



Information Society  
Technologies

# erpastudies

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## **Table of Contents**

<b>Executive Summary.....</b>	<b>2</b>
<b>Chapter 1: The ERPANET Project.....</b>	<b>3</b>
<b>Chapter 2: Scope of the Case Studies.....</b>	<b>4</b>
<b>Chapter 3: Method of Working .....</b>	<b>6</b>
<b>Chapter 4: Introduction to the Tate.....</b>	<b>7</b>
<b>Chapter 5: Details of the Interviews.....</b>	<b>8</b>
<b>Chapter 6: Analysis .....</b>	<b>9</b>
Perception and Awareness of Digital Preservation .....	9
Preservation Activity .....	10
Compliance Monitoring.....	12
Digital Preservation Costs .....	12
Future Outlook.....	12
<b>Chapter 8: Conclusions .....</b>	<b>13</b>

## **Executive Summary**

The Tate is made up of four galleries in different parts of Britain. They house the national collection of British art from the 16th century to the present day, the Turner Bequest and the national collection of international modern art. The Tate embarked on a large-scale digitisation project called Insight in 1998.<sup>1</sup> The project aims to deliver high quality indexed images for each work of art in the Tate's collections. This comprises of some 60,000 objects and includes a variety of media ranging from paintings and sculptures to pencil drawings and sketchbooks. Insight also enables access to archive material including ephemera, correspondence and diaries. It is important to note that Insight was undertaken as a means of improving access to works of art and materials rather than for preservation purposes. The target audience for the digitised materials ranges from Tate staff to schoolchildren to researchers.

While digitisation efforts have been access driven to date, the sound digitisation practices implemented at the Tate for their Insight project will help to ensure that their resources can be preserved and made accessible in the long-term. The Tate is enthusiastic about cooperation and collaboration with a wide range of stakeholders for the identification and adoption of viable digital preservation strategies. The Tate is planning to improve the long-term curation of all their digital resources including art, business records, email and financial information. An Information Strategy Project undertaken in 2001 led to some recommendations but they have yet to be implemented. This is largely due to the fact that the majority of funding is channelled into improving public access to the collections rather than internal information management.

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<sup>1</sup> Insight began with the launch of the Tate website in 1998. It was then taken forward through the British Art Information Project, part of the Tate Britain Centenary Development supported by the Heritage Lottery Fund (HLF). The initiative is currently being extended through the NOF-digitise programme supported by the New Opportunities Fund.  
[http://www.tate.org.uk/collections/in\\_background.htm](http://www.tate.org.uk/collections/in_background.htm).

## **Chapter 1: The ERPANET Project**

The European Commission and Swiss Confederation funded ERPANET Project<sup>2</sup> (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-coordinator to the project. An Advisory Committee with experts from various organisations, institutions, and companies from all over Europe give advice and support to ERPANET.

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<sup>2</sup> ERPANET is a European Commission funded project (IST-2001-32706). See [www.erpamet.org](http://www.erpamet.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. 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. 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 companies and institutions included, but also through the depth at which they will explore the issues.

ERPANET is deliberately and systematically approaching disparate companies and institutions 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.<sup>3</sup> 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,
- 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

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<sup>3</sup> 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/Digitalpreservationcharter4\\_1.pdf](http://www.erpanet.org/www/content/documents/Digitalpreservationcharter4_1.pdf).

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.

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 focused questionnaire designed to be targeted at a range of strategic points in the organisations under examination. The instrument<sup>4</sup> 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 by an advisory committee.<sup>5</sup>

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<sup>4</sup> See [www.erpanet.org](http://www.erpanet.org). We have posted 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.

<sup>5</sup> See [www.erpanet.org](http://www.erpanet.org) for the composition of this committee.

## **Chapter 4: Introduction to the Tate**

The National Gallery and Tate Gallery Act of 1954 brought about the legal separation of the two galleries and Tate was established as an independent institution. The Tate currently operates as an independent body<sup>6</sup> with its own Board of Trustees appointed by the Prime Minister. One trustee is also appointed by the National Gallery to liaise between the galleries.

