



## **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 2014-2017 set by the Data Seal of Approval Board. The afore-mentioned repository has therefore acquired the Data Seal of Approval of 2013 on July 31, 2015.

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:	2014-2017   July 19, 2013
Guidelines Information Booklet:	<a href="#">DSA-booklet_2014-2017.pdf</a>
All Guidelines Documentation:	<a href="#">Documentation</a>
Repository:	German National Library/ Deutsche Nationalbibliothek (DNB)
Seal Acquiry Date:	Jul. 31, 2015
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> Adickesallee 1 60322 Frankfurt am Main Deutschland  T 0049 69 15250 E <a href="mailto:info-f@dnb.de">info-f@dnb.de</a> W <a href="http://www.dnb.de/">http://www.dnb.de/</a>

### Data Seal of Approval Board

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# Assessment

## 0. Repository Context

### Applicant Entry

#### *Self-assessment statement:*

According to the Law regarding the German National Library, the Deutsche Nationalbibliothek (DNB) has the legal mandate to collect, catalogue, index and archive non-physical media works (online publications). The collection field of online publications covers all text, image and sound-based works made available on public networks. The submission obligation covers both Internet publications with corresponding printed versions and also web-specific media works. Examples of online publications include electronic magazines, eBooks, university dissertations, digitised content, music files, audio books and also websites. Details of and restrictions to the collection brief are laid down in the Legal Deposit Regulation and in the collection guidelines.

Law regarding the German National Library (in German): <http://www.gesetze-im-internet.de/dnbg/index.html>  
(Non-official English translation:  
[http://www.dnb.de/SharedDocs/Downloads/EN/DNB/wir/dnbg.pdf?\\_\\_blob=publicationFile](http://www.dnb.de/SharedDocs/Downloads/EN/DNB/wir/dnbg.pdf?__blob=publicationFile))

Legal Deposit Regulation: <http://www.gesetze-im-internet.de/pflav/index.html> (German)

Collection Guidelines: <http://d-nb.info/1051940788/34> (German)

Suitable procedures for the large-scale collection, cataloguing and archiving of online publications have been developed gradually at the DNB. The current state of play is a set of procedures for the collection and archiving of individual online publications. Automatic procedures for the collection and archiving whole groups of objects, such as entire websites, are still under development. Meanwhile, websites are collected and hosted by a service provider on behalf of the DNB.

Regarding long-term preservation, the DNB builds on redundant storage: On the one hand the data are stored within the long term archival system, which was developed together with IBM in the projects kopal and DP4lib. There, the data are saved meeting the high security standards in long term archiving; usability in future systems is guaranteed as well, for example through migration to new formats. On the other hand a local system with short access time is necessary to make sure the objects are available for the users of the DNB. For this purpose a local repository including a band-back up, which is scalable according to foreseeable disk space requirements, is used.

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General information about digital preservation at DNB: <http://www.dnb.de/EN/lza>

The long term archival system, which builds on IBM DIAS (DIAS core) is located spatially separate from the DNB locations in Frankfurt and Leipzig, namely in Göttingen, and is hosted by a Service Provider, GWDG. The service provider is responsible for the hosting and maintenance of DIAS core and for bitstream preservation exclusively. The DNB takes responsibility for preservation planning and eventual migration projects.

GWDG: <http://www.gwdg.de/index.php?id=leistungsspektrum&L=1>

GWDG service description for DIAS core maintenance:

<https://wiki.dnb.de/download/attachments/31524273/GWDG-DNB-Leistungsbeschreibung.pdf?version=1&modificationDate=140439740>  
(German)

## Reviewer Entry

*Accept or send back to applicant for modification:*

Accept

*Comments:*

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

*Minimum Required Statement of Compliance:*

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

**Applicant Entry**

*Statement of Compliance:*

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

*Self-assessment statement:*

Because any depositor must register, DNB knows where and from whom it receives its data. Depositors must confirm that they are entitled to deliver the publication as a deposit copy to DNB with the rights necessary for the legal mandate.

