

# Information Seeking Behaviour of Electronic Document and Records Management Systems (EDRMS) Users: Implications for Records Management Practices. Part 2

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In the first article in this series, in the November 2007 issue of *IQ*, the authors described how they approached their study on whether the way RM professionals manage records in accordance with the ISO 15489 standard is consistent with the information seeking behaviour (ISB) of EDRMS users. Here, they continue their report by discussing their methodology.



aving established the basic tenets of our study, we will continue by describing the research method used and the way we conducted our data analysis, commencing with the study's Sample.

#### Sample

In total, we studied four different organisations, using three different types of EDRMS between them, and 40 users to identify the ISB of EDRMS users. The research required participation by EDRMS users. Hence, we decided to target participants at middle management levels.

This group of EDRMS users are professionals in their respective fields, and these middle managers rarely have a personal or administrative assistant assigned to them to seek information on their behalf, whilst senior management may have such a resource. This group of people are assigned tasks to prepare reports and provide ground level advice to management, and thus are target EDRMS users.

## Selection Criteria for Participating Organisations

We applied the following criteria when selecting the organisations sampled for participation in the research.

• The organisation had an established records management program with the pillar RM best practices stated in ISO 15489 implemented. This refers to a RM program where there are: recordkeeping policies and procedures in place; some form of classification exists, such as a taxonomy, thesaurus, or classification scheme to classify the organisation's corporate records; and a retention and disposal schedule that authorizes the disposal of records in accordance with legislation affecting the organisation.

- At least one qualified or experienced records management staff member is appointed to manage the records management section.
- The organisation had an EDRMS. The EDRMS must be managing electronic records with integration to the MS Office suite of applications or similar (e.g. MS Word, Excel, PowerPoint, Email Management, or equivalents like McIntosh or Lotus). It does not matter if the organisation is running a parallel system managing paper and electronic records.

#### **Initial Contact with Selected Organisations**

We made initial contact with each of the RM professionals either by telephone or by email, to introduce them to the researchers and the research, and to find out if the organisation met the criteria to be included in the research.

Once the organisation consented to participate in the research, we initiated a formal process for organising the interview sessions. An email was sent to the RM professionals requesting that they identify key EDRMS users in their organisation, across various departments within the organisation, so that a cross section of staff from different professional backgrounds are identified for the study.

When the RM professional completed the interview schedule, we reviewed the position description of the EDRMS users identified in order to ensure that a cross-section of staff from different professions and business units were selected for participation.

#### Research Tools Used to Collect the Data. Identifying RM Practices – Case Study with RM Professionals

Using the pillar RM best practices stated in Table 1, we developed structured interview questions addressing how each of the pillar principles were being practiced in the organisation.

We held interview sessions with the RM professionals in each of the four organisations to find out how they have implemented the pillar records management principles in their organisations. Before the interview sessions, we requested all four RM professionals to either email or make available to us whilst onsite all documentation on RM their organisation had developed or referenced for its RM regime.

This documentation included Retention and Disposition Schedules (RDS), classification schemes, thesauri, policies, procedures, guidelines, and training information about the EDRMS. Screen dumps of the EDRMS record registration and search screens were also requested to be made available onsite or via email.

Most of the requested information was received via email in advance of the scheduled interview session with the RM professionals, and this greatly assisted with preparing for the interview sessions with each of them. The screen dumps of the EDRMS provided an understanding of how the EDRMS was configured for the organisation and provided an overview of the type of metadata being captured in the EDRMS.

On the first day onsite, the RM professional provided a demonstration of the EDRMS to us. The demos usually lasted 30 minutes. This was then followed by a one-hour interview

scheduled with the RM professional. With the permission of the RM professionals, we recorded the interview sessions using a MP3 player.

#### Identifying the ISB of EDRMS Users – Short Questionnaire, Interview Sessions, and Protocol Analysis with Participants

We asked participants to complete a short questionnaire, stating their name, the department they worked for, job title, bullet descriptions of their job functions, and what other information sources they used.

