



## **Implementation of the Data Seal of Approval**

The Data Seal of Approval board hereby confirms that the Trusted Digital repository German National Library/ Deutsche Nationalbibliothek (DNB) complies with the guidelines version 2010 set by the Data Seal of Approval Board. The afore-mentioned repository has therefore acquired the Data Seal of Approval of 2010 on May 19, 2011.

The Trusted Digital repository is allowed to place an image of the Data Seal of Approval logo corresponding to the guidelines version date on their website. This image must link to this file which is hosted on the Data Seal of Approval website.

Yours sincerely,

The Data Seal of Approval Board

## Assessment Information

Guidelines Version:	2010   June 1, 2010
Guidelines Information Booklet:	<a href="#">DSA-booklet_2010.pdf</a>
All Guidelines Documentation:	<a href="#">Documentation</a>
Repository:	German National Library/ Deutsche Nationalbibliothek (DNB)
Seal Acquiry Date:	May. 19, 2011
For the latest version of the awarded DSA for this repository please visit our website:	<a href="http://assessment.datasealofapproval.org/seals/">http://assessment.datasealofapproval.org/seals/</a>
Previously Acquired Seals:	Seal date: May 19, 2011 Guidelines version: 2010   June 1, 2010
This repository is owned by:	<b>German National Library/ Deutsche Nationalbibliothek</b> <ul style="list-style-type: none"><li>• Adickesallee 1 60322 Frankfurt am Main Deutschland</li></ul> T 0049 69 15250 E info-f@dnb.de W <a href="http://www.dnb.de/">http://www.dnb.de/</a>

## Assessment

### **1. The data producer deposits the research data in a data repository with sufficient information for others to assess the scientific and scholarly quality of the research data and compliance with disciplinary and ethical norms.**

*Minimum Required Statement of Compliance:*

3. In progress: We are in the implementation phase.

*This guideline cannot be outsourced.*

## Applicant Entry

*Statement of Compliance:*

3. In progress: We are in the implementation phase.

*Evidence:*

This guideline raises a main issue, which affects the whole assessment: DNB's task is "to collect, permanently archive, comprehensively document and record bibliographically without gap all German and German-language publications" under a legal deposit legislation, and although DNB collects some research data (e.g. as appendix to doctoral theses), such data is rather not the main focus of DNB. Consequently, DNB's policies are designed for (legal deposit) publications, and do not necessarily address data specific aspects. Information pertaining to scientific quality or compliance with disciplinary norms are such data specific aspects.

You could, however, view the metadata, which are generated and provided by DNB, as basic information for others to assess the discipline and expert's level of a publication.

About the tasks of the German National Library: [http://www.d-nb.de/eng/wir/ueber\\_dnb/dnb\\_im\\_ueberblick.htm](http://www.d-nb.de/eng/wir/ueber_dnb/dnb_im_ueberblick.htm)

## Reviewer Entry

*Accept or send back to applicant for modification:*

Accept

*Comments:*

Metadata are either provided by data producers (see guideline #3) or extracted by DNB from the data/documents provided by the data producers – in which case the information required to assess data/documents quality is there, it's just a matter of process for quality appraisal.

## **2. The data producer provides the research data in formats recommended by the data repository.**

*Minimum Required Statement of Compliance:*

3. In progress: We are in the implementation phase.

*This guideline cannot be outsourced.*

### **Applicant Entry**

*Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*Evidence:*

In accordance with its mandate to collect without gap all German (language) publications, DNB has adopted the principle that it must in principle accept any format.

In consideration of the realities of our data processing workflows, however, we temporarily accept a limited number of recommended formats only. The list of recommended formats is constantly updated (see link to priority list below). Objects delivered in ZIP containers should conform to the priority list. Submitters, whose formats do not conform to the priority list, are recommended to turn to the online publications service team. PDFs and ZIP-archives, which are delivered via web form, are validated with a mime-type check. Other formats are not accepted via web form, but only via OAI-Harvesting.

