ERPANET

PRINCIPLES OF DIGITAL PRESERVATION

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Introduction

The European Commission funded ERPANET project was established in November 2001, with the aim of uniting numerous diverse initiatives in the area of digital preservation. This charter with Principles of Digital Preservation has been drafted in order to provide organisations and individuals with a declaration of principles, interests and intentions. The primary aim is to highlight the importance of the preservation of digital objects, and concurrently build a community around it. It is through this approach that better concerted action can be achieved. The Spanish presidency has offered a resolution in this area to the Council of Ministers in June 2002.

UNESCO has also launched in 2002 a new initiative on 'Preserving Our Digital Heritage' alongside the existing Memory of the World Programme. The aim is to build a line of defence against the loss of valuable information which will be implemented from the initial point of creation. One of the deliverables will be an UNESCO charter on digital preservation. UNESCO has also drafted a medium term strategy on this issue. In the USA, the Library of Congress has been commissioned to build a national programme on digital preservation together with other leading institutions. These initiatives are either limited in scope or geographically bound. This Charter aims to be comprehensive and to include the whole area of preservation of digital information.

To date the leading actors in this area have predominantly come from the library and archive sectors. However, the developing trend has been one of heterogeneous initiatives from separate sectors. The following statement intends to unite communities active in the area of digital preservation and to provide them with a common basis of understanding and firm foundation for knowledge sharing, while strongly supporting their efforts to make further co-ordinated progress in finding new strategies and perhaps even solutions. It also intends to create a network of interested users and to strengthen existing networks of professionals. It aims to launch a European and international campaign, with an awareness of other initiatives.

This document will evolve over time and will have different versions, which will reflect the feelings and interests of the communities represented in ERPANET, until a final version will be published at the end of the project.

Background

In all domains the amount of digital information is increasing at a rapid rate, this raises crucial questions of preservation. Our intellectual capital, as laid down in educational, scientific, public, cultural and other intellectual resources, is increasingly at risk by the volatile character of digital objects and the rapid developments in information technology. This Charter has been drafted in order to identify the issues at stake, to stress the relevance to society of taking action, and to identify the common interest of different communities. The Charter will provide support and a common basis to co-ordinate efforts being undertaken in Europe by formulating principles and objectives with respect to digital preservation that can be or are shared by the communities involved.

The growing need for adequate management and preservation of digital information is recognised in many stakeholder communities. It has lead to efforts in disparate domains to prevent any loss of information that may impact upon further development of the European economy, knowledge, research and cultural heritage. The efforts aim to achieve enduring preservation of, and access to, new and existing information sources.

Based on these considerations the following statement has been drafted to achieve a concerted and co-ordinated effort in the area of digital preservation by all organisations and individuals that have an interest and share these concerns.

The Charter

Scope

The impact of the use of IT on creating and using information, on communication and networking in society is enormous. In order to sustain ongoing access to new and old information resources swift and unified action is required. Business companies and governments are pushing to use the possibilities provided by new technology. Citizens and individuals are becoming increasingly aware of the opportunities that are offered. Together they are moving toward a new information society.

For realising and enabling that new, but still undefined society and its associated concepts of e-citizenship and e-government, it is necessary to build a robust infrastructure. An important part is to address the management, maintenance and preservation of the created information resources, regardless of their origin.

ERPANET will initially be limited to initiatives and projects within the European Union and its associated states. However, when established, co-operation with initiatives elsewhere will be explored. It has to be explicitly stated that this initiative takes a multilingual approach and is not exclusively English language oriented.

The scope of this declaration is the whole chain or life-cycle from creation to disposal and the actors involved. With this perspective different aspects will be addressed and taken into account, such as freedom of information, data protection, human rights and democracy.

The digital object in this declaration, is any object that has been created with a computer, be it originally or after conversion (digitisation), and that has to be preserved for a certain period.

Objective

This initiative has the following objectives:

- It intends to mobilize actors from different communities and with different interests in preserving digital information.
- It aims to achieve co-ordination of all efforts that are undertaken in this area by different actors and stakeholders, so they can be more focussed in order to achieve more synergy, to avoid redundancy, and to achieve cost-effectiveness. The result should be the creation of an effective infrastructure for collaboration by connecting different networks, institutions and individuals that are working in this field.
- It intends to focus stakeholders on issues that desperately need attention in this area. The underlying assumption being that action has to be taken at conception rather than at secondary stages.
- After having identified the actors, the different communities, and the relevant issues it can and will serve as a basis for directing towards areas of activity and to establish priorities.
- The achievement of a network of well managed and firmly underpinned preservation policies, programmes, and activities will create a basis of knowledge that can foster new economic opportunities through creativity, support effectively the emerging knowledge economy and maintain and exploit the intellectual capital created by the different communities.
- It will strongly encourage and promote the use of open standards (and open source software), so long term needs can be served in a better way.