The German National Library operates various submission interfaces and automatic harvesting procedures, e.g., web forms for the submission of monographic and periodical online publications, university dissertations and theses and sheet music, and interfaces for automatic submission (OAI harvesting and hotfolder), which are appropriate for larger quantities of data. All submission methods require the delivery of metadata.

General Information about the submission procedures in English:

[http://www.dnb.de/EN/Netzpublikationen/Ablieferung/Ablieferungsverfahren/ablieferungsverfahren\\_node.html](http://www.dnb.de/EN/Netzpublikationen/Ablieferung/Ablieferungsverfahren/ablieferungsverfahren_node.html)

For the automatic submission methods, a minimum core set of metadata elements is defined. It includes bibliographic information (like title, author etc.) as well as administrative information (rights information, conditions for use and access). The requested metadata core set is available for the following formats: ONIX for Books, MARCXML and XMetaDissPlus.

Metadata Core Set Definitions: <http://nbn-resolving.de/urn:nbn:de:101-2012022202> (available only in German)

Metadata Core Set – Overview:

[http://www.dnb.de/EN/Netzpublikationen/Ablieferung/MetadatenKernset/metadatenkernset\\_node.html](http://www.dnb.de/EN/Netzpublikationen/Ablieferung/MetadatenKernset/metadatenkernset_node.html)

No metadata standard is necessary for delivery using the web form, however, the mandatory fields are indicated on the form. Screenshots of the web form including the mandatory metadata fields:

[http://www.dnb.de/SharedDocs/Downloads/EN/DNB/netzpub/np\\_mono\\_noten\\_hss\\_ausf.pdf?\\_\\_blob=publicationFile](http://www.dnb.de/SharedDocs/Downloads/EN/DNB/netzpub/np_mono_noten_hss_ausf.pdf?__blob=publicationFile)  
(available only in German)

With the help of the mandatory metadata information, users are enabled to assess background/ provenance and the rights status of the archived publications.

## **Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

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

*Minimum Required Statement of Compliance:*

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

### Applicant Entry

*Statement of Compliance:*

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

*Self-assessment statement:*

The DNB gives file format recommendations to the data producers/depositors. Priority is given to long-term accessibility. A further priority is the availability of any alternative formats used. The preferred file formats are therefore PDF/A and other PDF versions. Besides PDF documents, e-books in EPUB format and container/archive files can be transmitted using the web forms and the automatic submission procedure. If the documents are only available in other file formats, the Online Publications Service needs to be contacted prior to submission and the file format needs to be negotiated. DNB makes exceptions only when the data is considered to be highly relevant/valuable. The DNB clearly states that all file formats must be transferred in unprotected form. This is also checked during the ingest routine.

A data format policy has been published: <http://d-nb.info/1027296343/34> (available only in German)

During the ingest routine, a series of checks and validations are automatically carried out with the support of open-source tools (File Information Tool Set (FITS), <http://fitstool.org/>). The ingest routine consists of the following steps: 1) file integrity check, 2) file format identification, 3) check on technical restrictions, 4) generation of format specific metadata, and 5) verification of file format validity.

If step 1-3 reveal any kind of problems (e.g., DRM restriction), this leads to provisional rejection of the document and the deliverer is requested to submit a corrected/DRM free version of the document. If step 4 or 5 is unsuccessful, this is marked in the technical metadata of the object for potential later treatment.

The ingest level policy has also been described in the data format policy: <http://d-nb.info/1027296343/34> (available only in German). An English description of it was published in an iPres short paper in 2013: [http://purl.pt/24107/1/iPres2013\\_PDF/Risk%20Management%20for%20Digital%20Long-Term%20Preservation%20Services.pdf](http://purl.pt/24107/1/iPres2013_PDF/Risk%20Management%20for%20Digital%20Long-Term%20Preservation%20Services.pdf)

### Reviewer Entry

*Accept or send back to applicant for modification:*

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Accept

*Comments:*



### **3. The data producer provides the 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.

### **Applicant Entry**

*Statement of Compliance:*

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

*Self-assessment statement:*

For descriptive and administrative metadata, see our answer to question 1):

For the automatic submission methods, a minimum core set of metadata elements is defined. The requested metadata core set is available for the following formats: ONIX for Books, MARCXML and XMetaDissPlus.

