Royal Danish Library's
Digital Preservation Policy

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Introduction

This document constitutes the policy for the preservation of digital collections at the Royal Danish Library. The policy outlines the framework and principles for the digital preservation work involving those parts of the cultural heritage for which the Royal Danish Library is responsible.

Relationship to other policies

This document is a single element in a complex of policies, strategies and guidelines concerned with digital material. The complex embraces all active policies concerning collections, including policies for acquisition, access, digitisation, metadata and preservation of analogue material. Furthermore, the document is linked to active strategies in the aforementioned areas.

What is covered by this policy

The policy covers all of the Royal Danish Library's digital collections of cultural heritage, i.e. the policy includes both statutory and non-statutory collections of cultural heritage, as well as born-digital and digitised cultural heritage collections. Generally speaking, all digital cultural heritage collections that come under the auspices of the Library's acquisition and digitisation activities are preserved.

The options for carrying out digital preservation are defined by conditions that apply based on external factors such as legislation, finance, international technological, methodological and organisational development within the field and the nature of the digital material. These conditions are described in the policy.

The policy also describes the principles adopted for the performance of activities in connection with digital preservation which the Royal Danish Library will endeavour to follow within the existing framework.

In order to ensure implementation of the policy, the overall organisation of the work involving digital preservation in the form of roles and responsibilities is defined in the policy.

Purpose and vision

Under the conditions that apply at the time in question (described in the section entitled 'Framework for implementation of the policy'), the Royal Danish Library's policy for digital preservation shall ensure the best possible conditions for long-term preservation of that part of the digital cultural heritage for which the Library is responsible.

The policy thus lays down the framework on a general level, as well as the Library's principles for working with digital preservation. It is developed in order to ensure that digital preservation is carried out with a view to ensuring the best possible access to digital material both in the short term and the long term.

This means
- that the Library's digital collections maintain their authenticity over time in relation to the significant properties that are to be preserved
- that preserved data can be accessed in accordance with applicable legislation and agreements reached
- that the digital collections can be accessed by the Library's users in a contemporary manner

Digital preservation is a field in which
- international collaboration is necessary in order to solve the resource-demanding and challenging tasks
- change is a constant factor in terms of technology, methodology and organisation, both nationally and internationally
- a sustained high level of competence is required
- long-lasting quality is a prerequisite for avoiding losses

Royal Danish Library's vision is thus to
- prioritise the necessary organisation and financing to solve the task
- follow and contribute to developing international standards and best practice
- collaborate with other national and international organisations to the extent that this can help to achieve the best possible digital preservation
- be at the forefront of the instigators of digital preservation in Denmark and contribute to the development of systems
- promote knowledge of digital preservation and its importance at all levels
- live up to the principles of a "Trustworthy Digital Repository" (5).

Background
One of the responsibilities of the Royal Danish Library is the long-term preservation of digital material. Seen in relation to preservation institutions' traditional preservation of analogue material, the long-term preservation of digital material constitutes an area with its own challenges. Some of the key challenges particular to digital material are that
- the quantity of digital material is growing
- the complexity of digital material is growing (formats, etc.)
- digital material cannot be set aside in a passive manner, as is the case for books, for example, since systems, storage media, data formats and programs are in a constant state of change. A failure to act – also during the early phases – will therefore result in a loss of ability to provide access to the preserved data
- complete methods and solutions to these issues do not yet exist, but work is being carried out internationally to develop strategies and techniques that can handle some of the problems for subgroups of the material

- there are no ready-to-use models in terms of what the activities cost, either annually or in terms of the total cost during the lifetime of the material, but work is being carried out internationally on establishing such cost models
- legislation concerning storage and access to these types of material is more restrictive than for analogue material.

The nature of the material means that it is necessary to actively begin preservation during the acquisition process and subsequently on an ongoing basis in order to ensure access to the preserved digital material over time.

Ongoing long-term preservation consists of two main activities: bit preservation and functional preservation. In order for the Royal Danish Library to be able to handle these preservation tasks, the institution must be in a position to continuously handle changes in the conditions for preservation, whilst also ensuring preservation within the applicable framework conditions.

The policy for digital preservation therefore describes the conditions that are significant for performance of preservation, as well as the principles for management and execution of preservation activities.

