National Archives and Records
Administration
Records Management Service
Component Program (RMSC)

# RMSC Requirements Development Project
# Workshop Report – Group 2

**January 25 – 27, 2005**

**RMSC**
Records Management Service Components

National Archives and Records Administration
Records Management Service Component Program (RMSC)

## RMSC Requirements Development Project
## Workshop Report – Group 2

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## Executive Summary

The Records Management Service Component (RMSC) Program RMSC Requirements Development Project continued on January 25, 2005, with the second of six collaborative sessions with records management stakeholders representing 18 Federal Agencies. The RMSC Requirements Development Project additionally supports the National Archives and Records Administration, E-Government Electronic Records Management (ERM) initiative #24.

The published objectives of Group 2 were to:
- Identify core records management functions/activities and their related attributes, supportable by service components.
- Extract the records management activities that can be supported by software service components and prioritize
- Educate participants on how to write functional requirements
- Provide feedback on requirements collection process
- Document the workshop output in session report

These objectives were identical to those of Group 1.

All objectives were met.

One of the project sponsors, Mr. L. Reynolds Cahoon, NARA's Chief Information Officer and Assistant Archivist Office for Human Resources and Information Services addressed the RMSC working group by expressing his appreciation for their participation and emphasized the importance of the project.

The team identified, defined, and prioritized eight candidate records management service component activities and their related attributes. Participants then provided definitions for the activities, prioritized them, and then provided additional detail for the attributes. Finally, the participants drafted 23 functional requirements using the eight candidate records management component activities and their attributes.

The progress of both Groups to create functional requirements allowed the Program Director to schedule a combined session of Group 1 and 2 to reach consensus and align the RSMC Working Groups to present a combined set of prioritized Records Management Service Component functional requirements.

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## Section I - RMSC Requirements Development Project Workshop Overview

The Records Management Service Component (RMSC) Requirements Development Project, a part of the RMSC Program, continued on January 25, 2005, with the second of six collaborative sessions with records management stakeholders representing 18 Federal Agencies. The representatives from Federal agencies were separated into two groups in order to limit each group to no more than fourteen participants. This group size restriction was imposed to increase productivity and take full advantage of the dynamics of small group collaboration.

The RMSC Requirements Development Project additionally supports the National Archives and Records Administration, E-Government Electronic Records Management (ERM) initiative #24. (See Appendix B for a revised RMSC Project Schedule)

The published objectives of Group 2 were to:
- Identify core records management (RM) functions/activities and their related attributes, supportable by service components.
- Extract the records management activities that can be supported by software service components and prioritize.
- Educate participants on how to write functional requirements.
- Provide feedback on requirements collection process.
- Document the workshop output in session report.

All objectives were met.

The progress made by both groups during their initial sessions, allowed the Program Director to schedule a combined Group 1 and 2 session to reach consensus and align the efforts of all participating Federal agencies to vet a set of prioritized functional requirements for records management service components with representatives of academia and industry.

The workshop was conducted from January 25-27, 2005 at the Dynamics Research Corporation Decision Support Center (DSC) in Vienna, Virginia.  Representatives from the National Archives and selected Federal Agencies attended.  These include the:

- Department of Commerce
- Department of Defense
- Department of Energy
- Department of Interior
- Department of Justice
- Department of State
- Department of Treasury
- Department of Veterans Affairs

- National Aeronautics and Space Administration

For the first activity, Mr. Edmund Feige, the project facilitator, led the team through an introductory sign-in exercise using the groupware and then asked everyone to introduce themselves. (See Appendix D for session participant sign-in information).  Thereafter, he conducted a brief overview of the DSC facility to include the administrative and security requirements.

One of the project sponsors, Mr. L. Reynolds Cahoon, the National Archives Chief Information Officer and Assistant Archivist, Office of Human Resources and Information Services, then addressed the RMSC working group. He expressed his pleasure in the 100% positive response by the agencies invited to participate in the project.  Mr. Cahoon stated the broad program objectives to:

- Provide definition to facilitate potential acquisition of RMSC's that can be used to provide interoperable records management functionality in any agency system that processes electronic records.
- Enable vendor and developer communities to integrate RMSC's into their products and services by extending records management from the back of business processes to the front, and ensure standard outputs from both similar and dissimilar business processes that result in electronic record creation.
- Build records management into the governance processes through enterprise architectures, capital planning and business process design.

Mr. Cahoon discussed the benefits of having RMSCs that would allow the management of records to begin much earlier in the business process. Mr. Daryll Prescott, the NARA Program Director, explained the program activities (See Appendix A) and the project schedule (See Appendix B). He validated the viewpoint and the scope of the project in order to focus the group on records management activities independent of business application implementation.  The group agreed that the following viewpoint and scope applied to this project:

- **Viewpoint**
    – Records Management Activities
- **Scope**
    – *From:*   Declaration of a record
    – *To:*      Disposition of a record

The next activity was a series of background briefings to permit the team to focus on the tasks at hand and explain the approach chosen to complete the tasks.  The briefings that were presented included:

- Records Management Service Component Overview - Dr. Mark Kindl of the Georgia Tech Research Institute.
- Federal Enterprise Architecture Overview – Dr. Ken Hawkins, the NARA Project Manager
- Examples of Records Management Activities Expressed as Models - Mr. Edmund Feige
- Collaborative Environment Briefing - Mr. Edmund Feige.

The facilitator surveyed the participants to determine if they understood the goals of the project and if they accepted the notion that records management requirements should be included in the acquisition process. Their positive response suggested the group was disposed to proceed with the creation of functional requirements. The approach for this workshop was to gather the components of RMSC functional requirements by:

- Identifying candidate records management activities.
- Defining each candidate records management activity.
- Determining the inputs and outputs for each activity.
- Drafting the functional requirements.

Using the groupware tool, the facilitator initiated the data gathering by conducting an unconstrained brainstorming exercise in which the team identified over 65 potential RMSC candidate activities.

