

INTERPARES TEAM MEXICO DIPLOMA IN DIGITAL RECORDS / ARCHIVES MANAGEMENT AND PRESERVATION

**IP3 – InterPARES 2011 International Summit Symposium
InterPARES TEAM Mexico**

Barcelona, Spain, October 3-5, 2011

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Brenda Cabral – Mexico
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ABSTRACT:

As a result of former analysis of the current situation regarding the management and preservation of digital records in Mexico was found that, in most sectors, these issues continue to be neglected in Mexico. Currently, the professional graduated from archival 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. Previous efforts in training, being so isolated and lacking of articulated planning, have had very low impact within our archival environment. This paper analyzes the specific action of the InterPARES 3 Project TEAM Mexico to implement its strategy designed to enhance the development of human resources infrastructure necessary to address these concerns. Specifically, the paper discusses:

1) The TEAM's work in the development and implementing of an ongoing diploma course in digital records/archives management and preservation, with 152 hours of teaching, with specific contents prepared by TEAM Mexico researchers which gather together material from several sources to provide students with an holistic and deeper understanding of the issues involved in the long-term preservation of trustworthy digital records. This diploma course pretends to offer a hitherto unseen -in Mexico- structured program for doing so.

2) The ongoing design of curricular courses, both at the undergraduate and graduate levels, for some record-related university programs leading to degrees and careers in records management, archives and information sciences, to be incorporated into the regular curricula of training for degrees and careers in these areas. These are being already developed and will be soon installed in UNAM and then be made available to other universities.

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Introduction

One of the main InterPARES 3 goals is to develop strategies 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. This diploma course is directly derived from the InterPARES 3 goal and pretends to present a concrete action for training of professionals who are working in current archives or archival / records and have the task to keep safely bodies of authentic records that are to be preserved over a long term. The scope of this paper is to make a summary of the most important effort made by TEAM Mexico in this field of endeavor.

In the InterPARES summit in 2009 at Seoul, TEAM Mexico introduced its plan to develop its strategy in education and training¹. One of the issues presented in that document was *“...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.*

¹ Voutssas, J., et al. 2009. “A strategy for Training on Digital Records Preservation in Mexico”. InterPARES 3 2009 Symposium. Seoul, Korea. National Archives of Korea. Sept. 2009. 424 p., p. 413-424.

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. Those professionals prefer -of course-, to get a diploma from highly rated institutions, since they are much more valuable for employers. UNAM, -the National University of Mexico- is the highest rated university in the Spanish world (this includes Spain and the whole Latin American universities); it is amid 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....”

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

- To acquire inside the TEAM knowledge and competences from others in training and educating on digital records and its preservation.
- To develop contents

For in-house training and continuing education workshops programs addressed to those who are already dealing with digital records and other digital materials there were no structured program for doing so. We found only isolated efforts but due to that isolation and lack of articulated planning, they had 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. Therefore, this stage gave us the opportunity to design our own 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 would be firstly developed for general knowledge of digital records and its preservation, followed by specific topics. Thus, TEAM Mexico developed contents giving a panorama of the state of art with materials from IP2, ISO norms such as 15489, standards and best practices from the International Council of Archives, OAIS, MoReQ 2010 and others. It is important to remark that we had to develop contents on the nature of digital records and archives plus those related to preservation due to the lack of materials. With these contents we are able now to train instructors or teachers from whom, by means of inducing them to a continuing self learning strategy, 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 diplomatic 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 specific subject matters that will be useful in any type and level of training or education and selective subject matters to be used whenever needed within these topics.

Thereby, for in-house training programs and continuing education workshops TEAM Mexico foresaw and targeted the following audiences:

- Records managers
- Archivists
- IT professionals
- Responsibles of digital repositories
- Public officers responsibles of management, preservation or accountability of digital records
- Planners and decision makers related with digital documents and archives

Location: the course was located at the “CUIB”, the University Center for Library and Information Studies Research at UNAM, the National Autonomous University of Mexico. CUIB already has now a 30 year 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 has been expressly committed to expand its subjects and field of action to archival courses and workshops. These facts enabled 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.

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 a 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 was 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, it was evident that CUIB offered a very attractive position to act as the “headquarter” for the InterPARES Mexican TEAM teaching programs.

Thus, we designed a diploma study, “*diplomado*”, with 152 effective hours of class, 19 weeks length, Friday and Saturday, 4 hours each, conformed by 6 “modules” including material from several subjects to provide students with a deeper understanding of the issues involved in the management and long-term preservation of trustworthy digital records/archives. It started in may, 2011 and will last until October 2011, currently with 20 students from several private and public institutions coming from the targeted audiences (many more rejected in order to keep the group in a manageable size). All the researchers

of TEAM Mexico were involved in designing specific contents for each module, and are involved as teachers. In the future, prominent students of this first diploma course could become instructors, trying to prepare at the same time new instructors. All the contents are stored in a specific site -CUIB's Intranet- in order that all materials are available to all diploma students through the course. At the end of each module, a “master lecture” is given related with the main subjects of that particular module. At this moment, the Director of the Mexican National Archives, the Vice-manager of Archives Office of Bank of Mexico (test bed partner), the Vice-director of the Mexican Government Office of Transparency had dictated these master lectures.

At the end, each student must present a project that proves his/her knowledge and skills to understand creation, management, transfer and preservation of documentary bodies and digital archives or the design of a plan of a current organization with best practices in the management and long-term preservation of trustworthy digital records. All these projects will be presented in a final seminar with the goal that all students share their different problems, approaches, focus, solutions, methodologies, etc. to enrich their final knowledge.