Framework for implementation of the policy

This chapter describes the framework conditions that are significant in terms of the policy and thereby the performance of activities in connection with digital preservation. The Royal Danish Library must be able to continuously handle changes in the conditions for preservation, whilst also ensuring preservation within the applicable framework conditions. If the framework conditions change, the strategy must therefore be adjusted with respect to the new conditions and in relation to risk management and applicable principles.

Legislation and agreements
The preservation activities for the Royal Danish Library's digital material follow relevant legislation, guidelines and concluded agreements concerning acquisition, administration (incl. preservation) and access at all times. This applies to the legislation relating to legal deposit, copyrights, data protection and archives. The Library responds on an ongoing basis to relevant legislation and guidelines in the area. Agreements entered into by the Library in connection with non-statutory collected material (e.g. acquisition of personal archives) must live up to the preservation policy.

Financing
Preservation activities for the Library's digital material are subject to the economic framework and budgets that are applicable at any time.

Royal Danish Library assesses on an ongoing basis whether the necessary resources to cover the costs of digital preservation are available.

Technological, methodological and organisational development
Developments in technological, methodological and organisational areas on which digital preservation and solutions for digital preservation depend continue apace. Royal Danish Library follows and responds to this development in the following areas:

- Technology that is used in processes concerning preservation activities
  (e.g. in web harvesting, characterisation, validation, planning, formats, migration, emulation)

- Methods for digital preservation
  (e.g. preservation strategies, auditing methods)

- Standards
  (e.g. Open Archival Information System (4), standards for formats, including metadata and compression)

- International collaboration at an overall level
  (e.g. for web harvesting, format catalogues, registration and collecting of operating system software)

- Collaboration on bit preservation
(e.g. in bit preservation with foreign national libraries or Danish institutions, national preservation initiatives with other Danish institutions)

- Research
(e.g. unravelling new initiatives within digital preservation)

Digital materials

Digital materials have varying size and complexity, and both characteristics can affect the possibilities for digital preservation.

Size

Size can be expressed in several ways:
- Number of files
- Size of the files
- The overall need for storage

In cases where there is a need to ingest new digital materials, this may have an impact on overall digital preservation.

Complexity

Complexity can be expressed in several ways:
- Data formats
- Composition of digital material
- Context of digital material

In cases where there is a need to ingest new digital materials with new complexity, this may have an impact on overall digital preservation.

Principles for implementation of the policy

This chapter describes the adopted principles for performance of activities in connection with digital preservation which are sought maintained within the framework conditions described in the previous chapter, 'Framework for implementation of the policy'.

Risk management

Preservation activities for digital material at the Royal Danish Library are based on principles for risk management with particular focus on risks related to the loss of data and future accessibility.

Trustworthy digital preservation

The Royal Danish Library ensures trustworthy digital preservation to the greatest possible extent. The overall principles for a "Trustworthy Digital Repository" are thus followed.

This means, among other things, that the Library regularly audits the organisation and technology that constitute the Library's digital archives. Royal Danish Library has no plans to secure formal certification.

Standards

Royal Danish Library keeps abreast of and, if possible, participates in the international collaboration that takes place concerning the development of standards and models for description and construction of the technical and organisational solutions which are related to the administration and preservation of digital collections. The Library uses such standards to the greatest possible extent in the solution and evaluation of preservation-related tasks.

At an overall level, the Library uses the OAIS model (ISO 14721) (4) as its reference model. The Library also uses the principles contained in the OAIS-based auditing and certification standard ISO 16363 (5).

Data, metadata and data formats

Royal Danish Library seeks to preserve its digital collections in formats suitable for digital preservation. This will as far as possible involve formats which are open, standardised or internationally acknowledged – and this applies to both data and metadata.

When choosing data formats, it will be taken into account whether the given formats are expected to be able to support one or more of the preservation strategies that the Library chooses to use.

For metadata (bibliographical, preservation, dissemination and administrative descriptions, including ownership and access rights), considerations will also revolve around whether it can ensure administration, retrieval and preservation of the digital collections in overall terms.

Metadata is designed according to locally described norms that are as close as possible to international standards and best practice.

The decision concerning the use of techniques that can constitute a risk of loss of data, such as encryption or compression, must be based on a risk assessment and involve consultation with the management.

Metadata and its relation to data must be preserved.