Day Two began with an exercise to reduce the list by merging like activities. The group separated activities from the list that were considered (1) systems requirements, (2) information about attributes, and (3) other, out of scope, or not RM.  After reducing the list to 13 candidate RMSC activities, the team used the groupware vote tool to sequence the activities to determine the RMSC activity workflow. The initial sequence was reordered and further merged to eight discrete activities by the group during discussions.

Thereafter, the participants were formed into three subgroups to create definitions for the eight identified candidate RMSC activities (Section II). The final exercise was to compare the list of eight candidate RMSC activities to the records management activities identified by the Georgia Tech Research Institute (GTRI) analysis of international and domestic records management studies conducted during the past ten years.  The team was offered the opportunity to modify their list. They concluded that their list of candidate activities did not omit any activities identified by the studies.

Prior to the last activity of the day, the Program Director described the end game and how the activities and their associated inputs and outputs form the major components of functional requirements statements.

The participants were provided a brief overview of the salient points of writing a functional requirement. Basically, a functional requirement is complete when it has an identifiable input (object, data, etc.), the specified activity that is to be performed on the input(s), and a specified output. All three parts must be documented in such a manner as to allow them to be identified in a test and evaluation plan in support of an acquisition activity.

The subgroups then identified inputs and outputs for each of the eight activities.

A summary of the results of the above activities can be found at Section III.

The Day 3 agenda was revised to accommodate the schedules of several participants. The participants (in subgroups) drafted proposed functional requirements for each of the eight candidate RMSC activities. The subgroup's identified a total of 23 functional requirements.

In order to provide the Program Office with their assessment of return on investment related to the potential acquisition of records management service components, the participants were asked to conduct three "forced choice" votes against three criteria:

- Constrained by current year dollars.
- Agency readiness to accept the change (ease of implementation).
- Criticality from the viewpoint of a records manager.

The results of these votes can be found at Section IV.

The following table summarizes the conclusion of the Group 2 participants related to the identification of RMSC activities and associated functional requirements. For specific activities that were used in the development of this table see Sections II and V.

GLOBAL REQUIREMENT. Group 2 specified that all attributes should make available their data in support of audit, reporting writing, etc. This requirement allows authorized users (e.g. people, applications) to use RM component data.

### Association of Candidate RMSC Activity to Functional Requirements

| RMSC Activity | Definition | Functional Requirements |
|---|---|---|
| **Create Record** | Capturing information declared as a record with associated attributes into an electronic system capable of managing records. | • The Create Records Component shall provide the capability to make the incoming uncategorized unauthenticated record object and associated attributes available to the Ensure Integrity Component for authentication. |

| RMSC Activity | Definition | Functional Requirements |
|---|---|---|
| | | • The Create Record Component shall provide the capability to attach the following attributes to the incoming uncategorized unauthenticated record: source of record (submitter human or automated), time stamp of entry into the Create Record Component, native format marker, and transmit this information to the Ensure Integrity Component.<br>• The Create Records Component shall provide the capability to review uncategorized unauthenticated records for completeness and add an attribute of completeness (yes/no) to the uncategorized unauthenticated record.<br>• The Create Record Component shall provide the capability to add attributes specified in the business process (e.g., restrictions on access), to the incoming uncategorized unauthenticated document/record and make that record available to the Ensure Integrity Component.<br>• The Create Record Component shall provide the capability to create a report of all activities that occur in the Create Record Component and provide that report for review and incorporation into the record of system activity.<br>• The Create Record Component shall provide the capability to make available data contained in the record and its associated attributes for report writing. |
| **Schedule Record** | Assign a retention period and final disposition to a record. | • The Schedule Record Component shall provide the capability to accept a categorized record and, using an approved record schedule, populate schedule attributes (e.g. schedule number, schedule item number, disposition act, disposition date, review |

| RMSC Activity | Definition | Functional Requirements |
|---|---|---|
| | | date, name of scheduler, date of scheduling) for the record, producing a scheduled record ready for the next activity. |
| **Categorize Record** | Systematic identification and arrangement of records into categories according to logically structured conventions, methods, and procedural rules represented in a classification scheme. (ISO 15489, draft international standards).[1] | • The Categorize Record Component shall provide the capability to apply the list of authorized users (individuals, organizations, or applications) who can re-categorize selected records, grant appropriate access to categorize or re-categorize records, and create suggested pick-list options based on history of individual decisions for future decisions.<br>• The Categorize Record Component shall provide the capability to apply the list of authorized users who can categorize selected records, grant appropriate access to categorize or re-categorize records, and create suggested pick-list options based on history of individual decisions for future decisions.<br>• The Categorized Record Component shall provide the capability to populate the record category attributes (e.g. category, name of categorizer, and date) to make a categorized record.<br>• The Categorize Record Component shall provide the capability to apply the authorized categorization schema and related business rules to an uncategorized record to produce a categorized or re-categorized record and populate a history of categorizations (tools or applications could/should provide such capabilities as visible |

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[1] See International Organization for Standarization, Information and Documentation: Records Management ISO 15489-1 (2001), part 3.5, definition for classification.

