

# **The nestor Catalogue of Criteria for Trusted Digital Repository Evaluation and Certification**

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# Overview

- Background
  - nestor
  - nestor WG on Trusted Repositories Certification
- nestor Criteria Catalogue on Trusted Digital Repositories
  - Concepts
  - Principles
  - Main Criteria
- Critical evaluation

## Network of Expertise in Long-Term Storage of Digital Resources for Germany

- Duration:
  - May 2003 – June 2006 , nestor II : July 2006 – June 2009
- Funding
  - German Ministry of Research and Education
  - with about 1 Mio €
- Partner:
  - cultural heritage sector (libraries, archives, museums),
  - research institutions (universities, data centres) and
  - Technology providers (computer centres, media centres)

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## nestor II

- Aim: information and communication –  
! not archiving
- Topics:
  - Training,
  - Escience,
  - Repositories,
  - Multimedia,

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## nestor WG on Trusted Repositories Certification

- Broader group of members than nestor
  - ( + World Data Center, Computer Scientists, Certification Specialists, ...)
  - Start in Dec. 2004
- Aim:
  - Establish a net of **Trustworthiness** in which long-term digital archives can function in various environments (librarys, archives, museums...)

## nestor WG on Trusted Repositories Certification

- Provide a coaching instrument to force a certain level for digital archives, ensure acknowledgements of recent standards
- Tight cooperation and permanent involvement of the communities
- Don't reinvent the wheel, but fit criteria into Germany's conditions

## Catalogue of Criteria I

- Public draft for comment in June 2006
- Self-assessment tool
- Target group: cultural heritage organizations, software developers, third party vendors, ...
- Focused on application in Germany, but orientated on international discussions and standards
- Formulates abstract criteria, enhanced with examples and explanations

## Central Concepts of the Catalogue of Criteria

- Key concept: Trustworthiness
  - A system operating according to its goals and specifications
    - (it does exactly what it says)
  - From an IT security perspective:
    - integrity,
    - authenticity,
    - confidentiality and
    - availability



## Central Concepts of the Catalogue of Criteria

- Implementation as a multi step process
  - *(of the long term archive and of single criteria)*
  - 1. Conception
  - 2. Planning and Specification
  - 3. Realization and Implementation
  - 4. Evaluation

Because of permanent changes, these steps must be repeated if necessary (quality management)

## Basic Principles for the Application

- **Documentation**
  - Allows to proof and evaluate the development of the system
- **Transparency**
  - Transparency to the outside
  - Transparency to the inside
- **Adequacy**
  - All criteria have to be seen in the actual preservation context
- **Measurability**
  - Partially no objectivley measurable features
  - Indirect indicators can be made available (e.g. by transparency)

## Composition of the Criteria

- The main criteria are on a very abstract level (because of the broad scope)
- They are enriched by subcriteria, detailed explanations, examples and references
- As basis for a common terminology the OAIS reference model was taken, where possible
- An audit checklist is provided together with the catalogue of criteria

## Overview of Main Criteria I

### A Organizational Framework

1. Goals are defined
2. Adequate usage is guaranteed
3. Legal rules are observed
4. Adequate organization is chosen
5. Adequate quality management is conducted

## Overview of Main Criteria II

### B Object Management

6. Integrity of digital objects is ensured
7. Authenticity of digital objects is ensured
8. A preservation planning is implemented
9. Transfers from producers are defined
10. Archival storage is well defined
11. Usage is well defined
12. Data management guarantees the functionality of the repository

## Overview of Main Criteria III

### C Infrastructure and Security

12. The IT infrastructure is adequate

13. The infrastructure ensures the protections of the repository and its digital objects

# Examples

<b>A</b>	<b>Organisational Framework</b>
<b>1</b>	<b>The repository has defined its goals.</b>  1.selection criteria 2.responsibility for the long-term preservation of the information represented by the digital objects 3.repository has defined its designated community
<b>2</b>	<b>The repository allows its designated community an adequate usage of the information represented by the digital objects.</b>  2.1 Access for the designated community 2.2 guarantees interpretability of the digital objects by the designated community