The Library uses universal, unique and persistent identifiers for identification of preserved digital materials.

Open and proprietary software

Any choice of software for use in digital preservation must be based on a risk assessment. This applies to both proprietary and open software.

In order to ensure openness and reciprocal exchange of experience, the Royal Danish Library endeavours to support and practise the use of open source.

Ingest principles

In addition to the relation to policies for acquisition and discarding of data (cf. 'Relation to other policies' section), the Royal Danish Library endeavours to define requirements, quality objectives and quality control of ingested material to the greatest possible extent. This involves, for example, requirements concerning formats and structures for digitised material and born-digital material.

All ingested material is assigned a universal, unique and persistent identifier, which can be used for future reference of the material. Materials in Netarchive are handled differently, however, as these can be identified universally, uniquely and persistently by specification of the web archive and properties on harvesting which make them uniquely identifiable (as, for example, via a Persistent Web IDentifier (PWID)).

Preservation principles

For each digital collection that the Royal Danish Library acquires for preservation, a decision has to be made as to what is to be preserved in terms of content, structure, functionality and appearance. For each collection, a decision also has to be made with regard to preservation level, including bit security, the desired functional preservation strategy and encryption, if applicable.

The Library endeavours to do bit preservation of data and metadata in the form it had when it was received, also when further processing takes place.

Digital preservation must be sufficiently independent of the supporting system portfolio so that it is possible to restore data and metadata under conditions in which (parts of) the system portfolio has been lost.

Internationally recognised standards are used that ensure administration, retrieval and preservation of the digital collections.

Furthermore, an ongoing technological monitoring of relevant tools, formats and standards, etc., takes place.

Bit preservation
Royal Danish Library will use risk management for continuous assurance of bit preservation, which for long-term preservation consists of avoiding risks that may lead to data loss. At the Royal Danish Library, risk handling is carried out e.g. by copies of the data being stored in independent environments (geographically, technically and organisationally) and by checking copies actively (unlike backup).

Endeavours are made to ensure that bit preservation takes place at different levels so that different demands concerning information security (confidentiality, integrity and accessibility) can be satisfied to the greatest possible extent.

In certain cases, the Library's preservation strategy can – in addition to one or more digital copies that are bit preserved – also include an analogue copy.

Royal Danish Library endeavours to collaborate with other organisations in order to achieve the best conditions for bit preservation.

Where a dissemination copy is identical to the preservation copy, the dissemination copy contributes to raising the quality of digital preservation to the greatest extent possible, both in terms of active use (and thereby validation) and as an element in checking the material's integrity.

As a general rule, material under bit preservation must not be deleted. Deletion may only be carried out on the basis of a risk assessment and following consultation with the management.

Functional preservation
Continuous monitoring of the composition and volume of the preserved collections is carried out and plans are formulated for the preservation of each collection.

In collaboration with national and international partners, the Royal Danish Library will work to develop methods for functional preservation that ensure that as large a part of the Library's collections as possible will be accessible in the future.

If, due to technical or economic reasons, it is not possible to preserve all functionality in digital material in connection with a preservation activity being carried out, the preservation of the digital object's intellectual content is usually awarded the highest priority.

The Library uses risk management for continuous assurance of functional preservation.

Access to preserved digital material

Royal Danish Library will make preserved collections available using a technology and in a format that is chosen on the basis of criteria involving economic considerations and relevance for the users.

Digital preservation is carried out so that access can be granted whilst taking into account relevant legislation and agreements in force.

Technical infrastructure

Royal Danish Library endeavours to establish and maintain the necessary technical infrastructure in order to be able to carry out the preservation of its digital collections, in which:

- the infrastructure supports the necessary monitoring of systems, media and formats in order to ensure a proactive effort
- the infrastructure supports the necessary preservation activities such as bit preservation, characterisation, validation, migration and emulation
- the infrastructure includes tools to help support decision-making processes and to monitor the performance of specific preservation activities
- endeavours are made to standardise the infrastructure for different materials where possible in order to support perspective and transparency

Continuous risk management of the infrastructure is carried out with a view to its support of digital preservation. As a minimum, this includes known deficiencies, known challenges and consequences of changes in the infrastructure or framework for the infrastructure.

The Library aims to keep the technical infrastructure for digital preservation as cost-effective as possible within the framework described in this policy, although with particular focus on risk management.

