erpastudies

national archives of scotland

www.erpanet.org

ELECTRONIC RESOURCE PRESERVATION AND ACCESS NETWORK

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Executive Summary

The National Archives of Scotland (NAS, formerly the Scottish Record Office) houses a comprehensive collection of records covering every aspect of the political, social, economic, cultural and intellectual history of Scotland from the 12th century to the present day. Among their varied holdings, the NAS preserves records of government, the courts, churches, some local authorities, as well as family and estate papers of commercial and industrial firms, societies and charities.

The National Archives of Scotland have not yet developed strategies on issues surrounding digital preservation. Instead, they have adopted the Scottish Executive's policy of printing to paper the most important documents they need to preserve for the long term. Neither the Scottish Executive nor the NAS have implemented an Electronic Records Management System (ERMS) to organise their digital records. However, the Scottish Executive is currently in the middle of a major programme to select and introduce an ERMS. This should be available to all core departments by the end of 2004. Many changes are expected to happen within the Scottish Executive which will affect the way the NAS treat digital records.

The NAS, in particular the Government Records Branch and the IT department, are running the Digital Data Archive (DDA) project. This project aims to provide a suitable environment for the archiving of born digital objects for the entire organisation. The DDA project has not yet initiated the development of any digital preservation strategies, but it plans to do so in the future.

Chapter 1: The ERPANET Project

The European Commission and Swiss Confederation funded ERPANET Project[1] (Electronic Resource Preservation and Access Network) works to enhance the preservation of cultural and scientific digital objects through raising awareness, providing access to experience, sharing policies and strategies, and improving practices. To achieve these goals ERPANET is building an active community of members and actors, bringing together memory organisations (museums, libraries and archives), ICT and software industry, research institutions, government organisations, entertainment and creative industries, and commercial sectors. ERPANET constructs authoritative information resources on state-of-the-art developments in digital preservation, promotes training, and provides advice and tools.

ERPANET consists of four partners and is directed by a management committee, namely Seamus Ross (HATII, University of Glasgow; principal director), Niklaus Bütikofer (Schweizerisches Bundesarchiv Hans Hofman (Nationaal Archief/National Archives of the Netherlands), and Maria Guercio (ISTBAL, University of Urbino). At each of these nodes a content editor supports their work, and Peter McKinney serves as a co-ordinator to the project. An Advisory Committee with experts from various organisations, institutions, and companies from all over Europe gives advice and support to ERPANET.

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[1] ERPANET is a European Commission funded project (IST-2001-32706). See www.erpanet.org for more details and available products.

Chapter 2: Scope of the Case Studies

While theoretical discussions on best practice call for urgent action to ensure the survival of digital information, it is organisations and institutions that are leading the drive to establish effective digital preservation strategies.[2] In order to understand the processes these organisations are undertaking, ERPANET is conducting a series of case studies in the area of digital preservation. In total, sixty case studies, each of varying size, will investigate awareness, strategies, and technologies used in an array of organisations. It is anticipated that upwards of 500 organisations, institutions and public bodies will eventually contribute to this research. The resulting corpus should make a substantial contribution to our knowledge of practice in digital preservation, and form the foundation for theory building and the development of methodological tools. The value of these case studies will come not only from the breadth of sectors included, but also through the depth at which they will explore the issues.

ERPANET is deliberately and systematically approaching disparate sectors from industry and business to facilitate discussion in areas that have traditionally been unconnected. With these case studies ERPANET will broaden the scope and understanding of digital preservation through research and discussion. The case studies will be published to improve the approaches and solutions being developed and to reduce the redundancy of effort. The interviews are identifying current practice not only in-depth within specific sectors, but also cross-sectorally: what can the publishing sector learn from the aeronautical sector? Eventually we aim to use this comparative data to produce intra-sectoral overviews.

This cross-sectoral fertilisation is a main focus of ERPANET as laid out in its Digital Preservation Charter.[3] It is of primary importance that disparate groups are given a mechanism through which to come together as best practices for digital preservation are established in each sector.

