German National Library
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Data Service: Changes in the RDF format from 12 January 2016 (export release 01/2016)

1. Release schedule

Dear Sir or Madam

As part of the scheduled export format release planning[1] of the German National Library (DNB), the next changes in the conversion and the data modelling will take place on 12 January 2016. (There may be disruptions to the interfaces and the Data Shop between 08:00 and 12:00 a. m. on the day of the technical changeover.)

Mirroring the schedule of the export releases, updated full copies of the Integrated Authority File (GND) and the bibliographic data of the DNB will be made available for downloading in RDF/XML and Turtle format in February, June and October[2] (scheduled from February 2016).

2. Bibliographic data of the German Union Catalogue of Serials

2.1. RDF/XML serialisation

From Release 01/2016 there will be changes to the concrete XML syntax for the bibliographic data[3] of the German Union Catalogue of Serials (ZDB). These are the same changes which became effective with Export Release 03/2015[4] for DNB bibliographic data and GND data. This is because a new software library is being used within the DNB to generate the export format and also the new JSON-LD and Turtle serialisations (see below).

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[1] https://wiki.dnb.de/x/wgcbBQ
[2] http://datendienst.dnb.de/cgi-bin/mabit.pl?userID=opendata&pass=opendata&cmd=login
[3] as well as for the address data of the German ISIL and Library Codes Agency
[4] http://www.dnb.de/SharedDocs/Downloads/EN/DNB/service/rundschreiben20150701AenderungenRdfXmlExportRelease20153En.pdf

Semantically there is no difference to the previous format: the XML data still describes the same RDF graph and the same triples as before.
There may – however – be consequences for users who process the data as XML or plain text.

The main differences are:

- All literals with no other data type are now explicitly issued with the data type "xsd:string"[5]. This affects the file size of the dump files.
  Example:
  <http://ld.zdb-services.de/resource/19-x>
  dc:title "Chemical abstracts"^^http://www.w3.org/2001/XMLSchema#string .

- Blank nodes will now always be given an automatically generated nodeID which is only valid within the file. It is alphanumeric and consists of 15 characters.
  Example:
  <http://ld.zdb-services.de/resource/244-6> a bibo:Periodical ;
  [...]
  bibo:contributorList _:node1a0tq9345x7 .

  _:node1a0tq9345x7 a rdf:Seq ;
  rdf:_1 <http://d-nb.info/gnd/120551721> ;
  rdf:_2 <http://d-nb.info/gnd/2131094-4> ;
  rdf:_3 <http://d-nb.info/gnd/7418-4> ;
  rdf:_4 <http://d-nb.info/gnd/2007729-4> .

2.2. Turtle serialisation

Starting with release 01/2016 the Turtle format[6] will also be offered via HTTP for the Linked Data Service of the ZDB as a further serialisation form in addition to RDF/XML.
The Turtle serialisation of RDF data is delivered if the user-agent requests the content-type "text/turtle" via HTTP content negotiation through the accept-header.
Turtle serialisation can also be obtained directly via the following URIs:

http://ld.zdb-services.de/data/<ZDBID>.ttl

For DNB bibliographic data and GND data, turtle serialisation is scheduled for the next release 02/2016.

2.3. JSON-LD serialisation

Starting with release 01/2016 the JSON-LD format[7] will also be offered for the Linked Data Service of the ZDB as a further serialisation form in addition to RDF/XML.
The JSON-LD serialisation of RDF data is delivered if the user-agent requests the content-types "application/json" or "application/ld+json" via HTTP content negotiation through the accept-header.
It can also be obtained directly via the following URIs:

http://ld.zdb-services.de/data/<ZDBID>.jsonld

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[5] http://www.w3.org/TR/xmlschema-2/#string
[6] http://www.w3.org/TR/turtle/
[7] http://www.w3.org/TR/json-ld/

For DNB bibliographic data and GND data, JSON-LD serialisation is scheduled for the next release 02/2016.

3. DNB and ZDB bibliographic data

3.1. Changes in the Linked Data Service

As of Release 01/2016 the same RDF graph will be issued for journal titles in the DNB holdings as that for the corresponding ZDB resource; the relationship between the two resources will be established by means of "owl:sameAs". The purpose of this is to highlight the ZDB URIs as the preferred identifiers for this resource type. This will not result in any changes to the RDF modelling of journal resources.
The RDF graph of each resource will now be extended to include the following additional statements:

```
<http://d-nb.info/<IDN>>
        owl:sameAs <http://ld.zdb-services.de/resource/<ZDB-ID>> .
```

and correspondingly

```
<http://ld.zdb-services.de/resource/<ZDB-ID>>
        owl:sameAs http://d-nb.info/<IDN> .
```

4. Sample files and other information

Sample files including the announced changes are available under the file name "ZDBTitelTestRelease01_2016..." for ZDB bibliographic data in the RDF/XML, Turtle and JSON serialisation forms, and under "DNBTitelTestRelease01_2016..." for DNB bibliographic data in the RDF/XML serialisation form at http://datendienst.dnb.de/cgi-bin/mabit.pl?userID=testdat&pass=testdat&cmd=login.

Information on the Linked Data Service of the German National Library can be found on our website at **Fehler! Hyperlink-Referenz ungültig.**http://www.dnb.de/EN/lds.

Please do not hesitate to contact us should you have any questions.

Yours faithfully,
on behalf of Deutsche Nationalbibliothek (German National Library)
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and Jana Hentschke (Information Infrastructure)

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