Benefits

Participation in this initiative should enable organisations or individuals to:

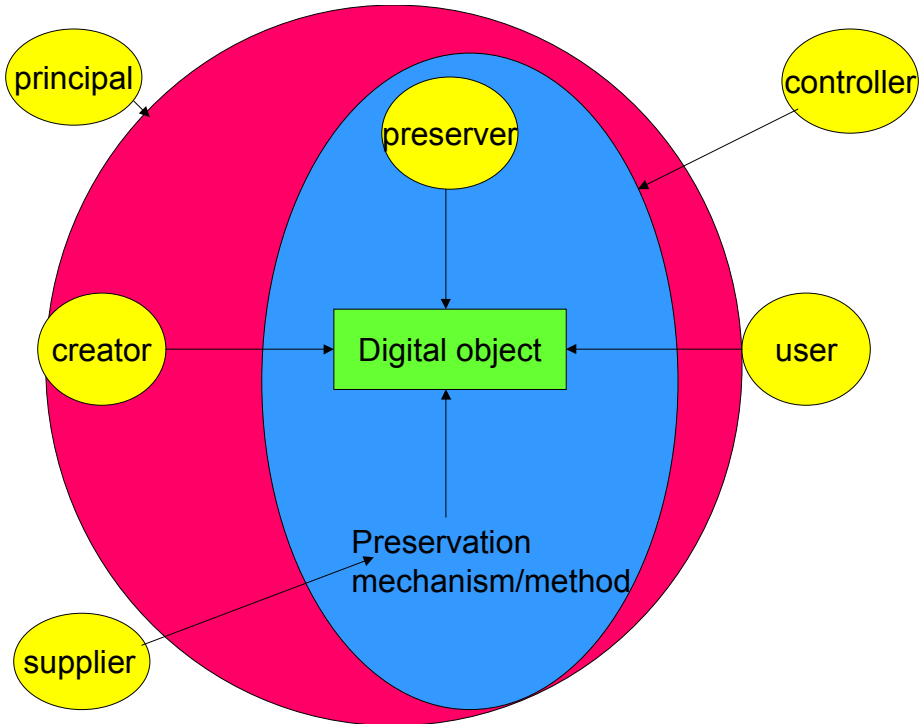
- Achieve better risk management (e.g. prevention of loss of intellectual capital, liability).
- Participate in a common framework for benchmarking digital access and preservation practice (efficient and effective; e.g. right sized for problem organisation).
- Participate in a platform for sharing knowledge (e.g. practices, methods, typologies, evaluation criteria).
- Use the platform as a mechanism for measuring competitive advantage.
- Build new partnerships e.g. for further research.
- Enhance the awareness among the main players in the digital object chain (DOC), i.e. principals, creators, suppliers and users .
- Unlock the e-value of the intellectual capital they possess.
- Achieve synergy and avoid redundancy (e.g. limited resources).
- Optimise the quality (and quantity) of interaction between the players in the digital object chain
- Maximise efforts in preservation.

Audience/roles

In order to be able to achieve the above-mentioned objectives it will be necessary to understand the roles that different actors play or may play in digital preservation. This charter does not address any distinct community in particular, but concerns all individuals and organisations that are responsible for or have an interest in digital information and emphasise the cross-sectoral approach that must be taken.

The following chain of actors can de distinguished in the following model: principals, suppliers, creators, preservers, controllers, and users.

Figure 1: Multidimensional view of the Digital Object Chain



Suppliers are all those individuals or organisations that provide and/or design and/or develop (software) tools for authoring, creating, communicating, preserving, searching, providing, and disseminating digital information.
Examples: software-vendors and -developers, IT-specialists, computer scientists, IT-researchers .

Creators are individuals and/or organisations that author, generate, or create digital information in the course of their work, as professionals in creative and/or entertainment industries, or in any other capacity.
Examples: (individuals in) business companies, government organisations, artists, scientists, researchers, cultural heritage institutions.

Preservers include every individual or organisation that has a responsibility for managing and preserving digital information, regardless of form, be it as custodian or as owner.
Examples: business companies, government organisations, memory organisations (e.g. libraries, archives, museums), research institutions, individual researchers.

Controllers include all individuals or organisations that have a responsibility to monitor and check the quality, efficiency, cost-effectiveness, and effectiveness of the management, preservation, security, and accessibility of digital information.
Examples: auditors, financial controllers, members of parliament, certifying organisations.

Users include all individuals or organisations that have an interest in using digital information.
Examples: scientists, historians, the public, journalists, members of parliament.

Principals include all persons that are enabling and/or assigning the creation of digital entities and the development of systems that will support that. This includes policymakers. They act mostly within the area of organisations that may involve both creators and preservers (red circle), but in the case they

are policymakers they could be involved with the whole field (and all actors). They could also only be responsible for the preservation part (blue circle).
Examples: CEO's, CIO's, information managers, program managers, project leaders, policymakers, cabinet (ministers), individuals.

With respect to the categories of principals, creators, preservers and users, the same individuals or organisations can exercise more than one role. The context in which individuals or organisations work or act determines who will play what role. In different contexts one actor can play different roles.

The basic interrelationship is the chain of creator, preserver and user. Principals, suppliers and controllers can interact at any moment with each component of this chain (see Figure 1). The whole can be identified as the digital object chain (**DOC**).

Principles

Each organisation should be aware of the following principles and use them in defining policies that include digital objects:

1. Preservation of digital information is a major challenge that requires collaboration between organisations and persons involved both in their creation and their management.

2. Preservation starts from the very beginning, i.e. the design of systems that will support the creation of digital entities. Subsequently it will encompass the whole life cycle of these entities.

3. It is necessary to have a clear understanding of the different roles that are involved in preserving digital information in order to identify requirements and responsibilities.

4. Preservation has to be an integral part of any policy and strategy developed and implemented that includes the use of IT and subsequently the creation of digital entities, such as digitalisation of analog objects, e-government and/or electronic services, cultural heritage programs that enable access through internet, etc.

5. Preservation strategies and methods should be integrated in all activities and/or systems that author, create, and use digital information/objects. Adequate preservation management includes:

    a setting policies and standards;

    b identifying and assigning responsibilities;

    c identifying requirements and establishing procedures; and,

    d designing, implementing, and controlling strategies, methods and/or systems that enable preservation

    It should ensure that digital information or objects can easily be exchanged, enriched, accessed and disseminated when needed.