Aims

The principal aims of the study are to:

- build a picture of methods and match against context to produce best practices;

- accumulate and make accessible information about practices;

- identify issues for further research;

- enable cross-sectoral practice comparisons;

- enable the development of assessment tools;

- create material for training seminars and workshops; and,

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[2] Chapters 2 and 3 are taken from 'Cross-sectoral Development of Digital Preservation Strategies: ERPANET and the Expansion of Knowledge', given at *Preservation of Electronic Records. New Knowledge and Decision-making*, Symposium 2003.

[3] The Charter is ERPANET's statement on the principles of digital preservation. It has been drafted in order 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.
http://www.erpanet.org/www/content/documents/Digitalpreservationcharterv4_1.pdf.

- develop contacts.

Potential sectors have been selected to represent a wide scope of information production and digital preservation activity. Each sector may present a unique perspective on digital preservation. Organisational and sectoral requirements, awareness of digital preservation, resources available, and the nature of the digital object created place unique and specific demands on organisations. Each of the case studies is being balanced to ensure a range of institutional types, sizes, and locations.

The main areas of investigation included:

- perception and awareness of risk associated with information loss;
- understanding how digital preservation affects the organisation;
- identifying what actions have been taken to prevent data loss;
- the process of monitoring actions; and,
- mechanisms for determining future requirements.

Within each section, the questions were designed to bring organisational perceptions and practices into focus. Questions were aimed at understanding impressions held on digital preservation and the impact that it has had on the respective organisation, exploring the awareness in the sector of the issues and the importance that it was accorded, and how it affected organisational thinking. The participants were asked to describe, what in their views, were the main problems associated with digital preservation and what value information actually had in the sector. Through this the reasons for preserving information as well as the risks associated with not preserving it became clear.

The core of the questionnaire focused on the actions taken at corporate level and sectoral levels in order to uncover policies, strategies, and standards currently employed to tackle digital preservation concerns, including selection, preservation techniques, storage, access, and costs. Questions allowed participants to explore the future commitment from their organisation and sector to digital preservation activities, and where possible to relate their existing or planned activities to those being conducted in other organisations with which they might be familiar.

Ten organisations in each sector, and three people within each organisation are targeted for each study. In reality this proved to be problematic. Even when organisations are identified and interviews timetabled, targets often withdrew just before we began the interview process. Some withdrew after seeing the data collection instrument, due in part to the time/effort involved, and others (we suspect) dropped out because they realised that the expertise was not available within their organisation to answer the questions. The perception of risks that might arise through contributing to these studies worried some organisations, particularly those from sectors where competitive advantage is imperative, or liability and litigation issues especially worrying. Non-disclosure agreements that stipulated that we would neither name an organisation nor disclose any information that would enable readers to identify them were used to reduce risks associated with contributing to this study. In some cases the risk was still deemed too great and organisations withdrew.

Chapter 3: Method of Working

Initial desk-based sectoral analysis provides ERPANET researchers with essential background knowledge. They then conduct the primary research by interview. In developing the interview instrument, the project directors and editors reviewed other projects that had used interviews to accumulate evidence on issues related to digital preservation. Among these the methodologies used in the Pittsburgh Project and InterPARES I for target selection and data collection were given special attention. The Pittsburgh approach was considered too narrow a focus and provided insufficient breadth to enable full sectoral comparisons. On the other hand, the InterPARES I data collection methodology proved much too detailed and lengthy, which we felt might become an obstacle at the point of interpretation of the data. Moreover, it focused closely on recordkeeping systems within organisations.