We followed this with an interview session with the participant using semi-structured interview questions. Lastly, we used the "Think Aloud" Protocol Analysis research method (Ericsson & Simon 1993) where we asked participants to think aloud and show us how they conducted their most recently executed simple search, followed by how they conducted their most recent difficult search using the EDRMS.

We visited each of the four organisations and gathered data on their premises. The interview sessions and the subsequent protocol analysis were conducted in the office of the participant in order to have access to the EDRMS from their office computers.

It was possible to identify the ISB of EDRMS users using the above methodology. By using the "Think Aloud" Protocol Analysis approach, it was possible to obtain an insight into users' information seeking thought processes as they conducted the different types of searches. From an understanding of their ISBs, it was then possible to describe this behaviour.

With the permission of the participants, we taped the interview sessions and later transcribed them. Notes were also taken during the course of the interviews and the protocol analysis observations.

## Data Analysis ISB of EDRMS Users

To identify the ISB characteristics of the EDRMS users, we used both the data gathered from the individual interview sessions with each participant and the protocol analysis for the difficult and simple searches.

An initial ISB pattern was plotted using the data from the interview with each participant. Then, for the same participant, we plotted the ISB pattern from the protocol analysis for the simple search and a separate ISB pattern for the difficult search. A comparison was made of the three different ISB patterns for each participant, looking for similarities and differences. We performed these steps for all 40 participants; hence, in total we developed 120 ISB pattern flow charts from the interview and protocol analysis data.

The ISB pattern from the interview data provided a representation of the participant's ISB characteristics, identifying all the different ISB characteristics the participant would engage with when seeking information in the EDRMS.

We found that the data from the protocol analysis reflected the ISBs described by the users in their interview sessions; the protocol analysis demonstrated a subset of the behaviours

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described in the interviews. The data from the protocol analysis was limited to the user's most recent simple or difficult search experience.

Table 4. The practices used to manage records in the EDRMS in compliance with RM principles

with KWI principles							
What are the pillar RM	Interview	Organisations					
principles & practices stated in ISO15489?	Questions for Records Managers	Org. A	Org. B	Org. C	Org. D		
Records Management policies are written to outline the aim and objectives of the records	1. Is there an IM/RM policy in the organisation?	Yes	Yes	Yes	Yes		
management principles and practices that need to be adopted in the organisation. It sets the rules on how records need to be managed and specifies the roles and responsibilities of staff in the organisation. Most importantly, it states that records need to be captured into the corporate information repository, which is the EDRMS.	2. What is the IM/RM policy of the organisation?	All organisations had RM policies, which were made available.					
	3. Is it endorsed and supported by senior management?	Yes	Yes	Yes	Yes		
	4. Does the policy state that the EDRMS is the corporate information repository for the organisation?	Yes	Yes	Yes	Yes		
	5. How is the policy implemented in the organisation?	Training	Training	Training	Training		
	6. How do you perceive the usage of the EDRMS in the organisation?	Good	Good, as indicated by the Audits.	Moderate. Improving	Good		

Table 5	Extract from	n matrix for	coding ISR	and RM	nractices

Practices used to manage records by the four organisations.	In	Information Seeking Behaviour Characteristics					
	Stage 1: Starting	Stage 2: Formulate Search Strategy					
	Search	88		Both	Retrieve		
		Search	Tree Structure	Metadata	Search		
		using	of	&	from		
		Boolean	Classification	Navigation	Shortcuts		
		Logic	Scheme				
Records Management policies are written to outline that the EDRMS	1						
is the corporate	•	-	-	_	-		
information repository.							
Policies also outline							
roles and							
responsibilities for RM.							

This in turn skewed the ISB of users' to the specific information the users were seeking when they conducted their last simple or difficult search. For example, if the simple search was to look for a document with a specific "Record Number" and the record number was known at the time, then a metadata search was conducted.

