DEUTSCHE
NATIONAL
BIBLIOTHEK

German National Library
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6 December 2016

Data Service: Changes in the RDF format from 17 January 2017 (Export Release 01/2017)

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 17 January 2017. (There may be disruptions to the interfaces and the Data Shop between 08:00 and 12:00 noon on the day of the technical changeover.)

2. Linked Data Service – General

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 the RDF/XML, Turtle and JSON-LD serialisation forms in February, June and October[2].

3. GND conversion changes

| Improvement: in the past there have been cases in which GND "Work" entities without rdf:type class assignment were delivered and which were thus only implicitly identifiable from the domain of the gndo:preferredNameForTheWork property. In the future the type will always also be given explicitly by "rdf:type".

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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

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FRANKFURT AM MAIN**

Examples in the test file:
http://d-nb.info/gnd/1059428296
http://d-nb.info/gnd/1260548538
http://d-nb.info/gnd/1260547868

4. Bibliographic data conversion changes (DNB and ZDB)

| Update: statements with property "dcterms:medium" can in some cases currently refer to objects of the RDA value vocabularies "RDACarrierType" and "RDAMediaType". The namespace used so far for these vocabularies "http://rdvocab.info/..." is now being updated to "http://rdaregistry.info/...".

Examples in the test file:
http://d-nb.info/1112146415
http://d-nb.info/1100921842
http://d-nb.info/1118774981
http://ld.zdb-services.de/resource/2843163-7

| Improvement: the literals (names) for personal and corporate entries will be adapted to bring them in line with the conventions applied by the DNB after the introduction of the RDA cataloguing code. This synchronises the RDF representation with that in the DNB portal. The properties "dc:creator" and "dc:contributor" are affected.
Note: only a few bibliographic data representations are affected because personal and corporate entries can usually be shown as links to the GND.
Example: http://d-nb.info/200233742/about/lds

Previously:
<http://d-nb.info/200233742> dc:creator "SED / ZK" .

New:
<http://d-nb.info/200233742> dcterms:creator _:node123 .
_:node123 gndo:preferredName "SED. ZK" .

Examples in the test file:
http://d-nb.info/201608332
http://d-nb.info/212850601
http://d-nb.info/203528883
http://d-nb.info/201094266
http://d-nb.info/200233742
http://ld.zdb-services.de/resource/2411227-6

| Improvement: the introduction of the new RDA cataloguing code includes the description of more specific types of relations between and below expressions and manifestations. These relations are expressed in most cases with the corresponding "rdau properties".

In detail:

- rdau:P60100 ("facsimile container of")
- rdau:P60194 ("insert")
- rdau:P60259 ("supplement")
- rdau:P60300 ("facsimile container of")
- rdau:P60183 ("insert")
- rdau:P60281 ("supplement")
- rdau:P60191 ("equivalent")
- dcterms:isFormatOf ("also issued as")
- rdau:P60197 ("mirror site")
- rdau:P60196 ("accompanied by")
- rdau:P60256 ("issued with")
- rdau:P60258 ("filmed with")
- rdau:P60257 ("on disc with")
- rdau:P60261 ("Preceded by")
- rdau:P60278 ("succeeded by")
- rdau:P60574 ("absorption of")
- rdau:P60247 ("absorbed by")
- rdau:P69075 ("absorption in part of")
- rdau:P60248 ("absorbed in Part by")
- rdau:P60576 ("continuation of")
- rdau:P60306 ("continued by")
- rdau:P60199 ("continuation in Part of")
- rdau:P60503 ("split into")
- rdau:P60505 ("merger of")
- rdau:P60504 ("merged to form")
- rdau:P60220 ("prequel")
- rdau:P60310 ("prequel to")
- rdau:P60480 ("replacement of")
- rdau:P60104 ("replaced by")
- rdau:P60479 ("replacement in part of")
- rdau:P60103 ("replaced in part by")
- rdau:P60277 ("separated from")
- rdau:P60199 ("continued in part by")
- rdau:P60577 ("sequel to")
- rdau:P60102 ("sequel")
- rdau:P60191 ("equivalent")
- rdau:P60272 ("reproduced as")
- rdau:P60297 ("reproduction of")
- rdau:P60200 ("digital transfer")
- rdau:P60287 ("digital transfer of")
- rdau:P60217 ("facsimile")
- rdau:P60301 ("facsimile of")
- rdau:P60179 ("preservation facsimile")
- rdau:P60299 ("preservation facsimile of")
- rdau:P60271 ("reprinted as")
- rdau:P60168 ("reprint of")
- rdau:P60083 ("electronic reproduction")
- rdau:P60469 ("electronic reproduction of")
- rdau:P60244 ("translation of")
- rdau:P60280 ("translated as")
- rdau:P60111 ("dubbed version of")
- rdau:P60112 ("dubbed version")
- dcterms:hasVersion ("Parallele Sprachausgabe", keine engl. Entsprechung)
- rdau:P60198 ("complemented by")
- rdau:P60204 ("augmented by")
- rdau:P60250 ("derivative Work")
- rdau:P60305 ("based on")
- rdau:P60307 ("augmentation of")
- rdau:P60113 ("cadenza")
- rdau:P60114 ("variations based on")
- rdau:P60115 ("modified by")