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# Examples

<b>B</b>	<b>Object Management</b>
<b>6</b>	<b>The repository ensures integrity of digital objects for all steps of processing:</b> 6.1 ingest 6.2 archival storage 6.3 access
<b>7</b>	<b>The repository ensures authenticity of digital objects for all steps of processing:</b> 6.1 ingest 6.2 archival storage 6.3 access

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# Examples

<b>C</b>	<b>Infrastructure and Security</b>
<b>13</b>	<b>The IT infrastructure is adequate</b> 13.1 The IT infrastructure implements the demands from the object management  13.2 The IT infrastructure implements the security demands of the object management
<b>14</b>	<b>The infrastructure ensures the protections of the repository and its digital objects</b>

# Example

## 1.1 The digital repository has developed criteria for the selection of its digital objects.

*The DR should have laid down which digital objects fall within its ambit. This is often determined by the institution's overall task area, or is stipulated by laws. The DR has developed collection guidelines, selection criteria, evaluation criteria or heritage generation criteria. The criteria may be content-based, formal or qualitative in nature.*

- In the case of both state-owned and non-state-owned archives, the formal responsibility is generally derived from the relevant laws or the entity behind the archive (a state-owned archive accepts the documents of the state government, a corporate archive the documents of the company, a university archive, the documents of the university).



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## Example 1.1

- German National Library law :
- The Library is tasked with:
  1. collecting, making an inventory of, analysing and bibliographically recording a) originals of all media works published since 1913 and b) originals of all foreign media works published in German since 1913, and ensuring the long-term preservation of these works, rendering them accessible to the general public, and providing central library and national library services.
- Supported by the state libraries, the Baden-Württemberg online archive (BOA - <http://www.boa-bw.de/> ) collects net publications ... "which originate in Baden-Württemberg, or the content of which is related to the state, its towns and villages or inhabitants."

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## Example 1.1

- The Oxford Text Archive <http://ota.ahds.ac.uk/> collects "high-quality scholarly electronic texts and linguistic corpora (and any related resources) of long-term interest and use across the range of humanities disciplines". The website contains a detailed "collections policy".
- The document and publication server of the Humboldt University in Berlin collects "electronic academic documents published by employees of the Humboldt University" [http://edoc.hu-berlin.de/e\\_info/leitlinien.php](http://edoc.hu-berlin.de/e_info/leitlinien.php).

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## Example 1.1

- *[Erpanet: Erpanet "Appraisal of Scientific Data" conference, 2003]*
- *[Interpares Appraisal Task Force: Appraisal of Electronic Records: A Review of the Literature in English, 2006]*
- *[Wiesenmüller, Heidrun et al.: Auswahlkriterien für das Sammeln von Netzpublikationen im Rahmen des elektronischen Pflichtexemplars : Empfehlungen der Arbeitsgemeinschaft der Regionalbibliotheken, 2004]*

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## Conclusion & Further Work

### Standardisation

- Coaching, self-audit, testbed
- Approach DIN / ISO

### Certification

- Criteria must meet requirements of formal certification processes
- Define an audit process

### Internationalisation

- Agree on common principles
- RLG/OCLC & DCC and
- EU Project DPE: Digital Preservation Europe

# The catalogue

- German Version
  - nestor–Arbeitsgruppe Vertrauenswürdige Archive – Zertifizierung: Kriterienkatalog vertrauenswürdige digitale Langzeitarchive, Version 1 (Entwurf zur öffentlichen Kommentierung), nestor Materialien 8, June 2006, Frankfurt am Main : nestor c/o Die Deutsche Bibliothek,
  - <http://nbn-resolving.de/urn:nbn:de:0008-2006060710>
- English Version (available soon)
  - nestor - Network of Expertise in Long-Term Storage of Digital Resources / Trusted Repository Certification Working Group: Criteria for Trusted Digital Long-Term Preservation Repositories, version 1 (Request for Public Comment),
  - <http://nbn-resolving.de/urn:nbn:de:0008-2006060703>
- Information about the trusted repositories group at:
  - <http://www.longtermpreservation.de/ag-repositories>

**Thank you very much for your  
attention!**

**Questions, comments ...?**

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