Hence, we decided to use the ISB patterns plotted using the interview data to develop the individual information seeking behaviour (IISB) for each user, and then we aggregated these IISBs to form the aggregated ISB pattern for each organisation.

We then aggregated the four ISB patterns plotted for each organisation, to derive a single final aggregated model of the ISB of EDRMS users as presented in Figure 2.

#### **RM Practices**

We used the pillar RM principles and practices from ISO 15489 as presented in Table 1, and developed interview questions for the RM professionals to find out what RM practices they used to manage records in the EDRMS.

We then developed a matrix, and compared all the eight pillar RM principles and practices stated in ISO 15489 to the practices used to manage records in the EDRMS as they were presented in the interview sessions with the RM professionals.

Table 4 presents a condensed version of the matrix, using the first of the eight pillar RM principles, RM policies, as an example. The second column lists the type of questions that were developed to address how the RM policies have been implemented in the organisations. The next four columns present the responses from each of the four organisations.

This method was continued in order to find to out how the

Figure 2. Information Seeking Behaviour (ISB) processes model of EDRMS users

## 1 Start Search a EDRMS users search the system for the following reasons: 1) they have a task to do & require info if the EDRMS to complete the task, 2) need to action a task by responding to action items via the EDRM workflow, or 3) they require information in the EDRMS as reference materials or to recollect what was communicated or performed previously on the same or similar subject matter. Hence, when STARTING a search, there is an AWARENESS of what EDRMS users are searching for. They are aware of at least 1 or more metadata associated with the search. Uses made their decision on what search strategy to employ based on whether they AUTHORED or FILED the item, or KNOW WHERE the item is stored in the EDRMS. If users AUTHORED, FILED or are AWARE where the items is filed they tend to NAVIGATE to the folder or item. Users also think if they have conducted the search previously and if they have SAVED these searches into their FAVORITES shocus. Or if the information can be accessed from their RECENT items folder.

#### 2 Formulate Search Strategy

b EDRMS uses can formulate more than one search strategy. EDRMS uses exhibited 3 methods of formulating a search strategy. 1) If they have not conducted the search previously, they will use a METADATA search based on knowledge of what they are looking for, using the search engine. The decision on the chrice of metadata fields to search by will vary depending on what information is being searched for & the level of AWARENESS user has of the information being searched for Using the CONTENT SEARCH is last option used. If they have saved the search criteria before they will either 2) RETRIEVE the search from their SHORTCUT , or 3) RECAIL where the document is filled & NAVIGATE/BROWSE through ELLASSIFICATION SCHEMA.

#### 3 Execute Search

c EXECUTE search based on search strategy.

#### 4 Process & Evaluate Search Results

- d Uses review the search results by BROWSING the DOCUMENT
  TITLE WARENT FOLDERS OF DOCUMENTS, DATE,
  DOCUMENT/FILE NUMBERS to make their selection.
- e Whist BROWSING, users will ASSESS the search results based on search criteria in Step 2 to see if it resembles what they are searching for
- f If NO, then they will continue BROWSING thru the remaining results.
- g If they have not found what they are searching for or if there are too many search results, users will decide to continue with their search using a REFINED search criteria. Users tend to REFINE their search by FILTERING, SORTING or changing the selection of metadata fields, and also by vaning the search criteria terms used in the metadata fields. If NAVIGATION is used, they will decide to NAVIGATE using different keywords via the Classification Schema.

#### 5 Access Search Results

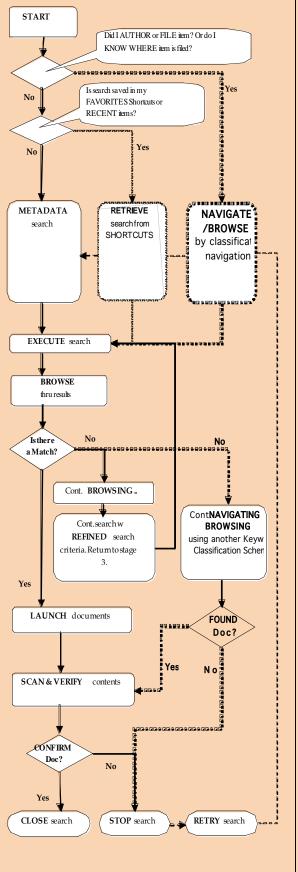
h If there is a match, users will LAUNCH documents that match their search criteria. Depending on the design & functionality of the EDRMS, some users do step 6 i before step 5 h.

