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Global publishing and national heritage: Selection of Internet resources for national bibliographies

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The era of online publications at Die Deutsche Bibliothek was initiated on July 1, 1998 with the dissertation “Examination on the development of early acoustically evocated potentials with cats for utilisation in basic research and clinical applications” (Untersuchungen zur Entwicklung der frühen akustisch evozierten Potentiale (FAEP) bei der Katze für den Einsatz in der Grundlagenforschung und zur klinischen Anwendung” by Petra Keller.

It is the legal mandate of Die Deutsche Bibliothek as central archival library and national bibliographic centre of the Federal Republic of Germany to collect, archive, index bibliographically all German and German-language publications and to provide public and unconfined access to it. Apart from print media, digital publications on physical data carriers have also been collected since some time and are covered by the “Law concerning Die Deutsche Bibliothek”.

Online dissertations

For the following reasons, Die Deutsche Bibliothek decided to start with online dissertations whose numbers were beginning to increase, especially in the exact sciences, as its first step towards development of a completely new procedure for collecting, archiving and indexing of online-publications:

- Online dissertations are static online publications, meaning that they are self-contained and completed at their first publication date.
- Online dissertations generally consist of only a single data file.
- Online dissertations are publications free of any restrictions for access and use.

However, before beginning with the collection of these publications on July 1, 1998, many questions had to be addressed:

- Registration procedure: How would the dissertations get to Die Deutsche Bibliothek?
- Metadata: Which metadata should be recorded?
- Format: In which data format the dissertations should be delivered?
- Indexing: Which new elements are required for the descriptive and subject indexing?
- Archiving: How can long-term accessibility to the dissertations be technically realized ?
- Bibliographic indexing: What should the entry in the catalogue and the national bibliography look like?
- Use: How does the user obtain access to the full text?

A work group with members of all departments of Die Deutsche Bibliothek developed a procedure taking all these points under consideration.

For the submission of dissertations in print and microfiche form there exists a long standing procedure between Die Deutsche Bibliothek and the university libraries: It is not the author but the university library which submits the dissertation to Die Deutsche Bibliothek. So the methods for submission of online dissertations had to be settled also with the university library, not with the individual author.

Participating university libraries register their online dissertations electronically at Die Deutsche Bibliothek. Initially a register form only available on the server of Die Deutsche Bibliothek was used. The project "Dissertations online" by the Deutsche Forschungsgemeinschaft jointly with Die Deutsche Bibliothek developed a metadata format for doctoral and postdoctoral theses - METADISS - based on the Dublin Core Metadata Element Set. The format was approved by library systems and by university libraries. The metadata set is compiled by the author of the dissertation and can also be used for registering the dissertation by the university library.

After the registration by the university library, Die Deutsche Bibliothek loads the document from the university server on its archive server DEPOSIT.DDB.DE. From accompanying metadata, a front page is generated automatically containing the most important data and providing access to the document.

The metadata set transmitted by the registration procedure consists of obligatory and facultative data elements.

Obligatory, for example, are:

- Name and location of the submitting institution
- Author, title, language, data concerning the dissertation
- URL of the document, format, number of data sets

Examples of optional elements include:

- Details relating to the author like address, date and location of birth
- Subject headings, abstract, supervisor

The publication must be transmitted in a format preferred by Die Deutsche Bibliothek. Formats currently mostly used are PDF, Postscript and HTML. The complete list of preferred formats is available on the homepage of Die Deutsche Bibliothek.

The formal indexing is effected on the basis of the "Rules for the alphabetic cataloguing of non-book materials, RAK-NBM" in the PICA-ILTIS format, which is the internal database format of Die Deutsche Bibliothek and was extended for electronic off- and online publications. Subject indexing is effected on the basis of the "Rules for the subject catalogue, RSWK" which now includes electronic publications.

Like print and microfiche dissertations, online dissertations are indicated in series H (University Publications) of the German National Bibliography. The bibliographic data contain both the URL of the delivering institution as well as the URL of Die Deutsche Bibliothek archive server.

The online dissertations taken over from the university libraries are saved permanently on the archive server of Die Deutsche Bibliothek DEPOSIT.DDB.DE. This enables access to the dissertation even when the dissertation is no longer available on the server of the university.

Currently, it is possible to search for online dissertations deposited at Die Deutsche Bibliothek via the OPAC in Frankfurt am Main and via the Z39.50 gateway, both accessible on the Internet. In view of the requirement of new elements for online publications, research opportunities have been extended. Departing from the title information, the documents can be recalled directly.

The procedure described here for collecting, archiving, and bibliographic indexing of online dissertations has been applied for almost three years now. During this period, Die Deutsche Bibliothek has acquired nearly 4,000 dissertations.

