the system and reduces the impact of negative user perceptions before full implementation.

4.2   Office of Comptroller of the Currency (OCC): Study Results

Category	OCC Response
Agency	U.S. Department of the Treasury, Office of the Comptroller of the Currency, 250 E St, SW Washington, DC 20219 Susan Sallaway, Records Officer
Product	Open Text - Workflow and Information System and Document Manager (WISDM), E-Docs Version (V) 6.04, CU2.
RMA only or Hybrid	The product is a Hybrid EDMS/ERMS
No. Users	There are approximately 650 users
No. Licenses	There are 3,000 licenses; there are approximately 650 full client users
When Implemented	Pilot July 2007/Live-full deployment occurred in September 2007
Deployment	Two business units: Large Bank Supervision (LBS) and the Records Management Program Office (RMPO), with plans for eventual enterprise-wide deployment.
DoD 5015.2 Compliance	This RMA is certified against the second version of the DOD 5015.2 standard.

Background

The Office of the Comptroller of the Currency (OCC) is part of the U.S. Department of the Treasury. OCC charters, regulates, and supervises national banks to ensure a safe, sound, and competitive banking system that supports the citizens, communities, and economy of the United States.

In seeking to implement a records management application, OCC defined the following "success factors":
- Provide a central electronic repository for OCC electronic records;
- Integrate a robust search and retrieval function that enables OCC users to search for electronic documents and records across the repository;
- Use metadata from the OCC taxonomy;
- Standardize recordkeeping processes;
- Document the business standards to maintain and enhance corporate knowledge;
- Deploy the RMA system in several phases; and
- Attain a return on its investment over time.

OCC creates a large number of case files, is involved in litigation on a routine basis, and it receives a high volume of FOIA requests. Its particular business needs include:
- A central electronic repository for OCC electronic records;
- An enterprise-wide records repository with a search and retrieval function that enables users to search for records using metadata across a single repository; and
- Standardized recordkeeping processes and documented business standards to maintain and enhance corporate knowledge.

A sound RM program was already in place. Organized under the OCC Office of Management, the RMPO consists of three senior records managers, a graduate student intern from the University of Maryland, College of Information Studies, and four RM contractors that staff the Central Records file room and retire and retrieve records. Administrative employees in business areas across the OCC are assigned some records management responsibilities along with other job duties. In addition to retiring records, as needed, they produce an annual file plan (formally called a Records Management Plan) for their business unit. The RMPO has high visibility in the OCC and serves on OCC information management working groups such as the Data Advisory Board and the Enterprise Taxonomy Working Group. OCC has a functional, comprehensive, media-neutral retention

schedule. It also has agency-wide RM policies, procedures manuals, a records management auditing program, and experienced, NARA-trained employees and contractors to provide guidance and assistance to OCC business areas.

OCC updated its RM policy to allow for the use of the RMA to manage records electronically, in lieu of printing and filing them. OCC established RM policies that easily integrated with the RMA and only required minor revisions. The RMPO will update current RM standard operating procedures (SOPs) to include RMA procedures.

Feedback

OCC evaluates its implementation in terms of People, Processes, and Technology:

People: There was very strong senior leadership support and their participation was crucial for the success of the project. There was also strong leadership and expertise at the project management level in the RMPO, Information Technology Services (ITS), and LBS business units. The strong leadership made appropriate resources available throughout the project, including several people with federal records management expertise.   The RMPO earned the respect and appreciation of senior management and employees, and forged new and ongoing partnerships with ITS, project managers, and business unit representatives. Another positive outcome was that some of the LBS and ITS staff members received exposure to records management theory, design, and application.

Processes: The project complied with industry-established procedures for project management, which include instituting an integrated master schedule, scope management, and weekly meetings to discuss schedule tasks and new issues. The Document Management/Records Management Application (DM/RMA) implementation also included robust change management and risk management initiatives.

Tools/Technologies: The DoD 5015.2 Standard was an important tool for the requirements development and design phase. Additionally, OCC file plans were crucial to configure the system. The OCC comprehensive records retention schedule, which was converted to a media-neutral schedule several years before, is functional, so the big buckets mapped easily to an RMA. The Records Management module project plan was well defined and served as a roadmap

throughout the tight project time line. Some of the tools and technologies that aided the OCC in the successful implementation of the DM/RMA include:

- An integrated DM and RMA deployment;
- Automatic integration with Microsoft MS Office applications;
- User-friendly software with a familiar MS Explorer look and feel;
- An automated process to easily install and rollout the system to remote users;
- Creating the WISDM Service Desk to trouble shoot any issues;
- Using Remedy to track defects and problems with the system;
- Using Clear Quest Test Manager for testing; and
- Using Rational Requisite Pro to manage and trace system requirements.

For those who are currently using it, the RMA fills the business need for compliant electronic document and records management, and improves access to information in the system. From a records management perspective, the RMA:

- Manages bank examination-related records and assists with long-term access to electronic records;
- Automates the records management functions;
- Applies existing records retention and records management policies to electronically stored records;
- Assists with providing timely electronic records responses to discovery or Congressional inquiry;
- Allows the suspension of relevant documents and records;
- Systematically disposes of final records in compliance with the OCC Comprehensive Records Retention Schedule; and
- Replaces paper-based recordkeeping systems.

The agency leveraged the DM and RMA systems to standardize and streamline its supervisory business processes, effectively increasing the security of electronic bank and supervisory documents and records, and improving collaboration and sharing between the community of examiners and supervisors.

The top three most useful information resources for the OCC implementation were:
1. An integrated master project management schedule;
2. Rational Requisite Pro that is used to manage the system requirements, including the DoD 5015.2 requirements; and

3. A SharePoint site that is used to share project team decision documentation, system documentation, meeting minutes, and deliverables, and to track change requests and system defects.