Metadata Core Set Definitions: <http://nbn-resolving.de/urn:nbn:de:101-2012022202> (available only in German)

Metadata Core Set – Overview:

[http://www.dnb.de/EN/Netzpublikationen/Ablieferung/MetadatenKernset/metadatenkernset\\_node.html](http://www.dnb.de/EN/Netzpublikationen/Ablieferung/MetadatenKernset/metadatenkernset_node.html)

No metadata standard is necessary for delivery using the web form, however, the mandatory fields are indicated on the form.

Screenshots of the web form including the mandatory metadata fields:

[http://www.dnb.de/SharedDocs/Downloads/EN/DNB/netzpub/np\\_mono\\_noten\\_hss\\_ausf.pdf?\\_\\_blob=publicationFile](http://www.dnb.de/SharedDocs/Downloads/EN/DNB/netzpub/np_mono_noten_hss_ausf.pdf?__blob=publicationFile)

(available only in German)

Concerning structural information:

In particular, the structure of container files for automatic submission is specified: <http://d-nb.info/1027296637/34> (German, see illustrations on p. 6, 7 and 9).

If container files contain multiple file documents, they should also contain a clear HTML start page.

For delivery via the web forms, “whole-part-relationships” have to be specified manually by the data producer/depositor.

Technical metadata is created during the automated ingest routine described in Q. 2 with the FITS tool and the so called “didigo” tool (“diagnose digital objects”), which was developed in-house by the DNB. The resulting metadata is stored as normalized FITS output.

## **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.

#### **Applicant Entry**

*Statement of Compliance:*

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

*Self-assessment statement:*

As the central archival library for the Federal Republic of Germany, DNB has the legal mandate to collect and permanently archive German and German language publications including online materials. It has published a long term preservation policy, which sets out the principles according to which digital archiving is carried out at the DNB. Some key principles are:

- Legal mandate
- National responsibility and co-operation (among other things, DNB leads nestor, the German network of expertise in digital preservation)
- Use of automated routines, with due diligence
- Conformance with standards
- Continuous enhancements (among other things, DNB engages in several national and international research activities and projects to promote progress in digital preservation solutions and enhance its own capability)

Law regarding the German National Library (in German): <http://www.gesetze-im-internet.de/dnbg/index.html>  
(Non-official English translation:  
[http://www.dnb.de/SharedDocs/Downloads/EN/DNB/wir/dnbg.pdf?\\_\\_blob=publicationFile](http://www.dnb.de/SharedDocs/Downloads/EN/DNB/wir/dnbg.pdf?__blob=publicationFile))

Long term preservation policy of the German National Library: <http://d-nb.info/1074162331/34>

## **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.

**Applicant Entry**

*Statement of Compliance:*

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

*Self-assessment statement:*

The DNB is a federal institution with legal capacity under public law. The Law regarding the German National Library defines the tasks, obligations and organs of the Federal institute. The Law confers widespread autonomy on the DNB; it comes under the jurisdiction of the Federal Government Commissioner for Culture and the Media.

The Law regarding the German National Library obliges all commercial and non-commercial publishers in Germany to submit two mandatory copies of their work, generally free of charge, to the Deutsche Nationalbibliothek. Online publications have to be submitted in accordance with submission methods supported by the DNB (as described in Q1).

Because any depositor must register, DNB knows where and whom it receives its data from. Depositors 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.

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.

**Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

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## **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.

## **Applicant Entry**

### *Statement of Compliance:*

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

### *Self-assessment statement:*

DNB's data management relies on redundant storage: On the one hand, all data are stored within an in-house data repository, which serves access. The local repository includes a band-back up, which is scalable according to foreseeable disk space requirements.