The goals of the diploma course are:

- To provide to students knowledge as well as technical and archival skills to understand creation, management, transfer and preservation of documentary bodies and digital archives.
- To manage current digital records existing within systems and servers in public or private organizations, specially those from e-government.
- ▲ - To teach the students how to design and develop an organizational plan with best practices in the management and long-term preservation of trustworthy digital records.

Contents (summary):

Module I: Introduction to modern archival science, records and archives (16 hrs.) (This is an introductory module to level basic knowledge of the students).

- The record
- Main archival and records theories and models

- Records classification schemas
- Documentary appraisal, retention schedules, etc.
- Master lecture: National Archives of Mexico today

Module II: IT and their relationship with archival science and archives (36 hrs.)

- Files: Logical and physical structures
- Programs and applications; languages, etc.
- Networks, Internet, intranets, etc.
- Databases: concepts, structures, types, practical construction
- Standards and interoperability
- Document formats: types, purposes, structures, etc.
- Digitized documents and digital-born documents
- Digital storage: types, devices, costs, etc.
- Electronic signature, seal, etc.
- Digital maintenance techniques: refreshing, copy, emulation, migration, etc.
- Risk analysis, information security and preservation
- Lecture: "Digital records: state of the art and trends"

Module III: Basic Recordkeeping (20 hrs.)

A record's plan. Planning and Management

- The case study
- Researchs and surveys
- Development of policies
- Planning a recordkeeping system
- Procedures and recordkeeping
- Guidelines and recordkeeping
- Selection of a strategy and a system
- Good practices
- Recordkeeping action plans
- Lecture: "Digital records and transparency in e-government"

Module IV: State of the art and trends of digital records in the world (24 hrs.)

- The nature of digital records: definitions, types, etc.
- InterPARES ontologies: components, attributes, fixed forms, stable contents, contexts, etc.
- Status of transmission, drafts, originals, copies, etc.
- Trustworthiness, reliability, authenticity, accuracy, degrees
- Definition and concepts of records and ISO 15489
- Digital records and legislation: information access and transparency, copyrights, personal data protection, etc.
- Current problems, challenges, risks, and opportunities in recordkeeping
- Digital records and its relation with legislation (transparency, personal data, rights)
- Regulations for digital records
- Organizational culture
- The cloud, e-government, etc.
- Lecture: "Development of digital preservation policies in Bank of Mexico"

Module V: Standards and recordkeeping systems, policies, guidelines and procedures (32 hrs.)

- Standards and models: ISO 15489, MoReq 2010, DoD 5015.2, ISO 26122
- Principles and requirements of the International Council of Archives
- Metadata for digital records: ISO 23081, etc.
- Basic requirements and metadata for a records creation system
- Basic requirements and metadata for a records maintenance system
- Useful InterPARES products: assessments of authenticity, creator guidelines, contextual analysis, record creation and recordkeeping, policies and guidelines for record creation and recordkeeping, baseline authenticity requirements, metadata requirements, the Spanish version of the glossary, etc.
- Lecture: "Towards Digital Environment : Initiatives at the Mexican Electoral Court"

Module VI: Digital Records Preservation and Auditing (20 hrs.)

- The *Chain of Preservation* Model

- Basic Guidelines for digital records preservation systems: planning, strategy, transfer and ingest, appraisal, long-term requirements, etc.
- Preservation strategies
- The OAIS Model
- The NARA/RLG Audit Checklist for Certifying digital repositories, etc.
- Examples of case studies with international initiatives
- Final Seminar with students works

Next steps:

Due to the great demand that the diploma course had -it was soon teemed- and the number of candidates left in a “waiting list” the diploma course is going to be split in a modality of four independent courses (about 40 hrs. each) and will be repeated in a two-rounds sequence through the next year, starting this next November 2011. This means that every candidate will have two chances to take all the four courses in one of the two rounds. CUIB will give a certificate to each student for each course taken; those who take all four courses will have the chance to write their final work to opt for the whole diploma certificate. Through this way we expect to train 40 or so more students this and next year.

As mentioned in our previous work at Seoul, 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.

Through a brief review of 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. 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 funds*

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.

Then, regarding formal education and capitalizing all the experience acquired and the contents developed, it is of the utmost importance that InterPARES Mexican TEAM commits to introduce into the curricular plan of the Master Degree in “Information Sciences and Studies” of UNAM, in the first place, two 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. Such a thing is already being 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 ready to do something alike. First, we are preparing 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, we are already preparing some academic contents which will be presented 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.

This will be done for the next academic year of 2012. Certainly, there is still a long road to go through, but the diploma course has become now a proven method to act as a keystone to go speedily on this path.

Authors Biography:

Juan Voutssas M. He is an IT Engineer, with a master and a Ph.D. in Library and Information Studies. He is a researcher at the National Autonomous University of Mexico (UNAM), at the University Center for Library and Information Sciences Research (CUIB), with more than 30 years of experience. He has designed, implemented and managed many IT projects related with libraries and information systems. Advisor and counselor for many organizations in IT governance and IT projects. For some years focused in preservation projects within digital libraries and thus, nowadays also in preservation projects in digital archives. Since spring 2008 the current director of InterPARES Mexican TEAM.

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 Mexico, 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. Current InterPARES Mexican TEAM researcher.

Brenda Cabral. 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. Current InterPARES Mexican TEAM researcher.

Jovv Valdespino. He is Master in Business Administration for the National Autonomous University of Mexico (UNAM) with specialty in Information Technologies and in library automation and a student of the doctorate program in Library and Information Studies. 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.