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행정안전부
국가기록원
National Archives of Korea



A STRATEGY FOR TRAINING ON DIGITAL RECORDS PRESERVATION IN MEXICO

IP3 – InterPARES 2009 International Summit Symposium
InterPARES TEAM Mexico

Seoul, South Korea, June 4-5, 2009.

Juan Voutssas M. – Mexico
Alicia Barnard – Mexico
Brenda Cabral – Mexico
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ABSTRACT:

An analysis of the current situation regarding the management and preservation of digital records has found that, in most sectors, these issues continue to be neglected in Mexico. Currently, the professional graduated from archive sciences careers are focused mainly in constructing digital databases or digitizing archives and in traditional supports preservation. Also, it is typical to find professionals from many disciplines managing digital records and archives, mainly from Information Technologies perspective, with little or null knowledge about how to manage them in a professional manner to ensure the authenticity of the records over the long term. This paper analyzes the efforts of the InterPARES 3 Project's TEAM Mexico to design and implement a strategy for the development of the human resources infrastructure necessary to address these concerns. Specifically, the paper discusses the TEAM's work in the following three areas:

1) The creation of several small courses and workshops addressing different aspects of digital records and their preservation, which, although developed and managed by the University of Mexico (UNAM), are designed to be adapted and offered as continuous education programs at different institutions.

2) The creation of a diploma study, with 150-200 hours of teaching, which gathers together material from several courses to provide students with a deeper understanding of the issues involved in the long-term preservation of trustworthy digital records.

3) The design of courses, both at the undergraduate and graduate levels, for certain records-related professional university programs leading to careers in records management, archives and information sciences, to be incorporated into the regular curricula of training for careers in these areas. These will be developed and installed at once in UNAM and then be made available to other universities.

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Introduction

This project is directly derived from the InterPARES 3 objectives and pretends to present a concrete plan of action for existing archives or archival / records units who have the task to keep safely bodies of records that are to be maintained over a long term. The aim of this paper is to seek the best strategy to introduce subject matters related to digital records and its preservation within teaching modules for in-house training programs, continuing education workshops, and academic curricula into educational programs in Mexico. First we will analyze the current situation, following with a strategy to develop different options for education and training and the mechanisms to involve different partners in such strategy.

The formal education on digital records and archives in Mexico

The professional education for archival sciences and records management in Mexico is reduced to five careers at university level: the archival sciences career at the National School of Library and Archival Sciences in Mexico City, the documentary information sciences careers at the School of Humanities of the University of the State of Mexico and in the University of Guadalajara and the Archival Sciences career at School of Information Sciences at the University of San Luis Potosí. Five more careers in Library and Information Sciences have a certain relationship with archives. At the high school level there is also an option to obtain a diploma as technicians for management of documentary information systems at the *College of Sciences and Humanities* of the National Autonomous University of Mexico (UNAM) as well as in some other technical colleges.

By briefly reviewing the curricula plan of the three professional careers we find that there is no specific subject matter related to the nature of digital records or its preservation, although we do find subject matters like *archives automation* or *systems design*.

National School of Library and Archival Sciences <i>(Bachelor in Archive Sciences)</i>	Autonomous University of the State of Mexico <i>(Bachelor in Information Sciences and Documentation)</i>	University of Guadalajara <i>(Bachelor in Information Sciences)</i>	Autonomous University of San Luis Potosí <i>(Bachelor in Archive Sciences)</i>	Autonomous University of Chihuahua <i>(Bachelor in Information Sciences)</i>
Computing practical tools Systems theory Networks within the information environment Systems analysis and design Information storage and retrieval Archives automation seminar Archives preservation and restoring	Systems General Theory Workshop of automation of documentary collections 1 Workshop of automation of documentary collections 2 Preventive document preservation	Information Technology systems design Data bases Introduction to telematic networks New information technologies Telematic networks	Information communication and technologies Technologies management and implementation Automation projects Archival resources management Archives preservation	Archives and records Information Technology Information systems design Preservation and conservation of archives and records Information sciences software evaluation

The overall curricula maps from the above mentioned schools are related mostly with records and archives in traditional supports, and concepts like “*records and archives fonds automation*” generally refer to development of records-creation systems or to the development of records databases and digitization processes for converting archives. Although it is relevant for records managers and archivists to learn about Information Technology (IT) and about Computer Sciences it seems to be that IT subjects prevail before the lack of modern archival tendencies that deal with digital records and its preservation. On the other hand, all subject matters related to preservation are focused on traditional supports.

As for in-house training and continuing education workshops programs to those who are already dealing with digital records and other digital materials we perceived no structured program for doing so. We found only isolated efforts but due to that isolation and lack of articulated planning, they have a very low impact within our archival environment. Therefore —as it also happens in other regions and countries,— digital records usually lay in hands of information technology professionals with little or null knowledge of formal archival

practices and organizational culture useful for proper creating, managing and preserving of digital materials.

