Journal Aggregations and Serials Cataloguing:
Solutions for the German Union Catalogue of Serials
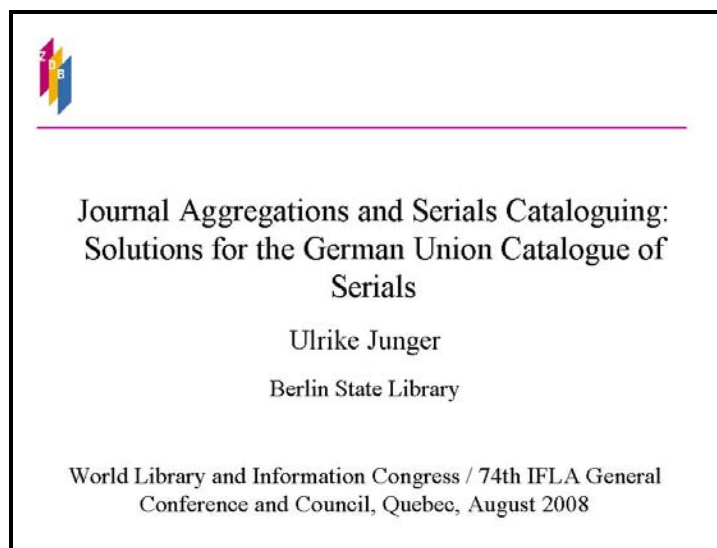
Ulrike Junger
Director, German Union Catalogue of
Serials/Zeitschriftendatenbank
Staatsbibliothek zu Berlin, Berlin, Germany
e-mail: ulrike.junger@sbb.spk-berlin.de

Abstract

The German Union Catalogue of Serials (Zeitschriftendatenbank, in short ZDB) is one of the largest databases for serials worldwide. It contains over 1.3 mio. titles of continuing resources of any type and around 7,1 mio. holdings representing more than 4300 libraries in Germany and Austria. ZDB records are the basis for serials information in most regional and local library systems in Germany. The majority of the titles recorded in ZDB is still catalogued by autopsy. The emergence of various forms of electronic resources led ZDB to develop new mechanisms to deal with their metadata.

Many ZDB member libraries have subscriptions to databases containing aggregations of electronic journals produced by various publishers. Relevant for users are not (only) bibliographic records for the databases/aggregations themselves, but for the individual journals contained in those aggregations. Because of the vast amounts of titles contained in

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those aggregations and even more because of the fact that subscriptions change rapidly it is hardly possible for individual libraries to create bibliographic and holdings records for individual titles.

The solutions ZDB has found for this problem are described. On one hand there is the provision of metadata for journal aggregations by publishers that not only contain bibliographic descriptions of journal titles but also information which ZDB member library has subscribed to a certain aggregation. On the other hand there are so-called product sponsorships where individual libraries integrate information on journal aggregations into bibliographic records in ZDB. The advantage of each solution is that not every ZDB member library has to take care for keeping its records updated. Even more important is that the bibliographic records and access information for each title of an e-journal contained in an aggregation can be exported into the local catalogue of the library for retrieval purposes.

Introduction

Dear colleagues, I am delighted to be here representing the German Union Catalogue of Serials and I would like to thank the Serials Section of IFLA for giving me the opportunity to talk to you during this conference. The theme of this session is "Navigating the world of serials: New initiatives in management and cataloguing".

In my presentation I first want to talk about some general features and figures of the German Union Catalogue of Serials (or in German: Zeitschriftendatenbank, in short ZDB; I will use this abbreviation during my presentation). Then I will talk about the modes of integration of journal aggregator information into ZDB.

I. Features and figures of the German Union Catalogue of Serials (Zeitschriftendatenbank/ZDB)

Features and figures of ZDB I

- ZDB = Zeitschriftendatenbank = German Union Catalogue of Serials
- National union catalogue for continuing resources of any type
- 1.3 mio. titles
- over 7 mio. holdings of 4300 libraries in Germany and Austria

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ZDB can look back on thirty years of a successful history. Originally, it was a project for cataloguing automation with only a few member libraries. It then however developed rapidly

to become the only national library network resp. union catalogue in Germany. It is an inherent component in the infrastructure of information provision for and by libraries. For some time now, the academic libraries of Austria (including the National Library in Vienna) collaborate with ZDB.