| RMSC Activity | Definition | Functional Requirements |
|---|---|---|
| | | options, drop down menus, recommended categories based on usage and/or history options of individuals, organizations, etc.) |
| **Search Record** | Query all or selected system repositories of records across the enterprise, (transitory, temporary, and permanent) for content or attributes, in order to determine existence and location of records and make available. | • The Search Record Component shall provide the capability to take the approved request for information using the Approved Access to Search and make available to the Manage Access Component the records responsive to the request.<br>• The Search Record Component shall use the search criteria to make available the records that match the search criteria for various needs (e.g. viewing, saving and printing). |
| **Ensure Integrity** | The series of activities to ensure the authenticity and completeness of a record and associated attributes upon its creation and throughout its lifecycle. | • The Ensure Integrity Component shall assign an integrity attribute to a created uncategorized record and pass it on to Categorize Component, as an uncategorized created record of integrity.<br>• The Ensure Integrity Component shall prevent modification of a created record and ensure its authenticity, such as storing on write once media and requiring digital signature, hashing, etc.<br>• The Ensure Integrity Component shall provide the capability to make information available for notification if the created uncategorized record is not the same as the created record.<br>• The Ensure Integrity Component shall provide the capability to make information available for notification if the created categorized record is not the same as the created record.<br>• The Ensure Integrity Component shall provide the capability to make information available for notification if |

| RMSC Activity | Definition | Functional Requirements |
|---|---|---|
| | | the created |
| **Maintain Record** | Ensure that the record and related attributes remain current and accurate. | • The Maintain Records Component shall provide the capability to make and keep an association between an existing record(s) that was used in create a new record in response to a request for information. |
| **Manage Access** | Control and maintain history of access to specific record items or file series based on security classification, functional roles, organizational position, delegated permissions or other restrictions. | • The Manage Access Component shall provide the capability to use the manage access tool to determine the approval, disapproval or partial approval of the access to search for information.<br>• The Manage Access Component shall provide the capability use the manage access tool to determine the approval, disapproval or partial approval of the record responsive to the request. |
| **Execute Disposition** | At the end of the established retention, effect continued retention, destruction or transfer of a record. | • The Execute Disposition will populate the Suspend Disposition Attribute when a Suspend Disposition Intervention occurs.<br>• The Execute Disposition Component will provide the capability to return a scheduled record when the Suspend Disposition Attribute is populated and will return the record to the Ensure Integrity Component.<br>• The Execute Disposition Component will take a scheduled record approved for destruction and destroy the record.<br>• The Execute Disposition Component will take a scheduled record approved for transfer and transfers the record. |

Group 2 requested the Program Director include in this report a list of records management activities that should be considered in future work since they were out of scope for the current project. Group 2 provided the list below:

- Preservation
- Security

- Restricted Records
- FOIA
- Declassification
- Privacy Act
- Derivative Records (Records created from other records such as a response to FOIA, Privacy Act, etc.)
- Technology Refreshment
- Ensure Integrity Risk

As a post-session activity, a process model was developed using the eight activities offered during the workshop to provide a graphical representation of the inter-relationships between the RMSC activities.  This model was developed by the two RMSC Program personnel and supported by DRC, the model was produced using Integrated Definition Language (IDEF0) notation.  (See Appendix E).

The objectives of developing the model were to:
- Identify any potential relationship disconnects between the records management activities as they were constructed by the participants.
- Identify potential missing or disconnected inputs and outputs.
- Document in graphical format the use of attributes (data elements) identified by the participants as they relate to the activities using or producing them.
- Develop an abstraction of the inter-relationships between the activities, their associated attributes, and the definitions describing their use in a model depicting the ten components.

## Section II – Candidate RMSC Activities

Using the groupware tool, the participants were asked to brainstorm records management activities that could be serviceable by a component. The team identified over 65 candidate activities. This initial brainstorming list included activities and attributes both in and out of the scope of this project. The group separated activities from the list into three categories that were considered (1) systems requirements, (2) information about attributes, and (3) other, out of scope, or not RM. After consensus was reached, the team was able to refine the potential candidate RMSC activities from 65 to 13 discrete RMSC candidate activities. The team then used a groupware voting tool to sequence the activities into a logical workflow. This vote stimulated a discussion that further reduced the list of activities for 13 to eight.

The participants were then subdivided into three working groups to further develop definitions for the eight candidate RMSC activities.

The last exercise was for the participants to compare and validate their developed activities and definitions against the Georgia Tech Research Institute (GTRI) analysis of international and domestic records management studies conducted during the past ten years. The group consensus was that they had captured the essence of the core records management activities contained in the GTRI work product.

The following are the eight candidate RMSC activities and their definitions that were developed by the participants:

### Create Record
Capturing information declared as a record with associated attributes into an electronic system capable of managing records.

### Schedule Record
Assign a retention period and final disposition to a record.

### Categorize Record
Systematic identification and arrangement of records into categories according to logically structured conventions, methods, and procedural rules represented in a classification scheme. (ISO 15489, draft international standards).

### Search Record
Query all or selected system repositories of records across the enterprise, (transitory, temporary, and permanent) for content or attributes, in order to determine existence and location of records and make available.

### Ensure Integrity

The series of activities to ensure the authenticity and completeness of a record and associated attributes upon its creation and throughout its lifecycle.

### Maintain Record
Ensure that the record and related attributes remain current and accurate.

### Manage Access
Control and maintain history of access to specific record items or file series based on security classification, functional roles, organizational position, delegated permissions or other restrictions.

### Execute Disposition
At the end of the established retention, effect continued retention, destruction or transfer of a record.

## Section III – RMSC Draft Activity Inputs and Outputs

After developing the eight candidate RMSC activities and their definitions, the participants were tasked to develop inputs and outputs (candidate attributes) for each RMSC activity.

It should be noted that some of these draft attributes are in narrative form.  Due to time constraints, the session participants were unable to refine "narrative draft attributes" into an acceptable attribute format. The participants in order to expand or explain the activity provided comments in parenthesis.

The resulting draft inputs and outputs linked to their related RMSC activities are provided below.

### Create Record
*Inputs*
- Metadata schema (system of required and optional attributes about the record).
- Completed workflow products (information files such as forms, logs, system generated reports).
- Attributes about the record.
- Record policy guidance.
- Document management business rules.

*Outputs*
- Tagged or marked document and object.
- Status report update.

### Schedule Record
*Input*
- Categorized record with associated attributes, all of which have been authenticated (a record which has been categorized with associated authenticated attributes).
- Record schedule (includes General Record Schedule and NARA-approved agency-specific program record schedule).