Information about RMA content:

Category	OCC Response
Volume	This varies by business unit, as the system is used differently to meet business needs. Some business units only file records, and do not use the DM functionality as much. Other users file the majority of documents created, even though only a percentage of these are appropriate for preservation as records.
Formats	The majority of the records that are saved or stored in the RMA are records created by Microsoft Office automation products including Outlook e-mail. Other types of records include JPEG, PDF, XML, and TIF files.
Metadata	There are seven elements of core metadata required for all documents and records: title, creator, document type, application, supervisory office, unit creating content, and document confidentiality. Additionally, the system automatically assigns a unique ID and captures the record date. The OCC plans to add a Federal Enterprise Architecture (FEA) Business Reference Model code element, which will be used to map the records to the FEA number. Unique metadata includes 'bank charter number', 'bank name', and 'consolidated company'. Certain documents require a more restricted classification code due to bank confidential information.
E-mail Management Process	So far, about 4% of the records in the system are e-mail messages. The RMA handles e-mail messages by allowing users to drag and drop e-mail messages into the system, at which point they receive a profile to enter metadata to file and categorize the messages. The RMA can also bulk-file e-mail messages. Depending on the amount of metadata, it takes about three clicks of the mouse to save an e-mail message. Users can set default features in the metadata to expedite the data entry process, and can file attachments either with the e-mail or save them as a separate record. There is no feature that asks the creator if they wish to declare a record before they send a message.
Actual Use of RMA for E-mail Management	In the two business units that have access to the system, most users are using the RMA to file e-mails as records. Filing e-mail messages as records in WISDM is not mandatory but those who use the system are being selective about which messages they file in the RMA. OCC ensures that staff receive training in using the RMA. The "drag and drop" feature and the ability to set default metadata to file e-mail messages in the RMA make it easy for users to file their e-mail messages in the system.
E-mail Export Formats	Users can export e-mail messages in the Rich Text format, Text Only format, Outlook Template format, Outlook Message format, Outlook Message Unicode format and the PDF format.
Other	The system does not manage records in multiple repositories and it does not

| | employ auto categorization technology based on 'rule engine' software. Only a small percentage of legacy scanned records were moved into the RMA. |

Technical Aspects of the Implementation

The implementation of the RMA increased the workload, staff, resources, hardware, and bandwidth requirements. It also required ITS to work with the business units on system auditing and performance requirements.

OCC used out-of-the-box functionality requiring little or no configuration. It only recently customized some of the Access Control List features of the software. The system interfaces with one legacy system for some of the record metadata, as well as Active Directory. Some existing electronic documents were imported into the system.

Concurrent to the DM/RMA implementation, there is an enterprise taxonomy baseline being established in the agency. There is also a Web and Electronic Publishing project underway at the OCC, as well as a system development project in its Bank Licensing unit.

The ITS department manages the system. Full time business unit representatives manage the system's business administration and content. The RMPO employees manage the records management administration functions of the system. The vendor provides a high level of technical support.

OCC rolled out the RMA in phases, first to a pilot group consisting of three large banks. Geography and bank size were factors in the selection process. Then, it rolled the RMA out to the LBS and RMPO business units. OCC rolled out the full functionality of three modules of the system (DM, RM, and Business Intelligence Reporting).   In deploying the RM module at the same time as its DM module OCC avoided major retrofitting.

Metadata requirements reflect enterprise requirements. The RMPO met with representatives of each business unit to gather and validate metadata requirements. The core metadata list was determined by the Enterprise Taxonomy Working Group. Business unit metadata was developed with focus groups from LBS.

Since OCC has a remote user community, the biggest challenge continues to be system performance and bandwidth. The ITS department is responsible for implementing the RMA to all users nationwide with the same system performance results. Ideally, OCC would build an appropriate enterprise architecture and infrastructure before deployment, or concurrently with the design and build of the RMA.

There are future plans for phased enterprise-wide deployment. Other plans include the integration with existing OCC software applications such as SharePoint. OCC plans to upgrade the RMA software as new versions become available.

Staffing

OCC hired more staff and contracted for additional technical assistance, hiring several individuals with Open Text expertise. OCC also contracted for a risk manager to support risk identification and tracking. WISDM project leads were responsible for overseeing project risks and identifying mitigation strategies for those risks.

Cross-functional OCC project leaders from LBS, RMPO, and ITS determined over time what project skill sets were needed to implement the RMA. The skill sets include:

- Federal government records management experience and training;
- OCC records management expertise;
- Advanced understanding of DoD 5015.2 requirements;
- Large Bank examination and supervision subject matter expertise;
- Requirements management expertise;
- Risk management expertise;
- System testing expertise;
- Configuration management expertise;
- Open Text DM and RM software and architecture technical expertise;
- Senior project management professional experience for managing large and complex project schedules;
- Senior program management experience;
- Contract management expertise; and
- Change management expertise.

There was, and continues to be, a strong change management program. A centralized management team was put in place to assure consistent results and the use of standards. Additionally, Independent Verification and Validation (IV&V) contractors were hired to review the project deliverables. The OCC implemented a Change Control Board (CCB) that reviews and approves all RMA changes. The Enterprise Taxonomy Working Group is comprised of representatives from all business units in the OCC.

The OCC developed reference guides for training and use during the implementation of the DM/RMA. The OCC has continued these efforts by developing SOPs and Frequently Asked Questions to aid customers and users of the RMA. End users received intensive two-day user interface training. System administrators, business administrators, and records administrators received software training.

The RMA implementation has enabled the RMPO to

- Manage records systematically;
- Apply internal controls consistently;
- Reduce the use of paper;
- Streamline business processes and SOPs;
- Increase the sharing of information;
- Improve collaboration; and
- Forge new and ongoing partnerships with ITS, project managers, and business unit representatives.

Lessons Learned:

1. Collaborate and build solid relationships, especially among key project leaders.
2. Adhere to the integrated project schedule and a structured methodology for system development.
3. Do not underestimate the amount of time required for planning.
4. To appropriately manage risk, clearly define procedures for escalating risks to stakeholders, and assess the impact of risks on schedule, costs, and product quality.
5. Technical and functional requirements should be specific, testable, and measurable. OCC built a manageable piece of the system, keeping the end-goal of enterprise-wide use in mind.

6. Be realistic about what is reasonable for the target user community to absorb.
7. New issues will continue to arise. Add them to the requirements management plan and then into ongoing development.
8. Unless you have a high-level, functional records control schedule, it will not easily map to an electronic RMA.

4.3 Navy: Study Results

Category	Navy Response
Agency Information	U.S. Department of the Defense, Department of the Navy, (DNS-5), 720 Kennon Street, SE, Building 36, Room 203, Washington Navy Yard, Washington, D.C. 20374-5074 Charley Barth, Records Officer
Product	TRIM Captura, TRIM Context 5.1 and 6.1
RMA only or Hybrid	Standalone RMA
No. Employees	Active Duty – 331,828; Navy Dept. Civilian Employees – 182,879
No. Users	10,000 at this time (400,000 user licenses)
When Implemented	Fall 2004
Deployment	Enterprise wide
DoD 5015.2 Compliance	DOD 5015.2, version 3, April 25, 2007

Background

The primary mission of the Department of the Navy is to protect the United States, as directed by the President or the Secretary of Defense, by the effective prosecution of war at sea including, with its Marine Corps component, the seizure of defense or advanced missile bases; to support, as required, the forces of all military departments of the United States; and to maintain freedom of the seas.