The Tate is operated over four sites in different parts of Britain. The four galleries are Tate Britain, Tate Modern, Tate Liverpool and Tate St. Ives. These four sites house the national collection of British art from the sixteenth century to the present day, the Turner Bequest and the national collection of international modern art.

The Insight project enables access to about fifty thousand digitised works of art. This consists of over four thousand paintings, fifteen hundred sculptures, eleven thousand prints and eight hundred works on paper. Some twenty-five thousand sketches and sixty-five hundred watercolours by J.M.W. Turner are also accessible via the Tate web site. The Tate Archives were established in 1969 at Millbank and care for ephemera, correspondence, and the Tate's own records. Over 4,000 archive objects are newly available in digital format via the website.

As with the majority of museums and galleries, digitisation projects such as Insight are seen by the Tate as a means of improving public access to the collections and related information.<sup>7</sup>

### **Tate Britain**

Millbank  
London SW1P 4RG

### **Tate Modern**

Bankside  
London SE1 9TG

### **Tate Liverpool**

Albert Dock  
Liverpool  
L3 4BB

### **Tate St Ives**

Porthmeor Beach  
St Ives  
Cornwall  
TR26 1TG

<http://www.tate.org.uk>

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<sup>6</sup> Museums and Galleries Act 1992

[http://www.hmsso.gov.uk/acts/acts1992/Ukpga\\_19920044\\_en\\_4.htm](http://www.hmsso.gov.uk/acts/acts1992/Ukpga_19920044_en_4.htm).

<sup>7</sup> The aim of Insight is to develop a digital information resource that encompasses the entire Tate Collection and enables onsite and remote access to art for the widest possible audience. <http://www.tate.org.uk/collections/insight.htm>.

**Chapter 5: Details of the Interviews**

Initial contact was made with Alan Crookham, Gallery Records Curator at the Tate Archive in September 2003. Mr. Crookham then contacted Simon Grant, Head of IT and Beth Houghton, Head of Library and Archive and solicited their input to the questionnaire. A telephone interview was conducted with Alan Crookham, who spoke on behalf of the group, on the 12th February 2004. During the interview Mr. Crookham also suggested that Tessa Meijer, Digital Assets Manager, be contacted for participation. Subsequent communications with Ms. Meijer were conducted via email and her comments have been incorporated into this report.

## **Chapter 6: 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 Tate is working to ensure that all digitised images and texts for the Insight project have long-term value. They realise that capturing images and creating text in standard formats can help to achieve this. The Tate is part of the European Museum Information Institute's Distributed Content Framework initiative (EMII-DCF).<sup>8</sup> As such, they are well aware of the benefits associated with adopting technological standards to enhance accessibility to digitised resources. The Tate is aware of Public Records Office (PRO)<sup>9</sup> (now renamed the National Archives) guidelines for best practices and external standards on digital preservation. The Tate has expressed interest in collaborating with the Digital Preservation Coalition (DPC)<sup>10</sup> and ERPANET in the near future. Clearly the Tate has a high awareness of the importance of digital preservation for publicly accessible resources.

The Tate's daily activities (human resource records, finance, business) are not yet fully automated and there are no standard practices in place. Each department is responsible for managing their own records. Currently, records are stored on a shared network. Vital business records, such as board meeting minutes and human resource files, are printed to paper to ensure their long-term preservation. An Information Strategy Project was carried out in 2001 for the internal information management at the Tate. The major recommendation was to implement a more integrated approach to information management across the entire organisation. Over the next year, there are plans to conduct in-house research into electronic record holdings and the implementation of an ERMS based on their paper filing system. The Tate hopes to apply this recommendation through an organisation-wide Electronic Records Management System (ERMS) but will need to wait until adequate funding can be secured. As noted above, internal access projects are seen as secondary and therefore the implementation of the EDMS may take some time.

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<sup>8</sup> EMII-DCF is funded by the European Commission's Information Society Technologies programme (IST). <http://www.emii-dcf.org/default.asp?id=1>.