The ERPANET interview instrument takes account of the strengths and weaknesses from both, developing a more focussed questionnaire designed to be targeted at a range of strategic points in the organisations under examination. The instrument[4] was created to explore three main areas of enquiry within an organisation: awareness of digital preservation and the issues surrounding it; digital preservation strategies (both in planning and in practice); and future requirements within the organisation for this field. Within these three themes, distinct layers of questions elicit a detailed discovery of the state of the entire digital preservation process within participants' institutions. Drawing on the experience that the partners of ERPANET have in this method of research, another important detail has been introduced. Within organisations, three categories of employee were identified for interview: an Information Systems or Technology Manager, Business Manager, and Archivist / Records Manager. In practice, this usually involved two members of staff with knowledge of the organisation's digital preservation activities, and a high level manager who provided an overview of business and organisational issues. This methodology has allowed us to discover the extent of knowledge and practice in organisations, to understand the roles of responsibility and problem ownership, and to appreciate where the drive towards digital preservation is initiated within organisations.

The task of selecting the sectors for the case studies and of identifying the respective companies to be studied is incumbent upon the management board. They compiled a first list of sectors at the very beginning of the project. But sector and company selection is an ongoing process, and the list is regularly updated and complemented. The Directors are assisted in this task an advisory committee.[5]

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[4] See Appendix. We include the questionnaire to encourage comment and in the hope that other groups conducting similar research can use the ideas contained within it to foster comparability between different studies.
[5] See www.erpanet.org for the composition of this committee.

Chapter 4: Introduction to Sector

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) drafted the "General Convention Concerning the Protection of the World Cultural and Natural Heritage" in 1972[6]. The General Convention defined the kind of natural or cultural heritage sites that may be considered for inclusion on the World Heritage List and established the World Heritage Fund and the World Heritage Committee. The Convention sets out the duties of States Parties in identifying potential sites and their role in protecting and preserving the World Cultural and Natural Heritage. By signing the Convention, each country pledges to conserve not only the World Heritage sites located within its own territory, but also to protect its national heritage.

The great value of cultural content is by now well recognised as it relates not only to culture in general but to important and vast markets, mainly education, tourism, entertainment and research. Efficient network access and delivery of digitised cultural material, such as digital surrogates of artefacts, monuments, sites, museums, various types of collections and so on, is of utmost importance for content owners and users alike. At the same time, wide access and delivery of valuable content raise several critical issues. These include the problems regarding content management, Intellectual Property Rights (IPR) protection and the unauthorised use and exploitation of digital data. Such financial and legal implications generate considerable scepticism among cultural organisations and individual content owners about the benefits of making their resources accessible. As a result, access to content of great educational and economical value is often restricted.

The preservation of cultural heritage falls under the scope of numerous European Union policies. First and foremost Article 151 of the Treaty (ex. Article 128)[7] states that "The Community shall contribute to the flowering of the cultures of the Member States, while respecting their national and regional diversity and at the same time bringing common cultural heritage to the fore".

Archives, and especially National Archives, promote sound records management practices and encourage community awareness and the use of valuable records in their care. They are the historical repositories of our collective memories, so it is our duty to ensure that the digital information they are producing will be accessible for future generations to come.

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[6] http://whc.unesco.org/world_he.htm.
[7] The Amsterdam Treaty, agreed by the European Union's political leaders on 17 June and signed on 2 October 1997 http://europa.eu.int/abc/obj/amst/en.

Chapter 5: Details of Interviews

The National Archives of Scotland (NAS) looks after the great riches of Scotland's archival heritage and has one of the most varied collections of records in Britain. It is the main archive for sources on the history of Scotland as a separate kingdom, her role in the British Isles and the links between Scotland and many other countries over the centuries.

The NAS holds records spanning the 12th to the 21st centuries, touching on virtually every aspect of Scottish life. It is the repository for public and legal records of Scotland but also accepts many local and private archives. It also advises Scottish government departments, institutions, businesses and private individuals on the care of their records.[8]

The Government Records Branch (GRB) at the NAS is running the Digital Data Archive (DDA) project. On behalf of the entire NAS, the DDA project aims to provide a suitable environment for the archiving of born digital objects.

The public records of Scotland include the records of the central government of Scotland both before and after the Union of 1707. The earlier records include those of Parliament, the Privy Council, Exchequer and the great offices of state. Modern government records, following the creation of the Scottish Office in 1885, include files on the development of health, schools and education, prisons, farming, fishing and industry. In addition, NAS holds records of former nationalised industries that provide information on roads, railways, canals and mines.