In seeking to implement a records management application to all its offices, the U.S. Navy faced a number challenges that it felt the RMA would address:

- Management of case-filed records across the agency;
- Ongoing compliance with its own requirements and those of outside agencies such as NARA;
- Addressing the need to examine and improve Navy business processes

- Improvement of recordkeeping to aid in legal support;
- Protecting sensitive information including Personally Identifiable Information (PII); and,
- Preserving the historical heritage of the agency.

Feedback

Navy reports that the integration of the RMA product has been a smooth and seamless effort with no problems reported. The TRIM software tool is easy to use requiring as few as one click to file a record. Training eased the transition to the RMA. Classroom and web based training were available for all in the command. Users need not have previous knowledge of records management or the TRIM interface to operate the system before training. Navy leadership supported the RMA, including funding to buy over 400,000 user licenses to accommodate the phased rollout of the software over time. Senior management support included three-star admiralty support and support from the Chief of Naval Operations. The Navy FOIA and Correspondence Management programs both saw improvement after the RMA was implemented. Navy took the time to perform business process reengineering for paper-based processes prior to implementing the RMA. The DoD 5015.2 standard, and the Secretary of the Navy instruction 5210.8D and Manual 5210.1 were all helpful resources.

TRIM RMA content:

Category	Navy Response
Volume	(No volume was provided for the number of e-documents in the TRIM repository.)
Formats	Word processing, spreadsheets, presentations, database files, imaged documents (.pdf, .jpeg, .tiff, etc.), project management files, and e-mail messages.
Metadata	Unique record number, title, and date created. Utilized DoD 5015.2 standard as a starting point.
E-mail Management Process	5% of all e-records are e-mail messages. Five to ten seconds to file a record; one click. Messages are captured into the RMA by "drag and drop" from multiple entry points. Messages can be bulk-loaded and source messages can be deleted after filing as directed by the respective naval command. Users so far have both filed attachments with the corresponding e-mail messages or have filed attachments separately.
Actual Use of RMA for E-mail	Navy has monitored the use of the RMA for e-mail and finds that users are being selective in what they choose to file.

Management	
E-mail Export Formats	Native Microsoft Outlook format (.msg) or .xml.
Other	No plans to migrate to another e-mail system from Microsoft Outlook

Technical Aspects of the Implementation

The largest impact of the RMA implementation on the Navy IT infrastructure was the purchase and installation of servers at distributed sites across the continental United States. There are forty-two unique "data set" repositories that reflect the forty-two major commands within the Department of the Navy. Navy decided to go with an off-the-shelf system that allowed for little customization and because of Navy's use of outside IT support contracts, the implementation did not have a major effect on any technical staff.

The level of customization was minimal; 99% of the TRIM system is out of the box functionality. Since there were no legacy RMA systems in place at the Navy, the agency started from scratch. The implementation of the RMA was a major focus of the agency because it had no parallel IT projects taking place at the time the RMA was being planned, tested, and implemented. The system vendor played a large part in the implementation and the ongoing success of the TRIM system by providing extensive help and technical support.

Obtaining a new version of the software and all upgrades are through Navy's network provider who is contractually obligated to provide an upgrade on every other major revision of the software. Navy has already gone through one upgrade of the system.

Navy has used the full functionality of the system from the beginning. Product features are wide open for use in offices, based on core configuration, and software can be extended to other offices. Existing Navy records policies and management practices were imported into the RMA. For determining metadata requirements, the Navy used DoD STD 5015.2, v3, as a starting point. Additional requirements were driven by each Navy command. Stakeholders included Navy bureau CIO's, records managers, legal, IT staff, and action officers.

The Navy strategy and implementation plan for the RMA project were created through a six month detailed process using an Integrated Product Team (IPT). The IPT was made up of people from legal, records, CIO, IT, administrative backgrounds to develop the core configuration. Navy also hired an IT support

service contractor to help with implementation planning. Navy did not develop a strategy and implementation plan for scanning records into the RMA.

The RMA system was rolled out in phases, beginning with a pilot group, and is still being rolled out to a classified Navy network and smaller, subordinate commands. The feedback from the pilot group proved pivotal and most, if not all, of their recommendations were incorporated into the core configuration and larger implementation strategy. The functions involved in the pilots – FOIA, inspections, hotline investigations, audits, etc. - were selected by the customer based on their business need and compatibility with the solution.

Staffing

The system is currently managed by a systems administrator and the Navy Records Management staff. The skill sets required by staff and employees to implement the RMA were developed by asking contractors who had had previous experience in implementing records management software. These skill sets had been acquired by the contractors from on the job training. It was a bonus if contractors were found that had Navy, Marine Corps or Administrative experience.

Navy did implement "change management" and "communications" strategies prior to implementing the RMA. These consisted of a multi-tiered plan with e-mail, web and forum communications. Navy also utilized portal learning technologies to establish web based training for the masses. The agency incorporated site visits with classroom and "over the shoulder training" as well. It took advantage of Navy publications and magazines to promote "good news" stories as well.

The Navy records management unit administers, develops, coordinates and maintains enterprise taxonomies and metadata for records, naming conventions, controlled vocabularies and data definitions/controlled vocabulary. It does allow some flexibility to the forty-two major commands to implement different metadata and naming conventions for unique business processes. The records management group has developed certain best practice documents as a result of the RMA including documentation on managing e-mail, setting up an annual training program, and command instructions and RMA business rules for each unique command.

Agency records management personnel took part in setting goals and objectives, in assigning roles and responsibilities, in formalizing training, in developing RMA data business rules, in publishing processes, procedures, and handbooks, and in assigning RMA data stewardship roles and responsibilities. No centralized IT governance board for the RMA environment was established. Navy had every intention of doing so but there were so many areas to focus on that it had to prioritize.

The RMA implementation has had a positive impact on the Navy records management staff. It helps them do their jobs better and educates their staff on RM principles. The RMA gives them a tool and value-added product to offer their commands. No statistics have been maintained on the number of hours invested in the RMA implementation by staff position.

Lessons Learned

1. Set it up as a web-based, web-functional solution.
2. Tie in to war fighter community <u>before</u> implementation.
3. Find ways to resolve the "human acceptance" factor; show value of records management to the mission of the agency to get people on board with the RMA.
4. Ongoing vendor support is critical. They have to remain a component of your implementation strategy to be successful. You can also tap into their help desk support and user forums.
5. An IT governance board is a good idea if you have enough resources/time to devote to it.

