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The InterPARES (International research on Permanent Authentic Records in Electronic Systems) Project: goal, methods and preliminary findings

The goal of the "InterPARES project" is to "develop the theoretical and methodological knowledge essential to the permanent preservation of records generated electronically, and, on the basis of this knowledge, to formulate model international, national, and organizational policies and strategies, as well as standards, capable of ensuring their preservation."

Research in this area was motivated by the consequences of the adoption of new information technologies on the part of governments, corporations and individuals. New dangers, such as technological obsolescence and systems' incompatibility, storage media fragility, and the difficulty of maintaining hybrid systems of record-keeping, were threatening both the existence and the authenticity of the records that must be preserved permanently for administrative, legal, and cultural reasons. This situation risked compromising the accountability of governments and businesses, undermining the productivity of industries and the reliability of commercial transactions, and

reducing scholars' confidence in electronic records as reliable and authentic sources for research. Straddling the private and public sectors, as well as being both international in scope and interdisciplinary in nature, the problem required innovative, collaborative, and multicultural research efforts. Thus, the project director, Luciana Duranti, assembled a group of researchers spanning four continents and organised in national and multinational teams, comprising members of government institutions, private organizations and the industry, and involving several disciplines.

In order to manage the complexity of the issues affecting the permanent preservation of authentic electronic records and to attain the project goal, the InterPARES project was divided into four interrelated domains of investigation. Each domain, supported by a dedicated task force of international researchers from a variety of disciplinary backgrounds, addresses a distinct research objective and a dedicated set of research questions. The findings and products of each task force are examined, revised and approved by the International Team, constituted by the project director, the chairs of the national and multinational teams and of the task forces, and the representatives of the test sites. The final reports of the first three task forces (Authenticity, Appraisal and Preservation) are going to be submitted to the national and multinational teams for contextualization at the end of June 2001, and forwarded with the teams' recommendations to the fourth task force (Strategies), which is responsible for developing the principles and criteria for the formulation of policies and standards to be submitted to the International Team for examination and revision in October, and for final release in December 2001. The process is iterative at each stage and does not proceed to the next stage until consensus is reached. Because of this structure, the research results described in this paper have been organized according to task force.

Authenticity Task Force (ATF): *Domain I*
The objective of Domain I is to identify the conceptual requirements for the preservation of authentic electronic records. To reach its objective, the ATF has agreed on a methodology comprising a number of steps. In order to establish an analytical framework for understanding records in electronic systems, both existing and future types, it has developed a "Template for Analysis" according to diplomatic concepts and methods. To populate the template, the ATF has conducted case studies to which researchers from several archival institutions and research teams have been and are contributing. The instrument for conducting the case studies is a questionnaire called "Case Studies Interview Protocol (CSIP)," developed from the template and refined after each round of case studies on the basis of an analysis of the data resulting from them. As explained in the "Authenticity Task Force Research Methodology Statement," the whole process is guided by grounded theory. After including the case studies results in the "Template Data Gathering Instrument (TEDGI)," which maps the responses to the CSIP questions to the elements of the Template for Analysis, a diplomatic analysis of each case study is conducted for the purpose of determining whether the electronic systems examined contain records and, if the answer is affirmative, to determine what type of records they are. The types of records are established on the basis of a methodology for building typologies that makes reference to traditional records typologies (e.g., an examination of the types of records generated by the Papal Chancery) and to typologies developed in other fields (e.g., an examination of typological analysis in archaeology). From the understanding developed in the course of this work, the ATF has developed conceptual requirements for the preservation of authentic electronic records. The baseline requirements for the maintenance of authentic records in electronic systems as well as specific requirements for each type of record will be taken into account in refining the criteria and methods developed by the Appraisal and Preservation Task Forces (Domain II & III).