Court records contain accounts of civil and criminal cases: the dispute, the crime and the punishment. Family and estate papers contain documents from every part of the world to which Scots have gone as travellers, traders, settlers, soldiers or administrators. The National Archives of Scotland's collection of maps and plans, dating mostly from 1750, includes estate, farm and feuing plans, transport plans (railways, roads, bridges, canals and harbours), and others covering architecture, coalmining and public utilities (electricity, drainage, gas and water supply).

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[8] http://www.familyrecords.gov.uk/partners/nas.htm.

Chapter 6: Circumstances

ERPANET initially contacted Graham Mount, the Digital Access Manager at the National Archives of Scotland. Mr. Mount appointed three colleagues involved in the Digital Data Archive (DDA) project: Laura Mitchel the Head of the Government Records Branch, Jane Brown the Senior Inspecting Officer of Parliamentary and Electronic Records and Steve Bordwell the IT Manager. The questionnaires were sent on the 19th of June 2003 and the interviews took place on the 9th of July in Edinburgh.

Chapter 7: Analysis

This section presents an analysis of the data collected during the case study. It is organised to mirror the sequence of topics in the questionnaire.

- Perception and Awareness of Digital Preservation

- Preservation Activity

- Compliance Monitoring

- Digital Preservation Costs

- Future Outlook

Perception and Awareness of Digital Preservation

The NAS started a project on digital preservation in 1997 aiming to rescue and make available datasets from the Scottish Office mainframe, which was being decommissioned. Based on this experience, they decided to undertake the Digital Data Archive Project (DDA) in 2002. This is an initiative from the Government Records Branch and the IT department to store all their digital records in a secure place in the archives and make them available to the public. The DDA project is seen as a technical solution to safeguard the increasing amount of digital material being created by the organisations from which the NAS select archive material. As is evident in their participation in this project, the level of awareness of digital preservation at the NAS and especially at the Government Records Branch (GRB) is very high.

Asset Value and Risk Exposure

The NAS is the main archive for resources on the history of Scotland. As such, they collect material to document Scottish history as completely as possible. Simultaneously, as a dynamic organisation, they are producing records vital for their own administration and business requirements. Following a change in directives from the Scottish Executive, the GRB will be digitally preserving a wide range of material. This range includes administrative material created by the organisation, digital images produced to act as surrogates for original records and born-digital material selected for permanent preservation in the archive, such as snapshots from the Scottish Parliament webcam. The main reason for preserving these types of information is the historical value of the material, but as a dynamic organisation constantly evolving, they also have to select and preserve their own administrative material to face legal, financial and business risks. However, their main concern is the risk of losing important evidence of Scotland's history and accountability of Scottish government to the Scottish people.

The organisation has conducted a risk analysis and a disaster recovery plan for archival records. For administrative records they have vital records policies and procedures (including backup to microfilm). These policies apply only to traditional paper records at the moment, but they will apply to digital records as well in the future.

Preservation Activity

Policies and Strategies

The GRB is the driving force in developing policies and strategies at the NAS. By communicating and collaborating with many external organisations, they keep up to date with the latest issues surrounding digital preservation. Some previous collaborative efforts have involved working with the Public Records Office (PRO), the DLM Forum and the Digital Preservation Coalition (DPC). As resources are scarce, the sharing of expertise and experience that these co-operative efforts provide are invaluable to the NAS. Collaboration and communication with other stakeholders also helps to avoid duplication of effort.

The whole ethos at the NAS is the preservation of information. For their own administrative records, retention schedules are derived from their Records Management Policy. The development of the Digital Data Archive will address the specific requirements of digital archival records. These policies apply across the whole organisation. Overall control lies with specific posts within the organisation, but every member of staff is made aware of their responsibilities for RM and relevant staff are kept informed about the DDA project. Also, while the DDA is still being developed, a member of staff from Records Management is available in each branch to provide guidance and advice.