On the other hand the data are stored spatially distant within the long term archival system, which is hosted by our external service provider GWDG in Göttingen. There, the data are saved meeting the high security standards in long term archiving; usability in future systems is guaranteed as well, for example through migration to new formats.

The in-house data storage and the outsourced data storage constitute de facto mirror sites for all content data ingested from Dec. 2012. Retro-archiving of all content ingested before Dec. 2012 is ongoing.

Both DNB and the service 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.

GWDG service description for DIAS core maintenance:

<https://wiki.dnb.de/download/attachments/31524273/GWDG-DNB-Leistungsbeschreibung.pdf?version=1&modificationDate=140439740>

(German)

## Reviewer Entry

*Accept or send back to applicant for modification:*

Accept

*Comments:*

## **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.

## **Applicant Entry**

### *Statement of Compliance:*

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

### *Self-assessment statement:*

DNB strategic plan for long-term preservation is based on three pillars:

1. The long term archival system as a technical infrastructure:

DNB staffs regularly review if the long term archival system still meets the state of the art.

2. A regular risk assessment of the archived object types:

DNB staffs monitor the preferred file formats and do risk assessments of the stored objects as required. Migration has only been executed as a proof of concept in the past.

3. Planning and execution of preservation actions:

The envisaged preservation actions comprise migration and emulation as preservation strategies. In order to minimize the need to execute such strategies, objects in formats that are deemed suitable for long term accessibility are preferred during the collection procedure. Risk management during the ingest process, the request for DRM free object versions, and the creation of technical metadata are expected to optimize the conditions for long-term accessibility and eventual preservation actions (see the Ingest level policy (as part of the data format policy) to which we referred in assessment statement #2: <http://d-nb.info/1027296343/34> (available only in German).



In the event of a “real” migration need, DNB would plan and execute it as a stand-alone project along the following lines:

Objects would be selected according to their technical characteristics, for example, “all PDF versions older than PDF 1.4”, or “all TIFF files within the object group digitization”. The significant properties of the selected information objects would be determined. Depending on the significant properties, a target file format would be selected. A migration tool would be selected and tested paying attention to the preservation of the significant properties. After successful tests, the migration would be executed automatically and only the significant properties of samples would be compared.

DNB strategic preservation plan:

<https://wiki.dnb.de/download/attachments/31524273/Erhaltungsplanung.pdf?version=1&modificationDate=1404310948000>

(available in German only)

See paragraph 4.3 “Preservation Planning at the DNB” in nestor Guideline for Preservation Planning – a Process Model, by S. Schrimpf and Ch. Keitel, in LIBER Quarterly, Vol 23, No 3 (2014):

<https://liber.library.uu.nl/index.php/lq/article/view/9166/9839>

## Reviewer Entry

*Accept or send back to applicant for modification:*

Accept

*Comments:*

## 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.

## Applicant Entry

### *Statement of Compliance:*

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

### *Self-assessment statement:*

The collection mandate of the DNB comprises text, image and sound-based works made available on public networks by German publishers / German rights holders. No selection criteria as regards content are applied; only formal criteria apply.

Suitable procedures for the large-scale collection, cataloguing and archiving of online publications have been developed gradually at the DNB. The current state of play is a set of procedures for the collection and archiving of individual online publications. Automatic procedures for the collection and archiving whole groups of objects, such as entire websites, are still under development. Meanwhile, websites are collected and hosted by a service provider on behalf of the DNB.

Within the overall online publication archival workflow, several distinct sub-workflows can be distinguished, of which the most important are 1) Ingest, 2) Archival Storage, 3) Access. The sub workflows are designed in a way that they accommodate all types of individual online publications within the collection mandate of the DNB, i.e., text, image and sound-based works made available on public networks. Procedural documentation generally exists and is kept up to date by DNB staff.