OAI-Harvesting requires mutual preparation. During the preparations, DNB negotiates with each submitter, which formats he/she is allowed to deliver. Most submitters can be convinced to deliver PDF, very few deliver other formats. Metadata must be delivered in ONIX or XMetaDissPlus.

Priority list: [http://www.d-nb.de/eng/netzpub/ablieferung/np\\_dateiformate.htm](http://www.d-nb.de/eng/netzpub/ablieferung/np_dateiformate.htm)

General rules and recommendations for the submission of online publications:

[http://www.d-nb.de/netzpub/ablieferung/np\\_ablieferung\\_regeln.htm](http://www.d-nb.de/netzpub/ablieferung/np_ablieferung_regeln.htm)

Detailed guidelines for the web form: [http://www.d-nb.de/netzpub/ablieferung/pdf/np\\_mono\\_hss\\_ausf.pdf](http://www.d-nb.de/netzpub/ablieferung/pdf/np_mono_hss_ausf.pdf)

Detailed guidelines for OAI-Harvesting: [http://www.d-nb.de/netzpub/ablieferung/pdf/automatisierte\\_ablieferung.pdf](http://www.d-nb.de/netzpub/ablieferung/pdf/automatisierte_ablieferung.pdf)

### **Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

### **3. The data producer provides the research data together with the metadata requested by the data repository.**

*Minimum Required Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*This guideline cannot be outsourced.*

#### **Applicant Entry**

*Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*Evidence:*

DNB has defined a core set of metadata elements, which all content providers have to provide together with their publications. The core set covers monographs, university dissertations and journals. Currently, the metadata are accepted in ONIX or XMetaDissPlus. Formal validation is carried out after submission.

Metadata core set: [http://www.d-nb.de/eng/netzpub/ablief/kernset\\_metadaten.htm](http://www.d-nb.de/eng/netzpub/ablief/kernset_metadaten.htm)

ONIX: [http://www.d-nb.de/netzpub/ablief/pdf/metadaten\\_kernset\\_onix.pdf](http://www.d-nb.de/netzpub/ablief/pdf/metadaten_kernset_onix.pdf) ;

<http://www.editeur.org/15/Previous-Releases/>

XMetaDissPlus: <http://www.d-nb.de/standards/xmetadissplus/xmetadissplus.htm>

#### **Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

#### **4. The data repository has an explicit mission in the area of digital archiving and promulgates it.**

*Minimum Required Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*This guideline can be outsourced.*

#### **Applicant Entry**

*Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*Evidence:*

As the central archival library for the Federal Republic of Germany, DNB has a legal mandate to collect and permanently archive German and German language publications including online materials. DNB leads nestor, the German network of expertise in digital preservation, and engages in several national and international research activities and projects to promote progress in digital preservation solutions and enhance its own capability.

Introduction to the German National Library Law: [http://www.d-nb.de/eng/netzpub/recht/recht\\_einfuehrung.htm](http://www.d-nb.de/eng/netzpub/recht/recht_einfuehrung.htm)

Introduction of DNB's digital preservation activities: [http://www.d-nb.de/netzpub/erschl\\_lza/np\\_lza.htm](http://www.d-nb.de/netzpub/erschl_lza/np_lza.htm) (the last updated version of 12.03.2009 is outdated, an update should be released soon)

nestor: <http://www.langzeitarchivierung.de/eng/>

#### **Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

## **5. The data repository uses due diligence to ensure compliance with legal regulations and contracts including, when applicable, regulations governing the protection of human subjects.**

*Minimum Required Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*This guideline cannot be outsourced.*

### **Applicant Entry**

*Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*Evidence:*

The data which are deposited by the DNB are mainly “non physical media works” (online / electronic publications). Format and way of delivery is determined in the Law regarding the German National Library (DNBG), the Legal Deposit Regulation and in accordance with the Law on copyright and related rights of legal protection.

All registered DNB users and deliverers accept a data protection statement.

Deliverers must confirm that they are entitled to deliver the publication as a deposit copy to DNB with the rights necessary for the legal mandate. Beyond the exceptions for use of the German Copyright Act the rightholder may grant following rights: a) access for registered users via internet, b) unlimited access.