As an Executive Agency of the Scottish Executive, the NAS have to follow many of the policies and directives of the Scottish Executive. One, which they choose to follow for their own administrative records, is the print to paper policy; basically they print every important digital record to paper and preserve it in that form.

Most of their policies apply to traditional records, as neither they nor the Scottish Executive has implemented an electronic records management system (ERMS) as yet. However, the Scottish Executive is well on the way to implementing an ERMS.

Selection

The NAS Records Manager is responsible for the development and implementation of selection and appraisal strategies applying to NAS's administrative records. The NAS has recently completed a re-evaluation of their selection policy for government records and they are now asking stakeholders to comment on the selection criteria to be adopted for their material. The selection policy is designed to apply to traditional paper records but in the future it will apply to digital records as well.

As they will have passed their active phase and will be archival digital records by the time they reach the DDA, digital material will already have been selected. The datasets have been selected by the mainframe project 1997 and therefore the project will not employ any appraisal strategies for the moment. The digital material that is produced within the organisation is saved on hard drives and shared folders. It is being backed-up, but no specific retention and appraisal policies yet apply. Selection and appraisal policies will be re-evaluated when the NAS is going to install an ERMS for their digital records.

Preservation

All archivists in accessioning branches have responsibility for bringing in records; some IT staff have responsibility for developing the digital data archive so that this material can be preserved. One of the accessioning branches (GRB) takes the lead

on these matters. Digital preservation activities will take place in house and once the DDA project is fully functional, training sessions for staff on how to use the system will be provided.

The DDA project is closely related to the OAIS model and it will follow the VERS[9] and PD0008 standard[10].

Most born digital material comes to the NAS on CD and will remain there until DDA is fully up and running; at the same time, NAS prints to paper all their important administrative digital documents. They chose to digitise or to put on microfilms some of their archival material, to act as surrogates for delicate objects. These decisions were mainly based on the expediency and availability of resources. Microfilm was the main preservation medium for providing surrogates of delicate material before digitisation came along and is still more stable and predictable when it comes to long term preservation, but future surrogates are likely to be produced digitally because they are more versatile.

They have not yet developed a strategy for the data formats they will use for digital preservation. Instead, they have decided that they will use flat file format for the preservation of datasets and will accept the format the original record comes in for other digital material. The PRONOM[11] project by the Public Records Office was consulted for managing information about the file formats used to store electronic records, and the software applications needed to render these formats. They have not yet determined how migration and emulation will be used to preserve these in the long term.

They have developed draft cataloguing metadata for datasets, based on ISAD (G). Other metadata is under development but they believe that Dublin Core is largely unsuitable for records management and describing archival collections. It is more likely to follow the OCLC/RLG[12] preservation metadata schema.

Two servers based in different buildings, which mirror each other and are backed up by tape, will host the digital material for the DDA project. Nothing but digital archival material is kept on these servers so they are the virtual equivalent of the strong rooms where the more traditional archives are kept. So the digital material is going to be kept in four different places (two servers and on tapes provided by two different companies).

Access

The servers will not be used for any other purpose and only particular staff will have permissions allowing them to enter the servers. Procedures are being built in to ensure that audit trails can be traced to comply with PD0008 and the requirements for joining the Government Secure Intranet.

A small number of people will be able to access the servers directly in order to maintain them, but if digital information is required, the archive server will duplicate the object stored and place it into an "airlock" from which the person requiring it can then retrieve it. Cataloguing work will be done using copies of items held on the archive server. Public access is likely to be given by copying material onto a

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[9] Victorian Electronic Records Strategy, http://www.prov.vic.gov.au/vers/.

[10] Code of Practice for Legal Admissibility and Evidential Weight of Information Stored Electronically, http://www.bsi-global.com/.

[11] PRONOM, http://www.pro.gov.uk/about/preservation/digital/pronom/development.htm.

[12] OCLC/RLG, http://www.oclc.org/research/pmwg/background.shtm.

separate 'access' server and possibly presenting it in a more user-friendly way, but this is still under discussion.

Compliance Monitoring

Since the DDA project is not yet functional, decisions on the monitoring and auditing of their policies and standards have not yet been made.