<sup>9</sup> Public Records Office Digital Preservation Guidance <http://www.pro.gov.uk/about/preservation/digital/guidance/default.htm/>

<sup>10</sup> Digital Preservation Coalition <http://www.dpconline.org/>

### *The main problems*

The main problem facing the Tate is securing stable funding and changing funders' attitudes. Funding for digitisation projects is mainly achieved through grants. Access is key to the Tate's mandate<sup>11</sup> and, as such, funds are funnelled into making digitised art works accessible rather than into their long-term preservation. This is a problem facing many cultural heritage organisations and illustrates the need to promote the importance of digital preservation among funding bodies – both in the cultural heritage sector and beyond. While automated collections management is seen as key to enabling public access, internal electronic document management is considered less crucial. As a result, funding for such projects is far more difficult to secure.

### *Asset value and risk exposure*

As the Tate houses thousands of irreplaceable works of art, there is greater concern regarding the loss of the genuine artwork than its digitised copy. However, the Tate recognises that its digital resources are valuable assets enabling increased public access to their collections. It realises that the Insight project produces "effective long-term image resources which can enhance virtual access to the Collection"<sup>12</sup>.

### *Regulatory Environment*

Copyright compliance is a major concern at the Tate and every care is taken to ensure that laws are adhered to. In fact, the Tate is working with the EMII-DCF to draft recommendations on copyright requirements for cultural heritage organisations.<sup>13</sup> The Tate must comply with the directives issued by their Board of Trustees. The Tate must also meet the requirements outlined by the Freedom of Information Act and Data Protection.

### **Preservation Activity**

Tate digitisation activities are primarily driven by access. As such, there are no real policies or strategies for the long-term preservation of digital resources. However, they are keen to remedy this situation and plan to work closely with other museums and advisory bodies such as the DPC and ERPANET in the near future. Following the interview, the Tate suggested that ERPANET address the National Museum Directors Conference (NMDC)<sup>14</sup> to help increase awareness of digital preservation among the highest levels of museum management.

### *Policies and Strategies*

The Insight project applies rigorous procedures in the capture and dissemination of digital resources.<sup>15</sup> Technological standards and metadata are employed to ensure that the resources can be easily found and accessed via the Tate web site. These

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<sup>11</sup> According to Oliver Vicars-Harris, Insight Project Manager, the Insight Project aims to provide free and open access to the Tate collections to anyone, anywhere in the world  
<http://www.ibase.com/PDFdownloads/Case%20Studies/TateInsight.pdf>.

<sup>12</sup> Oliver Vicars-Harris, Insight Project Manager in a case study produced by iBase  
<http://www.ibase.com/PDFdownloads/Case%20Studies/TateInsight.pdf>.

<sup>13</sup> EMII-DCF Legal requirements  
<http://www.emii-dcf.org/dokument/EMII-DCF%20WP02%20-%20Executive%20Summary.pdf>.

<sup>14</sup> National Museum Directors Conference. <http://nationalmuseums.org.uk/>.

<sup>15</sup> For an outline of the process, see <http://www.tate.org.uk/collections/insightp.htm#imaging>.

practices will also benefit the long-term preservation of the resources. The Tate uses an organisation-wide collections management system (The Museums System<sup>16</sup>) but do not as yet have a system-side ERMS.

### *Selection*

The Insight project aims to make all of the Tate's collections accessible via the Internet. The project aims to improve access to the entire collection by the end of 2003. The Tate is now investigating new technologies that enable going beyond two-dimensional static imaging to improve representation of sculptural, video and installation works.<sup>17</sup>

However, there are no overall policies regarding the retention of electronic business records. Each department selects and retains records at their own discretion.

### *Preservation*

For the past three years, the Tate has used The Museums System for their automated collections management. Data was successfully migrated from their previous collections management system (CMS).<sup>18</sup> In addition to the capture of new images by digital camera, the Insight project has also imported over 4,000 legacy images from Photo-CD to the image management system (inVisage).<sup>19</sup>

The CMS and IMS are both Oracle database driven. These systems form the primary repositories for the insight images and related information. For the Insight project, all images are captured as uncompressed TIFF files. By adopting a non-proprietary open standard for their archival masters, the Tate should be in a good position to migrate the files as necessary. A 48-bit uncompressed archival version is automatically saved to CD ROM and DVD. An 8-bit uncompressed surrogate is imported to the image management system and converted to a compressed image package. The image package contains five images ranging in compression - four are saved as JPEG files and one as a Portable Network Graphic (PNG). The Tate currently has over sixty thousand high-resolution master TIFF images on CD-ROM and DVD. Two sets of the DVD are retained. One set is stored onsite in fireproof cabinets and the other set is housed in cold storage at the National Gallery in London. The newly created Electronic Media Conservation department is actively researching long-term solutions for storage of their digital resources.