5.0 Office of the Secretary of Defense (OSD): Study Results

Category	DoD—OSD Response
Agency Information	U.S Department of Defense, Office of the Secretary of Defense, Washington Headquarters Service, Directives & Records Division, 1155 Defense Pentagon, Washington, DC 20301-1155 Robert Storer, OSD Records Administrator
Product	Symantec Enterprise Vault v7.
RMA only or Hybrid	Not an RMA. E-mail Archiving System.
No. Employees	Approximately 10,000
No. Users	*6,200. (*1,000 more users to be added.)

When Implemented	2007
Deployment	Primarily the Washington, D.C. area.
DoD 5015.2 Compliance	*Not* a 5015.2-compliant product.

Background

The U.S. Department of Defense (DoD), Office of the Secretary of Defense (OSD) is the principal staff element of the Secretary of Defense in the exercise of policy development, planning, resource management, fiscal, and program evaluation responsibilities. OSD includes the immediate offices of the Secretary and Deputy Secretary of Defense, Under Secretaries of Defense, Director of Defense Research and Engineering, Assistant Secretaries of Defense, General Counsel, Director of Operational Test and Evaluation, Assistants to the Secretary of Defense, Director of Administration and Management, and such other staff offices as the Secretary establishes to assist in carrying out assigned responsibilities. The Executive Services Directorate/Washington Headquarters Services (ESD/WHS) provides comprehensive administrative management and graphics services to the Office of the Secretary of Defense including Records Management.

In 2006, ESD was asked to lead an Electronic Records Management (ERM) working group to analyze recurring issues within OSD regarding the preservation and retrieval of electronic mail. The workgroup found that:

- There is no existing e-mail storage and retrieval capability in the agency;
- Users of e-mail systems are not records managers; many have difficulty identifying e-mails of record value and/or lack appreciation for preserving records. Thus, an application that can automatically review, classify, and file e-mail is required to ensure information of record value is preserved;
- Existing commercial off-the-shelf ERM applications can support e-mail archiving and retrieval in OSD.

ESD Workgroup Recommendations:

- OSD should implement an ERM application for all electronic records, not just e-mail, by the end of FY 2009;
- Use an interim system with e-mail archiving and retrieval capability;
- Refine the functional requirements for an ERM application developed by the ERM working group;

- Participate in ERM product testing and evaluations; and develop a files disposition schedule to support ERM.

The Department of the Air Force's Boeing KC-767A Tanker Lease deal and its resulting investigation was a major catalyst for OSD CIO to set the overall objectives of the EVault solution. Also, Congressional requests identified search and retention problems. The OSD CIO specified these objectives for selecting an e-mail solution:

- Improve and facilitate individual user e-mail management
- Manage and eliminate personal storage (PST) files on the OSD network
- Improve investigative search request (ISR) capability
- Improve MS Exchange database sizes
- Improve records management by introducing and sustaining common modern technology for document control and searchable archives across OSD
- Have a searchable archive for messages
- Improve Key/Critical Processes by developing and implementing an improved ERM system across OSD by February 2009

Feedback

The system was attractive to OSD because of its transparency to the end user. EVault is set to archive e-mail older than 90 days. Therefore user intervention for filing messages is not required. The system helps distribute and reallocate disk storage. Since messages are automatically archived, users do not have to worry about deciding if each and every document is a record. The impression of the OSD CIO so far is that the system is user-friendly and runs smoothly behind the scenes for easy integration into daily business operations.

Information about E-mail Archiving System:

Category	DoD—OSD Response
Process	The Archive Trigger is the age at which e-mail data is to be archived. This 90-day timeframe is standard across all OSD components utilizing the EVault solution. Items being Archived: Messages, Notes, Posts out of user mailboxes and public folders. Every night EVault scans messages located in enabled mailboxes that are older than 90 days and copies them to the EVault. The system deletes the message from the e-mail system but leaves a "stub" which contains some of the message content and serves as a 'pointer' to the location of the full message that is stored in the EVault repository.

	For PST files, a Symantec wizard goes out and collects files with .pst extensions, figures out which user created the PST file, creates a stub in MS Outlook and a wizard copies the data from the PST files into the repository. All messages are indexed for full-text searching and quick results. The system re-indexes messages after they have been vaulted and attachments are linked to messages. No user intervention is required at all. All messages that are still in the e-mail system after 90 days are captured; records, both temporary and permanent, as well as non-records.
Retention	Retention time for captured messages is *still to be determined*. The retention time is the length of time before archived data is to be considered 'expired'. Right now, all messages are being kept indefinitely till further guidance is developed at the Department level. Users can set up sorting of messages using folders in MS Outlook but there is no data available on how many people are using Outlook folders
Searching	Allows retrievals for search, FOIA, and litigation. An add-on application to EVault called Discovery Accelerator provides a powerful yet fast and user-friendly interface for performing advanced searches against the archived data. Since the archived data is fully indexed, searches using a phrase or string of words can be performed against all mail data, including the content of attachments. Searching involves the use of criteria such as time/date/name/subject. FOIA and Litigation searches have been very successful; what used to take many people several days to search now takes hours or minutes using the system. The search screen offers much the same functionality as is found in Outlook's search utility but all vaulted messages are together (one search only is needed).
Readability	Messages and attachments older than a year are still readable into the future using this software.
E-mail Server Space Management	The core function of the Enterprise Vault Archiving application is to extract data from primary storage sources and relocate it to secondary storage. In this case, primary storage is comprised of Exchange e-mail databases. Some of these databases are growing quite large, causing an increase in their backup and restore times. This solution will reduce e-mail database sizes, thus improving their storage management.
Key Features	▪ Although there are still mailbox limits, EVault makes it easier for users to stay within the limits. ▪ Centralized management of e-mail content. ▪ Faster backup of MS Exchange servers and controlled recovery in the event of a disaster. ▪ Enables retrieval of e-mail content and corporate documents to meet legal and regulatory requirements.

Technical Aspects of the Implementation

Implementing the EVault was a major effort by the IT units. EVault Outlook client extensions were installed on the client desktops. The scope of PST migrations involved over five (5) terabytes of component PST files that were

already being stored on the network. Enterprise Vault has a PST migration utility that moves data from PST files to the corresponding mailbox archives, and leaves short-cuts in the mailbox to the archived data. Orphaned PST files were backed up via Enterprise tape backup and stored off-site. Additional information:

- The system was rolled out one component at a time
- Pilots of EVault were conducted in selected offices of the agency
- They do have an IT Governance Board
- The continuity of operations strategy is to run the system from remote locations in an emergency;
- OSD also contacted the U.S. Coast Guard, Navy-NCIS, and the Joint Chiefs of Staff about the EAS/ERMS technologies they were using

Staffing

The EVault is an OSD CIO e-mail solution. It is available only to those DoD organizations that have an osd.mil e-mail address. WHS does not have access to the system at this time. However, some DoD organizations that the WHS provides records management services for are able to access EVault. There are some cultural issues. Users have needed to get used to not using PST files any more. Also, there are slight differences in how they operate to which they have had to become accustomed; particularly the manner in which one forwards archived messages.

