IRMT/World Bank Evidence-based Governance in the Electronic Age
Global Forum Electronic Discussions
Summary of Discussion One
Information Technology, Electronic Records, and Record Keeping
27 – 31 January 2003

Introduction to the Summary
The following is a brief summary of the Global Forum electronic discussion on **Information Technology, Electronic Records, and Record Keeping**. The electronic discussion, held from 27 to 31 January, was organized by the International Records Management Trust and the World Bank Information Solutions Group and World Bank Institute, with funding provided by the UK Department for International Development and the Commonwealth Secretariat.

Background to this Discussion
This is one of four electronic discussions being organized by the IRMT and World Bank, to be held between 27 January and 14 March 2003. The other discussions address the following topics:

- Financial Management Reform and Record Keeping (10-14 February)
- Legal and Judicial Reform and Record Keeping (24-28 February)
- Public Sector Reform and Record Keeping (10-14 March)

Once these electronic discussions are completed, the IRMT and World Bank will host a series of video conferences with senior government officials around the world, to examine the issues raised in more detail and to seek concrete solutions to the challenges of electronic records management.

Participants in the Discussion
Participants in the invitation-based discussion included representatives of information technology departments and representatives of record keeping departments of Commonwealth governments around the world, as well as other invited officials involved with electronic records or information technology issues and selected observers from around the world. Approximately 170 participants were registered in the discussion, from over 30 countries.

Purpose of the Electronic Discussion
The purpose of this electronic discussion was to facilitate a dialogue among experts in their own fields about the relationship between information technology, record keeping,

and accountable and efficient government and governance. The goal was to identify key emerging issues, and gaps in understanding, about the use of information technologies and the creation and management of records in governments in developing countries. The ultimate goal was to raise awareness amongst all participants of the information technology and record keeping issues involved with creating, managing, and protecting government information. The project organizers hope that the dialogue will start the process of building a network of professionals in regions around the world who share related concerns.

The Process of the Discussion

The discussion began with participants answering introductory questions about record keeping issues in general, both paper-based and electronic. These questions included the following:

1.   Does your institution or agency make provision for the long-term preservation of information held in the IT systems it develops or administers? If so, how? If not, why not?

2.   Has admissibility of records as legal evidence been an issue for electronic records in your jurisdiction? If so, is the authenticity and reliability of such information protected in electronic systems? How?

3.   Do you have concerns about how to create, manage, and safeguard electronically generated information so that its value as evidence is protected? Do you have ideas or suggestions for successfully protecting electronic records?

4.   From your perspective, what would you say are the effects of good or bad record keeping on your area of administration in government?

5.   Can you give us examples of your record keeping problems, successes, and needs?

6.   What would you say is one major challenge in making the transition from paper-based record keeping systems to electronic record keeping systems?

7.   Do you have any suggestions about the pitfalls that should be avoided in making the transition or processes that have been more or less successful in your own institution?

These questions served as a starting point, but the participants introduced a range of other issues throughout the week. By the end of the week, six distinct issues had been identified by the participants as central to the current problems of – and critical to the future success of – electronic records management and the protection of the products of information technologies. These issues are:

1. the absence of legislation and policies for the management of information technologies and their products, including electronic records

2. the lack of standards and systems for the management of IT products and electronic records.

3. the low profile of the record keeping profession, the misperception that information technology will easily solve all information and records problems, and the consequent lack of resources to support record keeping programs and

develop a sustainable environment for the management of the products of information technologies.

4. the lack of adequate training of and human resource development for records personnel.
5. the lack of coordinated action or closer relationships between IT and records management personnel
6. The lack of clarity about processes for the preservation of electronic records and the products of IT

Each of these issues is outlined in more detail below, with suggestions for action raised by the participants.

Issue No. 1

The absence of legislation and policies for the management of information technologies and their products, including electronic records.

Background

There is a need for strong, integrated, and effective legislation and policies for the development of information technologies and the care of the products of information technologies, including electronic records.

In many countries in the developing world, laws, legislation, and policies are inadequate for the protection of electronic records and the products of information technologies. Indeed, in some countries, the legislative infrastructure does not exist to manage the paper record either.