- rdau:P60116 ("cadenza composed for")
- rdau:P60117 ("libretto for")
- rdau:P60120 ("remade as")
- rdau:P60121 ("set to music as")
- rdau:P60177 ("abstracted in")
- rdau:P60178 ("indexed in")
- rdau:P60181 ("errata to")
- rdau:P60182 ("illustrations")
- rdau:P60189 ("freely Translated as")
- rdau:P60201 ("screenplay for")
- rdau:P60203 ("abstract")
- rdau:P60205 ("summarized as")
- rdau:P60206 ("catalogue")
- rdau:P60208 ("concordance")
- rdau:P60209 ("addenda")
- rdau:P60214 ("imitated as")
- rdau:P60216 ("expanded as")
- rdau:P60221 ("appendix")
- rdau:P60222 ("guide")
- rdau:P60223 ("abridgement of")
- rdau:P60224 ("abstract of")
- rdau:P60238 ("digest of")
- rdau:P60241 ("adaptation of")
- rdau:P60242 ("arrangement of")
- rdau:P60243 ("free translation of")
- rdau:P60245 ("revised as")
- rdau:P60246 ("parodied as")
- rdau:P60251 ("errata to")
- rdau:P60252 ("guide to")
- rdau:P60253 ("appendix to")
- rdau:P60254 ("illustrations for")
- rdau:P60260 ("adapted as")
- rdau:P60262 ("finding aid")
- rdau:P60263 ("index")
- rdau:P60264 ("screenplay")
- rdau:P60266 ("musical setting of")
- rdau:P60267 ("radio script")
- rdau:P60270 ("libretto")
- rdau:P60273 ("paraphrased as")
- rdau:P60274 ("arranged as")
- rdau:P60275 ("abridged as")
- rdau:P60279 ("digested as")
- rdau:P60285 ("script for the radio programme")
- rdau:P60286 ("addenda to")
- rdau:P60289 ("summary of")
- rdau:P60290 ("catalogue of")
- rdau:P60291 ("concordance to")
- rdau:P60294 ("expanded Version of")
- rdau:P60295 ("remake of")
- rdau:P60296 ("paraphrase of")
- rdau:P60302 ("index to")
- rdau:P60303 ("revision of")
- rdau:P60308 ("abstracts for")
- rdau:P60309 ("indexing for")
- rdau:P60311 ("imitation von")
- rdau:P60312 ("parody of")
- rdau:P60474 ("finding aid for")
- rdau:P60723 ("music")
- rdau:P60724 ("music for")
- rdau:P60740 ("choreography")
- rdau:P60741 ("choreography for")
- rdau:P60832 ("inspired by")
- rdau:P60833 ("inspiration for")

