

Information Management and Office Systems Advancement

(IMOSA)

- An Overview -

by John McDonald, Director

Information Management Standards and Practices, Government Records Branch

National Archives of Canada

The purpose of this document is to provide an overview of the objectives, activities and results of the **Information Management and Office Systems Advancement (IMOSA)** project. The IMOSA project was established in December 1989 as a collaborative initiative between the Department of Communications (DOC) through the Canadian Workplace Automation Research Centre (CWARC) and the National Archives of Canada (NA) through the Government Records Branch (GRB) in partnership with several other government departments and private sector organizations. It was based on earlier work that was conducted as part of the Office Communications Systems (OCS) Field Trial Program (1983-1986). As part of that program, the National Archives was invited to participate in a field trial at the Department of Communications where a local area network linked 70 users in the Policy sector. This provided a rich milieu for studying the impact of technology on the management of information from both the archival and corporate perspectives.

Based on the experience, preliminary functional requirements were developed by the National Archives for managing electronic documents generated on the office systems used for the field trial. These requirements were further refined by an ad hoc group that comprised representatives from the National Archives, Department of Communications and Provenance Systems Inc. The purpose of this group was to develop requirements that could be used to respond to the needs of the NA and DOC both of which were about to introduce office support systems. The working title of the requirements was FOREMOST (Formal Records Management for Office Systems Technologies). Although the requirements were developed to respond to the needs of DOC and the NA, interest in and demand for the requirements from other organizations was substantial.

As a result of the demand and recognizing that the requirements could form the basis for work that could proceed at the government-wide level, the National Archives in 1990, published the requirements under the title Managing Information in Office Automation Systems: Final Report on the FOREMOST Project. Through its Information Management Standards and Practices (IMSP) Division, the Branch also worked with the Treasury Board Secretariat, through its Information Technology Standards program to establish the Treasury Board Systems Standards Working Group (TBOSSWG). This group, which comprises representatives from over 20 government departments concerned about the management of information in office systems, served as the stakeholders for the National Archives' development efforts.

In reviewing the FOREMOST report the TBOSSWG suggested that before the requirements could be considered for government-wide adoption, they should be tested. The representative from CWARC, Susan Gillies, suggested that this could best be accomplished through a partnership that built on the industry exchange program supported by CWARC. This program allows private and academic sector organizations to participate in research projects that advance knowledge concerning the impact of office systems on organizations. It also supports the research into the development of appropriate solutions some of which may eventually emerge as Canadian software products.

It was based on the CWARC suggestion that the Information Management and Office Systems Advancement (IMOSA) project was established. Although intended as a single project (i.e. testing the functional requirements), IMOSA eventually grew into three phases that featured multiple projects and multiple partners. Over time it moved from being an acronym that described a project to a term that described a partnership mechanism that could be used to bring together like minded organizations to conduct research into various issues associated with the management of corporate information in office systems.

PHASE ONE

The first phase of the project was based on a partnership between the National Archives, the Department of Communications (CWARC) and Provenance Systems Inc. (contributing through an industry exchange agreement with CWARC). The purpose of this phase was to develop and test a prototype application based on the functional requirements described in the FOREMOST report. Phase One began in January 1990 and concluded a year later.

The prototype application, which was developed by Provenance Systems and based on contributions from a team of specialists from the National Archives, was installed on the Novell local area network (LAN) in the Government Records Branch where users created and exchanged electronic documents using the software available on the LAN (Wordperfect, Harvard Graphics, electronic mail, etc.). The prototype application was available through a list of LAN menu options and provided end users with a tool to file, browse, search and retrieve in order to protect the corporate holdings of the organization, while also providing functions allowing the records manager to control and manage both electronic and non-electronic holdings. Much of the departmental subject classification system (which was automated) was downloaded to the file server to ensure that consistency could be maintained between the hardcopy and electronic corporate holdings. The electronic holdings could comprise documents created using a variety of software that was available on the LAN (i.e. a document could be in the form of a spreadsheet, a graphic, or an electronic mail message as well as text generated by a word processing package).