Digital Preservation Costs

The NAS have not allocated a budget specifically for digital preservation. The funding of the DDA project comes from the IT budget in terms of the equipment they are going to use to store the digital information.

Future outlook

The DDA project is an initiative led by the GBR branch and the IT department. It is not a long-term approach to the preservation of digital information; it is a technical solution to safely store their digital archival records. A lack of funding is obviously one of the reasons that the NAS has not undertaken such a project before. More money will definitely have to be devoted to such initiatives if they are to preserve electronic material successfully through an ERMS or even after the completion of the DDA project. Employing staff specifically to look at digital preservation issues and develop a long-term strategy will be a key priority in the future.

Chapter 8: Conclusions

The DDA is a medium term project that will give the NAS breathing space in which to consider what to do for the long term. It is actually a technical solution that will provide a secure storage facility for digital archival records. Digital preservation strategies have not yet been developed, as the team initially focused on the preservation of the original data stream, through a file registration system that identifies documents uniquely.   In effect, the DDA project can be seen as phase 1 of a longer programme which will go on to look at long term preservation and access.

The DDA project will function as a preservation tool for digital information.

Changes towards the behaviour of digital records are expected to happen next year as the Scottish Executive is going to implement an electronic records management system, partly driven by the Freedom of Information Act.

The DDA project is in its early phase, so many decisions need to be taken in terms of policies and standards. However, it is an encouraging initiative that will function as a basis to develop a long-term digital preservation strategy in the future.

Chapter 9: References

Convention Concerning the Protection of the World Cultural and Natural Heritage http://whc.unesco.org/world_he.htm.

The Amsterdam Treaty, agreed by the European Union's political leaders on 17 June and signed on 2 October 1997. http://europa.eu.int/abc/obj/amst/en.

Family Records UK, http://www.familyrecords.gov.uk/partners/nas.htm.

Victorian Electronic Records Strategy, http://www.prov.vic.gov.au/vers/.

Code of Practice for Legal Admissibility and Evidential Weight of Information Stored Electronically, http://www.bsi-global.com/.

PRONOM, http://www.pro.gov.uk/about/preservation/digital/pronom/development.htm.

OCLC/RLG, http://www.oclc.org/research/pmwg/background.shtm.

Appendix: Interview Instrument

ERPANET Case Study

Administrative Section
Interview Details
Organisation Details
Disclosure/Privacy Information
Tracking of Activities

Perception and Awareness of Digital Preservation

We would like to begin by asking you a few questions about your general impressions of digital preservation, and the impact that it has on the _____ sector. We will use the term 'digital information' throughout to refer to all forms of digital data, records and information.

1. Is there a general awareness in the _____ sector that the long-term preservation (more than five years) of digital information is an important issue?

2. To what extent does the sector recognise the importance of preserving digital information in the long-term?

3. What are the main problems associated with digital preservation in the _____ sector?

4. From what sources have you heard about the issues surrounding digital preservation?

5. What values does digital information have in the _____sector beyond the original purposes for which it was created?

Understanding How Digital Preservation Affects Your Organisation

We would like to focus on how some of these digital preservation issues affect your own organisation

6. What type of information is digitally preserved in the short and the long term in your organisation?

7. What are the reasons that digital information is preserved in your organisation:
   ❑ Legal requirements
   ❑ Financial requirements
   ❑ Business requirements (e.g. document important decisions and activities)
   ❑ Historical value
   ❑ Other (Please specify)

8. What risks is your organisation under if digital information is not preserved in the long-term?
   ❑ Legal risks
   ❑ Financial risks
   ❑ Business risks
   ❑ Historical value
   ❑ Other (Please specify)

9. Has the organisation conducted a risk analysis and/or business needs analysis with regard to the preservation of information? If yes, can you indicate the main results?

Actions Taken: Policies, Strategies, Standards and Practices Developed

The questions in this section aim to explore some of the actions that the organisation has undertaken to deal with the preservation of electronic records. It will examine the above as well as selection, preservation, storage, and access activities.