*Output*
- Scheduled Record (a record that has been scheduled in accordance with the General Record Schedule and/or NARA-approved agency-specific program record schedule).
- Populated attributes to include assigned schedule #, temporary or permanent, with retention period which may be predicated by the occurrence of an event (an attribute of a categorized record which indicates its scheduled disposition; e.g., temporary or permanent, which embodies the appropriate retention period for that record predicated on the GRS or NARA-approved agency-specific program record schedule).

## Categorize Record

*Input*
- Categorization schema (approved schema of categories).
- Authenticated but uncategorized record (record as received from the Ensure Integrity step).
- Attributes assigned during authentication (all attributes that were assigned in the previous step).
- List of people who are authorized to categorize records (list of those individuals with authority to categorize records).
- Previously categorized record (there is a possibility that records previously categorized will have to be re-categorized at some point.  These records coming to this step in the process will need to have a new category attached, while maintaining a record of the previous category).

*Output*
- Categorized record (multiple categories possible)
- Identity of category applied (category from the list that is/are applied to this record)
- Date of categorization
- Identity of categorizer/rules set used (identity of the records schedule, file plan etc., used to categorize)
- Re-categorized record (record that had been originally assigned to one category that has been reassigned to another category)
- History record of previous category and other attributes captured
- Date of category list applied

## Search Record

*Input*
- Search criteria

*Output*
- Identification of record.
- Record available for viewing, saving and/or printing.
- Report of results.

## Ensure Integrity

*Inputs*
- Created uncategorized record with request for secure container.
- Retrieved secure record.
- Transferred record (a record transferred from another source).
- Modified secure record (a retrieved record with an authorized change or redaction).
- User identity validation (authenticates permission to change).

*Outputs*

- Authentic and complete record in a secure container (certified record).
- Warning of incomplete or changed record received for authentication without proper authorization (notice of authentication error with copy to supervisor).
- Audit trail of history, including date, time, user and action requested (stored record of tracking data, including warnings transmitted).
- New record in a secure container and link to original record.
- Warning of unauthorized attempt to modify record (after the component refuses a change or detects an unauthorized change, this output is the warning to appropriate personnel).

## Maintain Record
None provided.

## Manage Access
*Input*
- Permission (list of users and authorizations).
- Record requested.

*Output*
- Report of changes and access
- Record accessed

## Execute Disposition
*Input*
- Scheduled item
- Record

*Output*
- Destroyed record.
- Transferred record.
- Retained record.
- Report of actions.
- Disposition data available.

## Section IV – Rank Ordering of RMSC Activities

During the workshop there were four rank ordering votes conducted by the participants using the groupware prioritization tool.

The first exercise asked the participants to order the original 13 candidate RMSC activities in a life-cycle sequence i.e. from the initial to the final activity.

All functional proponents were asked to participate (N=10).  The results of that exercise follows:

## Vote Results

| |
|---|
| 1. Create Record |
| 2. Categorize Record |
| 3. Schedule Record |
| 4. Metatag Record |
| 5. Maintain Record |
| 6. Manage Access |
| 7. Ensure Authenticity |
| 8. Search records |
| 9. Find Record |
| 10. Review Record |
| 11. Retrieve Records |
| 12. Suspend Disposition |
| 13. Execute Disposition |

## Ordering of RMSC Activities Vote Statistics

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | Mean | STD | n |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Create Record | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.10 | 0.32 | 10 |
| 2. Categorize Record | 0 | 3 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.80 | 0.63 | 10 |
| 3. Schedule Record | 1 | 2 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3.30 | 1.34 | 10 |

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | Mean | STD | n |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4. Metatag Record | 0 | 4 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4.00 | 3.30 | 10 |
| 5. Maintain Record | 0 | 0 | 0 | 1 | 4 | 2 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 6.40 | 2.32 | 10 |
| 6. Manage Access | 0 | 0 | 0 | 0 | 1 | 4 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 6.80 | 1.62 | 10 |
| 7. Ensure Authenticity | 0 | 0 | 0 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 7.10 | 3.00 | 10 |
| 8. Search Record | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 2 | 0 | 0 | 0 | 0 | 7.70 | 0.95 | 10 |
| 9. Find Record | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 3 | 0 | 0 | 0 | 0 | 8.10 | 0.74 | 10 |
| 10. Review Record | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 4 | 0 | 0 | 9.40 | 2.41 | 10 |
| 11. Retrieve Record | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 6 | 1 | 0 | 0 | 9.70 | 0.82 | 10 |
| 12. Suspend Disposition | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 6 | 2 | 11.90 | 0.88 | 10 |
| 13. Execute Disposition | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 7 | 12.70 | 0.48 | 10 |

The second exercise asked the participants to prioritize the final eight candidate RMSC activities using a budget constraint. The criteria applied to this vote was to "rank order the activities from the most critical to implement, to the least critical assuming limited funds were available."

Only one functional proponent from each participating agency was allowed to vote (N=8). The results of that exercise follows:

**Vote Results**

| |
|---|
| 1. Ensure Integrity |
| 2. Create Record |
| 3. Search Record |
| 4. Schedule Record |
| 5. Categorize Record |

| 1. Ensure Integrity |
| 6. Execute Disposition |
| 7. Manage Access |
| 8. Maintain Record |

## Budget Prioritization of RMSC Activities Vote Statistics

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Mean | STD | n |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Ensure Integrity | 2 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 2.50 | 1.60 | 8 |
| 2. Create Record | 4 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 3.63 | 3.38 | 8 |
| 3. Search Record | 2 | 0 | 1 | 2 | 1 | 1 | 1 | 0 | 3.88 | 2.17 | 8 |
| 4. Schedule Record | 0 | 1 | 2 | 2 | 1 | 2 | 0 | 0 | 4.13 | 1.46 | 8 |
| 5. Categorize Record | 0 | 1 | 2 | 0 | 1 | 4 | 0 | 0 | 4.63 | 1.69 | 8 |
| 6. Execute Disposition | 0 | 1 | 1 | 3 | 0 | 0 | 2 | 1 | 4.88 | 2.17 | 8 |
| 7. Manage Access | 0 | 0 | 2 | 1 | 2 | 0 | 2 | 1 | 5.25 | 1.91 | 8 |
| 8. Maintain Record | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 4 | 7.13 | 1.13 | 8 |

The third vote asked the participants to rank order the eight candidate RMSC activities using the criteria of ease of implementation within their agency. That is, in priority order, which activities would require the least management of change turbulence within their agency?