The participants recognized the need to protect all types of records for legal and administrative purposes and to establish policies for electronically created information from databases to electronic mail. They also identified the need for wide-ranging "cyber laws" for the creation and management of information technologies and their products, including policies for emergency planning, preservation, and legal admissibility of electronically generated information and records.

Participants also recognized the importance of relating information technology and electronic records laws and policies with broader national objectives, such as human rights and health care, and they agreed that systems were needed to enforce any laws established.

Suggestions for Action

o   An international agency, such as the International Records Management Trust, could develop a publicly accessible resource base identifying legislation related to electronic records management, to raise awareness of actions taken elsewhere and help share experiences.

o   National Archives around the world could revise their existing legislation to accommodate the current need of managing electronic records. In the process of formulating or revising legislation, the legal departments, relevant ministries, and

departments of government will be involved, raising their understanding of the issues involved.

o National Archives need to realize that many top government leaders are concerned with IT development, and so the archivists should use the existing platforms of Information and IT councils or committees to move the government's agenda forward and ensure records issues are acknowledged throughout.

o National Archives need to keep encouraging their government to create enabling environments for the growth of a domestic information technology that supports socio-economic and human development, by, for example, developing national information and IT policies.

o Governments need to be encouraged to consider establishing an effective regulatory framework with regard to IT training standards; changing the public service culture to embrace the strength of information systems by ensuring staff are competent; development methods to stress commitment to training and upgrading within the civil service, to encourage a change in the organizational culture.

o Governments also need to establish rules and regulations for the establishment of private institutions, in line with public-sector standards in information technologies and electronic records management, particularly for training of staff and management of records

Issue No. 2
The lack of standards and systems for the management of IT products and electronic records.

Background

Several participants suggested that standards are needed for the creation and management of IT and electronic records, including the development technical and administrative standards and the implementation of formalized systems for management and preservation. This area can be perceived as different from legislation and policy development, as it is more "technical", but clearly the development of standards or selection of systems should be linked closely to policy-level decisions.

Participants urged attention to security issues, IT infrastructure, processes for validating and verifying the accuracy of data, mechanisms for controlling the integrity of records that are backed up, copied, migrated, or emulated, and the need for both data standards and digital standards. They also noted the need for standards for electronic workflow and electronic document management, and the need to control and systematize procedures and processes in the work place, particularly with regard to electronic mail and the protection of evidence of actions and transactions.

Participants emphasized that it was important to realize that standards were important for all aspects of record keeping, regardless of whether the system is paper-based or electronic.

Suggestions for Action

o   An international agency, such as the International Records Management Trust, could develop or compile and disseminate international guidelines for the digitization of records and information.

o   An international agency, again such as the International Records Management Trust, could develop a resource base of information about "best practice" in electronic records and information technology management around the world.

o   Each country could study its own systems and standards and carry out a gap analysis and needs analysis. Then each country should try to develop its own standards and systems which can be shared by other countries. Such an initiative will highlight many of the "lessons learned" around the world.

o   National Archives need to ensure that procedures for the management of electronic records are closely linked to effective and efficient management of paper-based records; otherwise any digitally oriented system will be meaningless.

o   Similarly, National Archives need to ensure that all systems and standards address the interface between paper and electronic records and do not ignore one or the other.

Issue No. 3

The low profile of the record keeping profession, the misperception that information technology will easily solve all information and records problems, and the consequent lack of resources to support record keeping programs and develop a sustainable environment for the management of the products of information technologies.

Background

Participants noted the lack of awareness among senior government -- and society -- of the important role of record keepers in protecting evidence for legal, administrative, and cultural purposes. They also noted the lack of awareness of the effects of information technology on government, systems, and society. As one participant noted, many archivists in developing countries are rendered "dumb" in an Information Age because of the lack of support for even the acquisition of computer equipment for every day tasks, let alone the resources to develop electronic records programs.

Several participants noted that records managers and archivists have a low profile. Archival institutions are often viewed by senior administrators as cultural institutions rather than information centers. Archivists play a key role in developmental issues and in

the management of electronic records. Archivists need to continue raising awareness of the importance of quality records care for the protection of evidence.