The Ingest routine can be summarized:

1. Registration of depositor
  
2. Submission of content from depositor to DNB

3. Processing of the object at DNB, including integrity check and check for duplicates

4. Check / create URN

5. Transfer descriptive metadata into the DNB catalogue

6. Identify file format

7. Generate technical metadata

8. Generate SIP

9. Transfer SIP into DIAS

Documentation of Ingest is included in:

File Format and Ingest Level Policy: <http://d-nb.info/1027296343/34> (German)

SIP Specifications: [http://www.dnb.de/SharedDocs/Downloads/EN/DNB/netzpub/spezifikation\\_hotfolder.pdf](http://www.dnb.de/SharedDocs/Downloads/EN/DNB/netzpub/spezifikation_hotfolder.pdf)  
(German)

OAI-Harvesting: [http://www.dnb.de/SharedDocs/Downloads/EN/DNB/netzpub/automatisierte\\_ablieferung.pdf](http://www.dnb.de/SharedDocs/Downloads/EN/DNB/netzpub/automatisierte_ablieferung.pdf)  
(German)

Documentation of Archival Storage is included in the GWDG service description:

<https://wiki.dnb.de/download/attachments/31524273/GWDG-DNB-Leistungsbeschreibung.pdf?version=1&modificationDate=140439740>

(German)

Access of the DIAS archival storage system is described in this document:

[https://wiki.dnb.de/download/attachments/31524273/Benutzer-u-Supporthandbuch-LZA-Anbindung\\_V1.2.pdf?version=1&modificationDate=140439740](https://wiki.dnb.de/download/attachments/31524273/Benutzer-u-Supporthandbuch-LZA-Anbindung_V1.2.pdf?version=1&modificationDate=140439740)

(German)

The description of the Dissemination Information Package (DIP) interface of DIAS is still valid:

[http://kopal.langzeitarchivierung.de/downloads/kopal\\_DIAS\\_DIP\\_Interface\\_Specification.pdf](http://kopal.langzeitarchivierung.de/downloads/kopal_DIAS_DIP_Interface_Specification.pdf)

## 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.

### **Applicant Entry**

*Statement of Compliance:*

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

*Self-assessment statement:*

DNB collects publications according to its legal mandate and is obliged by the Law regarding the German National Library 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.

Law regarding the German National Library (in German): <http://www.gesetze-im-internet.de/dnbg/index.html>  
(Non-official English translation:  
[http://www.dnb.de/SharedDocs/Downloads/EN/DNB/wir/dnbg.pdf?\\_\\_blob=publicationFile](http://www.dnb.de/SharedDocs/Downloads/EN/DNB/wir/dnbg.pdf?__blob=publicationFile))

As a federal institution under public law with annual funds provided from the budget of the Minister of State for Culture and the Media, the DNB operates on a stable long-term basis.

DNB's data storage and preservation architecture, where the external long term data storage mirrors the in-house access data storage, constitute an important building block for our crisis management.

### **Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

## **10. The data repository enables the users to discover and use the data and refer to them in a persistent way.**

*Minimum Required Statement of Compliance:*

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

### **Applicant Entry**

*Statement of Compliance:*

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

*Self-assessment statement:*

All archival objects can be searched via the library's online catalogue ([http://www.dnb.de/EN/Kataloge/kataloge\\_node.html](http://www.dnb.de/EN/Kataloge/kataloge_node.html)) and can be accessed in accordance with legal regulations. Depending on the rights that the content producer grants during the submission process, some publications can be provided in-house only, while others are remotely accessible.

DNB takes care that all digital publications can be utilized in accordance with legal regulations, i.e., that at least two copies of any digital publication can be accessed within DNB's reading rooms. DNB has committed itself to keeping all archived objects accessible and useable at least within its controlled access system of its own reading rooms, where it can implement emulators and ensure compatibility of migrated versions and viewing software.

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.

Long term preservation policy: <http://d-nb.info/1074162331/34>

Policy for issuing URNs in the urn:nbn:de namespace: <http://d-nb.info/1045320641/34>

### **Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

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## 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.

## Applicant Entry

### *Statement of Compliance:*

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

### *Self-assessment statement:*

DNB uses checksums on information package level (each package consisting of digital objects plus metadata) to control the integrity of its archival holdings, both during ingest and during archival storage. If an information package is delivered to DNB without a checksum, a checksum is automatically created and assigned during the ingest process.