Publications issued by publishers

Legal deposit for online publications has not been provided for in the "Law concerning Die Deutsche Bibliothek". Die Deutsche Bibliothek does not consider an amendment of the law at this point in time as recommendable, as it first wants to gain secured results with exemplary publishers as far as technological requirements for release, data transmissions, entering into the own system, and so on are concerned. Publishers do not see themselves as being in the position of providing long-term archiving for electronic publications to the required extent; therefore, there is a great interest that Die Deutsche Bibliothek might assume this responsibility centrally.

Some basic aspects have been defined in preliminary stages in accord with publishers, librarians, information specialists, and government representatives, and these were passed by the Publishers' Committee of the German Booksellers' Association (Verlegerausschuss des Börsenvereins des Deutschen Buchhandels) in June 1997:

- Online publications need to be transmitted as a matter of principle through data networks or - upon request - on data carriers.

- Online publications issued in various formats should be submitted in the format preferred by Die Deutsche Bibliothek.
- Whenever publications identical in content are released simultaneously in a physical medium and as online publication, both formats have to be submitted.
- Whenever publications identical in content are simultaneously distributed by different providers, they have to be submitted only once.
- The library has permission to copy the online publication for the purpose of long-term archiving. When doing so, authenticity of the content must be safeguarded.

Die Deutsche Bibliothek jointly with the publishers DuMont (Cologne), K.G. Saur, (Munich), Springer (Heidelberg) and Wiley VCH (Weinheim) has constituted a “Workgroup Electronic Deposit Library”, in which also the German Booksellers’ Association participated. In this Workgroup the conditions are tested and negotiated under which Die Deutsche Bibliothek could also function as archive for online publications.

The first results were presented to the Publishers’ Committee of the German Booksellers’ Association in March 2000:

It is assumed that the current law as well as the existing regulations for publications on data carriers can also be applied to online publications, but that the particular features of digital publications will require adjustments. Suitable procedures for submitting, archiving, and making them available need to be created.

Owing to the quantity of online publications facing Die Deutsche Bibliothek, at least three ways of processing come into question:

- Archiving and full bibliographic indexing, respectively indexing on the basis of metadata or purely automated procedures (status “archived”)
- Linking to provide access to the publisher’s server, indexing and eventual archiving (status “linked”)
- Linking and indexing without later archiving (status “served”)

In contrast to other national bibliographic guidelines for collection of online publications (which provide for delimitation according to principles of nationality and importance of content of the respective publication), Die Deutsche Bibliothek continues to pursue traditional territorial, objective, and largely value-free collection principles. Subject to legal deposit are all online publications whose originators (copyrights holders) are based in the Federal Republic of Germany and that are made public via communication networks. Not subject to legal deposit are business reports, annual reports, and administration reports, pure public relations works, advertising, and possibly net publications below a determined scale.

For online publications whose copyright holders are based in Austria or in Switzerland, access will be granted internally by contract, but archiving them is not planned. In any case, they will be indexed bibliographically in the German National Bibliography.

In cases where a net publication exists as a parallel edition in print or microform that is identical in content, both formats are collected. In cases where the net publication is matched by an identical electronic format on an electronic data carrier, in general the format on the data carrier will be collected. In cases where the net publication is available in several formats, the format preferred by Die Deutsche Bibliothek must be submitted. Online publications that are equipped by the producer with mechanisms like copy protection, limitation of usability dependent on individually defined system environments, have to be submitted in such a state that allows Die Deutsche Bibliothek to fulfil its mandate of long-term archiving and permanent availability (within a defined framework).

For the timing of the submission, the rules governing deposit in general pertain; that is, deposit within a week after release. Dependent on the case of the three possible ways of processing of online publications at Die Deutsche Bibliothek mentioned above, it is also possible to serve legal deposit temporarily through linking.

As a matter of principle, any net publication should be registered electronically at Die Deutsche Bibliothek. Deposit of the publication should be effected by the publisher ("Push-Procedure") in contrast to procedures for online dissertations ("Pull-procedure"). Given various formats of online publications (static, dynamic, databases) and the practical realisation of the deposit procedure in particular cases, Die Deutsche Bibliothek will also accept cumulated deliveries according to determined deadlines.

Like with online dissertations, a registration procedure is being developed between publishers and Die Deutsche Bibliothek. For this procedure, the metadata format according to the Dublin Core Element Set will also be applied containing the following elements (among others):

- Metadata for identification (URL, DOI, URN)
- Metadata concerning conditions for access as well as usage and acquisition

- Metadata referring to the structure

- Metadata referring to the content

- Technical metadata

Free of charge access to copyright-protected publications that are stored on the archive server of Die Deutsche Bibliothek is only authorised for registered users at multimedia workstations in the reading rooms of the Deutsche Bibliothek (Frankfurt am Main) and the Deutsche Bücherei Leipzig. External access to archive copies on the server of Die Deutsche Bibliothek is only possible for material not covered by copyright.

Die Deutsche Bibliothek is planning to draw up a model contract applicable in general for handling copyright-protected publications by publishers so that individual contracts with every single publisher will become unnecessary.