According to its legal mandate the DNB takes preservation actions like migration on archived publications. Where the law, e.g. Copyright Act, inhibits DNB thereby, agreement with the relevant rightholders is sought. As for instance there is an Agreement with the German Publishers Association and the German Association of the Phonographic Industry for sound and image-sound data to remove technical measures for the protection of publications.

However, given the masses of delivery of deposit copies the DNB is not obliged to scrutinize all media on violations of data and personal privacy or other criminal deeds. As soon as an offence comes to our knowledge we do all to restore compliance with legal regulations and contracts.

Such violations may give reason for restricted access of the publication; however, the deposit copy will not be deleted.

Introduction to the legal bases: [http://www.d-nb.de/wir/ueber\\_dnb/dnb\\_im\\_ueberblick.htm](http://www.d-nb.de/wir/ueber_dnb/dnb_im_ueberblick.htm)

Agreement on Copyright Protection: <http://www.d-nb.de/eng/wir/recht/vereinbarung.htm>

### **Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

A follow-up may be required when the online documents will be translated into English...

## **6. The data repository applies documented processes and procedures for managing data storage.**

*Minimum Required Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*This guideline can be outsourced.*

### **Applicant Entry**

*Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*Evidence:*

DNB's data management is based on in-house data storage, which serves access, and on external data storage, run by a third party provider, for archival purposes. The in-house data storage and the outsourced data storage will constitute de facto mirror sites for all content data.

Both DNB and the named provider use a RAID array for data storage. The hardware in use is regularly checked and monitored. Policies for managing data storage are in place. They envisage maintenance and detection of data integrity and back-ups in separate locations. The service provider additionally provides cost controlling, and regular reporting.

A data recovery policy is in place. If necessary, DNB and the provider can recover the status of (maximum) 24 hours ago.

In terms of security, objects delivered to DNB do not go directly into the in-house data storage, but are stored in a separate storage area before they are processed by an Import Service and transferred into the in-house data storage. Only registered DNB staff can administer the DNB in-house storage. The provider's data storage can only be accessed by DNB as the contracting body. The access is secured and encrypted

Link to service provider: [http://www.gwdg.de/index.php?id=1&no\\_cache=1&L=1](http://www.gwdg.de/index.php?id=1&no_cache=1&L=1)

### **Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

Import Service process documentation (functionnal specifications, etc.) would be useful for the next DSA follow-up.



## **7. The data repository has a plan for long-term preservation of its digital assets.**

*Minimum Required Statement of Compliance:*

3. In progress: We are in the implementation phase.

*This guideline can be outsourced.*

### **Applicant Entry**

*Statement of Compliance:*

3. In progress: We are in the implementation phase.

*Evidence:*

A Bitstream Preservation Policy for long term storage is in place. DNB's strategy for ensuring long-term preservation and usability relies on migration and emulation.

Technical metadata, which are needed for migration and emulation, can be captured during ingest (with JHOVE) and stored in a Universal Object Format (UOF) within the LMER format (digital preservation metadata for electronic resources, registered METS profile) or can be generated on the fly when needed. At the moment, DNB is experimenting with both options.

DNB is working on a plan for preservation planning and systematic preservation action. So far, any such action is taken ad-hoc. An overall Digital Preservation Policy (containing mission, goals, organizational issues etc.) is currently under development, too.

UOF specification: [http://kopal.langzeitarchivierung.de/downloads/kopal\\_Universal\\_Object\\_Format.pdf](http://kopal.langzeitarchivierung.de/downloads/kopal_Universal_Object_Format.pdf)

LMER specification: <http://www.d-nb.de/standards/lmer/lmer.htm>

Bitstream Preservation Policy:

[https://wiki.d-nb.de/download/attachments/39262269/Bitstream+Preservation-DNB\\_V3.doc?version=1&modificationDate=12809917500](https://wiki.d-nb.de/download/attachments/39262269/Bitstream+Preservation-DNB_V3.doc?version=1&modificationDate=12809917500)

Introduction of DNB's digital preservation activities: [http://www.d-nb.de/netzpub/erschl\\_lza/np\\_lza.htm](http://www.d-nb.de/netzpub/erschl_lza/np_lza.htm) (the last updated version of 12.03.2009 is outdated, an update should be released soon)

### **Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

A follow-up may be required when the Bitstream Preservation Policy is approved and available online.