The prototype application was assessed by a small user group that comprised project officers and managers from the site as well as records management staff. The results served to highlight issues that were already known in an impressive sense, but that were brought into greater focus through the experience gained in using the prototype and in contemplat-

ing its use on a broader scale by larger and more complex user groups and organizations. More detailed observations led to the conclusion that the incorporation of corporate memory management considerations in an office systems environment would be dependent upon the following six factors:

- policy that provides a consistent view (if not definition) of what is and is not a "record" (i.e. information in context), a series of statements that set out requirements for the ongoing availability, understandability, and usability of records, and a series of statements that assigns accountability throughout the organization.
- rules of the road' which, within the policy framework, guide users in managing information from a corporate perspective. These can range from helpful hints on how to use shared space (i.e. electronic work group space) to criteria to help users or systems designers to decide when an electronic record is to be kept and how.
- a clear understanding of how the office works and how the use of office systems evolve in order to set the policy and rules of the road in context. This is very important. The use of office systems seems to mature over time from a set of personal support tools to help us generate more paper, to a network that supports the automation of tasks carried out by work groups, to an integrated network that supports the automation of work processes associated with entire business applications. We need to adapt our strategies accordingly which is why in our own work we are concentrating on the development of solutions that touch on all three stages of maturity.
- functional requirements to assist institutions in developing RFI's and RFP's and to assist industry in building appropriate technical solutions. The requirements need to be expressed at various levels but, above all, need to be relevant to the application. The requirements to help an individual user manage his or her documents on a PC will be related but much different from those expressed to support the electronic document management needs of a small work group or the 'enterprise-wide' records management needs of an entire organization.
- a combination of procedural and technical solutions as well as effective implementation strategies that respect the requirements. We need to work more directly with the manufacturers of automated records management systems, electronic document management systems and groupware as well as 'systems integraters' to provide them with a user view of an emerging and important market niche (as some companies are already discovering) - the management of organizational memory.
- information technology standards that not only enhance the potential for exchanging information in context across space (i.e. the buzzword is 'interconnectivity') but also the potential for storing information in context through time. Given the absence of a comprehensive suite of standards that promotes an open systems environment we will probably need to build migration strategies that reflect a combination of dejure, defacto and proprietary standards.

The **Report on Phase 1 of the IMOSA Project** was finalized and tabled to the TBOSSWG and made available to a wide range of interested individuals and groups. The results of the experience spawned a number of ideas that led to the establishment of a second phase to the IMOSA project which got underway in 1991.

PHASE TWO

Phase two of IMOSA endeavoured to capture much of what was learned in Phase One. The initiatives that are described below are based on the enhancement of the requirements that were tested in Phase One and the development of two user-oriented guides that were proposed by the TBOSSWG.

The CIMA Requirements

The prototype software that was developed as part of Phase One did not support functions that addressed the retention and disposition (including archival transfer) of electronic documents. During the Summer and Fall of 1991, a focus group of representatives from the National Archives (Government Archives Division (GAD), Records Services, and IMSP) and the Department of Communications (Records Management) as well as Dale Ethier Consulting (operating under an exchange agreement with CWARC) and Provenance Systems (operating under a contract with IMSP) met on a regular basis to develop the requirements that would address this functionality (since called 'electronic file migration').

At the same time, the results of the testing of the prototype software were reviewed by the focus group and used to enhance the existing requirements that covered filing, retrieving, and other related functions. The new more comprehensive set of requirements that emerged from the focus group sessions were called 'corporate information management application' (CIMA). This was to distinguish them from the FOREMOST requirements which represented an earlier and, by now, more primitive version from which the CIMA requirements were derived.

During the Summer and Fall of 1991, Dale Ethier Consulting, operating through an exchange agreement with CWARC and in partnership with the National Archives and CWARC, drafted the final text of the requirements. These were reviewed by the partners and finalized in July 1992.

The CIMA requirements resulted from a research exercise. They were not intended to serve as government-wide standards or guidelines. They were to be seen as a product of an effort to help the partners in the initiative to jump start their thinking and advance their individual goals. For the private sector firms it enabled them to explore, in a pre-development environment, the issues they needed to address before developing the made-in-Canada products (software, consulting advice) that would appear on the national and, most importantly, international marketplace (these firms did not have a competitive advantage over other companies because the results of the exchange agreements in which they invested heavily were open to anyone). For CWARC the initiative supported its mandate to undertake research into the impact of office technologies on the workplace. For the National Archives the research resulted in a product (the CIMA requirements) and a body of knowledge that it would not have otherwise acquired. These will be used to establish

projects that, in drawing on the research experience, will lead to the development of government-wide standards and practices designed to assist institutions in managing their electronic corporate memory.