The system is also available to OSD telecommuters and other remote offices through the use of Virtual Private Networks (VPN) and Citrix. There was little training needed for staff members since they do not have to initiate filing actions. Overall the system has had a positive affect on staffing by helping employees keep their e-mail records in check.

Lesson Learned

The major lesson: have management take a harder line as far as implementing the system. Don't make it an option.

6.0 Analysis of Findings

This report describes four approaches to electronic recordkeeping by Federal agencies. Each of the agencies studied has committed itself to using technology to help achieve business and IT goals through RMA or EAS software solutions.

In the 2007 RMA Study, each of the agencies that were studied used different vendor software products from the others; the same was true in this year's study. This reinforces the notion that there are several strong products on the market and agencies are choosing ones that are a good "fit" to meet their needs financially, technically, and culturally. The software product itself is only part of the reason why an implementation succeeds; other factors, such as user acceptance, a strong records management program, user training, management support, etc. are equally important.

The willingness and/or capability of the computer user to initiate filing of electronic records using the software can spell the success or failure of the technology implementation. EPA, Navy, and OCC all rely on individual computer users to make filing decisions and perform data entry using their RMAs. E-mail and office automation documents are selectively declared and classified one-by-one, (unless bulk filing is used). Depending on the level of training provided to users and established business rules for filing, electronic "record" documents are being filed into the RMA repositories, and non-record electronic messages and documents are excluded from capture. The capture and declaration processes can take three clicks of the mouse (or more) per record, either at the point in time when the record is first created, or at a later time after the document has been stored in a shared drive or in an e-mail system "Sent" folder. Each of these three agencies offers ongoing training and technical support to aid users in recognizing records and operating the software to file records.

The DoD-OSD system, which is not an RMA but rather an E-mail Archiving System (EAS), automatically captures e-mail messages "behind the scenes," in a manner that is transparent to the employee. No user actions are needed as the system will pull in all existing messages to a repository after a set time frame: whether record or non-record; duplicate or original; official document or reference item; permanent, temporary, or transitory. No extra mouse clicks are required and the system promises a robust search engine. For now, all messages are being kept, regardless of record status or retention. This solution provides the means for removing individual users from the recordkeeping decision-

making process and allows them to focus on their job duties, freeing them from having to make filing decisions throughout their day for each e-mail message they send or receive. While this is particularly attractive for an agency with the large employee population of the Defense Department, it still presents a level of risk since no retention or disposition actions take place within the repository (at this time). However, OSD ultimately plans to obtain a DoD 5015.2-compliant software product to supplement e-mail archiving and retrieval.

Some of the agencies in the study worked to improve their existing records management programs **before** acquiring their software. Some also had significant numbers of individual records retention categories that they reduced to a smaller number through the use of flexible ("big bucket") scheduling. This resulted in fewer retention categories that their users have to consider when making filing decisions.

It is apparent from the background information provided by the agencies in the questionnaire responses that software technologies for e-recordkeeping are not quickly acquired and made available to all. Some of the study agencies took years to prepare themselves for electronic recordkeeping and took substantial time in selecting their software. In all cases it will take many months or even year(s) to completely implement the software agency wide.

Testing and piloting of the software aided the implementations of the four agencies. The pilots gave the agencies time to experiment with the software using a small, motivated test group that helped expose any "kinks" in the systems before the software was rolled out to a larger group.

The nature of the agency mission and its internal 'culture' were also critical factors in the smooth execution of some of the RMA projects. For example, OCC has narrowly focused programs that generate relatively few series that are structured case files. The RMA tool has become part of everyday OCC business processes where records management is embedded throughout OCC workflows. Making use of the RMA does not seem to constitute an additional burden on its staff, which already values the importance of thorough documentation and good recordkeeping.

Finally, more than one agency stressed the importance of senior management support for their technology implementations. Two agencies mentioned that although they received enough support to acquire their technologies, management in both agencies needed to be more forceful in requiring the use of

the software; otherwise people will consider it to be an option and may not take advantage of the benefits it offers.

APPENDIX A – Questionnaire

Records Management Application Study – FY 2008
Interview Questions for Agencies using RMAs

A. NARA Interviewer
name(s):_____
B. Date(s) of
Interview:_____
_____
C. Agency Information:
1. Name of
    Agency:_____
2. Location:_____
    _____
3. Point of Contact Name and
    Title:_____
4. Point of Contact Phone#/E-mail
    address:_____
5. May we see a demonstration of the
    RMA and observe its use in everyday
    agency operations?
6. May we call you with follow up
    questions?
7. Can we refer to your name and/or your
    agency's name in our final report?

**D. Records Management Application
(RMA) Information:**
1. What is the name of RMA product that
    you have implemented? (Vendor
    name[s], product name[s], and version.)
2. Is the product you are implementing a
    pure "RMA" or is it a hybrid
    EDMS/ERMS product, or part of a full
    Content Management (ECM) package?
3. Date implemented:
    _____
4. Scope of implementation:
    ☐   Enterprise-wide
    ☐   More than one site but not all
        sites
    ☐   Single site only (e.g.
        headquarters)
    ☐   Specific business units only
    ☐   Other
        (describe):_____
        _____
5. How many users? _____

6. How many <u>licenses</u> versus users?
    _____
7. How many <u>full client users</u> versus
    concurrent users? _____
8. Is the RMA certified against the DOD
    5015.2 standard? If so, which version of
    the standard?

E. Agency Feedback on RMA
1. On a scale of 1-10, how would you rate
    the <u>outcome</u> of your RMA
    implementation? (1-"poor" to 10-
    "outstanding"):_____
2. Can you explain why you think your
    agency has achieved a successful
    outcome from implementing your
    RMA?
3. Did you establish a set of pre-defined
    "success factors"? (If so, please provide
    a copy of your "success factors" list.)
4. Which of your pre-defined "success
    factors" have you met (so far)?
5. Did you find success in other areas you
    didn't originally consider?   Please
    describe.
6. What did you learn from the
    implementation? (From not meeting
    some success factors.)
    a. <u>Positive outcomes</u> of the RMA
        implementation.
    b. <u>Negative outcomes</u> of the RMA
        implementation.
    c. What was the <u>biggest challenge</u>
        you had to deal with regarding
        this implementation?
    d. What would you do differently
        now, based on what you
        learned from this
        implementation?
7. What were the top three most useful
    information resources used to make
    your RMA implementation a success?
8. On average, how long does it take (in
    seconds) a user to file a record in the
    RMA?