#### 6 Decision Making about Search Results

- j If users are able to LAUNCH open the doc they will SCAN through the LAUNCHED document & VERIFY its contents. A few users do step 5h before step 6i, as their EDRMS enables SCANNING of the doc via a Viewer at the bottom of the search results window.
- j Actions of LAUNCHING, SCANNING & VERIFYING the document enables users to CONFIRM that have found the document they are searching for.

#### 7 End Search

k If they have found the document this will CLOSE their search. Otherwise users will decide to STOP the search after spending 10 -30 mins of searching. Nearly all users stated that the importance of the info being searched determines whether time affects their searching or not. Users will seek assistance from their colleagues, Records Section or the HelpDesk. If promising leads are obtained from these sources, users will return to the EDRMS and RETRY FORMULATING SEARCH STRATEGY again.



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remaining seven pillar RM principles were implemented and practiced in the organisations by the records managers.

#### **Matching ISB with RM Practices**

Having the answers to what the ISB of EDRMS users is and

Table 6. Explanation of the search methods available to users in the EDRMS

	Search Methods Explanation  Explanation					
		<u>*</u>				
1.	Metadata Search using Boolean Logic	Searching using the search window in the EDRMS for terms in the metadata fields of the record by using Boolean logic operators like 'AND' or 'OR'.				
		An example would be 'performance appraisals AND Joe Bloggs'. The words 'performance appraisal' would be part of the title metadata field and 'Joe Bloggs' the author metadata field of the record.				
2.	Navigating Tree Structure of Classification Scheme	Navigating or browsing the tree view folder structure of the classification scheme presented in the EDRMS.				
3.	Both Metadata & Navigation	A combination of the search methods 1 and 2 explained above.				
4.	Retrieve Search from Shortcuts.	Retrieving search from the shortcut functionality available in the EDRMS. These include; retrieving searches from the recently accessed or saved searches folders; or retrieving records stored in a favourites folder for quick access.				
5.	Metadata Search using terms in Classification Scheme	Refers to searching using terms in the classification scheme as metadata fields, under the classification metadata.				
		Examples of first level terms in the classification scheme are; Personnel, Financial Management, Legal Services. Examples of the second level terms are: planning, reviewing, advice, compliance.				
6.	Using terms in the Thesaurus	Searching using terms in the classification scheme that are listed in the thesaurus. The thesaurus can be either uploaded into the thesaurus functionality in the EDRMS, or uploaded into software that integrates with the EDRMS. In either of these installations, it is possible to search for records classified against the terms in the thesaurus. If the thesaurus is not integrated to the EDRMS then, it will not be possible to perform the aforementioned search.				
7.	Sorting Search Results	Refers to the act of using the sorting functionality in the EDRMS to sort the search results presented after a search by preferred metadata fields such as; author, title, date, record number.				
8.	View Related Docs / Containers	When the search results are displayed it is possible to highlight a specific record and find out which records or containers (folders) are related to the record. This functionality enables users' to identify and browse related or similar records held in other containers, relevant to their search.				
9.	Refining Search using Boolean or by Varying Metadata	Conducting a refined search to the existing search using either Boolean logic terms like 'and' or 'or' to either expand or narrow the search results. Or refining the existing search by changing the search terms that are assigned as metadata for the record being searched.				

how records are managed in the EDRMSs, we then proceeded to answer the primary research question: are the ways in which corporate documents and records are managed in the EDRMS consistent with the ISB patterns of users?