- o rdau:P60846 ("commemoration")
- o rdau:P60847 ("commemoration of")
- o rdau:P60293 ("choreographic adaptation of")
- o rdau:P60180 ("adapted as choreography")
- o rdau:P60225 ("dramatization of")
- o rdau:P60088 ("dramatized as")
- o rdau:P60743 ("graphic novelization of")
- o rdau:P60742 ("adapted as graphic novel")
- o rdau:P60304 ("libretto based on")
- o rdau:P60210 ("adapted as libretto")
- o rdau:P60227 ("motion picture adaptation of")
- o rdau:P60110 ("adapted as a motion picture")
- o rdau:P60719 ("musical theatre adaption of")
- o rdau:P60721 ("adapted as a musical theatre adaptiation of")
- o rdau:P60228 ("novelization of")
- o rdau:P60138 ("novelization")
- o rdau:P60720 ("opera adaptation of")
- o rdau:P60241 ("adapted as opera")
- o rdau:P60830 ("oratorio adaptation of")
- o rdau:P60831 ("adapted as oratorio")
- o rdau:P60229 ("radio adaptation of")
- o rdau:P60174 ("adapted as a radio programme")
- o rdau:P60235 ("radio script based on")
- o rdau:P60188 ("dapted as a radio script")
- o rdau:P60231 ("screenplay based on")
- o rdau:P60185 ("adapted as a screenplay")
- o rdau:P60232 ("motion picture screenplay based on")
- o rdau:P60184 ("adapted as a motion picture screenplay")
- o rdau:P60233 ("television screenplay based on")
- o rdau:P60186 ("adapted as a television screenplay")
- o rdau:P60234 ("video screenplay based on")
- o rdau:P60187 ("adapted as a video screenplay")
- o rdau:P60230 ("television adaptation of")
- o rdau:P60354 ("adapted as a television programme")
- o rdau:P60226 ("verse adaptation of")
- o rdau:P60106 ("verse adaptation")
- o rdau:P60236 ("video adaptation of")
- o rdau:P60361 ("adapted as a video")
- o rdau:P60745 ("video game adaptation of")
- o rdau:P60744 ("adapted as a video game")
- o rdau:P60202 ("incidental music for")
- o rdau:P60118 ("incidental music")
- o rdau:P60731 ("music for motion picture")
- o rdau:P60732 ("motion picture music")
- o rdau:P60730 ("music for radio program")
- o rdau:P60729 ("radio program music")
- o rdau:P60728 ("music for television program")
- o rdau:P60727 ("television program music")
- o rdau:P60726 ("music for video")
- o rdau:P60725 ("video music")
- o rdau:P60184 ("screenplay for the motion picture")
- o rdau:P60232 ("motion picture screenplay")
- o rdau:P60186 ("screenplay for the television programme")
- o rdau:P60233 ("television screenplay")
- o rdau:P60187 ("screenplay for the video")
- o rdau:P60234 ("video screenplay")

Some examples in the test file:
http://d-nb.info/991219562, http://d-nb.info/962764582, http://d-nb.info/551481501,
http://d-nb.info/550660755, http://d-nb.info/1113613505,
http://d-nb.info/1112617884, http://d-nb.info/1080913246,
http://d-nb.info/1079725075, http://d-nb.info/107803589X,

http://d-nb.info/1077757115, http://d-nb.info/1076260853,
http://d-nb.info/1070209090, http://d-nb.info/1048061728,
http://d-nb.info/1031884335,
http://ld.zdb-services.de/resource/2868712-7,
http://ld.zdb-services.de/resource/2868659-7,
http://ld.zdb-services.de/resource/2868657-3,
http://ld.zdb-services.de/resource/2868556-8,
http://ld.zdb-services.de/resource/2868269-5,
http://ld.zdb-services.de/resource/2864539-X,
http://ld.zdb-services.de/resource/2846219-1,
http://ld.zdb-services.de/resource/2845216-1,
http://ld.zdb-services.de/resource/2845120-X,
http://ld.zdb-services.de/resource/2844981-2,
http://ld.zdb-services.de/resource/2844744-X,
http://ld.zdb-services.de/resource/2844433-4,
http://ld.zdb-services.de/resource/2843729-9,
http://ld.zdb-services.de/resource/2842713-0,
http://ld.zdb-services.de/resource/2842625-3,
http://ld.zdb-services.de/resource/2841990-X,
http://ld.zdb-services.de/resource/2840907-3,
http://ld.zdb-services.de/resource/2838075-7,
http://ld.zdb-services.de/resource/2837791-6,
http://ld.zdb-services.de/resource/2835029-7,
http://ld.zdb-services.de/resource/2830701-X,
http://ld.zdb-services.de/resource/2830303-9,
http://ld.zdb-services.de/resource/2817027-1,
http://ld.zdb-services.de/resource/2805153-1,
http://ld.zdb-services.de/resource/2349258-2,
http://ld.zdb-services.de/resource/17839-1,
http://ld.zdb-services.de/resource/1427626-4

| Improvement: the work(s) represented in a manifestation are linked with
"schema:exampleOfWork"[3]. In new data, the object is then often a GND URI. If the
work is not expressed by a GND link in the data, a blank node with a
"gndo:preferredName statement" is given as the object.