F. RMA Content related:
1. What <u>percentage</u> of documents that are
created by agency users actually get filed in
your RMA?
2. What kinds of electronic records are filed
in the RMA?
    ☐   Word Processing

- □ Spreadsheets
- □ Presentations
- □ Database files
- □ Imaged documents (PDF, JPEG, TIF, etc.)
- □ Digital Photographs
- □ Desktop Publishing Files
- □ Project Management Files
- □ Other (describe):_____

3. What standard metadata is applied to all records saved to the RMA, including metadata that is unique to your agency?

4. What percentage of all electronic documents created in agency offices are <u>e-mail messages</u>?

5. **Is the RMA used to manage e-mail messages** that are records? *[If your answer is NO, skip questions 6-15 below.]*

6. Describe the method(s) used to file e-mail messages into the RMA:
    a. Are users prompted by a message screen to file the e-mail in the RMA prior to sending it? **Y/N.**
    b. Are messages 'dragged/dropped' from e-mail folders into the RMA? **Y/N**
    c. Can the RMA bulk-file e-mail messages? **Y/N**
    d. Is the source e-mail message deleted once the message is filed into the RMA? **Y/N**
    e. How many clicks of the mouse does it take to file a message (on average)?__
    f. How are attachments filed?
        - □ With the message
        - □ Filed separately
        - □ Both ways, depending
        - □ Not filed at all

7. Is use of the RMA <u>mandatory</u> for filing record e-mail messages? **Y/N**

8. Have you verified whether or not users are actually <u>filing</u> "record" e-mail messages into the RMA? **Y/N** □Some users □Most users

9. For those who are using the RMA to file messages, have you determined if they are filing everything (any and all messages), or, are they being <u>selective</u> (using established 'record' criteria)?

10. For those who are not using the RMA (or any other electronic system) for

filing e-mails, <u>where</u> are the messages being filed and <u>how</u> are they being disposed of?

11. Have you been able to determine why some are not using the RMA for filing messages?

12. Have you worked out any strategies and shortcuts that make it easier for people to file E-mail messages in the RMA? If so, what are they?

13. Were there any problems integrating the RMA product with the existing (Microsoft, Lotus, Novell, etc.) e-mail application?

14. Are you planning to switch to a <u>different e-mail system</u> in the future (e.g. go from Lotus to MS Outlook) and if so, will the new system integrate with your present RMA?

15. Which export formats (and versions) does the RMA support for e-mail messages?

16. If you are not using the RMA for filing e-mail, is some <u>other electronic technology</u> (e.g. E-mail Archiving software) being used to manage e-mail messages? (Please describe.)

G. Technical:
1. What impact did the RMA implementation have on your IT infrastructure?
2. What impact did the RMA implementation have on your IT staff?
3. What level of customization was required for the RMA?
4. How were legacy systems (if any) accounted for when planning for the RMA system?
5. Were other <u>parallel</u> IT projects taking place within the agency?
6. What level of technical support did the RMA vendor provide? Future vendor support?
7. Who manages the system currently?
    - □ System administrator
    - □ Records manager
    - □ IT specialist
    - □ Other positions
    - □ Government employees
    - □ Contracted support

8. Was the RMA system rolled out in phases or all at once?
9. If the system was first rolled out to a pilot group, how was their feedback incorporated into the final system?
10. Have you used the <u>full</u> functionality of the system from the beginning or were system functionalities rolled out incrementally? Are certain RMA system features not "turned on"? If so, which ones and why did you choose not to activate them?
11. Does the system manage records in multiple repositories? (That is, you are using a 'federated' architecture where records are physically maintained on individual servers at various agency locations instead of on a single central server at headquarters.)
12. Does the system employ <u>auto-categorization</u> technology based on 'rule engine' software?

H. Front-end activities (pre-RMA):
1. What level of senior management support did you receive?
2. What were the motivating factors for implementing the RMA software?
   - ☐ Create a large number of case files
   - ☐ Compliance with agency or other requirements
   - ☐ Routinely involved in litigation
   - ☐ High volume of FOIA requests are received on a regular basis
   - ☐ Particular business needs
   - ☐ Other (describe):
   - ☐ Comments -
     _____
3. Did you have a sound records management program already in place? Describe.
4. Did you pilot the RMA software before it was fully implemented? How was the pilot run?
5. Which business unit were included in the pilot and how were they selected?

6. Were records policies and management practices changed to accommodate the RMA? If so, how?
7. How did you determine what your metadata requirements would be? What stakeholders were involved?
8. How did you determine what skill sets would be needed to implement the RMA? What skill sets did you end up using to implement the RMA?
9. Did you consider any <u>alternatives</u> to acquiring an RMA to resolve electronic recordkeeping needs? For example, developing an in-house solution, obtaining a less-robust/less expensive COTS product, incorporating Records Management Service Components into your systems, e-mail archiving software etc. Please explain.
10. How did you develop a strategy and implementation plan for the RMA project?
11. Did you develop a strategy and implementation plan for **scanning** records into the RMA?
12. Did you implement any kind of "change management" and "communications" strategies prior to implementing the RMA? Please describe.
13. Did you participate in (select all that apply):
   - ☐ Setting goals and objectives
   - ☐ Measuring effectiveness
   - ☐ Assigning roles and responsibilities
   - ☐ Automating the RMA data Quality Assurance/Quality Control
   - ☐ Formalizing training
   - ☐ Develop RMA data business rules
   - ☐ Publish processes, procedures, and handbooks
   - ☐ Assign RMA data stewardship roles and responsibilities
14. Have you implemented a centralized IT governance board for the RMA environment to assure the emerging technology and standards are used?

15. Who within your organization administers, develops, coordinates and maintains enterprise taxonomies and metadata for records, naming conventions, controlled vocabularies and an unambiguous and comprehensive set of data definitions/controlled vocabulary?

NOTE: If you have any sample documentation that you feel illustrates a sound practice (developed for your RMA implementation), can you provide it for the Study report? For example, 'quick guides to identifying records,' 'business rules for filing into the RMA,' etc.

I. Implementation and Post-Implementation:
1. What are you future plans for extending the software to other offices (if applicable) or obtaining a new version of the software?

2. Do you plan to upgrade the software as new versions become available?
3. What type of training was provided to the end users and the system administrators as the RMA was being rolled out?
4. What impact has the RMA implementation had on your RM staff?
5. Did you keep track of and document the number of hours invested in the RMA implementation by staff position? Can you provide any statistics in this regard?
6. Have you actually validated the use and effectiveness of the RMA in managing your agency's electronic records? (Please describe.)