We developed another matrix, see Table 5, listing the eight pillar RM principles stated in Table 1 in the vertical axis and the ISB characteristics in the horizontal axis. We ticked the columns where RM practices matched ISB characteristics.

## Findings The Information Seeking Behaviour (ISB) of EDRMS Users

EDRMS users performed a sequence of information seeking activities from the time they started a search to when they ended it. We grouped the activities into seven processes: starting the search; formulating search strategy; executing the search; processing and evaluating results; accessing results; decision making about search results; and finally ending the search.

Figure 2 presents the ISB model. It provides a process view of the activities users perform when seeking information in an EDRMS. The information seeking activities are grouped into seven sequential broad ISB processes. Comprehensive descriptions of each of the

ISB activities performed by users is stated in the flowchart in the sequences in which they occur.

In the following, we describe our observations of the ISB of EDRMS users in each stage of their information seeking process as outlined in Figure 2.

#### Stage I: Start Search

When starting a search in the EDRMS, users had an awareness of:

- · what information was being sought;
- whether the information was authored by the user conducting the search; and
- whether a search shortcut had been created by the user and could be retrieved for the current search.

#### Stage 2: Formulate Search Strategy

The users exhibited three methods of formulating a search strategy. In almost all cases, if they had not conducted the search previously, they would use a metadata search based on their knowledge of what they were looking for, using the search engine provided by the EDRMS.

The decision of which metadata fields to search by depended on a number of factors, which we discuss later in this paper. If the user had previously conducted the search, they might use a saved shortcut to retrieve the search or, if they remembered where the record was filed and the functionality was available to them, they might navigate or browse through folders using the classification scheme or tree structure that was implemented in the EDRMS.

Shortcuts included saved searches, recent edits, and items stored using the favorites functionality in the EDRMS. It was at this stage of the ISB that the IISS of the user came into play. The IISS reflected the user's preferred method for searching.

Thus, we observed users who preferred to navigate the folder tree structure to find records, seek records by searching via metadata fields in the search screen, or search using preferred metadata fields like document title, author or date.

#### **Stage 3: Execute Search**

This was the act of executing the search formulated in Stage 2 by hitting the enter button on the keyboard.

#### Stage 4: Process and Evaluate Search Results

At this stage, the users browsed through the search results and assessed the search results to ascertain if the information they sought had been found. They refined their search criteria either to reduce the number of search results to a manageable few or to better focus on finding the required records.

Common sub-activities were:

- Sorting search results to display information in a preferred order. Most frequently users sorted by date created, author, document title, or by chronological or alphabetical order.
- Filtering search results by using relevant metadata fields to

- refine the search results to a meaningful set to work with or to browse through. Users most often filtered by record type and date created.
- Navigating down the classification scheme folder structure using (where it was available) a hierarchical (tree) view to identify the sought records or information.

#### **Stage 5: Access Search Results**

Users accessed search results to confirm that they had found the record they were seeking. Their access could be limited by the security settings in the EDRMS. Launching open items that matched the search criteria.

## Stage 6: Decision Making About Search Results

The users scanned the opened record to verify that the contents matched the search criteria and to confirm that it was the record being sought.

#### Stage 7: End Search

If the required record had been found, the search was closed. This could also be the case if the record could not be found. A search might be stopped when users did not find information quickly in the EDRMS but expected to find it from another source.

After having either stopped or closed the search, users would retry the search if there were promising leads from sources where the users sought help in order to improve the search strategy. They would retry the search by returning to the stage where the search strategy was formulated.

### Other Factors Impacting the ISB of EDRMS Users

We hypothesized how the four factors training, IISS, task, and time would affect the ISB of EDRMS users, as presented in Figure 1. Our findings proved these hypotheses, but additionally revealed that training also influences IISS and task influences time.