Example:
<http://d-nb.info/1076924786> schema:exampleOfWork http://d-nb.info/gnd/1079918663

<http://d-nb.info/1026517184> schema:exampleOfWork _:node1 .
_:node1 gndo:preferredName „Die Schlacht der Trolle" .

Further examples in the test file: http://d-nb.info/1076925618,
http://d-nb.info/1077070470, http://d-nb.info/1076920012,
http://d-nb.info/1080383468

Note: titles of works (literals) have so far been conveyed using
"dcterms:alternative". The new solution replaces this.

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[3] http://schema.org/exampleOfWork

| Improvement: the information on the place of distribution and distributor name introduced by RDA is issued in literal form with the properties "rdau:P60160" ("has place of distribution") and "rdau:P60438" ("has distributor"). Along with the property "rdau:P60330" ("has distribution statement") comes a concatenated version that is suitable for display and also establishes the relationship between place, name and (possibly) a year (relevant in case of multiple items of distribution information).
Note: only the latest distribution details are transported in RDF.

Example:
<http://d-nb.info/975983474> rdau:P60160 „Neustadt an der Aisch" ;
     rdau:P60438 „Verlag Ph. C.W. Schmidt" ;
     rdau:P60330 „Neustadt an der Aisch : Verlag Ph. C.W. Schmidt" .

Further examples in the test file: http://d-nb.info/1052613861

| Improvement: the information on the place of manufacture and manufacturer name introduced by RDA is issued in literal form with the properties "rdau:P60162" ("has place of manufacture") and "rdau:P60443" ("has manufacturer"). Along with the property "rdau:P60331" ("has manufacture statement") comes a concatenated version that is suitable for display and also establishes the relationship between place, name and (possibly) a year (relevant in case of multiple items of manufacturing information).
Note: only the latest manufacture details are transported in RDF.

Example:
<http://d-nb.info/1079428836> rdau:P60443 „Druckerei Steinmeier" ;
     rdau:P60162 „Nördlingen" ;
     rdau:P60331 „Nördlingen : Druckerei Steinmeier" .

| Improvement: the publication information currently transported in literal form with the properties "dc:publisher", "rdau:P60163" ("has place of publication") and "rdau:P60333" ("has publication statement") will only be issued in the future in the current version.

| Revision: the constituent works of compilations (resources that are published as a single unit, but the manifestation of which incorporates several works, for example, "X's collected works") will now be issued with the property "dcterms:hasPart". The object is then always a blank node with a dcterms:title statement and usually an rdau:P60339 statement ("has statement of responsibility") in the DNB data. Also the properties "rdau:P60493" ("has other title information") and "dcterms:alternative" can occur for parallel titles (e.g. in other languages).

Example:
<http://d-nb.info/1070397903> dc:title „Batman – Einsatz für den dunklen Ritter" ;
     marcRole:aut <http://d-nb.info/gnd/1014609283> , <http://d-nb.info/gnd/1025180429> , <http://d-nb.info/gnd/136258441> ;
     dcterms:hasPart _:node1 ;
     dcterms:hasPart _:node2 ;
     dcterms:hasPart _:node3 .

> _:node1 dcterms:title „Die Rache des Puppenspielers" ;
>   rdau:P60339 „Donald Lemke" .
> _:node2 dcterms:title „Eine schreckliche Überraschung" ;
>   rdau:P60339 „Blake A. Hoena" .
> _:node3 dcterms:title „Angriff aus dem Eis" ;
>   rdau:P60339 „Robert Greenberger" .