## **8. Archiving takes place according to explicit work flows across the data life cycle.**

*Minimum Required Statement of Compliance:*

3. In progress: We are in the implementation phase.

*This guideline can be outsourced.*

### **Applicant Entry**

*Statement of Compliance:*

3. In progress: We are in the implementation phase.

*Evidence:*

Within the overall workflow for online publications, several distinct sub-workflows can be distinguished.

Procedural documentation exists for all of them:

- Submission from content holder to DNB (includes selection respectively rejection of out-of-scope publications)
- Creation of additional metadata
- Validation
- Ingest into long-term archive
- Data Storage Management (partly outsourced, see #6)
- Access support.

DNB is working on procedures for preservation planning and for preservation action.

### **Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

## **9. The data repository assumes responsibility from the data producers for access and availability of the digital objects.**

*Minimum Required Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*This guideline cannot be outsourced.*

### **Applicant Entry**

*Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*Evidence:*

DNB collects publications according to its legal mandate and is obliged by law (DNBG) to preserve these publications (access and availability) for the future. The DNB does that on its own responsibility, in fulfilling its legal mandate. The deliverer is obliged by law, not by contract to deliver the deposit copy.

Introduction to the legal bases: [http://www.d-nb.de/wir/ueber\\_dnb/dnb\\_im\\_ueberblick.htm](http://www.d-nb.de/wir/ueber_dnb/dnb_im_ueberblick.htm)

### **Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

## **10. The data repository enables the users to utilize the research data and refer to them.**

*Minimum Required Statement of Compliance:*

2. Theoretical: We have a theoretical concept.

*This guideline cannot be outsourced.*

### **Applicant Entry**

*Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*Evidence:*

DNB takes care that all digital publications can be utilized in accordance with legal regulations. Depending on the rights that the content producer grants us during the submission process, some publications can be provided in-house only, while others are remotely accessible.

All publications that DNB accepts for long-term preservation are uniquely and persistently identified with a URN so that they can reliably be referred to.

General terms of use: <http://www.d-nb.de/service/pdf/benutzungsordnung.pdf>

URN Service: [http://www.d-nb.de/eng/netzpub/erschl\\_lza/np\\_urn.htm](http://www.d-nb.de/eng/netzpub/erschl_lza/np_urn.htm)

### **Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

## **11. The data repository ensures the integrity of the digital objects and the metadata.**

*Minimum Required Statement of Compliance:*

3. In progress: We are in the implementation phase.

*This guideline cannot be outsourced.*

### **Applicant Entry**

*Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*Evidence:*

DNB uses checksums on archival package level (each package consisting of digital objects plus metadata) to control the integrity of its archival holdings. From a more general perspective, the Bitstream Preservation Policy is designed to ensure data integrity.

Bitstream Preservation Policy:

[https://wiki.d-nb.de/download/attachments/39262269/Bitstream+Preservation-DNB\\_V3.doc?version=1&modificationDate=12809917500](https://wiki.d-nb.de/download/attachments/39262269/Bitstream+Preservation-DNB_V3.doc?version=1&modificationDate=12809917500)

### **Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

## 12. The data repository ensures the authenticity of the digital objects and the metadata.

*Minimum Required Statement of Compliance:*

3. In progress: We are in the implementation phase.

*This guideline cannot be outsourced.*

### Applicant Entry

*Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*Evidence:*

Because any depositor must register, DNB knows where and whom it receives its data from. So we can be relatively sure that we are not “spammed”. Provenance is recorded in the metadata and stored together with the delivered document. DNB has also implemented access protection measures.