In the actual structuring of digital materials that undergo long-term preservation, the Library uses universal, unique and persistent identifiers in the same context as when ingesting digital materials.

Research, knowledge-sharing and competence development

Royal Danish Library ensures that its personnel always have adequate professional knowledge such that the preservation policy can be maintained and implemented responsibly, irrespective of whether this is carried out in-house or outsourced.

Endeavours are made to ensure that this competence development and maintenance takes place through internal training of personnel and via participation in national and international conferences, collaboration and partnerships. The Library takes part in relevant external research projects in the field, as well as instigating research projects itself.

The Library disseminates the knowledge that is acquired on digital preservation to the public domain via relevant channels, e.g. websites, projects and conferences.

Collaboration on preservation activities
Through strategic collaboration projects, the Royal Danish Library endeavours to secure a key position in international networks that work with digital preservation, such that legally, politically and in terms of knowledge, methods and tools the Library is on a par with comparable institutions in Europe.

Where appropriate, the Library contributes to partnerships and joint maintenance operations with Danish or international preservation institutions that possess the necessary expertise.

Organisation
The Royal Danish Library ensures performance of this policy by establishing an organisation which supports the task. The organisation covers roles and responsibilities as described in the chapter 'Responsibility for implementation of the policy' and relevant processes described in the chapter 'Administration of the document'.

Responsibility for implementation of the policy

In order to be able to meet the challenges concerning digital preservation, the Royal Danish Library, through its organisation and division of responsibilities, must ensure that

- maintenance of the Library's policy for digital preservation is in accordance with the Library's objectives and responsibilities for digital cultural heritage
- maintenance of the Library's strategy for digital preservation is in accordance with the current risk status, applicable framework conditions for digital preservation (cf. the section 'Framework for implementation of the policy') and *Royal Danish Library's Digital Preservation Policy*
- implementation of the Library's strategy for digital preservation is in practice

The overall responsibility for digital preservation lies with the Royal Danish Library's management, which

- prioritises resources for digital preservation at an overall level
- appoints (or delegates the appointment of) those responsible for the roles that are related to digital preservation
- approves the policy and appoints those responsible for approval of strategy and risk status, as well as consequent priorities for digital preservation

Administration of the document

This document is the first version of *Royal Danish Library's Digital Preservation Policy*. This policy supersedes the previous policies for the Royal Library (6), Netarchive (7) and the State and University Library, Denmark (8).

Updating of the document
Updating of the document is ensured by the department responsible for digital preservation and is approved by the Royal Danish Library's management every three years or more frequently if this is required due to changes in conditions for digital preservation.

Dissemination of the document
The document is published via the Library's website in a Danish and an English version with the aim of supporting national and international collaboration on digital preservation.

Definitions

- **Authenticity**
  means that the digital material is an authentic and reliable representation of the original digital material ingested into the repository. Demonstrating authenticity requires policy, security and documentation which can ensure both the provenance and integrity of the material.

- **Backup**
  is the preservation of bit sequences where there are two copies: one which is used, and one which remains passive and is used as a source from which data can be recreated. The copies are not checked for consistency, which means that this solution is a short-term solution for re-establishing recently lost data in the same structures.

- **Bit preservation**
  is the preservation of bit sequences that assures the finding and readability of the correct (original) sequence of 0s and 1s for posterity. In addition to ordinary maintenance of storage systems, bit preservation consists of storage of a number of independent copies of the bit sequence, as well as a regular check of integrity and recovery of any errors, see [www.digitalbevaring.dk](https://digitalbevaring.dk) (https://digitalbevaring.dk/viden/bitbevaring/).

- **Copy**
  is one of several identical versions of the same file which is preserved and regularly compared in order to check its integrity.

- **Data format**
  represents a particular way of representing and structuring data so that the data can be accessed by tools that can present the format in comprehensible form (e.g. TIFF editor to TIFF format), or can be understood based on instructions as to how data should be interpreted (for example metadata formats). The majority of formats have a standard for how data should be structured, and in such cases the validity of a format can be measured according to whether the data complies with the data format standard, see [www.digitalbevaring.dk](https://digitalbevaring.dk) (https://digitalbevaring.dk/ordbogen/dataformat/).