On the other hand we have many governmental, educational, and private organizations already creating, ¿maintaining? digital records lacking of policies, procedures and other regulation useful for its trusted preservation. In an effort to determine certain general policies the Mexican *Federal Law of Archives* (whose approval by the Senate is still pending, although it has already been approved by Chamber of Representatives in Mexico) states the *National General Archive* to establish the guidelines for the use of creating and preserving systems for traditional and digital records, and also introduces the obligation of the agencies for developing policies and guidelines for the control of digital records with the purpose of applying homogeneous archival instruments (classification schema, disposition tables, etc.), used for traditional records; the creation, maintenance and preservation of its meta data, and the documentation of any maintenance strategy such as migration, actualization of software or hardware.¹

It is also worthwhile to mention that the Mexican *Federal Law for Transparency and Access to Governmental Information*, which includes personal data and confidential information protection, demands that records and archives must be properly organized. This Law also comprehends electronic records².

Having in mind the issues above mentioned, InterPARES TEAM Mexico decided to design a strategy in order to help the lack of knowledge that prevails on digital records and its preservation.

Acquire knowledge of digital records and its preservation training and education from others.

In order to develop our study plans either for in-house training programs, for continuing education workshops, and for academic curricula in higher education we are reviewing the topics, instruments and literature that others are already using for these

¹ Ley Federal de Archivos. Mexican Senate Parliamentary Gazette march 24th 2009. Gaceta Parlamentaria del 24 de marzo de 2009, pp. 31-36, available may 15th, 2009 (in spanish) at: <http://www.senado.gob.mx/gace.php?sesion=2009/04/02/1&documento=6>

² Ley Federal de Transparencia y Acceso a la Información. Available may 15th, 2009 (in spanish) at: http://www.oas.org/juridico/spanish/mec_avance_mexV.pdf

purposes and choosing and adapting what we feel would be best for our environment, or will develop some others when considered necessary for our purposes.

As for in house training programs, we are reviewing the programs and materials that have been already developed by:

- InterPARES Project. <http://www.interpares.org>
- The International Council of Archives. <http://www.ica.org/en/resource-centre>
- The Electronic Records Archives of the National Archives and Records Administration. <http://www.archives.gov/era/index.html>
- The National Archives of the United Kingdom. <http://www.nationalarchives.gov.uk/preservation/digital.htm>
- The International Records Management Trust. <http://www.irmt.org>
- The Society of American Archivists. <http://www.archivists.org/menu.asp?m=education>
- *La "Asociación de Archiveros de Cataluña". (Catalonia Archivists Society)* <http://www.arxivers.com/esp/quisom2.asp>

Besides, for educational curricula we will look at the academic curricula of the following universities:

- University of British Columbia <http://www.slais.ubc.ca/COURSES/courses-summary.htm>,
- University of Barcelona, <http://www.ub.edu/graus/>,
- University of Michigan <http://www.si.umich.edu/msi/arm.htm> ,
- Glasgow University:
<http://www.gla.ac.uk/postgraduate/taught/arts/informationmanagementpreservationdigitalarchive/recordsmanagement/>,
- Carlos III of Madrid University:
http://www.uc3m.es/portal/page/portal/postgrado_mast_doct/masters/mu_archivistica/program
- Salamanca University:
<http://www.usal.es/webusal/node/474>
<http://www.usal.es/webusal/files/MasterInformacionDigital.pdf> ,
- La Salle University of Colombia: <http://sisinfo.lasalle.edu.co/>

Also the International TEAMS of IP3 will be consulted whenever it is needed and the programs and curricula developed by TEAM Mexico will be disseminated among International Alliance TEAMS.

Development of contents

This phase will give us the opportunity to design contents for in-house training and continuing education workshops as well as academic curricula from a general point of view to specific ones, i.e. contents will be firstly developed for general knowledge of digital records and its preservation, followed by specific topics.

First, TEAM Mexico is already developing contents that will give a panorama of the state of art with materials from IP2, standards and best practices from the International Council of Archives, ISO, such as ISO 15489 and OAIS, as well as MoReQ 2. Here it is important to mention that we have to develop contents on the nature of digital records and archives plus those related to preservation due to the lack of materials, as mentioned above. With these materials we will be able to train instructors or teachers from whom, by means of inducing them to a continuing self learning strategy, we expect them to help us to develop specific contents on preservation or other kind of subject matters related to digital records, such as computing and IT, organizational culture, contemporary archival and diplomatics theory and practice or public service management, local archival and records regulation or access of information, privacy and copyright issues. The main idea is to have required subject matters that will be useful in any type and level of training or education and selective subject matters to be used whenever they are needed, as well to create simultaneously a “critical mass” of training instructors within these topics.