The database currently contains over 1.3 mio. titles of continuing resources of any type and around 7.1 mio. holdings representing more than 4300 libraries in Germany and Austria.

The ZDB was established by the Berlin State Library (Staatsbibliothek zu Berlin) which has remained the responsible parent institution. The editorial board for bibliographical control is located at the Berlin State Library. The library also represents ZDB in the library community and takes the lead in advancing and promoting ZDB. The German National Library has been the technical partner over 8 years now. Its principal task is - besides hosting the database – the provision and distribution of the data services which are offered by ZDB to regional library networks, individual libraries and other services related to libraries.

ZDB contains entries for serials of all kinds, this means for journals, newspapers, serials, data bases (so-called continuing integrating resources) of all periods, countries, languages, and material types. The records consist of the bibliographic description and holdings records of the individual member libraries. The bibliographic description of the ZDB is based on the German "Regeln für die Alphabetische Katalogisierung". These rules form the cataloguing standard in Germany and are to be replaced in the future by the new international cataloguing code RDA (Resource Description and Access). The bibliographic records are on the one hand linked with the entries of the national authority files for persons, corporate bodies and headings, on the other hand related titles are linked together. This means that e.g. title splits for former and later titles are linked, but also entries for printed and electronic editions. The integration is done by a link of ID-numbers.

The ZDB fulfils a number of functions and services with its comprehensive data pool. At first, it is an instrument for shared serial cataloguing. New title records for serials are primarily created in the ZDB, data maintenance is exclusively performed in the ZDB. Holdings records are either created directly in ZDB or in one of the regional networks which almost all German and Austrian libraries belong to. In both cases it is ensured by regular update-services among the systems that title and holdings data are identical in all systems. Local library systems are provided with ZDB data by their regional network.
This workflow guarantees a high degree of labour division among the participating libraries. At the same time, a special unique ID-number is assigned to each title record which is reused in a multitude of other systems and thus enables smooth updating but also linking between different databases.

ZDB has the character of an authority file for serials in Germany and Austria. Its primary function is that of a cataloguing master for serials. Therefore member libraries have to comply with a rather strict cataloguing standard. Only the editorial board is allowed to make major changes in the title records (especially if journal entities are concerned) or delete them. A high data quality and consistency is indispensable due to the broad reuse of the ZDB data in other systems. In addition, the ZDB has also served as national ISSN register since 2007. The International Standards Serials Number (ISSN) is assigned to new German titles on the basis of the ZDB bibliographic records.

From its very beginning, the ZDB has been functioning as basis for interlibrary lending and document delivery in the field of journals. Besides the general reuse of data in other library systems, the machine-readable structure of the ZDB holdings data allows the automated order processing that is now standard within online ILL.

II. Dealing with journal aggregators in ZDB

As a central service provider ZDB has to react to new developments in order to meet the needs of participant libraries. Especially the emergence of electronic products produced a variety of challenges to the traditional ways of managing metadata for this material.
On one hand ZDB has a certain data model and the guiding principles of a duplicate free database and cooperative cataloguing, on the other hand the field of electronic journals is developing fast. This is especially true for the ways in which e-journals are marketed. They come in packages or aggregations. Libraries usually do not subscribe to single e-title any more.
Nevertheless access to individual titles and individual library holdings is assumed to be still relevant. Users want to find everything in their local catalogue, and they look for a title, not for a package. That means that titles in an aggregation have to identified and recorded to bring them to the user.
This is difficult because the acquisition of large packages requires processing a large number of titles in a short time, in order to get the material into the local catalogue. Additionally aggravating is the fact that the titles contained in a package or an aggregation may change often. Libraries often lack the capacity to create und update the required records for titles and holdings in due time.
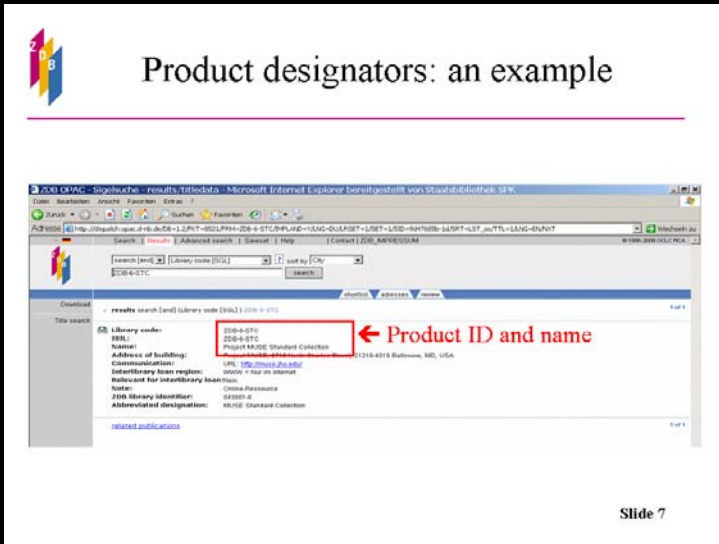
How can these conflicting demands be brought together for an instrument like ZDB?
I first want to talk about the way aggregator information is recorded in ZDB. Then I would like to give some details about the practical use of this data model.