The use of checksums during the ingest process is described in the “Specification of transfer packages” for automatic submission to the DNB, p.8/9: <http://d-nb.info/1027296637/34> (available only in German)

During archival storage, the service provider for the long term archival system has contractually agreed to guarantee the integrity of the information package by the following measures: access restrictions, twofold-redundant backups, integrity checks on the archival information packages, hardware and system software monitoring, DIAS system recovery tests.

GWDDG service description for DIAS core maintenance:

<https://wiki.dnb.de/download/attachments/31524273/GWDDG-DNB-Leistungsbeschreibung.pdf?version=1&modificationDate=140439740>

All long term preservation actions, which are executed on a digital object, are recorded and documented as preservation metadata in the section “lmerProcess”

LMER reference description: [http://www.dnb.de/EN/Standardisierung/LMER/lmer\\_node.html](http://www.dnb.de/EN/Standardisierung/LMER/lmer_node.html)

## **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.

### **Applicant Entry**

#### *Statement of Compliance:*

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

#### *Self-assessment statement:*

Because any depositor must register, DNB knows where and whom it receives its data from. Provenance is recorded in the metadata and stored together with the archived document.

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

DNB has implemented access protection measures. Only registered staff can administer the archival storage, so that unintentional changes of the data can be ruled out as far as possible.

To prove the authenticity of stored documents, DNB uses checksums.

Moreover, the persistent identification of digital objects with URNs supports the assurance of authenticity. Each new intellectual version of a digital object gets a new URN, so that the user can be sure that a URN always resolves to the original object.

A strict format policy at ingest (<http://d-nb.info/1027296343/34> -German), according to which only such formats are accepted that are deemed suitable for long term accessibility, minimizes the need to execute migrations. If a digital object needs to be migrated for preservation reasons, however, the same urn:nbn:de will apply for the newly created version of the digital object as for the original object, and an audit trail guarantees the authenticity of the object.

Audit trails are created both during the ingest routine and in the event of a migration. They are maintained as part of the information package. See [http://kopal.langzeitarchivierung.de/downloads/kopal\\_Universelles\\_Objektformat.pdf](http://kopal.langzeitarchivierung.de/downloads/kopal_Universelles_Objektformat.pdf) for the specification of the “Universal Object Format”, in which information packages are stored at the DNB (available only in German).

### **Data Seal of Approval Board**

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E [info@datasealofapproval.org](mailto:info@datasealofapproval.org)

## **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.

#### **Applicant Entry**

*Statement of Compliance:*

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

*Self-assessment statement:*

In its long term preservation policy, the DNB commits itself to conform to the relevant common standards. See # 12 in DNB's Long term preservation policy: <http://d-nb.info/1074162331/34>

Especially, the standards OAIS, METS (UOF-SIP), DIN 31644, but also OAI, SFTP and WebDaV can be mentioned in this context:

DNB's infrastructure can be mapped to OAIS:

<https://wiki.dnb.de/download/attachments/31524273/Langzeitarchiv-OAIS.pdf?version=1&modificationDate=1405080668311>  
(German)

The format of the Submission Information Package that is ingested from DNB into the long term archival system (UOF-SIP) conforms to METS and is registered as an official METS profile:  
<http://www.loc.gov/standards/mets/profiles/00000011.html>

DIN 31644: DNB is undergoing an externally reviewed self assessment against DIN 31644, which is offered by nestor: [http://www.langzeitarchivierung.de/Subsites/nestor/EN/nestor-Siegel/siegel\\_node.htm](http://www.langzeitarchivierung.de/Subsites/nestor/EN/nestor-Siegel/siegel_node.htm)

OAI, SFTP and WebDaV are the standard protocols that are used for the submission of online publications from content holders to the DNB:  
<http://www.dnb.de/EN/Netzpublikationen/Ablieferung/Ablieferungsverfahren/ablieferungsverfahren.html>

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## **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.