- **Digital collection**
  constitutes a collection of digital files and metadata which can be regarded as a whole, e.g. defined in relation to content, origin or data formats.

- ***Digital material***
  is material that is saved digitally as 0s and 1s in a file. Digital material can, for example, be a database, a digitised reproduction of sound, video or a painting which can be accessed via a computer, mobile phone or similar, see www.digitalbevaring.dk (https://digitalbevaring.dk/viden/digitalt-materiale/).

- ***Digital preservation***
  is the processes that ensure ongoing access to digital information despite changes in technologies (storage media, data formats and programs for access) over time. Access in this connection means both that data is preserved without error, and also that it can be interpreted by future user groups with a perspective of a minimum of 100 years. Digital preservation is a task with many different aspects where there are no ready-made solutions and answers today.

- ***Dissemination copy***
  is a version of the preserved material which is typically not as rich in information as the preservation copy. The dissemination copy is often adjusted for a particular dissemination purpose and is generated when different formats are used for dissemination and long-term preservation. The lifetime of a dissemination copy will often be far shorter than that of a preservation copy, since the demands with regard to up-to-date dissemination are constantly changing, see www.digitalbevaring.dk (https://digitalbevaring.dk/ordbogen/formidlingskopi/).

- ***Functional preservation***
  is preservation of the ability to interpret the bit sequence, which ensures access to digital material in a useful manner. Functional preservation must safeguard the digital material against technological obsolescence, so that it will be possible to read, understand and display/play the material with standard programs and equipment both now and in the future, see www.digitalbevaring.dk (https://digitalbevaring.dk/viden/logisk-bevaring//).

- ***Preservation copy***
  is the copy of digital material that is used as the archival copy. The preservation copy is typically richer in information than copies made for other purposes and is thus often larger than other copies. As a rule, a preservation copy forms the basis for the production of derived formats, e.g. for dissemination.

- ***Metadata***

  is data about data, i.e. the data which describes other data. For example, a radio broadcast can have data about the time of the broadcast, channel and content, the file format and size of the file, which copyrights are associated with the broadcast, how the file has been created, e.g. if it is digitised, etc. Metadata is thus all the related information that makes it easier to understand the data file itself, see www.digitalbevaring.dk (https://digitalbevaring.dk/viden/metadata/).

- ***Persistent identifier***

  is a universal identifier for registered digital material for which there are rules for how the association between the identifier and the material is maintained.

- ***Persistent Web Identifier***

  is a universal, precise and permanent identifier which refers to web materials in web archives by referring to permanent information about the material in the web archives.

- ***Risk acceptance***

  Definitions of criteria for risk tolerance.

- ***Risk assessment***

  Identification, registration, analysis and evaluation of the potential risks that threaten the library's digital archives. The assessment must be revised on an ongoing basis in order to identify changes in the archive's framework and conditions (technical, organisational, political or legal) which can alter the overall risk picture.

- ***Risk handling***

  Preparation of a plan for handling of risks and initiation of relevant activities which can minimise the negative consequences of current risks.

- ***Risk management***

  contains risk assessment and risk handling of risks and handling of every individual risk, either by planning and initiation of activities in order to minimise the negative consequences of current risks or by risk acceptance of the risks in question within defined tolerances, see www.digitalbevaring.dk (https://digitalbevaring.dk/viden/risikostyring/).

Reference list

Internal documents related to the Digital Preservation Policy

The following internal documents and drafts of documents that are related to the Digital Preservation Policy are as far as possible used in the process of preparation of the policy:

(1) Royal Danish Library (2018): *Accessionspolitik [Acquisition policy]*
http://www.kb.dk/export/sites/kb_dk/da/nb/om_nb/natbib_accpol.pdf

(2) Royal Danish Library (2019): *Det Kgl. Biblioteks Strategi for digital bevaring [Royal Danish Library's Digital Preservation Strategy]*
http://www.kb.dk/export/sites/kb_dk/da/kb/opgaver_og_maal/DB_Strategi_20190109.pdf

(3) Royal Danish Library (2019): Strategi for digitalisering af fysisk kulturarv *[Strategy for digitisation of analogue cultural heritage]*
http://www.kb.dk/export/sites/kb_dk/da/kb/opgaver_og_maal/Strategi_digitalisering_fysisk-kulturarv_2018.pdf