Reference Guide to Information Technology Standards

The impetus for this guide emerged from the interest that IMOSA participants (the TBOSSWG, departmental contacts, etc.) had in learning more about the information technology standards that were relevant to the management of information in office systems. Given the absence of a layman's view of these standards, IMSP developed the guide in cooperation with officials from the TBITS program. The intended audience will be those departmental program managers and information systems specialists who are responsible for the procurement, introduction, use and overall management of office systems. The guide will be released in the Spring of 1993 to MGIH coordinators and Standards coordinators for use within their institutions.

Managing Computer Directories

During Phase One of IMOSA it became clear that it would be difficult for any organization to wean users away easily from their personal directories (complete with individualized approaches to naming conventions, directory construction, etc.) to a corporate environment that required them to file and retrieve their holdings from a corporately developed and managed filing system. The guide on managing computer directories is an effort to provide advice to users on how they can build and use file directories to respond to their individual needs but in a manner that is both consistent across the organization and in line with the corporate approach to subject clarification. It is seen as a stepping stone to help users migrate more smoothly to the corporate application that will eventually be introduced into the organization.

The guide will be issued to MGIH coordinators who will be advised that the guide should be tailored to the needs of their own organizations.

PHASE THREE

As work proceeded on the finalization of the CIMA requirements, officials from CWARC and the National Archives together with officials from several other institutions (many of which were members of the TBOSSWG) and private sector firms agreed to undertake a number of research projects designed to explore various issues associated with the CIMA requirements. These initiatives comprised Phase Three of IMOSA.

Survey of Vendors of Software Products that Relate to the Functional Requirements for a Corporate Information Management Application

Describes a survey conducted by CWARC of over 130 Canadian and American software vendors to determine the extent to which each is developing or marketing products that include some or all of the functional requirements for corporate electronic document management as described in the Checklist appended to the survey. It should be of interest to office systems planners and implementors who need to know the availability of software products that address the corporate management of electronic documents. The statistics and other information could be used to build government-wide strategies that accelerate the development of technical solutions to corporate electronic document management problems.

Checklist of Generic Functional Requirements for the Management of Electronic Corporate Documents in Office Systems

Based on the detailed CIMA requirements used in the survey described above, this checklist describes the basic requirements that federal government institutions may wish to consider as they begin developing requests for proposals leading to the procurement of software for the corporate management of electronic documents in office systems. It should be of interest to office systems planners involved in the development of RFP's for office systems technologies.

Survey of Committees Related to the Management of Information in the Federal Government

Describes the results of a survey of over 400 inter-departmental committees involved in various aspects of information management. The survey was conducted to identify future partners and to assess the degree to which the federal government was organizing to address issues raised as part of the IMOSA project. The survey describes their mission, scope and membership. The project was led by Treasury Board Secretariat and the results compiled and distributed by CWARC with financial support from the National Archives.

The Use of Thesauri in the Management of Federal Government Information Holdings

Describes the results of a study, led by CWARC and conducted by the University of Laval, into the characteristics of thesauri and the role that thesauri can play in the management of federal government information holdings. The report will be of interest to those involved in developing new approaches to the description and classification of federal government information holdings including those generated in office systems.

Study of the Requirements for a Corporate Information Management Application for the Management of Electronic Documents in Office Systems and Imaging

Describes the results of CWARC led research (conducted by LGS Inc.) into the extent to which the CIMA requirements can address the management of imaged records. The results will be of interest to those involved in integrating imaging into existing or new networked office systems and who are concerned about developing functional requirements that address information management considerations.

Evaluation of "Functional Requirements for a Corporate Information Management Application" against the Management of Government Information Holdings Policy

Describes the results of Treasury Board led research into the extent to which the CIMA requirements conform to the requirements of the Management of Government Information Holdings Policy. The report will be of interest to those involved in ensuring that MGIH policy considerations are reflected in the development of functional requirements leading to the procurement of software for the corporate management of electronic documents.

Study of the Implementation of a CIMA class application in a federal government department

Describes the results of an assessment of an automated records management system at Revenue Canada - Taxation that addresses the management of both electronic and hardcopy documents. The report will be of interest to those who are interested in the management as well as technical issues that organizations must face when introducing this kind of application into the workplace.