Policies, Strategies, and Standards

10. Is there any collaborative effort across the _____ sector to tackle common digital preservation issues?
    - ❑ Conferences
    - ❑ Newsletters
    - ❑ Journals
    - ❑ Common Institutions
    - ❑ Collaborative Projects
    - ❑ Other (Please specify)

11. Has your organisation attempted to find information external to the sector regarding preservation?
    If yes, please indicate the sources
    - ❑ Government agencies
    - ❑ Higher education institutions
    - ❑ Archives
    - ❑ Libraries
    - ❑ Museums
    - ❑ IT Specialists
    - ❑ Other (Please specify)

    Please specify the kind of information provided and how useful it proved to be.
    _____
    _____
    _____
    _____
    _____

12. Do you cooperate with other institutions in the research and development of policies, strategies, and standards? In what way?

13. How useful is this common effort in applying it to your organisation's own needs?

14. Do you have any specific organisational policies that relate to the preservation of information?

15. Who (and what) was/is involved in the creation of these policies?
    - ❑ Management
    - ❑ Employees
    - ❑ Special task force in the organisation
    - ❑ Results of internal analyses (e.g. risk analysis)
    - ❑ External sources, models, advice
    - ❑ Other (Please specify)

16. Do these policies apply across the entire organisation?
17. How are these policies implemented?
18. Has your organisation developed preservation strategies, standards, and practices and implemented them?
    - ❑ Yes
    - ❑ No
    If YES, Please specify.
    _____
    _____
    _____
    _____

19. How were they introduced and implemented (e.g. by department, with training)?

20. How, and under whose responsibility have these been established?
    - ❑ External Advice/Sources/Models
    - ❑ Survey of information resources
    - ❑ In-house solutions developed
    - ❑ Other (Please specify)

21. How often are your preservation policies and strategies updated and renewed?

Selection of Digital Information for Preservation

22. Do you have a selection policy, or classification and retention policy that determines what information in your organisation is to be preserved?
    - ❑ Yes
    - ❑ No

    If YES, Please specify.

    _____
    _____
    _____
    _____

23. Is your classification and retention schedule linked and implemented across the organisation?

24. Who is responsible for the maintenance and implementation of these schedules?

25. How do you ensure that selected information is complete, accurate and identifiable?

Preservation of Digital Information

26. Does your organisation take care of its preservation activities itself, or are these outsourced?
    - ❑ Outsourced
    - ❑ In-house

    If outsourced, what reasons were behind this decision, and who carries out the preservation activities?

    _____
    _____
    _____
    _____

27. Are there specific individuals in your organisation responsible for the preservation of digital information?

28. What positions do these people hold in the organisation, and what are their responsibilities and competencies?

29. What type of training or advice is available for them?

30. Is your organisation aware of any external standards, best practices, and guidelines available on preservation?
    - ❑ Yes
    - ❑ No

    If YES, Please specify.

    _____
    _____
    _____
    _____

31. Are these specific to your sector?

32. Where did you learn about them? Please specify your sources.

33. Which of these standards, practices and guidelines do you use?

34. What technologies do you use for preservation? For the following list of current techniques, please specify which ones you use and for what kind of information.

Technique	Specify Type/Technology Used	Information Preserved
Print to Paper		
Scanning		
Save on Disk		
Save on Other Media		
Emulation		
Migration		
Microfilm/Microfiche		
Other		

35. On what grounds were these techniques chosen? Please specify your answers.
    - ❑ External Advice
    - ❑ Trials and Evaluations
    - ❑ Recommendations
    - ❑ Intra-sectoral standards available
    - ❑ Other

    Please provide as much information as possible about why these decisions were taken.
    _____
    _____
    _____
    _____

36. What data formats do you use for preservation?
    - ❑ Standard data formats
    - ❑ Others

    Please specify for both answers
    _____
    _____
    _____
    _____

37. Do you convert the information to be preserved into other data formats for technical (or other) reasons?

38. What metadata do you use to describe both your digital information and the processes of storage and preservation? Does it follow any standards available (Dublin Core or others)? Can you provide a copy of the metadata set?