The Insight project captures a variety of metadata for each digital image created. Point of capture information (device, software, exposure settings), catalogue data (artist, title, accession number, dates), copyright information and subject index information (using standard classification systems such as ICONCLASS) are all recorded as metadata. The catalogue data is migrated directly from the Collections Management System. A team of three indexers applies the subject index information.

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<sup>16</sup> The Museum System, <http://www.gallerysystems.com/museum.asp>.

<sup>17</sup> Supported by the New Opportunities Digitisation Fund (NOF) Digitise programme, the Special Imaging Treatments will experiment with new ways of presenting more challenging works. [http://www.tate.org.uk/collections/in\\_special.htm](http://www.tate.org.uk/collections/in_special.htm).

<sup>18</sup> The previous CMS was Multi MIMSY, [www.willo.com/mimsy](http://www.willo.com/mimsy).

<sup>19</sup> Insight production is supported by a customised Image Management System (inVisage) supplied by iBase Image Systems Ltd. To see a case study about the project on this sight, go to <http://www.ibase.com/PDFdownloads/Case%20Studies/TateInsight.pdf>.

Each digital image is examined carefully by members of the project team for quality and for any possible faults such as incorrect catalogue data. Once the team have verified the quality of the image, it is signed-off and picked up by the server which feeds to the delivery systems. In addition, members of the curatorial, education and picture library staff regularly receive samples of indexed images to verify and approve, thereby certifying integrity and consistency of approach.

### *Access*

Access is a major aim outlined in the Tate's mission statement. All of their digitisation activities to date have centred on making the collections and related information more widely available to the general public.

Internal records are available to all staff with access to the shared drive and permission to view particular folders.

### **Compliance Monitoring**

For the Insight project, the Tate must ensure that it complies with the funding stipulations set out by the Heritage Lottery Fund (HLF) and the New Opportunities Fund (NOF) Digitise programme<sup>20</sup>. Both are concerned with improving access to collections to enhance education.

### **Digital Preservation Costs**

As noted previously, funds are generally channelled towards front of house activities. Budgeting for specific projects, such as Insight, do not specify allocation of funds to digital preservation. There is no internal budget allocation towards the preservation of internal digital resources.

### **Future Outlook**

The Tate feels that their strategy for the Insight project will be adequate for the next few years. By adopting standard formats for the creation of their digital resources the Tate will be able to migrate to new formats as this becomes necessary. The Tate is starting to experiment with special imaging treatments beyond static 2D representation to present some of their more complex works. Complex digital objects are problematic with regards to preservation and will require extra consideration to ensure that investments into experiments are maximised for long-term benefit.

The Tate is working towards implementing strategies to improve the management of their internal digital resources and this will be completed as funding becomes available.

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<sup>20</sup> New Opportunities Fund (NOF), <http://www.nof.org.uk>; Heritage Lottery Fund (HLF), <http://www.hlf.org.uk>.

## **Chapter 8: Conclusions**

Overall, the Tate is aware that digital preservation is important, especially with regards to publicly accessible resources. The practices they have set in place for the Insight project illustrate that they are well on their way to implementing a solid framework that could be applied to other types of digital information generated and held within the organisation.

As digitisation efforts have been access driven to date, it is likely that any future funding for digital preservation activity will be directed towards publicly accessible resources. However, the Tate does plan to tackle the challenges of preserving their internal resources as soon as funding allows.

The Tate is eager to collaborate and share experiences with other museums and galleries and also with government and advisory bodies. Willingness to cooperate will help the Tate to identify and implement strategies for the long-term care of all their digital resources for the future. To ensure wide-spread success, however, attempts to raise awareness among funding bodies of the importance of digital preservation must be undertaken both in the cultural heritage sector and beyond.

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