External documents related to the Digital Preservation Policy

The following external documents have direct influence on the Digital Preservation Policy:

(4) ISO 14721:2012 (2012): *Space data and information transfer systems -- Open archival information system (OAIS) -- Reference model, available via*
http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=57284

(5) ISO 16363:2012 (2012): *Space data and information transfer systems -- Audit and certification of trustworthy digital repositories, available via*
http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=56510

Previous policies

Royal Danish Library's Digital Preservation Policy supersedes the following policies:

(6) The Royal Library (2014): *Politik for langtidsbevaring af digitalt materiale på Det Kongelige Bibliotek [Policy for long-term preservation of digital material at the Royal Library]*
Archived in web archive: netarkivet.dk, archival time: 2017-10-31 10:19:52 UTC, archived (and online) URI:
http://www.kb.dk/export/sites/kb_dk/da/kb/downloadfiler/DigitalBevaringsPolitik-KB-DK-2014.pdf [file]

(7) Netarchive (2014): *Politik for langtidsbevaring af materiale indsamlet til Netarkivet ved Det Kongelige Bibliotek og Statsbiblioteket [Policy for long-term preservation of digital materials collected for Netarchive by the Royal Library and the State and University Library, Denmark]*
Archived in web archive: netarkivet.dk, archival time: 2017-01-02 10:11:31 UTC, archived (and online) URI: http://netarkivet.dk/wp-content/uploads/2015/03/Netarkivet_Politik_langtidsbevaring_1.0_150115.pdf [file]

(8) The State and University Library Denmark (2016): *Statsbibliotekets Politik for digital bevaring [Digital Preservation Policy for the State and University Library Denmark]*
Archived in web archive: netarkivet.dk, archival time: 2017-01-02 11:01:41 UTC, archived (and online) URI: http://www.statsbiblioteket.dk/nationalbibliotek/digital-bevaring/politik-for-digital-bevaring [file]

Sources of inspiration

The following documents have been used as sources of inspiration for the preparation of the Digital Preservation Policy.

(9) Beagrie, N., Semple, N., Williams, P., Wright, R. (2008): *Digital Preservation Policies Study*
Archived in web archive: webarchive.org.uk, archival time: 2014-06-15 02:23:34 UTC, archived (and online) URI:
http://www.jisc.ac.uk/media/documents/programmes/preservation/jiscpolicy_p1finalreport.pdf [file]

(10) Digitalbevaring.dk (2015): *Hvordan laver man en bevaringspolitik og -strategi? [How does one make a preservation policy and preservation strategy?]*
Archived in web archive: netarkivet.dk, archival time: 2016-06-15 06:55:26 UTC, archived (and online) URI: http://digitalbevaring.dk/bevaringspolitik-strategi/ [file]

(11)   Madeline Sheldon (2013): *Analysis of Current Digital Preservation Policies: Archives, Libraries and Museums*
Archived in web archive: archive.org, archival time: 2015-12-01 05:51:16 UTC, archived (and online) URI:
http://www.digitalpreservation.gov/documents/Analysis%20of%20Current%20Digital%20Preservation%20Policies.pdf?loclr=blogsig [file]

(12)   Nyvang, C, Kromann, T. H., Zierau, E. (2017): *Capturing the Web at Large - A Critique of Current Web Referencing Practices*
Proceedings of the Researchers, practitioners and their use of the archived web Conference (RESAW2 London, 2017) DOI: 10.14296/resaw.0004, available at:
http://doi.org/10.14296/resaw.0004

(13)   Sierman, B., Jones, C., Elstrøm, G. (2014): *SCAPE: Catalogue of preservation policy elements*
Archived in web archive: archive.org, archival time: 2018-02-08 10:03:14 UTC, archived URI: http://scape-project.eu/wp-content/uploads/2014/02/SCAPE_D13.2_KB_V1.0.pdf [file], available at:
http://www.scape-project.eu/deliverable/d13-2-catalogue-of-preservation-policy-elements

(14)   The UNESCO/PERSIST Content Task Force (2016): *The UNESCO/PERSIST Guidelines for the selection of digital heritage for long-term preservation*
Archived in web archive: archive.org, archival time: 2018-03-07 08:07:02 UTC, archived (and online) URI: http://unesdoc.unesco.org/images/0024/002442/244280E.pdf [file]