At a first sight, for in-house training programs and continuing education workshops we foresee the following target audiences:

Training for those who are already creating, maintaining or preserving digital records or archives.

The delivery of training will intend to be more practical than theoretical and here we expect four main different audiences: archivists, librarians and any other professionals whose primary responsibility is to ensure permanent preservation of trusted records. Computing and IT professionals already working around archives to whom specific topics on archival and organization culture will be introduced. Assorted professionals with records

management and archives knowledge or working around digital archiving to whom certain themes on information technologies should be introduced as well. A mixed group of those already mentioned whereas topics on archival, organizational culture and information technologies will have to be taken into consideration.

Training for auditing professionals

This audience needs general knowledge as well as specific elements that may help them to audit record and archives systems of any kind.

Training for specific needs

This courses will derive from needs related to a specific plan of action to different needs such as the implementation of a records-keeping system or of a preservation system.

At the same time that we are developing teaching modules in three streams: for in-house training programs, for continuing education workshops, and for academic curricula, we are constructing a strategy to introduce effectively these teaching modules into the society. Let's call it the InterPARES Mexican TEAM "marketing strategy".

InterPARES Mexican Team is conformed by professionals from different institutions. But an important core of them nowadays belongs to the National Autonomous University of Mexico (UNAM). Moreover, at the present time, the InterPARES TEAM and projects have its main support from the University Center for Library Sciences Research (CUIB) of UNAM. So, we are constructing our "marketing" planning around this center of this university, using it as a "lever" to foster this endeavor.

CUIB has a strategic position for this purpose for several reasons:

First, it is co-responsible, along with the Faculty of Philosophy and Belles Lettres of UNAM, to impart the Master and Ph.D. Studies in Library and Information Sciences (master studies are imparted in both attendant and distance modalities). The InterPARES Mexican TEAM director is also a member of the Tutorial Advisory Committee for the UNAM Grade Library Sciences Studies. These facts facilitates the introduction of the academic material prepared by the Mexican TEAM into the academic curricula of these grade studies and pave the way to intend some related research for new-coming grade students.

Second, CUIB already has a long tradition in giving continuing education courses and workshops. CUIB usually offers —along the whole year— to the academic and professional community, programs for continuing education workshops related to library and information sciences, across a very wide sort of subjects, profundity and duration. So the academic and professional information-related community is used to look forward seeking for these programs, paying special attention to the new ones. The CUIB has earned through the years a summoning capacity which attracts easily attendants to these courses. Usually they are teemed and many times they have to be repeated in order to cover all the applications. CUIB is now expressly willing to expand its subjects and field of action to archival courses and workshops. These facts enable the InterPARES Mexican TEAM to present and to impart the continuing education programs prepared by the TEAM taking advantage of the moral authority and prestige of CUIB in these activities speeding up the penetration of these courses to the archivists and information community. In the beginning, members of the Mexican TEAM would be the instructors, trying to prepare at the same time new instructors.

Third, being the main research center within the field of information sciences in Mexico and probably in all Latin America, CUIB is frequently required by many governmental and private institutions to act as an advisor and consultant in specific information problems. Often, CUIB acts like an “outsourcer” in business intelligence practices and projects related to information. Many times, within this work, these institutions request to the center specific in-house training programs, expressly designed and given by CUIB's researchers and professionals. Thus, the center has a strong tradition in designing, constructing and imparting these kind of programs. Taking also advantage of this fact, the InterPARES Mexican TEAM is already prepared to act as a consultant in specific archives preserving problems and consequently in designing in-house training programs aimed for existing archives or archival / records units who have the task to keep safely bodies of records that are to be maintained over the long term.

For all these reasons, is evident that CUIB offers a very attractive position to act as the “headquarter” for the InterPARES Mexican TEAM teaching modules.

The “marketing” strategy also contemplates the following issues:

Regarding formal education, InterPARES Mexican TEAM pretends to introduce into the curricular plan of the Master Degree in “Information Sciences and Studies” of UNAM, in

the first place, one specific subject in archives long term digital preservation; in years to come, a series of more specific and varied subject matters with topics related to these subjects, in order to give the Master Degree students an option to get a specialty in archival digital preservation. This kind of things are already done now with other specialties. The degree students must take five obligatory subjects from a total of nine, and then four optional subjects among a wide variety of available topics to get an specialty into the degree. Our goal is to prepare in a short future a complete set of these “specialty subjects” which will offer as a whole to the students a new thorough and very specific specialty in archives digital long term preservation.

Regarding the bachelor level, we are planning to do something alike. First, to prepare a specific subject for the library sciences students related to archives long term digital preservation. At the beginning, as optional subject. This will be easy since many of the professors in degree level are the same than in under-degree level, and there are many and significant “communicant vessels” among them to do such a thing.