Further examples in the test file: http://d-nb.info/1063204852, http://d-nb.info/1037218310, http://d-nb.info/1060397994

4.1. Revision of responsibility information modelling

| Improvement: following the launch of cataloguing based on Resource Description and Access (RDA), the modelling of responsibility information in RDF has been fundamentally revised by the DINI AG KIM Bibliographic Data Group[4] with input from members of the Linked Data Service mailing list[5]. The most important consequential change concerns the modelling of entries without authority data reference. Up to now different properties have been used for GND links and literal forms[6]: "Dublin Core Terms" for links and "Dublin Core Elements" for literals. To ease data requests and to optimise for the long-term objective of representing all entities of the responsibility complex as GND links, the same property is now used in both cases (either "Dublin Core Terms" or "MARC relator properties", depending on the role) and the literal form modelled as a blank node.

An example of an unlinked literal form as 1. creator:
http://d-nb.info/200189972/about/lds

Previously:
<http://d-nb.info/200189972> dc:creator „Dante <Alighieri>" .

New:
<http://d-nb.info/200189972> dcterms:creator _:node1 .
_:node1 gndo:preferredName „Dante, Alighieri" .

| Improvement:
adjustments of punctuation in name forms to that in the DNB portal[7] and therefore to RDA rules.

Above example and further examples in the test file:
http://d-nb.info/200014471, http://d-nb.info/1078859191,
http://d-nb.info/1070341460, http://d-nb.info/201608332,
http://d-nb.info/212850601, http://d-nb.info/203528883,
http://d-nb.info/201094266, http://d-nb.info/200233742,
http://ld.zdb-services.de/resource/2411227-6

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[4] https://wiki.dnb.de/x/8YBjAw
[5] http://lists.dnb.de/mailman/listinfo/lds
[6] Literal forms are rarely contained in the DNB bibliographic data.
[7] http://www.dnb.de/kataloge

| Improvement: the RDA-differentiated relations between the responsible entities and publications will continue to be represented by means of the MARC Relator Properties. Because a responsible entity can occupy multiple roles, several statements are generated in some cases.
The role of "creator with principal responsibility " ("dcterms:creator") is regarded as a separate role which is always given, regardless of whether more specific information is available on the precise function of that creator.

An example of a person who has several roles: creator with principal responsibility, author, translator and acclaimed person (http://d-nb.info/1078744491)

```
<http://d-nb.info/1078744491> dcterms:creator <http://d-nb.info/gnd/13241516X> ;
        marcRole:aut <http://d-nb.info/gnd/13241516X> ;
        marcRole:trl <http://d-nb.info/gnd/13241516X> ;
        marcRole:hnr <http://d-nb.info/gnd/13241516X> .
```

Further examples in the test file: http://d-nb.info/1078859191, http://d-nb.info/1070341460, http://d-nb.info/1076919995, http://d-nb.info/1076988598

| Improvement: by contrast, the relationship "contributor" ("marcRole:ctb" or "dcterms:contributor") is only shown if no more specific information is known on the nature of the function. (NB: "marcRole:ctb" is issued by the Library of Congress as rdfs:subPropertyOf by "dc:contributor".)
In practice, for technical reasons, the role of "Contributor" is partly represented in the data by the property "marcRole:ctb" and partly by "dcterms:contributor".

Further examples in the test file: http://d-nb.info/200028790, http://d-nb.info/200363336, http://d-nb.info/107699069X, http://d-nb.info/361115296

| Update: as a result of the introduction of RDA cataloguing, it is no longer possible to specify the order of multiple creators during the cataloguing process. Therefore, the issue of "bibo:authorList" and "bibo:contributorList" is being discontinued.

Examples in the test file: http://d-nb.info/720384354, http://d-nb.info/010002820 http://ld.zdb-services.de/resource/ 340-2

5. Sample files and other information

The following sample files, including the announced changes, can be retrieved in the serialisation forms RDF/XML, Turtle and JSON from http://datendienst.dnb.de/cgi-bin/mabit.pl?userID=testdat&pass=testdat&cmd=login:

"GNDTitelTestRelease01_2017..." for GND authority data
"DNBTitelTestRelease01_2017..." for DNB bibliographic data
"ZDBTitelTestRelease01_2017..." for ZDB bibliographic data

Please bear in mind that the RDF resources in these files originate from records catalogued according to RDA, from records containing RDA elements (mixed records) as well as from pure legacy data without RDA elements in order to document specific circumstances clearly.

Information on the Linked Data Service of the German National Library can be found on our website at http://www.dnb.de/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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