II. 1. The data model for journal aggregators

As mentioned a guiding principle for the ZDB is to avoid duplicate records, i.e. that there is only one record for every journal entity. It may very well be that one title is part of various journal packages or aggregators. We therefore had to find a way how to integrate or combine package or aggregator information with the title entities. In ZDB this is done by creating so-called product designators. A record is created for each designator and kept in a separate file of the database. They have authoritative character within the German library community and – like the bibliographic data – are distributed to other library systems. The main function of the product designator is to keep the packages together.

Here is an example of such a designator record:

Especially relevant is the fact that each designator has a unique identifier, like the ZDB ID number. The creation of the designator records is done centrally by the editorial office of ZDB.

This product ID is added to journal records in two ways. First the product code is added into the bibliographic description. Secondly, the record for the product designator is linked to the bibliographic records.

Example of an aggregator title

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What can be done with this information?
The principal function is selection for various purposes.

Benefits from the data model

- Get an overview which titles are part of a particular product
- Get an overview which aggregators a particular title is part of
- Select data for further distribution and/or processing in secondary system

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1. Get an overview which titles are part of a particular product
If you search for a product designator in our electronic catalogue all the journal titles linked to this product can be retrieved with one click. The same result can be reached by directly searching for the product designator ID.

2. Get an overview which aggregators a particular title is part of
Looking at individual journal titles the product designators give information about whether a title belongs to one or more aggregators. Eventually this could be used for overlap analyses: very often a title is part of several aggregators and it happens frequently that libraries subscribe to various aggregators with partially identical content. To avoid this and to have a basis for secured acquisition decisions an overlap analysis is helpful.
The following slide gives an example for such a title.

Example of a title record with several product designators

3. Select data for further distribution and/or processing in secondary system
Most academic libraries in Germany belong to one of six regional library networks. Those networks usually provide the data for local library catalogues on the basis of a larger regional catalogue database. The data for the continuing resources come from ZDB, the data for monographic and other material usually is created within the library network or is acquired from vendors or sources like the LoC. Many libraries do not manage individual license records within ZDB for the e-journals or aggregators they have subscribed to. Instead, their regional library computing centre is creating such records for them. This is done based on the information which library holds which aggregator. In order to get the whole package into the local system the regional network can use the product information to select the titles and create holdings records.

Now I would like to introduce the methods by which aggregator information is integrated into ZDB.

II. 2. Product sponsorships

After the concept of the product designators was introduced to the ZDB members some libraries developed the idea of so-called product sponsorships. That means that a library takes the responsibility for adding the product designators and the relevant vendor URLs to the ZDB titles and keeping this information up to date. This usually is done on the basis of title lists that vendors supply along with a subscription. Therefore a prerequisite is that the library has a subscription for a particular aggregator. Libraries organized in a consortium also use the concept of product sponsorships to cooperatively manage recording the titles in ZDB. In most cases there already exists a record for the title in ZDB which must only be amended with the product information.