39. Is the collection and production of metadata automated?

40. Who is responsible for the transfer of information into long-term storage?

41. How often (if undertaken) does digital information migrated or refreshed?

Storage of Digital Information

42. Do you have a particular storage area for digital information to be preserved?

     ❑ Yes
     ❑ No
If Yes, how is this organised and equipped?

_____
_____
_____

43. Do you keep redundant copies of the digital information to be preserved for safety (or other reasons)?

Access to Digital Information

44. How is information protected from inadvertent or unauthorised access and manipulation?

45. Does your preservation solution allow direct access to the digital information stored (i.e. are they stored in an executable format)? If no, how is the access provided?

46. What access issues does your organisation face?
    a. Copyright
    b. Privacy Issues
    c. Access Security and Privileges
    d. Others (Please specify)

47. How does your organisation intend to provide access to digital information into the future?

Digital Preservation Costs

48. Did your organisation attempt to undertake a cost benefit analysis concerning its investments in preservation?

49. Has this analysis been assessed in light of your actual preservation activities? Did it prove to be accurate?

50. To which section of the budget are the economic resources for your preservation programme allocated?

51. What percentage of the organisation's budget is spent on preservation? Can you compare that to some other area of the organisation's activity?

52. Is the organisation attempting to address amortisation issues in the preservation budget?

53. Are there available sources of funding within the _____ sector allocated for digital preservation issues?
     ❑ Yes
     ❑ No
If Yes, please specify

_____
_____
_____
_____

54. Are you satisfied with these cross-sector services?

55. If no, what would you like to see available? [i.e. what would you think could best be solved in common in your sector?] Would you be willing to engage financially in such information?

56. Are there other external sources available for digital preservation activities, (e.g. government grants, cross-sector funds)?

    ❑   Yes
    ❑   No
If Yes, please specify

_____
_____
_____
_____

Monitoring of Actions

After having identified what has been undertaken in your organisation with regard to preservation activities, we would like to find out about how these efforts have been monitored.

57. Is the preservation process audited on a regular basis?

58. Is compliance to policies, standards, and strategies audited on a regular basis?

59. Is compliance to other requirements (legal, business etc.) audited on a regular basis?

60. How often are checks made to the preserved material, (e.g. for signs of deterioration)?

61. Please specify the criteria used for these audits.

62. Who performs these audits? (e.g. Internal/External)

Future Requirements

We would like to ask about the areas in which there is a need for additional attention in your organisation and the sector as a whole.

63. How long do you predict that your current preservation policies, strategies, and solutions will meet your organisation's preservation needs?

64. Is the amount of money allocated for preservation going to change in the future? Will it need to be changed?

65. If more funds were available, what could/would they be used for?

66. What conclusions has your organisation come to about its preservation efforts? Are these satisfactory?

67. What preservation efforts are remaining to be addressed within your organisation?
    ❑   Further data to be preserved
    ❑   Revision and adjustment of preservation policies and strategies
    ❑   Additional resources dedicated to preservation
    ❑   Technological solutions
    ❑   Other (Please specify)

68. Would you like to see more cross-sectoral or intra-sectoral activity with regard to preservation?

69. Are there any other areas in which you would like to have more information made available on digital information? Where do you expect this information to come from?

Thank you very much for your valuable contribution.

CONTACT DETAILS

ERPANET Coordinator

George Service House
11 University Gardens,
University of Glasgow
Glasgow, G12 8QQ,
Scotland

Tel: +44 141 330 4568
Fax: +44 141 330 3788
Coordinator@erpanet.org

ERPANET STAFF

d i r e c t o r s
Seamus Ross, Principal Director
Niklaus Bütikofer, Co-Director
Mariella Guercio, Co-Director
Hans Hofman, Co-Director

c o o r d i n a t o r
Peter McKinney

e d i t o r s
Andreas Aschenbrenner
Georg Büchler
Joy Davidson
Samir Musa

www.erpanet.org

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