Only one functional proponent from each participating agency was allowed to vote (N=8). The results of that exercise follows:

## Vote Results

| 1. Create Record |
| 2. Schedule Record |
| 3. Manage Access |
| 4. Search Record |
| 5. Categorize Record |
| 6. Execute Disposition |
| 7. Ensure Integrity |

| 1. Create Record |
| 8. Maintain Record |

## Management of Change Prioritization of RMSC Activities Vote Statistics

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Mean | STD | n |
|---|---|---|---|---|---|---|---|---|------|-----|---|
| 1. Create Record | 3 | 1 | 0 | 1 | 2 | 0 | 0 | 1 | 3.38 | 2.56 | 8 |
| 2. Schedule Record | 1 | 2 | 0 | 1 | 3 | 0 | 1 | 0 | 3.88 | 2.03 | 8 |
| 3. Manage Access | 1 | 0 | 3 | 0 | 0 | 3 | 1 | 0 | 4.38 | 2.13 | 8 |
| 4. Search Record | 0 | 2 | 1 | 2 | 0 | 2 | 0 | 1 | 4.38 | 2.13 | 8 |
| 5. Categorize Record | 1 | 1 | 1 | 2 | 1 | 0 | 0 | 2 | 4.38 | 2.56 | 8 |
| 6. Execute Disposition | 0 | 2 | 1 | 0 | 2 | 2 | 1 | 0 | 4.50 | 1.93 | 8 |
| 7. Ensure Integrity | 1 | 0 | 2 | 1 | 0 | 1 | 3 | 0 | 4.75 | 2.31 | 8 |
| 8. Maintain Record | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 4 | 6.38 | 2.56 | 8 |

The last vote asked the participants to rank order the eight RMSC activities using the criteria of importance of the RMSC activities to the records management community i.e. from the most important to the least.

Only one functional proponent from each participating agency was allowed to vote (N=8).  The results of that exercise follows:

## Vote Results

| 1. Ensure Integrity |
| 2. Create Record |
| 3. Search Record |
| 4. Schedule Record |
| 5. Execute Disposition |
| 6. Categorize Record |
| 7. Manage Access |
| 8. Maintain Record |

## RM Community Prioritization of RMSC Activities Vote Statistics

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Mean | STD | n |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Ensure Integrity | 2 | 2 | 1 | 2 | 0 | 0 | 0 | 1 | 3.13 | 2.30 | 8 |
| 2. Create Record | 4 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 3.38 | 2.72 | 8 |
| 3. Search Record | 1 | 2 | 1 | 1 | 1 | 2 | 0 | 0 | 3.63 | 1.92 | 8 |
| 4. Schedule Record | 1 | 2 | 2 | 0 | 1 | 1 | 1 | 0 | 3.63 | 2.13 | 8 |
| 5. Execute Disposition | 0 | 1 | 2 | 2 | 1 | 0 | 1 | 1 | 4.50 | 2.07 | 8 |
| 6. Categorize Record | 0 | 1 | 0 | 1 | 3 | 2 | 1 | 0 | 5.00 | 1.51 | 8 |
| 7. Manage Access | 0 | 0 | 1 | 1 | 0 | 3 | 3 | 0 | 5.75 | 1.49 | 8 |
| 8. Maintain Record | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 6 | 7.00 | 1.93 | 8 |

## Section V – RMSC Functional Requirements

The final task for the participants was to develop the functional requirements associated with each candidate RMSC activity. After being provided a short briefing on how to develop a functional requirement, they were divided into three working groups.

The resulting functional requirements linked to their related candidate RMSC activities are provided below. It should be noted that these requirements are in draft form and, due to time constraints, were not refined into a consistent requirement format by the workgroup. A functional requirement is complete when it has an identifiable input (object, data, etc.), the specified activity that is to be performed on the input(s) and a specified output. All three parts must be documented in such a manner as to allow them to be identified in a test and evaluation plan during an acquisition activity.

### Create Record
- The Create Records Component shall provide the capability to make the incoming uncategorized unauthenticated record object and associated attributes available to the Ensure Integrity Component for authentication.
- The Create Record Component shall provide the capability to attach the following attributes to the incoming uncategorized unauthenticated record: source of record (submitter human or automated), time stamp of entry into the Create Record Component, native format marker, and transmit this information to the Ensure Integrity Component.
- The Create Records Component shall provide the capability to review uncategorized unauthenticated records for completeness and add an attribute of completeness (yes/no) to the uncategorized unauthenticated record.
- The Create Record Component shall provide the capability to add attributes specified in the business process (e.g., restrictions on access), to the incoming uncategorized unauthenticated document/record and make that record available to the Ensure Integrity Component.
- The Create Record Component shall provide the capability to create a report of all activities that occur in the Create Record Component and provide that report for review and incorporation into the record of system activity.
- The Create Record Component shall provide the capability to make available data contained in the record and its associated attributes for report writing.

### Schedule Record
- The Schedule Record Component shall provide the capability to accept a categorized record and, using an approved record schedule, populate schedule attributes (e.g. schedule number, schedule item number, disposition act, disposition date, review date, name of scheduler, date of scheduling) for the record, producing a scheduled record ready for the next activity.