APPENDIX B – Glossary

Bandwidth	A computing term meaning a rate of data transfer, throughput or bit rate, measured in bits per second.
"Big Bucket" Schedule	A "big bucket" or large aggregation schedule is a type of *flexible schedule* (see below). Flexible scheduling using "big buckets" or large aggregations is an application of disposition instructions against a body of records grouped at a level of aggregation greater than the traditional file series or electronic system that can be along a specific program area, functional line, or business process. The goal of this type of flexible scheduling is to provide for the disposition of records at a level of aggregation that best supports the business needs of agencies, while ensuring the documentation necessary to protect legal rights and ensure government accountability. Big Bucket scheduling can also aid in electronic recordkeeping by presenting users with fewer retention categories choices for filing documents and e-mail messages.
Change Management	A structured approach to change in individuals, teams, and organizations.
Configuration	In communications or computer systems, a configuration is an arrangement of functional units according to their nature, number, and chief characteristics. Often, configuration pertains to the choice of hardware, software, firmware, and documentation. The configuration affects system function and performance.
Content Management	Techniques to set policies and supervise the creation, organization, access, and use of large quantities of information, especially in different formats and applications throughout an organization. Content management is often used to describe the management of websites, but in other instances refers to the management of all information across the whole of an enterprise.
Controlled Vocabulary	Controlled vocabularies provide a way to organize knowledge for subsequent retrieval. They are used in subject indexing schemes, subject headings, thesauri and taxonomies. Controlled vocabulary schemes mandate the use of predefined, authorized terms that have been pre-selected by the designer of the vocabulary, in contrast to natural language vocabularies, where there is no restriction on the vocabulary.
DoD 5015.2 Standard	A U.S. Department of Defense (DoD) standard that defines the basic requirements based on operational, legislative and legal needs that must be met by records management application (RMA) products acquired by the DoD and its Components.
Electronic Document Management System (EDMS)	Software that manages the creation, storage, and control of semi-structured documents. It consists of several technologies including, but not limited to document management, COLD (Computer Output to Laser Disk), imaging, and workflow.
Electronic Record	Any information that is recorded in a form that only a computer can process and that satisfies the definition of a record.
Electronic Records	Using automated techniques to manage records regardless of format.

Management (ERM)	Electronic records management is the broadest term that refers to electronically managing records on varied formats, be they electronic, paper, microform, etc.
E-mail Archiving Software (EAS)	Applications that remove e-mail from the mail server and manage it in a central location also known as an archive.
E-mail Management	Covers the entire lifecycle from capture, storage, retrieval, indexing, and archival in an efficient framework.
Enterprise Architecture	A framework for describing the relationship between business functions and the technologies and information that support them. Federal Agencies' major IT investments are aligned against each reference model within the Federal Enterprise Architecture framework.
File Plan	A plan designating the physical location(s) at which an agency's files are to be maintained, the specific types of files to be maintained there, and the organizational element(s) having custodial responsibility. Also: A document containing the identifying number, title or description, and disposition authority of files held in an office.
Flexible Scheduling	Flexible scheduling provides for concrete disposition instructions that may be applied to groupings of information and/or categories of records. Flexibility is in defining the record groupings, which can contain multiple records series and electronic systems. The difference from the traditional scheduling approach is that the unit to be scheduled is not the individual records series or an electronic system, but all records in all media relating to a work process, group of related work processes, or a broad program area to which the same length of retention should be applied.
FOIA	The Freedom of Information Act, or FOIA (5 U.S.C. 552, as amended), generally provides any person with the statutory right, enforceable in court, to obtain access to Government information in executive branch agency records.
Media-Neutral	A term used to describe a records series which is manifested in more that one format: paper, electronic, photographic, etc. In scheduling records, media-neutrality spares agencies from having to submit new schedules for most electronic records if the analogous paper records were previously scheduled. General Records Schedule 20 was revised in December 2007 to expand the authority agencies have to apply previously approved schedules to electronic records; grant broader authority to agencies to dispose of hard copy records that have been converted to an electronic format; and provide disposition instructions for ad hoc printouts and for documentation associated with permanent electronic records.
Metadata	Describes or specifies characteristics that need to be known about data in order to build information resources such as electronic recordkeeping systems and support records creators and users.
Naming Convention	A naming convention is a convention for naming things, such as records. The intent is to allow useful information to be deduced from the names based on regularities. Well-chosen naming conventions aid the casual user in navigating larger file structures.
Native Format	A native format, in the context of software applications, refers to the file format which the application works with during creation.

Network	The equipment and materials used to connect servers and terminals. Networks vary in size and may be described as a local area network (LAN) or a wide area network (WAN). The Internet is a network of networks.
Record	A unit of recorded information created, received, and maintained as evidence or information by an organization or person, in pursuance of legal obligations or in the transaction of business. Includes all books, papers, maps, photographs, machine readable materials, or other documentary materials, regardless of physical form or characteristics.
Records Management	The systematic and administrative control of records throughout their life cycle to ensure efficiency and economy in their creation, use, handling, control, maintenance, and disposition.
Records Management Application (RMA)	Records Management Application. The software used by an organization to manage its records. An RMAs primary management functions are categorizing and locating records and identifying records that are due for disposition. RMA software also stores, retrieves, and disposes of the electronic records that are stored in its repository. (DoD 5015.2)
Records Schedule	A type of disposition agreement developed by a Federal agency and approved by NARA that describes Federal records, establishes a period for their retention by the agency, and provides mandatory instructions for what to do with them when they are no longer needed for current Government business. The term refers to: (1) an SF 115, Request for Records Disposition Authority, which has been approved by NARA to authorize the disposition of Federal records; and (2) a General Records Schedule (GRS) issued by NARA.
Repository	A repository is a place where data is stored and maintained for future retrieval, such as in an RMA repository.
SharePoint	In computing, the Microsoft SharePoint products and technologies sold by Microsoft include browser-based collaboration and a document-management platform. It can be used to host web sites that access shared workspaces and documents, as well as specialized applications like wikis and blogs from a browser, and records management.
Taxonomy	Taxonomy is the practice and science of classification. Taxonomies, or taxonomic schemes, are composed of taxonomic units known as taxa (singular taxon), or kinds of things that are arranged frequently in a hierarchical structure. Typically they are related by subtype-supertype relationships, also called parent-child relationships.
Unstructured Data	Unstructured data (or unstructured information) refers to (usually) computerized information that either does not have a data structure nor has one that is not easily usable by a computer program. The term distinguishes such information from data stored in fielded form in databases or annotated (semantically tagged) in documents. Examples of "unstructured data" may include audio, video, and unstructured text such as the body of an e-mail message, Web page, or word processing document.
Workflow	A workflow is a depiction of a sequence of operations, declared as work of a person, work of a simple or complex mechanism, work of a group of

	persons, work of an organization of staff, or machines. Workflow may be seen as any abstraction of real work, segregated in work share, work split or whatever types of ordering. The term workflow is used in computer programming to capture and develop human to machine interaction.
	(Sources for Glossary are listed in Appendix C.)