## Applicant Entry

### *Statement of Compliance:*

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

### *Self-assessment statement:*

DNB provides access to its holdings in accordance with legal regulations, i.e., at minimum within DNB's reading rooms or remotely via the internet if the rights holder has granted the respective permission.

Basically anyone aged 18 can register for a library card at DNB and consequently access and use online publications within the reading rooms. 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.

DNB's terms of use:

[http://www.dnb.de/SharedDocs/Downloads/DE/DNB/service/benutzungsordnung.pdf?\\_\\_blob=publicationFile](http://www.dnb.de/SharedDocs/Downloads/DE/DNB/service/benutzungsordnung.pdf?__blob=publicationFile)  
(available only in German)

## 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 the relevant sector 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.

**Applicant Entry**

*Statement of Compliance:*

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

*Self-assessment statement:*

The legal framework for the use of DNB's archival holdings is set by the German copyright legislation, general rights of privacy, and the Law about the German National Library. With accepting DNB's terms of use, the user acknowledges that publications are provided in accordance with the applicable copyright legislation and that especially copying of parts of the publication is only allowed in accordance with the copyright legislation. Besides these regulations, no other regulations or codes apply, apart from general rules of good scientific practice like giving credit to the original author etc., which the DNB does not, and is not in a position to, monitor.

German copyright legislation: <http://www.gesetze-im-internet.de/urhg/> (available only in German)

Law regarding the German National Library (in German): <http://www.gesetze-im-internet.de/dnbg/index.html>  
(Non-official English translation:  
[http://www.dnb.de/SharedDocs/Downloads/EN/DNB/wir/dnbg.pdf?\\_\\_blob=publicationFile](http://www.dnb.de/SharedDocs/Downloads/EN/DNB/wir/dnbg.pdf?__blob=publicationFile))

DNB's terms of use:  
[http://www.dnb.de/SharedDocs/Downloads/DE/DNB/service/benutzungsordnung.pdf?\\_\\_blob=publicationFile](http://www.dnb.de/SharedDocs/Downloads/DE/DNB/service/benutzungsordnung.pdf?__blob=publicationFile)  
(available only in German)

**Reviewer Entry**

*Accept or send back to applicant for modification:*

Accept

*Comments:*

## 16. The data consumer respects the applicable licences of the data repository regarding the use of the data.

*Minimum Required Statement of Compliance:*

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

### Applicant Entry

*Statement of Compliance:*

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

*Self-assessment statement:*

The legal framework for the use of DNB's archival holdings is set by the German copyright legislation, general rights of privacy, and the Law about the German National Library. Besides these legal bases, no other licenses apply. With accepting DNB's terms of use, the user acknowledges that publications are provided in accordance with the applicable copyright legislation and that especially copying of parts of the publication is only allowed in accordance with the copyright legislation.

Only such publications are provided remotely via the internet, where the rights holder has granted the respective right to the DNB. In this case, it is up to the user to make fair use of the publication (e.g., citing it appropriately). When access is limited to the reading rooms of the DNB, DNB provides access to copyright protected digital works at dedicated supervised reading places only. In case of non-compliance with the library regulations, the user can be excluded from using the library.

German copyright legislation: <http://www.gesetze-im-internet.de/urhg/> (available only in German)

Law regarding the German National Library (in German): <http://www.gesetze-im-internet.de/dnbg/index.html>  
(Non-official English translation:  
[http://www.dnb.de/SharedDocs/Downloads/EN/DNB/wir/dnbg.pdf?\\_\\_blob=publicationFile](http://www.dnb.de/SharedDocs/Downloads/EN/DNB/wir/dnbg.pdf?__blob=publicationFile))

DNB's terms of use:  
[http://www.dnb.de/SharedDocs/Downloads/DE/DNB/service/benutzungsordnung.pdf?\\_\\_blob=publicationFile](http://www.dnb.de/SharedDocs/Downloads/DE/DNB/service/benutzungsordnung.pdf?__blob=publicationFile)  
(available only in German)

### Reviewer Entry

*Accept or send back to applicant for modification:*

Accept

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*Comments:*