German National Library
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03 July 2019

Data services: Changes in RDF format from 15 October 2019 (Export Release 2019.03)

1. Release schedule

Dear Sir/Madam,

In accordance with the German National Library's (DNB) release planning for export formats[1], the next change in the conversion and data modelling will take place on 15 October 2019. (There may be disruptions to the interfaces and the Data Shop between 08:00 and 12:00 noon during the technical changeover.)

2. Linked Data Service in general

2.1. Full copies

Following the export releases, it is expected that updated full copies of the Integrated Authority File (GND[2]) and the DNB's bibliographic data will be made available for download in the serialisation formats RDF/XML, Turtle, JSON-LD, as an HDT file[3] and in N-Triples as of March, June/July and October/November[4]. The full copy for Entity Facts[5] will also be released at these times, albeit only in the format JSON-LD.

Metadata provenance dump deliveries are effected at the same intervals. The provenance information is modelled along the lines of PROV Ontology[6] and published in the form of a separate data copy. Additional information regarding planning, documentation and modelling is available on the DNB WIKI[7] .

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[1] https://wiki.dnb.de/x/wgcbBQ

[2] https://www.dnb.de/EN/gnd

[3] Header, Dictionary, Triples; http://www.rdfhdt.org/what-is-hdt/

[4] https://data.dnb.de/opendata/

[5] https://www.dnb.de/EN/entityfacts

[6] http://www.w3.org/TR/prov-o/

[7] https://wiki.dnb.de/x/46G5C

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Full copies of the bibliographic data from the German Union Catalogue of Serials (ZDB) and the Address data of the German ISIL and Library Code Agency[8] will be updated in March and October/November.

2.2. Prefixes used in the document

| owl: http://www.w3.org/2002/07/owl#

3. Changes to the Linked Data Service

| The HTTP protocol has been replaced by HTTPS in all elements of the ZDB and DNB Linked Data Service. The reasons for this decision are described in the WIKI[9] set up by the DINI-AG Kompetenzzentrum Interoperable Metadaten (DINI-AG Competence Centre for Interoperable Metadata).

The changes affect the following:
- o DNB title profile „DINI-AG KIM-Empfehlungen"
- o ZDB title profile „DINI-AG KIM-Empfehlungen"
- o ISIL- und Sigelverzeichnis (ISIL and library codes directory)
- o GND profile „GND Ontology"
- o Entity Facts
- o all RDF elementsets (GND Ontology[10], DNB Metadata Terms[11], Agent Relationship Ontology[12])
- o all RDF value vocabularies (GND Gender[13], GND Geographic area code[14], GND Sachgruppen[15], GND Type of coordinates[16])

For the time being, the only exception is the BIBFRAME prototype, which is to undergo fundamental revision in the next release.

Examples in the test file:

http://d-nb.info/gnd/134689240   -> https://d-nb.info/gnd/134689240

http://d-nb.info/454884451   -> https://d-nb.info/454884451

http://ld.zdb-services.de/resource/2018506-6   -> https://ld.zdb-services.de/resource/2018506-6

http://ld.zdb-services.de/resource/organisations/DE-26-010   -> https://ld.zdb-services.de/resource/organisations/DE-26-010

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[8] http://sigel.staatsbibliothek-berlin.de/en/startseite/

[9] https://wiki.dnb.de/x/06S5C

[10] https://d-nb.info/standards/elementset/gnd

[11] https://d-nb.info/standards/elementset/dnb

[12] https://d-nb.info/standards/elementset/agrelon

[13] https://d-nb.info/standards/vocab/gnd/gender

[14] https://d-nb.info/standards/vocab/gnd/geographic-area-code.html

[15] https://d-nb.info/standards/vocab/gnd/gnd-sc.html

[16] https://d-nb.info/standards/vocab/gnd/type-of-coordinates.html

4. Publication of RDF vocabularies

In addition to the announcement of changes in RDF format, dated preliminary versions of the RDF vocabularies for "DNB Metadata Terms" and "GND Ontology" will also appear after being aligned with the release planning.