Second, to prepare some academic contents and present them to the National School of Library and Archival Sciences in Mexico City. This will not be so immediate and natural, since this school depends on the Federal Ministry of Education and not from UNAM. The idea would be to interest them to integrate gradually these contents into their curricula while preparing some of their professors.

Going into the continuing education, the main issues to take care would be:

As mentioned, we are already working in designing a general small workshop dedicated, more than anything, to awake awareness about digital archives long term preservation.

Several workshops with different subjects, levels and range will be prepared and issued this year and the incoming years through CUIB with the purpose of creating a “critical mass” of professionals in these subjects. These workshops will be between 10-40 hours each.

A wide set of courses is desirable, in order to be able to teach many different aspects about digital archives proper preservation. When the number of courses reaches a certain number and covering, they can be imparted together as a “diploma” course, about 150-200 hours, with a complete set of different professors and subject covering. In the Mexican

working environment, these “diploma” courses are highly valued by the professionals and employers, and thus they are frequently requested with full attendance. Although they have no curricular value within universities, they are considered by employers as a degree of “high specialization” for professionals and because of that they are very popular and imparted often in Mexican universities. Professionals prefer —of course—, to get a diploma from highly rated institutions, since they are much more valuable for employers. UNAM, —the University of Mexico— is the highest rated university in the Spanish world (this includes Spain and the whole Latin American universities; it is among top 200 universities of the world in London Times Higher Education, also in Shanghai Jao Tong University and in Webometrics rankings) and the only Mexican university located in these top levels in these rankings. Because of that, curricular and non-curricular diplomas from UNAM are most highly valued and requested. This is an advantage we will try to use in our favor.

Regarding in-house training programs:

We will use part of the contents and programs from the continuing education workshop to design a few “typical” courses for in-house training, dedicated to enable the staff of medium / small organizations with archival duties to plan for and carry out proper digital preservation.

Special in-house training courses will be designed as requested by specific organizations with specific necessities. If possible, they will be “recycled” to the continuing education programs. These continuing education and in-house training programs will be for governmental and private organizations with archival activities as well as for small and medium-sized archival organizations, mainly those endowed with low resources.

Time schedule

To achieve this strategy thoroughly, —including the change of curricular plans of other schools outside UNAM— will take several years. But we do believe that the main issues can be achieved in a two-three years timeframe. Our plan is to obtain the following goals:

2009)

To develop and to impart the first courses and workshops for general awareness and knowledge of digital records and its preservation.

To develop and to impart the first courses and workshops for specific topics.

To develop the curricular plan for one optional subject for the *Information Studies* master's degree level.

To develop the curricular plan for one optional subject for bachelor's level.

To design the subjects layout for a diploma course.

2010)

To introduce the developed optional subject for *Information Studies* master's degree level to the students in summer 2010, (when the new academic year-semester starts).

If possible, to introduce the developed optional subject for bachelor's level to the UNAM Library Sciences students in summer 2010, (when the new academic year-semester starts).

To develop a whole basic set of courses and workshops for specific topics.

To promote the above set of subject matters to archival sciences schools.

With these courses, to start to fill the contents for the “diploma” course and to start imparting it.

To develop the subjects layout —and when possible the contents— of the *Information Studies* master's degree set of subject matters for a specialization, as well as for the bachelor level at UNAM.

2011)

To develop the whole set of courses and workshops for specific topics.

To work closely with the different schools related with archival science implanting subjects/programs into their formal curricula.

To be designing / imparting a whole set of specific in-house training programs, expressly designed and given for governmental, education, private organizations.

Authors Biography:

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Alicia Barnard. She is currently an independent consultant for records and archives. From 1990 to 2008 director of the Documentation Center at the Federal Ministry of Health in México, coordinating records and archive units, developing its regulation and as trainer on countless records management courses. Has presented or published more than 40 papers and articles. Received in 1992 the *"Archival Merit Diploma"* and in 2000 *"Acknowledgment to the Records and Archival Tasks Diploma"* from the Mexican General Archive of the Nation. Former Director of the InterPARES Mexican TEAM until spring 2008.

Brenda Cabral Vargas. She is Ph.D. in Libraries and Information Sciences for the National Autonomous University of Mexico (UNAM); researcher at the University Center for Library and Information Sciences Research within UNAM. At the moment focused on Information and Communication Technology at UNAM with specialty in distance learning. With more than 17 years of experience, she has coordinated many libraries and taught different signatures in many universities in the private sector as much as in public sector.

Jovv Valdespino Vázquez. He is Master in Business Administration for the National Autonomous University of Mexico (UNAM) with specialty in Information Technologies and in library automation. During his experience for more than 30 years he has planned, implemented and managed many strategic projects of different areas of the administration so much in the UNAM, the private sector as well as in public sector. Current InterPARES Mexican TEAM researcher.