It was noted that a lack of understanding could be an age-related issue. More senior officials are perhaps older and less experienced with technologies and so find it more difficult to embrace the new opportunities and deal with the challenges.

Several people identified lack of resources as a separate issue. While it is recognized that resources are particularly problematic in developing countries, it can be argued that a lack of resources generally signifies a lack of support from senior management for an activity or issue. Thus lack of resources is included as an issue of concern that goes hand-in-hand with a lack of awareness.

Suggestions for Action

o The records community as a whole could consider a new vision for its work, including a change in name and a readjustment of its public profile, away from "records" toward information or evidence.

o The records community could broaden its responsibilities to the larger world of "information management" and ensure the new profession is collaborative and inclusive of all those who care for information and records, including information technology professionals.

o National Archives could ensure that they have implemented adequate systems for paper-based records management in order to prepare for the care of electronic records.

o National Archives could develop outreach programs to raise awareness of the role of records management. Examples from one country include sensitization programs on national radio and television; publication of a newsletter and a brochure for national archives users; updating and publication or dissemination of the National Archives' finding aids, participation in international projects (such as the UNESCO funded Slave Trade Archives Project), and the development of a website for the national archives.

o National Archives could work more closely with partners, including representatives of organizations as well as key individuals, to implement a stronger program. In particular, National Archives could look to create smart partnership with key players in the industry.

o With the emergence of information technologies, the National Archives should consider to reposition itself:

> o From archives to records
>
> o From records to systems
>
> o From non-active to proactive
>
> o From back to front line

o Records personnel should ensure their needs and priorities are considered in the design or procurement of information systems, in order to ensure record keeping functionalities are catered for in new and redesigned systems.

Issue No. 4

The lack of adequate training of and human resource development for records personnel.

Background

Several participants commented on the need to improve employment conditions in developing countries. This issue is clearly linked to lack of awareness of record keeping. But training is critical regardless of the profile of record keepers and so action must be considered even if profile does not improve in the meantime. Intensive training, improved recruitment of new staff, and the creation of a clear and respected career path for records personnel are critical.

Suggestions for Action

o National Archives could consider if they should press their governments to group information specialists under one scheme of service, which would allow for better opportunities for mobility and promotion, thus raising the profile of record keepers and improving their ability to undertake their essential functions.

o National and international agencies could review educational programs to ensure their relevance in the electronic age; for example, to ensure training addresses information technology policies and strategies as well as the management of electronic and paper-based records.

o Governments should develop information systems training policies that facilitate the training of information systems, information technology, and records personnel in general. .

Issue No. 5

The lack of coordinated action or closer relationships between information technology and records management personnel.

Background:

Participants were keen to encourage collaborative efforts not only between information technology and records management personnel but also with creators, users, clients, and others. They felt that an increased understanding by records management staff of information technology issues would raise profile of records manager and bring them into

the loop of digitization. Records managers also need to recognize that information technology managers are not always keen on records management.

Suggestions for action:

o   National Archives and records oriented educational establishments could ensure that records personnel are trained in relevant areas of information technology.

o   National Archives could find ways for records managers to work more actively and closely with information technology managers to share ideas and expertise.

o   National Archives could formalize our terminology as record keepers and share ideas with information technology experts about relationships between the two professional lexicons, so each group understands the similarities and differences between one and the other.

o   Professionals in information technology and record keeping could publish and distribute their terminologies more widely, especially to target groups in the other discipline, to raise awareness.

o   Government should encourage all information technology oriented staff, including records personnel, to work collaboratively on all automation projects. In particular, governments could find a way to ensure records management personnel are brought into the process of developing or revising information technologies and systems, to add their input about record-keeping issues.

o   Professionals in information technology and records management could find a common definition of "electronic record" and ensure that whenever an electronic record is in question during the development of a process or system, both groups are involved in any actions required

o   The National Archives could establish an Information Technology Unit, to provide technical support and, formally or informally, to train record keepers on information technology issues.

o   Government could encourage the establishment within the organization of IT committees, consisting of IT specialists, users, and other stakeholders, to help focus and develop IT policies and strategies.

o   Professionals in information technology and record keeping could organize joint seminars on common issues.

o   Records personnel could draw on the ideas and practices emerging from the geo-spatial community, including those people who work with geo-spatial data/ geographic information systems, thematic map representations, spectral signatures, and so on. These individuals are involved in cutting edge technologies that can offer valuable lessons for other disciplines.