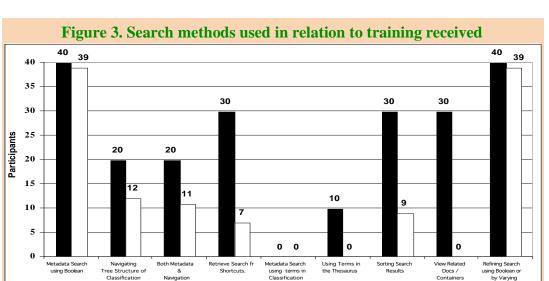
#### The Affect of Training on ISB

Table 6 presents and explains each of the search methods that are available to users given the design of the EDRMS in the organisations studied. Figure 3 summarizes the relationship between the training provided and the search methods that were used by the study participants.

Figure 3. Search methods used in relation to training received

Figure 3 reflects an aggregation of what training was provided to users, and what search methods users stated in the interviews that they used. The x-axis lists all the different search methods available to users in the EDRMS. Each of these search methods are explained in Table 6.

We make the following observations from the findings presented in Figure 3. The organisations provided training on INFORMATION SEEKING BEHAVIOUR OF ELECTRONIC DOCUMENT AND RECORD MANAGEMENT SYSTEMS: Continued from page 53



Training Provided to Users and Search Methods Used by ERMS Users

some aspects of searching and not on others. Users tended to use the techniques they were taught.

One organisation only provided training on two search methods and users in this organisation only used these methods. No user employed a search technique they were not trained in using. Three organizations provided training on how to view related documents or folders but none of the users used this function. Some search techniques were observed to be more popular than others. Ninety-eight percent (98%) formulated their search and refined their search using metadata fields.

Reviewing the training program of the four organisations and also the interview data of the RM professionals, we observed that none of the organisations provided training on how to search using the metadata associated with the first or second level EDRMS in the classification scheme or using the thesaurus functionality embedded in the EDRMS.

Organisation C's thesaurus was uploaded using a third party thesaurus application and not integrated into the EDRMS. Hence, users cannot search by browsing through the thesaurus and click on terms in the thesaurus to view records classified against the thesaurus terms. Training was provided to all Organisation C's participants on how to search the thesaurus, so users would know how to request new folder titles from the Records Section.

However, training was not provided on how to consult the thesaurus application and type in these thesaurus terms in the classification metadata fields of the EDRMS to search for records classified against these terms.

Training programs on different search methods thus

appear to play an important role in enabling users to effectively search and retrieve information stored in the EDRMS. Providing focused training on the search skills that

> are most relevant to the type of tasks users are likely to perform frequently would enable users to adopt these search methods as part of their IISS.

## The Affect of IISS on ISB

We describe the Individual Information Seeking Style (IISS) of users as the personal information seeking style that individual users already possess for information seeking, either to complete a task or to fulfil an information

need. An IISS could be developed: through working with EDRMS in previous jobs; working with other information systems like the Microsoft Windows Explorer's tree view folder structure common in network drives; or using search engines such as Google to search the internet or intranets; or a combination of these experiences.

Users did express some information seeking preferences in the interviews. For example, eight participants (20%) said they would create shortcuts to quickly access their frequently used records or documents. Some of the users who had used the "tree view" folder structure hierarchies in network drives or MS Windows Explorer preferred to "navigate" down the folders in the EDRMS instead of seeking information via metadata fields. These stated preferences were evident when users demonstrated searches to us.

We also noted that at times this direct relationship between IISS and ISB was moderated by both training and task. For example, we observed users who had a preferred IISS of "navigating" down the "tree" view folder structure of the EDRMS also seeking information by using metadata fields when they were not able to find information using their preferred method.

The EDRMS training provided them with the skills of seeking information via metadata fields, and the task they had to perform forced them to use a non-preferred search method in order to find the required information, thereby moderating their ISB. The moderating influence that training has on IISS suggests that it is possible to improve the search and retrieval skills of EDRMS users by providing appropriate EDRMS training programs.