### Categorize Record

- The Categorize Record Component shall provide the capability to apply the list of authorized users (individuals, organizations, or applications) who can re-categorize selected records, grant appropriate access to categorize or re-categorize records, and create suggested pick-list options based on history of individual decisions for future decisions.
- The Categorize Record Component shall provide the capability to apply the list of authorized users who can categorize selected records, grant appropriate access to categorize or re-categorize records, and create suggested pick-list options based on history of individual decisions for future decisions.
- The Categorized Record Component shall provide the capability to populate the record category attributes (e.g. category, name of categorizer, and date) to make a categorized record.
- The Categorize Record Component shall provide the capability to apply the authorized categorization schema and related business rules to an uncategorized record to produce a categorized or re-categorized record and populate a history of categorizations (tools or applications could/should provide such capabilities as visible options, drop down menus, recommended categories based on usage and/or history options of individuals, organizations, etc.)

### Search Record

- The Search Record Component shall provide the capability to take the approved request for information using the Approved Access to Search and make available to the Manage Access Component the records responsive to the request.
- The Search Record Component shall use the search criteria to make available the records that match the search criteria for various needs (e.g. viewing, saving and printing).

### Ensure Integrity

- The Ensure Integrity Component shall assign an integrity attribute to a created uncategorized record and pass it on to Categorize Component, as an uncategorized created record of integrity.
- The Ensure Integrity Component shall prevent modification of a created record and ensure its authenticity, such as storing on write once media and requiring digital signature, hashing, etc.
- The Ensure Integrity Component shall provide the capability to make information available for notification if the created uncategorized record is not the same as the created record.
- The Ensure Integrity Component shall provide the capability to make information available for notification if the created categorized record is not the same as the created record.
- The Ensure Integrity Component shall provide the capability to make information available for notification if the created

## Maintain Record

- The Maintain Records Component shall provide the capability to make and keep an association between an existing record(s) that was used in create a new record in response to a request for information.

## Manage Access

- The Manage Access Component shall provide the capability to use the manage access tool to determine the approval, disapproval or partial approval of the access to search for information.
- The Manage Access Component shall provide the capability use the manage access tool to determine the approval, disapproval or partial approval of the record responsive to the request.

## Execute Disposition

- The Execute Disposition will populate the Suspend Disposition Attribute when a Suspend Disposition Intervention occurs.
- The Execute Disposition Component will provide the capability to return a scheduled record when the Suspend Disposition Attribute is populated and will return the record to the Ensure Integrity Component.
- The Execute Disposition Component will take a scheduled record approved for destruction and destroy the record.
- The Execute Disposition Component will take a scheduled record approved for transfer and transfers the record.

## Appendix A – RMSC Program Overview

### What is the Records Management Service Component (RMSC) Program?

The RMSC Program is a collection of activities (projects) to:

- Manage the collection, documentation, and prioritization of records management service component requirements. This activity is in support of the E-Government Electronic Records Management (ERM) initiative #24

- "Get the word out" to academia and industry that the Government has collectively agreed to meet during the first quarter of calendar year 2005 and propose a set of requirements for records management service components

- Continue coordination with Federal agency participants in order to ultimately acquire one or more records management service components for inclusion in the Federal Enterprise Architecture (FEA) component repository, and to

- Continue to make available reports and information about the RMSC requirements in support of major programs of the Federal Government such as the National Archives and Records Administration's Electronic Records Archives (ERA), and the DoD 5015.2 standard certification Programs

### The RMSC Objectives are:

To facilitate potential acquisition of RMSC's that can be used to provide interoperable records management functionality in any agency system that creates/manages electronic records by:

- Identifying, documenting, normalizing and prioritizing those records management stake-holder requirements that are amenable to support by service components, and

- Aligning with the Office of Management and Budget's (OMB) FEA reference models and component repository program

RMSC's will enable vendor and developer communities to integrate RMSC's into their products and services by extending records management from the back of business processes to the front, and will ensure standard outputs from both similar and dissimilar business processes that result in electronic record creation.

The RMSC Program's first activity will be the Requirements Development Project, kicking off the week of January 10, 2005, with the first of six (6) collaborative sessions with agency Records Management and enterprise architecture stakeholders using interactive *GroupSystems* technology.  Participants will identify and prioritize functional requirements for Records Management activities that can be supported with service components.

Additional information about the RMSC Program and the RMSC Requirements Development Project can be found on the NARA web page at:

http://www.archives.gov/electronic_records_archives/rmsc/index.html

## Appendix B – Records Management Service Component Project Schedule
[return to page 3] [return to page 4]

| January 2005 | | | | | | |
|---|---|---|---|---|---|---|
| Sun | Mon | Tue | Wed | Thur | Fri | Sat |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| 30 | 31 | | | | | |

Government Group 1 (row of 9–15)
Government Group 2 (row of 23–29)

| February 2005 | | | | | | |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | | | | | |

Government Groups 1 & 2 (row of 6–12)
NARA SME Review (row of 27–28)

| March 2005 | | | | | | |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | 31 | | |

NARA SME Review / Industry & Academia (row of 1–5)
Government Groups 1 & 2 (row of 6–12)
Report Published (row of 27–31)

| Group 1 Government Participants | Group 2 Government Participants |
|---|---|
| Department of Agriculture | Department of Commerce |
| Department of Homeland Security | Department of Defense |
| Department of Housing and Urban Development | Department of Energy |
| Department of Labor | Department of Interior |
| Department of Treasury | Department of Justice |
| Environmental Protection Agency | Department of State |
| General Services Administration | Department of Treasury |
| Social Security Administration | Department of Veterans Affairs |
| | National Aeronautics and Space Administration |