The preliminary versions for release 2019.03 can be accessed at:

| https://d-nb.info/standards/elementset/dnb_20191015 (DNB Metadata Terms)
| https://d-nb.info/standards/elementset/gnd_20191015 (GND Ontology)

5. Changes in GND conversions

| Correction: some URIs for the descriptions of GND entities are not displayed correctly; these errors have now been rectified. Instead of the GND IDs, the system IDs ("IDNs") were incorrectly integrated into the description URIs – this was invariably problematic when a GND ID and IDN were not identical. This is the case with all GND entities that are not persons or personal names and were set up before the GND was launched in 2012.
| Improvement: As the entities in the ORCID RDF data are now clearly identified with https://orcid.org/-URIs[17], we are making the corresponding adjustments in the GND Ontology profile ("owl:sameAs") and Entity Facts ("sameAs") besides inserting an "s" in the previous http://orcid.org/-URIs.
Examples in the test file:
https://d-nb.info/gnd/1049560450, https://d-nb.info/gnd/1011711818

5.1. GND Ontology profile

| Improvement: Whenever names of persons are available and tagged in original scripts, i.e. non-Latin scripts (cf. GND entry guide[18]), the literals are now specified in RDF using language information (which may also contain script information).
Example:
   o <https://d-nb.info/gnd/1047091410> gndo:variantNameForThePerson "中院仲子"@ja .
   o <https://d-nb.info/gnd/1051419042> gndo:variantNameForThePerson "Дансранбилэгийн Догсом"@mn-Cyrl .

Examples in the test file:
https://d-nb.info/gnd/1047205513, https://d-nb.info/gnd/1047575760,
https://d-nb.info/gnd/1047635526, https://d-nb.info/gnd/1115271210,
https://d-nb.info/gnd/110503805, https://d-nb.info/gnd/119056321,
https://d-nb.info/gnd/1047149699, https:/ /d-nb.info/gnd/1053722435 and more

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[17] https://support.orcid.org/hc/en-us/articles/360006897674-Structure-of-the-ORCID-Identifier
[18] https://wiki.dnb.de/download/attachments/92443125/EH-A-09.pdf

5.2. Entity Facts profile

| New feature: the key "associatedCountry" is used to link countries associated with the GND entities.

Example:

```
[ {
  "@context" :
"http://hub.culturegraph.org/entityfacts/context/v1/entityfacts.jsonld",
  "@id" : "https://d-nb.info/gnd/4119616-8",
  "@type" : "place",
  "preferredName" : "Timbuktu",
  "associatedCountry" : [ {
    "@id" : "https://d-nb.info/standards/vocab/gnd/geographic-area-code#XC-KE" ,
    "preferredName" : "Mali"
    } ]
},{
  "@context" :
"http://hub.culturegraph.org/entityfacts/context/v1/entityfacts.jsonld",
  "@id" : "https://d-nb.info/gnd/100002617",
  "@type" : "person",
  "preferredName" : "Josephus Abudacnus",
  "associatedCountry" : [ {
    "@id" : "https://d-nb.info/standards/vocab/gnd/geographic-area-code#XC-EG" ,
    "preferredName" : "Ägypten"
    },{
    "@id" : "https://d-nb.info/standards/vocab/gnd/geographic-area-code#XC-EG" ,
    "preferredName" : "Ägypten"
    },{
    "@id" : "https://d-nb.info/standards/vocab/gnd/geographic-area-code#XA-GB" ,
    "preferredName" : "Großbritannien"
    },{
    "@id" : "https://d-nb.info/standards/vocab/gnd/geographic-area-code#XA-BE" ,
    "preferredName" : "Belgien"
    } ]
} ]
Mit
  "@context" : {
    "preferredName": "https://d-nb.info/standards/elementset/gnd#preferredName",
    "associatedCountry" : {
      "@id": "https://d-nb.info/standards/elementset/gnd#geographicAreaCode",
      "@type": "@id"
    }
  }
```

Examples in the test file:
https://hub.culturegraph.org/entityfacts/14267-0,
https://hub.culturegraph.org/entityfacts/100002617
https://hub.culturegraph.org/entityfacts/4041275-1
https://hub.culturegraph.org/entityfacts/35603-7
https://hub.culturegraph.org/entityfacts/5863-4
https://hub.culturegraph.org/entityfacts/36351-0
https://hub.culturegraph.org/entityfacts/203-3

https://hub.culturegraph.org/entityfacts/4027808-6

6. Examples and further information

The following example files, including the announced changes, can be accessed in the serialisation formats RDF/XML, Turtle and JSON-LD by visiting https://data.dnb.de/testdat/:

| „DNBTestRelease2019_03…" for the DNB bibliographic data
| "GNDTestRelease2019_03 …" for the authority data from the GND
| "ZDBTitelTestRelease2019_03 …" for the ZDB bibliographic data
| "EntityFacts_TestRelease2019_03.jsonld" for Entity Facts

All the information regarding the German National Library's Linked Data Service can be found on our website[19].

If you have any questions, we will be happy to assist you.

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[19] https://www.dnb.de/EN/lds