#### The Affect of Task on ISB

Previous research on theories of information seeking behaviour by Carol Kuhlthau, Gloria Leckie, T. D. Wilson, and Katriina Byström (Fisher, Erdelez & McKechnie 2006), indicate that "task" and/or "information need" drives the ISB of users. We observed this phenomenon in our research findings as well.

The findings indicate that the EDRMS users' information seeking behaviour is driven either by a task that he/she has to complete or by a cognitive need for information to make decisions or to find out more about a topic.

Before proceeding to explain this finding, we would like to take a moment to define the terms "task" and "task information awareness" (TIA) as used in the research. We define task as a work related activity that the user needs to perform and complete by seeking and acquiring information.

Examples of tasks are the need to action an invoice, write minutes of a meeting, write reports on specific subject matters, conduct analysis of past policies on a subject matter and develop new polices or revise existing policies, and conduct searches for information on behalf of colleagues or supervisors. TIA, on the other hand, refers to the bits of specific information pertaining to the overall work tasks that the user or his/her colleagues know about and that aids the completion of the task.

As an example, the task could be to approve an invoice from a supplier. The TIA the user could have to complete this task is perhaps only the specific invoice number to be approved. With this TIA, the user would be able to conduct a search in the EDRMS using the metadata field "invoice number" and retrieve the invoice from the supplier and thus be able to complete the task.

Alternatively, the user's TIA could be only the name of the supplier of the invoice to be approved. With this TIA, the user could decide to conduct a metadata search using the supplier's name or, if the user knows where supplier folders are filed in the EDRMS, he/she may prefer to navigate to the specific supplier's folder and retrieve the information.

Examples of the types of information that we observed that users were seeking from the EDRMS to complete their tasks included searching for information that:

- they have authored in the course of their work and which they have filed into the EDRMS themselves;
- their colleagues have authored and filed into the EDRMS;
- they need to share with their immediate business unit or colleagues and which has been registered into the EDRMS by them or others;
- they need to either action, respond, review, or look at to complete their task; and/or
- information that contains historical data.

Observations from the protocol analysis suggest that the task directly influences the ISB. The level of TIA that users have of the task they need to complete greatly influences them when they seek information in the EDRMS, thus making TIA a subset of task.

For example, if users are aware that the information they

need was created on a specific date, or who the author is, or where it was filed, they use this information to decide how to formulate their search strategies. That is, this knowledge influences whether they use a metadata search to find the information, navigate to the folder, retrieve the search from their favourites, or use their recently accessed records shortcuts. It also helps them to later "Process and Evaluate the Search Results" by refining, filtering, or sorting their search results.

#### The Affect of Time on ISB

We hypothesized that time directly affects the ISB of EDRMS users. While time did have an effect, it was weaker than we expected, and moderated by task. Twenty-eight users (70%) said that they did not apply a time limit when searching the EDRMS. The remaining 12 (30%) said that they did not consciously time themselves when searching for information. They estimated that they spend between 2 to 30 minutes before deciding to stop the search.

All 40 users were aware that the EDRMS is not the only source for information and that not all their colleagues store information in the EDRMS. Thus, if they are not able to find the information they are seeking, they stop the search. They may then search other applications, approach a colleague directly, or seek clarifying information.

## Implementation of Pillar RM Principles and Practices

We report our findings on how each of the organisations had implemented the pillar RM principles and practices, along with our findings on users' ISB patterns in the EDRMS.

#### **Policies**

The organisations have implemented RM policies that are endorsed by senior management in their organisations. The policies outline that records created and received by the organisation will be managed using the EDRMS according to records management practices and legislative requirements that the organisation needs to adhere to.

The policies have been implemented in the organisation by communicating them to relevant staff, through campaigns during the launch of the policies, or as part of the RM induction programs to new staff. This documentation is also published on the corporate intranets. In general, the RM professionals reported that they perceived that the EDRMS is embraced positively by the organisation; however, there is resistance from some users.