Issue No. 6

The lack of clarity about processes for the preservation of electronic records and the products of information technologies.

Background

Participants suggested that it was important to clarify what is meant by preservation and what exactly should be preserved. Not all digital creations are "records" and not all records are worth preserving, whether paper-based or electronic. Backups are a short term option but not appropriate for the long term. Emulation, migration, retrospective conversion, transferring are all methods for protecting information, but do record keepers understand them and know how to select the best option? Many participants said they needed much more information on this topic.

Participants also noted that digital media have a limited life span: perhaps 5 to 8 to 10 years.

They also noted that security of the electronic record is both a standards issue and a preservation issue. There is a need for reliable and authentic information. The process of digital preservation involves the selection of a stable medium, preservation of the medium, providing a mechanism to refresh the data, ensuring the integrity and authenticity of material.

Participants expressed concern about the serious incompatibility crisis. Software houses must be fully engaged in process of upward compatibility of their software or promises of cheaper upgrades. Archivists, scientists and engineers as well as those in the arts should endeavour to acquire skills in digital recording using software that can stand the test of time. It is normal to be afraid of making decisions about such a volatile technology, but record keepers should learn to take calculated risks.

Suggestions for Action

o .Government could develop a centralized, well equipped reprographic and digital preservation unit to serve all arms of a government.

o National Archives could provide training in record keeping issues for staff of a preservation unit.

o Government could also ensure that training is provided in digital preservation issues for record keeping personnel.

o Governments can undertake collaborative efforts within and across jurisdictions. They could involve all stakeholders concerned with information management and information technology and policy formulation.

o An international agency such as the International Records Management Trust could conduct a survey of the state of electronic records care around the world and make the results centrally known.

Note: The discussion organizers are pleased to advise that such a project is underway. One participant in the discussion, Mr. Shadrack Katuu of the University of Botswana, is involved in a survey relating to the challenges of managing electronic records in developing countries. In September 2002, the project organizers carried out a survey on the challenges facing national archival institutions. The findings of this research project are to be released in the near future. Anyone wishing to contribute to the online survey can access the link at http://64.73.24.48/s.asp?u=83025167093 or, for those who wished to add information to surveys already completed, they can access the link at http://64.73.24.48/s.asp?u=25896129244.

o An international agency, such as the International Records Management Trust, could develop an international database/repository of information regarding record keeping and the impact of information technology. Information in the repository specifically related to IT and electronic records might include:

1. what aspect of life in the national community the record represents

2. what is the current state of the record, paper-based or electronic

3. what storage formats are used for database records

4. what storage formats are used for imaged records

5. who uses the output

6. what does the archival act state about the management of those records

7. what laws are required/exist to support the care of those records

8. what successes/failures can be identified for this particular action

NOTE: The IRMT has identified the development of an "information gateway" on record keeping and IT/electronic records issues as one of the possible steps in a capacity building program and is investigating long-term funding for such an initiative.

o National Archives should be sure to recognize and respect the value of "tried and true" methods of preservation, at least as stop gap measures, including microfilm and microfiche.

o Archival professionals need to make sure that solutions to information systems issues are not technology led but are led by information needs, which are critical. Technology is a tool and should be managed as such.

o Records management professionals should examine the methods for preservation used most often by information technology professions to see what mechanisms are commonly used and are effective, including copying and migration.

- o Anyone involved with preserving electronic records needs to be absolutely clear on the purpose of preservation, the types of records being preserved, and for how long. There is no purpose in using expensive technology to preserve records that do not need to be kept. It is important to focus on the business processes involved, the core information needed, and the reasons for its preservation before expending funds on digitization, migration, or other technologies.

- o Government should establish policies for the outsourcing of preservation work, to ensure that the services provided protect the evidence in the records and information adequately.

- o Archival agencies should work collaboratively to consider sharing expertise and perhaps developing centralized systems for the management and preservation of electronic records. It may be possible to share responsibilities across a region and save resources.