To prove the authenticity of stored documents, DNB uses checksums. The checksum is saved as a file along with the original document and displayed to the user on a front page before he accesses the file. The user can then derive the code himself and can compare it to the code assigned to the “original”.

Moreover, the mandatory URN for each publication stored in the DNB repository supports assurance of authenticity. By default, each new version of a publication is assigned a new URN, so that the user can be sure that a URN always resolves to the original publication.

Metadata provided by submission are permanently linked and preserved with the object.

Delivery: <http://www.d-nb.de/eng/netzpub/ablief/index.htm>

[http://www.d-nb.de/eng/netzpub/ablief/hss\\_schritte.htm](http://www.d-nb.de/eng/netzpub/ablief/hss_schritte.htm)

### Reviewer Entry

*Accept or send back to applicant for modification:*

Accept

*Comments:*

### **13. The technical infrastructure explicitly supports the tasks and functions described in internationally accepted archival standards like OAIS.**

*Minimum Required Statement of Compliance:*

3. In progress: We are in the implementation phase.

*This guideline can be outsourced.*

#### **Applicant Entry**

*Statement of Compliance:*

3. In progress: We are in the implementation phase.

*Evidence:*

It was an explicit goal of the kopal project, in which the DNB long-term archive was designed, to ensure OAIS-compliance. The archive is laid out according to the OAIS functional entities

- Ingest
- Archival Storage
- Data Management
- Administration
- Preservation Planning (function still under development)
- Access

kopal information brochure: [http://kopal.langzeitarchivierung.de/downloads/kopal\\_Broschure\\_2006\\_en.pdf](http://kopal.langzeitarchivierung.de/downloads/kopal_Broschure_2006_en.pdf)

OAIS-Mapping: <http://files.d-nb.de/nesstor/fohlen/mappingOAIS-DNB.pdf>

#### **Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

## **14. The data consumer complies with access regulations set by the data repository.**

*Minimum Required Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*This guideline cannot be outsourced.*

### **Applicant Entry**

*Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*Evidence:*

By law, DNB has the mandate to provide access to its holdings. Deliverers can only define the access level (a) minimal standard: in-house access on dedicated reading places, b) registered users via internet, c) unlimited access). Basically anyone aged 18 can register for a library card at DNB. With registration, users recognize DNB's terms of use. According to the terms of use, e.g., copies must be in accordance with copyright law. To make sure this rule is adhered DNB provides copyright protected digital works at dedicated supervised reading places only.

Terms of use: <http://www.d-nb.de/service/pdf/benutzungsordnung.pdf>

### **Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*



**15. The data consumer conforms to and agrees with any codes of conduct that are generally accepted in higher education and scientific research for the exchange and proper use of knowledge and information.**

*Minimum Required Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*This guideline cannot be outsourced.*

**Applicant Entry**

*Statement of Compliance:*

0. N/A: Not Applicable.

*Evidence:*

As research data are not a main focus of DNB, this rather data specific criterion is not applicable. If anything, we could mention here that we assist quotation (for “proper use of information”) by providing persistent identifiers and library standard metadata.

The terms of use are only available in German, but an introductory page is in English:  
<http://www.d-nb.de/eng/service/benutzung/benutzung.htm>.

**Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

Ok – my view is that publications can be a subset of research data, so the same principles are valid for both ; a follow-up could be to evaluate theregulations for proper use of the publications stored - if any.

## **16. The data consumer respects the applicable licenses of the data repository regarding the use of the research data.**

*Minimum Required Statement of Compliance:*

4. Implemented: This guideline has been fully implemented for the needs of our repository.

*This guideline cannot be outsourced.*

### **Applicant Entry**

*Statement of Compliance:*

0. N/A: Not Applicable.

*Evidence:*

Again, we think that this criterion is not applicable, because we don't deal with research data licenses. As a legal deposit library, we even don't license journals or the like.

If anything, we could say that our depositors can specify the access rights for their publications. DNB takes care that these rights are respected.

The terms of use are only available in German, but an introductory page is in English:  
<http://www.d-nb.de/eng/service/benutzung/benutzung.htm>.

### **Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*