Appraisal Task Force (ApTF): *Domain II*

The objective of Domain II is to develop criteria and methods for the appraisal of electronic records. In order to achieve it, the ApTF has carried out three principal activities: a review of the literature on the appraisal of electronic records; an analysis of the methods and procedures employed by archival institutions for the appraisal of electronic records; and the modeling of the appraisal function for electronic records. The review, which was published in a volume of proceedings of a symposium held in Italy, resulted in some refinements of the research questions, and confirmed the need for a detailed examination of points in the process where particular issues of appraisal of electronic records arise. The review restricted itself to the literature in English, because investigations by members of the ApTF revealed that there was practically nothing directly on the subject in other languages. The next step was to examine the experience of a number of institutions that have conducted a significant amount of appraisals of electronic records. The ApTF collected documents about institutional polices and procedures, and a number of reports of appraisals of electronic records, and analyzed them. The results of this analysis provided an outline of the likely activities to be modelled. The ApTF then concentrated its efforts on the modelling exercise, which proved to be a very fruitful collaboration amongst a number of co-investigators and institutional partners. The decision-making of appraisal was placed in the larger context of institutional policies, strategies, and procedures for selection of records for long-term preservation. It clearly identified the points in the exercise of appraisal for selection in which particular issues for electronic records arise. More importantly, the work drew heavily on the concepts identified and elaborated by the Authenticity Task Force, which provided a firm intellectual foundation for characterizing the necessary elements of vital aspects of the process. During the development of the models, input was received from institutional partners. Presentations were made by members of the ApTF to experts on the staff of the national archives of Canada and the United States, which have had the greatest experience with the appraisal of electronic records. The ApTF, after completing the models, has begun work on articulating the criteria and methods of appraisal of electronic records.

Preservation Task Force (PTF): *Domain III*

The objective of Domain III is to develop preservation methods for authentic electronic records. To work towards this aim, the PTF carried out several activities: it reviewed the concept of preservation in the literature, in guidelines issued by international organizations, and in the drafted ISO standard; analyzed the methods and procedures employed by archival institutions which have acquired electronic records; and identified all the "boundary conditions" for electronic records, that is, the situations in which electronic records are at a serious risk of corruption or loss. The most difficult part of the work was the conceptualization of what it means to preserve an electronic record and what it is that one preserves. Further, the concepts of rendition and reproduction presented a serious challenge. From a theoretical point of view, this domain has been on the one hand the hardest and on the other the most satisfying as the researchers have consistently moved in uncharted territory. On the basis of all the knowledge acquired in the course of the activities of inquiry or developed through scholarly search and debate, the PTF developed activity models of the preservation function independent of authenticity requirements. At this time, the PTF is embedding the conceptual requirements for authenticity in the general preservation model.

Strategies Task Force (STF): *Domain IV*

The objective of Domain IV is to develop a framework for the formulation of international standards and national and organizational policies and strategies. The composition of the STF reveals the way it intends to approach its work. Chaired by the Project Director, as the person who determines the overall direction of the InterPARES

project, its members are the chairs of the three task forces, an expert on legal and policy issues and an expert on standards, especially those related to copyright. The STF has developed a methodology and a procedure for the distillation of principles and criteria guiding the formulation of standards, policies and strategies from the findings and final recommendations of the three task forces. The procedure heavily involves the research teams. This represents the most delicate point of the research, when the universal concepts, principles and methods developed by internationally constituted task forces are brought into specific national, organizational and cultural realities and so contextualised. At the end of June 2001, the STF, having received the results of the work on the first three domains, will begin extracting from them a framework of principles and criteria in order to hand them to the research teams, which will submit their feedback papers in October 2001. The STF will proceed from there to articulate its recommendations. At this time, the STF has given to research assistants the task of identifying international and national standards, as well as national and organizational policies that are relevant to the STF work.

Glossary Committee: *Domain I-IV*
The Glossary Committee is the only unit of InterPARES that embraces all four domains. Its mandate is to create a glossary that mediates and integrates terms used and developed during the course of the InterPARES project. Consistency of terms is of utmost importance not only because InterPARES is working across multiple disciplines, and within multiple cultures, but also because the task forces are working separately on the same concepts for different purposes. Extensive technical and procedural controls (system documentation, formalized workflow procedures, Term Style Format Rules) minimize the potential for inconsistent use. The Committee has created four drafts of the glossary to date. On an ongoing basis, each task force continues to prepare lists of candidate terms, with related definitions, to submit to the Glossary Committee for approval; these are terms used or developed by each task force in the course of its research.

The InterPARES project will be completed in December 2001 and its findings released in February 2002. However, the project has only begun to explore the tip of the iceberg, having focused on records generated by the simplest kinds of digital systems, databases and document management systems. The InterPARES team has just submitted a proposal for a five years continuation that will address the challenges presented by records made, received or set aside in dynamic, interactive, sensory, performance and experiential systems and produced in the course of a larger variety of activities, including the creative and performing arts.