#### **Procedures and Standards**

All the organisations have comprehensive RM procedures and guidelines developed and implemented as part of the RM programme. This documentation was promoted and communicated to all staff via road shows when it was initially implemented, and subsequently through induction programmes for all new starters.

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All organisations provide RM induction training in addition to training on the EDRMS. As part of the RM induction, staff is trained on what is a record, made aware of their responsibilities to save records, and that email records need to be captured into the EDRMS.

In organisation B, an analysis was conducted prior to EDRMS implementation identifying what information in each business unit is a record, and as such needs to be captured into the EDRMS. Staff in the other organisations were trained in how to identify records and register them in the EDRMS.

After reviewing the RM documentation and the induction materials, we concluded that users are provided with awareness and understanding of what is a record and of their responsibility to save records into the EDRMS. There is also awareness in all organisations that, apart from the EDRMS which is the corporate information repository, there are other information management (IM) systems implemented for capturing records and non-records.

Both organisations B and D have developed documenttitling standards and communicated these to staff during induction programmes.

However, when we reviewed the interview and protocol analysis data it is clear that these standards are not followed consistently by all staff.

About 43% of the users stated that their information seeking experience in the EDRMS is difficult primarily owing to poor document titling by their colleagues or the Records Section.

#### Metadata

Metadata are implemented in all the EDRMS implementations. In organisation B, to use the metadata is the only method available to users when searching and retrieving information. The design of the EDRMS does not provide a folder structure view of how information is

organised, so users in organisation B cannot navigate down a tree-view folder structure.

All the organisations have designed their EDRMS using multiple record types so that appropriate metadata for the specific record type can be captured into the EDRMS. The implementation of this design assists users in searching for and

All the organisations have designed their EDRMS using multiple record types so that appropriate metadata for the specific record type can be captured

retrieving specific records by limiting their search to a record type, then using a combination of metadata fields for the record type to conduct their searches. For example, when registering "contracts" users are required to complete metadata on the contract number, date created, supplier details, etc. When

Table 7. EDRMS users' preferred and frequently searched metadata fields							ds
Ranking		Organisations:					
by frequently used metadata fields	Metadata Fields Frequently Searched	A	В	C	D	Total:	%
1	Title Word	10	9	0	8	27	68
2	Document / Application Type	10	0	2	0	12	30
3	Author	0	0	7	0	7	18
4	Record Type	0	5	0	0	5	13
5	Object ID / Record or Document No.	1	1	2	1	5	13
6	Date	0	0	5	0	5	13
7	File Number	0	0	4	0	4	10
8	Contact	0	3	0	0	3	8
9	Treasurer's Number	0	0	2	0	2	5
10	Any Word	0	0	0	2	2	5
11	Typist	0	0	1	0	1	3

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searching for the record type "contracts" these metadata fields can be used in combination to find the specific contract.

In Table 7, users' preferred metadata fields when seeking information from the EDRMS are listed and ranked. The data from the interview session with users were used to compile this ranking. The responses were to the interview question "What is your preferred way of searching for information in the EDRMS?" Users could list a number of preferred metadata fields in their response. A tick was made in the metadata field each time it was stated as a preferred field.

An aggregation of all the ticks for each metadata field was performed to derive the total for each organisation, as shown in columns three to six. An aggregation of the responses for all four organisations is presented in column seven. The last column presents a percentage figure derived from column seven.

The three most preferred and frequently used metadata fields for searching are the Title (68%), the Document or Application Type (30%), and the Author (18%).

When search results are displayed, users frequently browse the following metadata elements: Title of the Records (98%), Date (33%), and Author (10%). Given that the Title metadata is a key element in the search and retrieval of EDRMS records, it is essential that the data entry into this field is as accurate and meaningful as possible.

In the next issue of IQ we will complete this report with the final comprehensive details of our findings on Classification Scheme/Thesaurus, Retention & Disposition Schedule, Security, Training, Monitoring & Auditing, and a discussion of our observations and recommendations.



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