## Appendix C – Agenda

### Tuesday, January 25, 2005

| | |
|---|---|
| 11:30 | Arrival |
| 11:45 AM | Introduction |

- Administrative
- Participant sign-in/introductions

| | |
|---|---|
| 12:00 PM | Opening Remarks – Mr. L. Reynolds Cahoon, Chief Information Officer and Assistant Archivist Office of Human Resources and Information Services |
| 12:20 | Lunch |
| 12:45 | Requirements Development Process Overview Briefing |
| 1:00 | Break |
| 1:10 | Records Management Service Component Overview Briefing |
| 1:45 | Federal Enterprise Architecture Overview Briefing |
| 2:00 | Examples of Records Management Activities Expressed as Models Briefing |
| 2:15 | Collaborative Environment Briefing |
| 2:30 | Brainstorm Records Management Activities that are Serviceable by a Component |
| 2:55 | Session Wrap up |
| 3:00 | Session Adjourns |

### Wednesday, January 26, 2005

| | |
|---|---|
| 8:30 | Arrival |
| 8:45 | Continue Brainstorming, and Prioritize Records Management Activities that are Serviceable by a Component |
| 10:00 | Break |

| 10:10 | Refine RM Activities List by Parsing Activities |
|-------|------------------------------------------------|
| 10:30 | Determine an Activities Workflow |
| 10:40 | Work Groups Develop Definitions for Each Identified RM Activities |
| 11:45 | Lunch |
| 1:00 | Work Groups Match Activities to Georgia Tech Research in Records Management Activity Tables |
| 1:30 | Develop Functional Requirements |
| 2:55 | Session Wrap up |
| 3:00 | Session Adjourns |

**Thursday, January 27, 2005**

| 8:30 | Arrival |
|-------|---------|
| 8:45 | Review Previous Day Activities |
| 9:00 | Continue to Develop Functional Requirements |
| 12:00 | Lunch |
| 1:00 | Prioritize Activities to Selected Criteria |
| 2:30 | Next Steps Discussion |
| 2:55 | Workshop Evaluation |
| 3:00 | Workshop Ends |

## Appendix D – Participants
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## Appendix E – Draft RMSC Process Models
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### How to Read an IDEF0 Model

In IDEF0 models, activities (also known as processes or functions) are represented by rectangles. Inputs trigger the activity or provide consumable material. Inputs are shown as arrows entering the left side of the activity box. Outputs are the product of the activity and are shown as arrows exiting the right side of the activity box. Controls direct when or how to perform the activity and enter the box from the top. Mechanisms enable the activity to occur without being consumed or transformed (as opposed to inputs). Mechanism arrows enter the activity from the bottom.
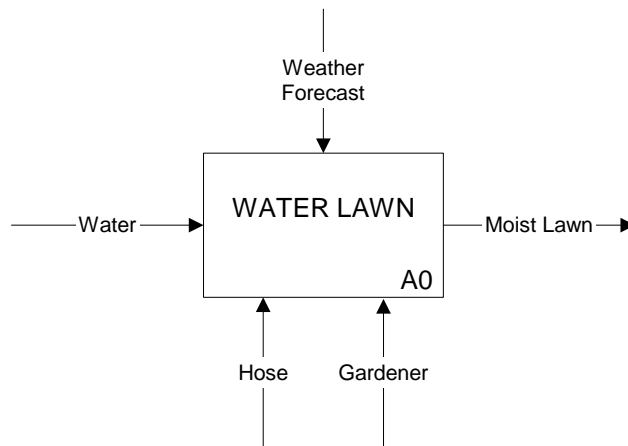
In essence,
*Inputs* are items that initiate/trigger the activity and are transformed, consumed or becomes part of the end result of the activity
*Controls* guide or regulate the activity; usually indicate when or how process will be performed
*Outputs* are the results produced by the activity; the reason for which the process was performed
*Mechanisms* are systems, people, equipment used to perform the activity

This simple activity may be read, "As advised by the weather forecast (control), the gardener using a hose (mechanisms) waters the lawn (activity) by spraying water on dry turf (inputs) to produce moist turf (output).

```
                    Weather
                    Forecast
                       |
                       v
          ┌─────────────────────────┐
          │     WATER LAWN          │
  Water ─→│                         │─→ Moist Lawn
          │                     A0  │
          └─────────────────────────┘
                 ^          ^
                 |          |
               Hose      Gardener
```

Activity models are hierarchical. An A0 diagram with several "children" activities that together equal the single activity of "the parent" follows the top diagram, A-0. Likewise the first level children (A1, A2, etc.) may each be decomposed into subordinate functions (A11, A12,…A34) with all but the last digit identifying the parent. ICOMs are also hierarchical. Where ICOMs

intersect with an activity on a diagram, the same ICOMs intersect with the appropriate edges of the diagram that represents the activities decomposition.