The ideas and agreements between Die Deutsche Bibliothek and German publishers described above are reflective to a significant extent of recommendations for voluntary deposit of electronic publications at national libraries which were passed at the end of the last year by the Conference of European National Librarians (CENL) and the Federation of European Publishers (FEP).

Last year, Die Deutsche Bibliothek acquired about 320 online periodicals from Springer on its archive server, which will be followed by online monographs soon.

Projects

From the outset, Die Deutsche Bibliothek sought co-operation with national and international committees in participating in numerous projects concerned with electronic publications.

Some of these are described below:

Dissertations online

This project, funded by the Deutsche Forschungsgemeinschaft and its partners the German scientific associations came to conclusion last year. The aim of the project was to create the legal, technical, and organisational basis for the deposit, bibliographic indexing, and access to online dissertations. Die Deutsche Bibliothek was involved in this project.

The following results have been obtained (among others):

- In co-operation with the project META-LIB, a Dublin Core Metadata set – METADISS - was developed and used by the university libraries for the description of online dissertations and their registration at Die Deutsche Bibliothek.
- Questions concerning dissertation procedures, data protection law, and copyright law were clarified between authors, universities, libraries and publishers.
- Formats for archiving, conversion, retrieval, and presentation were recommended, and tools for conversion were developed.
- Archiving of online dissertations on document servers of universities and on the archive server of Die Deutsche Bibliothek was safeguarded.

In the meantime Die Deutsche Bibliothek has established DissOnline, an agency for co-ordination to serve as contact point for scientific institutions, libraries, publishers, and authors. It co-ordinates further developments, handles public relations, and promotes publishing of dissertations in electronic form.

META-LIB (Metadata initiative of German libraries)

Die Deutsche Bibliothek and the Niedersächsische Staatsbibliothek Göttingen are now participating in the second stage of META-LIB, a project funded by the Deutsche Forschungsgemeinschaft. The aim of the project is to develop guidelines for the application of metadata, especially of the Dublin Core Set for the indexing of digital and digitised resources. Die Deutsche Bibliothek has taken over the responsibility for developing and testing the national bibliographic indexing of electronic resources applying Dublin Core Metadata as well as authority files. These are the following (among others):

- An outline of a data model according to the standard for Functional Requirements for Bibliographic Records (FRBR)
- Development of metadata sets. (As mentioned above the set METADISS has been established jointly with the project group Dissertations online. Currently a metadata set is being developed for continuous and completed documents (periodicals and monographs)).

- Preparatory work for a data prototype concerning authority files for electronic resources, based on FRBR and in co-operation with the IFLA work group FRNAR (Functional Requirements and Numbering of Authority Records)

The project started in 1998 and will be completed in 2002.

NEDLIB (Networked European Deposit Library)

Long-term archiving and accessibility of electronic publications were the subject of the European project NEDLIB that was concluded at the end of 2000. Eight national libraries were partners in this project as well as a national archive, two software firms, and three publishers as sponsors. Financial support took place within the framework of the Telematic Programme of the European Commission.

The following results were obtained:

- A model of a deposit system for the long-term archiving of electronic publications
- Guidelines concerning technical standards and solutions, procedures for the practical application
- A freely available software package for the automated collection and archiving of electronic publications
- Results of an experiment concerning emulation as strategy for long-term preservation
- Market forecast for electronic publications

TEL (The European Library)

This project was initiated on February 1, 2001 for a period of 30 months. Project partners are eight European National libraries as well as the Conference of European National Librarians (CENL). The European Union supports the programme within the framework of the Information Society Technology Programme.

The aim of this project is to develop a portal enabling simultaneous searching in the online catalogues of European national libraries as well as allowing access to digital and conventional collections and services. On the basis of the Gabriel platform, the information server of the European national libraries, a virtual European library shall come into existence.

The following results are sought:

- Agreements with the publishers of the respective countries concerning using the possibilities of electronic publications
- Development of a common business model for the use of electronic publications
- Development of a joint portal
- Development and tests of open standards, work methods and procedures to be adopted without any problems by other national libraries

Perspective

Online publications are increasingly going to play a more important role in the years to come. Die Deutsche Bibliothek has undertaken significant efforts in terms of personnel and technology to provide long-term preservation for these publications. Apart from this, the influx of print media continues to increase. The German National Bibliography has indicated around 226,000 publications last year for an increase of 4 % over 1999. For the future, Die Deutsche Bibliothek continues to accept responsibility for archiving and to making accessible all formats of publications despite their varying requirements.

In conclusion, you are invited to visit these Internet addresses:

Homepage Der Deutschen Bibliothek <http://www.ddb.de>

DissOnline <http://www.ddb.de/professionell/dissonline.htm>

METALIB <http://www.ddb.de/professionell/metalib.htm>

NEDLIB <http://www.kb.nl/coop/nedlib/>

TEL <http://www.europeanlibrary.org/>