APPENDIX C – References

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National Archives and Records Administration. (2008, September 10). NARA Bulletin 2008-07: Endorsement of DoD Electronic Records Management Applications (RMA) Design Criteria Standard, version 3. http://www.archives.gov/records-mgmt/bulletins/2008/2008-07.html

National Archives and Records Administration. (2008, July 31). NARA Bulletin 2008-05: Guidance Concerning The Use Of E-Mail Archiving Applications To Store E-Mail. http://www.archives.gov/records-mgmt/bulletins/2008/2008-05.html

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National Archives and Records Administration. NARA Glossary. http://www.archives.gov/era/about/glossary.doc

National Archives and Records Administration. (2006, June). Recommended Practice: Analysis of Lessons Learned for Enterprise-wide ERM Projects. http://www.archives.gov/records-mgmt/pdf/lessons-learned.pdf

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Office of the Comptroller of the Currency. (2008, May 6). WISDM Overview Presentation. http://www.archives.gov/records-mgmt/presentations/raco2008-sallaway.pdf

Society of American Archivists. 2005. SAA: A Glossary of Archival and Records Terminology. http://www.archivists.org/glossary/index.asp

U. S. Department of Defense. DoD 5015.2-STD: Electronic Records Management Software Applications Design Criteria Standard. http://jitc.fhu.disa.mil/recmgt/standards.html. (This site includes both version 2 [2002] and version 3 [2007] of the standard.)

Wikipedia: The Free Encyclopedia. http://en.wikipedia.org/wiki/Main_Page

APPENDIX D – Recommended Guidance

Association for Information and Image Management.   AIIM is the community
that provides education, research, and best practices to help organizations
find, control, and optimize their information. http://www.aiim.org/

Association for Information Management Professionals. ARMA International is
a not-for-profit professional association and the authority on managing
records and information – paper and electronic. http://www.arma.org/

Environmental Protection Agency. Records management home page is located
at http://www.epa.gov/records/.

Joint Interoperability Test Command Records Management Application (RMA):
Assistance to Agencies. JITC provides electronic records management
assistance on a fee for service basis in the areas of: developing an
implementation plan; evaluating and selecting an RMA; identifying
configuration requirements for the RMA; configuring the file plan to the
RMA; vital records and disaster recovery planning; limited DoD 5015.02–
STD certification for in-place electronic recordkeeping capabilities; other
electronic records management issues. (520) 538-1920,
jitcfhrma@fhu.disa.mil.

National Archives of Australia. http://www.naa.gov.au/

Toolkit for Managing Electronic Records. National Archives and Records
Administration. The Toolkit is a web portal
(http://www.archives.gov/records-mgmt/toolkit/) that provides summary
descriptions of a collection of guidance products for managing electronic
records and resources ("tools") that have been developed by NARA and
other organizations, including the NARA products listed below:

Analysis of Costs and Benefits for ERM/ERK Projects. Provides a guide to identify some
typical cost categories and possible benefits of an existing RM system, or of the
alternative ERM/ERK solutions.

Context for Electronic Records Management (ERM). Specifies the records management
and information technology [IT] terminology associated with Electronic Recordkeeping
(ERK).

Electronic Records Management Guidance on Methodology for Determining Agency-unique Requirements. Provides a step-by-step approach to identifying and defining agency specific system requirements as building blocks for agency ERM systems.

Examples of System Functions for Electronic Recordkeeping (ERK) and Electronic Records Management (ERM). Gives examples of detailed system functions that an ERKS or ERM system might need to perform in order to satisfy basic records management functions.

Guidance for Building an Effective Enterprise-wide Electronic Records Management (ERM) Governance Structure. Defines governance and its importance to the success of IT, the purpose and function of that governance, how project-specific governance (such as those instituted for enterprise-wide ERM) fits within and alongside other established governance structures, and the risks attendant in the absence of good governance.

Guidance for Coordinating the Evaluation of Capital Planning and Investment Control (CPIC) Proposals for ERM Applications. Provides a set of decision points to help determine if office-specific ERM systems should be funded independently or integrated with an agency's enterprise-wide ERM system.

NARA Endorses the Federal-wide adoption of the DoD 5015.2-STD.

Preliminary Planning for Electronic Recordkeeping: Checklist for IT Staff.
Lists questions for IT staff to address before implementing an electronic recordkeeping system, and provides related guidance.

Preliminary Planning for Electronic Recordkeeping: Checklist for RM Staff. Identifies high-level issues that Records Officers need to consider before initiating any discussion about moving towards electronic recordkeeping.

Recommended Practice: Analysis of Lessons Learned for Enterprise-wide ERM Projects.
Analyzes the experience of managers who have been involved in ERM projects, summarizing their accumulated knowledge of factors that can promote successful implementation and identifying the barriers that can impede the progress of enterprise-wide installation.

Recommended Practice: Developing and Implementing an Enterprise-wide Electronic Records Management (ERM) Proof of Concept Pilot. Applies the principles and "best practices" of IT project management to a proof of concept demonstration pilot for ERM whose purpose is to assess whether the solution should be deployed agency-wide.

Recommended Practice: Evaluating Commercial Off-the-Shelf (COTS) Electronic Records Management (ERM) Applications. Summarizes the Environmental Protection Agency's (EPA) experience identifying the COTS products that would best meet the needs of agency staff for both Electronic Document Management (EDM) and Electronic Records Management (ERM).

Survey of Baseline Organizational Information. Provides a survey questionnaire for

gathering baseline organizational information for developing records management system requirements or evaluating ERM and ERK solutions.

Typical Records Management [RM] Functions and Typical RM Program Activities. Provides an overview of basic concepts about typical records management functions and overall records management program functions.

What is Electronic Recordkeeping (ERK)? Presents high level discussions of what electronic recordkeeping [ERK] is in terms of architectures, objectives, and critical success factors.

Why Federal Agencies Need to Move Toward Electronic Recordkeeping. Summarizes the statutory, legal, regulatory requirements plus internal reasons to move towards electronic recordkeeping (ERK).