During the post session analysis, the following graphical decomposition diagrams were developed to validate the eight RMSC activities and to analyze the inter-relationships among the eight RMSC activities.  These working diagrams will be further refined as the RMSC project matures.
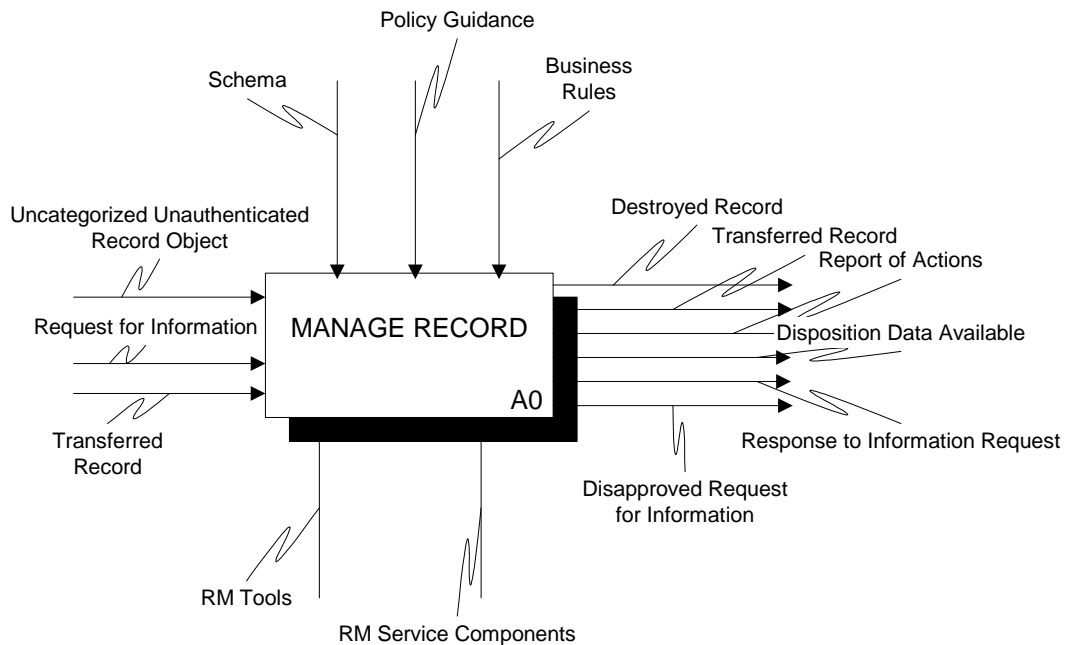
The next level of decomposition of MANAGE RECORD
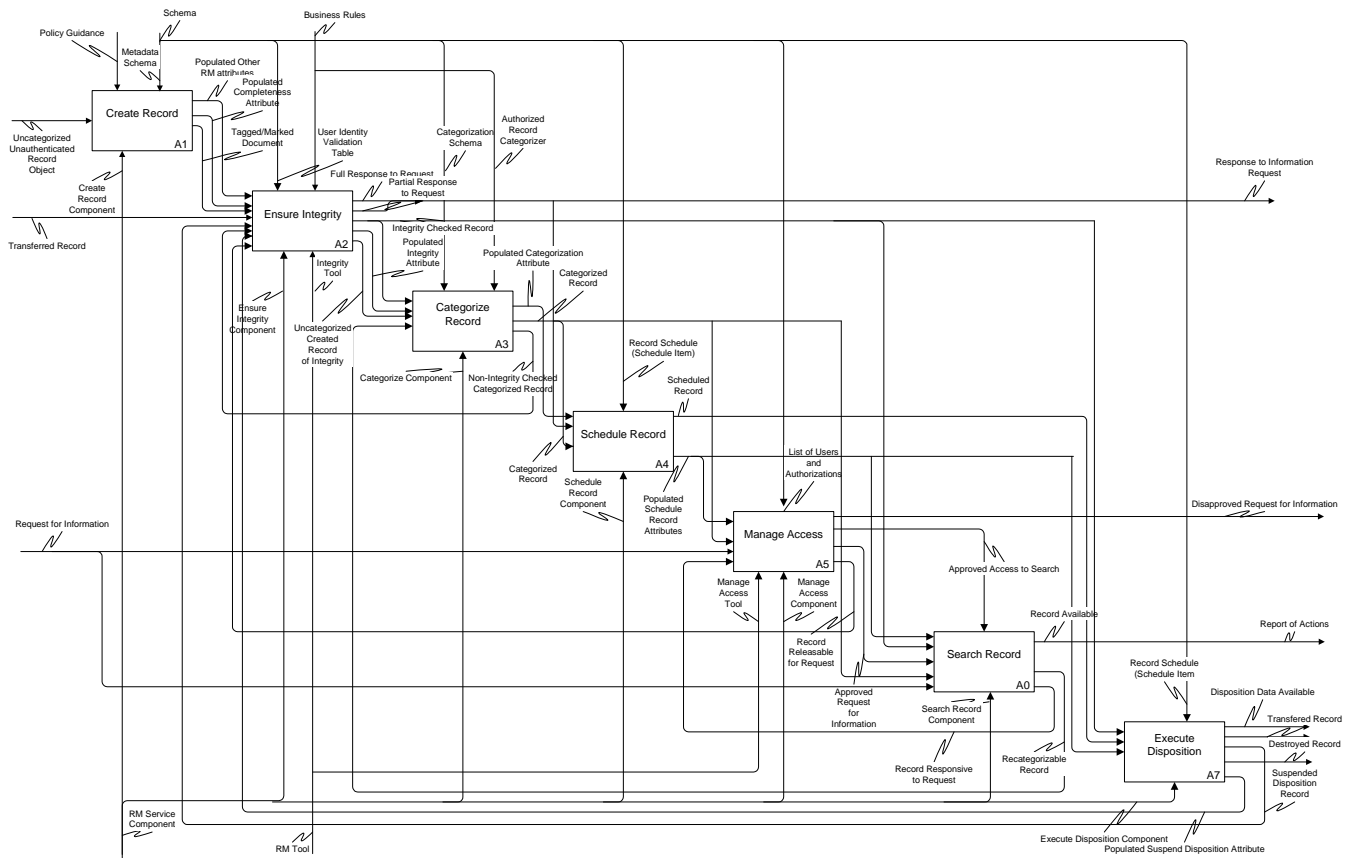
## Appendix F – Workshop Briefings

1. Records Management Service Component Overview presented by Dr. Mark Kindl (Georgia Tech Research Institute)

2. Federal Enterprise Architecture Overview presented by Dr. Kenneth Hawkins (National Archives)

3. Examples of Records Management Activities Expressed as Models by Mr. Edmund Feige (Dynamics Research Corporation)

4. Collaborative Environment Briefing by Mr. Edmund Feige (Dynamics Research Corporation)

## Appendix G – Acronyms

DRC            Dynamics Research Corporation
DSC            Decision Support Center
FOIA           Freedom of Information Act
GTRI           Georgia Tech Research Institute
ISO            International Organization for Standardization
NARA           National Archives and Records Administration
RM             Records Management
RMSC           Records Management Service Components