Since this method still involves manual changes for each record it is only feasible for smaller packages of up to a couple of hundred titles. But it is a very practical method of labour division and efficient cooperation: the effort for the individual library is manageable and libraries profit from each others work.

Up to now there are about 10 sponsor libraries managing 15 products. We hope that there will be more sponsorships in the future.

II. 3. Integration of information provided by a vendor

The second method to deal with aggregators in ZDB has been developed in cooperation with the vendor EBSCOHost in the year 2002. Various ZDB member libraries have subscriptions to databases containing aggregations of electronic journals like e.g. History Reference Center by this vendor. In comparison to the product sponsorships here data are managed centrally by the editorial office of ZDB with semi-automated procedures.
EBSCOhost provides two sets of data. One set consists of title information and is provided in the MARC format. A special feature is that title records not only contain ID-numbers of EBSCO, but also ID number of ZDB. The title data are converted to the ZDB format. These data are then checked against the ZDB database. The ZDB ID-number serves an "anchor" for this update procedure. New EBSCO titles are catalogued manually. EBSCOhost then receives an updated list with new ZDB ID numbers.
The second set of data provided by EBSCOhost contains information about which journal title is part of which aggregator. For each aggregator there is a product designator record as described before. The product-related data are directly imported into ZDB and added to the titles. The data are provided to member libraries by ZDB independent of the fact that there actually is at least one subscription to a particular aggregator.

Cooperation with EBSCOhost II

- EBSCOhost provides also files with product information
  – Allows allocation of journals to different aggregators/databases
  – Integration of product designators
- Data provision on a monthly basis

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EBSCOHost provides ZDB with data on a monthly basis. Although there are routines to process the data at least in a semi-automated way, due to the frequent changes concerning titles as well as products a lot of manual editorial work is necessary to record or repair titles that have no match in the ZDB database. Because of the great amount of data involved this is can be a time consuming task. ZDB therefore has not extended this method to other vendors so far, e.g. ProQuest. A solution might be that ZDB provides a central service only for aggregators that its member libraries have subscribed to.
In general, probably a mixture of centralised and decentralised procedures is adequate for a database with multiple functions such as ZDB.
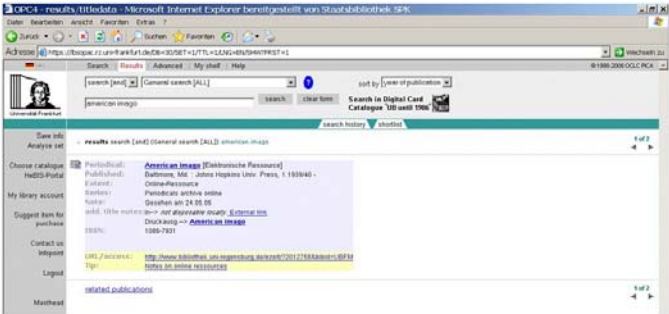
What are the benefits?

Both methods – product sponsorships and central processing of vendor data - allow ZDB to remain a bibliographic database without duplicate records for the same journal and thus keep up the character of an authority file. Unique entities are also a condition for other services using ZDB data, e.g. online ILL.

Individual libraries benefit from both methods: even if they act as product sponsors they usually have subscribed to more than one package or aggregator and thus profit from the contributions of other libraries.

An aggregator title in a local electronic catalogue II

"American imago" in the catalogue of the University Library of Heidelberg
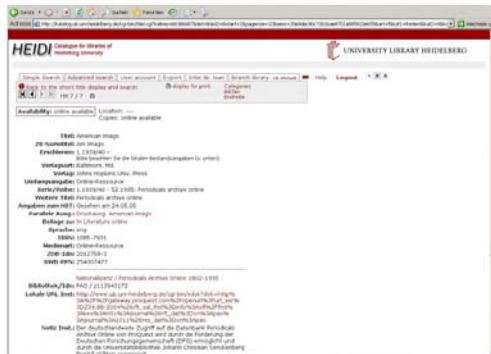
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Regional and local library systems use the product designator information in their integrated library systems, especially in order to create records for local catalogues. That way users can search for individual journals in the catalogue and usually access them directly.

And that is the ultimate goal of our work: to serve the user in the best way possible!

The goal:

Serving the user in the best way possible!

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Thank you!