

# Germany

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## General description of the political support for digitisation (and national ownership)

Culture, the support of sciences and the related infrastructures in Germany are mainly the decentralised responsibility of the 16 Länder (States). Therefore, many digitisation activities are the responsibility of the 16 States and their respective Ministries for Culture or Science. Furthermore, many initiatives are independently developed by universities, libraries, archives, museums, research centres, academies, private associations, publishers etc. within their specific legal frameworks. The Federal Government assumes responsibility only in some areas and fulfils a coordinating role in some others. Within their responsibility, the Ministries both for Education and Research (BMBF) and for Economics and Labour (BMWA) support several digitisation initiatives in this overall rather heterogeneous landscape.

At the level of the Federal Government, in 2005 a sub-department of the Commissioner for Cultural and Media Affairs (BKM) has commissioned a study *Bestandsaufnahme zur Digitalisierung von Kulturgut, mit Handlungsempfehlungen* (State-of-the-art report on digitisation of cultural heritage materials, with recommendations for further action), carried out by Fraunhofer IMK - Institut für Medienkommunikation. Its background are, on the one hand, the deliberations of some European heads of government in 2005 concerning the creation of a European Digital Library by digitising the rich European cultural heritage. This is a response to the Google initiative for the digitisation and accessibility of several million (mostly English-language) books. On the other hand the study addresses:

- a) the need to have a state-of-the-art overview of the techniques, problems and challenges of digitising cultural materials (which often create specific problems)
- b) the need to avoid duplication of work at the national level

- c) the questions related to providing easy access to digitised materials.

While aiming at preventing monopolistic, or quasi-monopolistic situations under which access to digitised cultural heritage materials will be subject to economic framework conditions of one or few data providers resp. information brokers, the study will also analyse the economic potentials of such digitised materials. The study foresees expert workshops with representatives from archives, libraries, museums etc., where common grounds regarding techniques and standards (also applicable to the industry, the health sector etc.) will be examined. Cross-linking with other German projects (such as NESTOR, see below under D) is also considered.

Practical recommendations to result from the study will target standard practices to be followed with regard to interoperability, long-term archiving and accessibility. It will look at a cost-benefit analysis of digitisation and at relevant business models with a view on exploiting the digital resources. It will try to better understand the kinds of use foreseen/possible for digital resources and the actual use made of them, to advise regarding the choice of which cultural resources should be digitised, to investigate the relation to microfilming, preparations for handling the objects to be digitised, quality criteria applied, 3-D-digitisation, existing standards or standards to be created, experiences in other countries, audio-visual digitisation, presentation of digitised objects, protection of copyrights, digital trustworthiness, etc.

## Range of policy (geographical, institutional and ideological)

In September 2001 EUBAM was founded. EUBAM is a permanent joint Working Group of representatives from the Ministries for culture of the States and the Federal

Government as well as experts from Archives, Libraries, Museums and Monument Protection, and the German Research Council (DFG). Its mission is to inform these different sectors about EU activities concerning the available funding of cultural activities and, in particular, about digitisation of cultural heritage. It also functions as a contact point for the related EU bodies (e.g., NRG) vis-à-vis Germany <<http://www.eubam.de>>. EUBAM works in close collaboration with the "Digital Library Forum" <<http://www.dl-forum.de>>, a portal funded by the Federal Ministry BMBF, which brings together information about matters related to the "Digital Library".

Currently EUBAM plans to set up a large-scale information portal <<http://www.kulturerbedigital.de>> resp. <<http://www.digital-heritage.de>> that is intended to serve as the central reference point for the coordination of digitisation activities and the shaping of an overall national digitisation policy. It is intended to include, i.e., a complete list of German digitisation projects, and will also function as the mouthpiece of the EUBAM group.

#### **Available instruments and the use of those: guidelines, funds, target organisations**

A national semi-government agency is the German Research Council (DFG), which funds projects and establishes project schemes for co-ordinated actions in all fields of science. The DFG supports a number of projects aiming at the establishment and improvement of scientific information infrastructures in Germany. It provides funding for the acquisition and Web-based cataloguing of digital research literature, the implementation of innovative electronic means of communication and publishing (including the long-term availability of digital documents), the development of new software and techniques for the improvement of scientific information systems and the creation of a national digital research library providing access to historical materials <<http://www.dfg.de/lis>>; <[lis@dfg.de](http://lis@dfg.de)>.

In 2005, the DFG has published a position paper *Aims and structure of the funding programme 'Cultural heritage'* for digitisation projects under the organisation's auspices. The paper outlines, against the aim of supporting the scientific landscape in Germany, the need for access to historical documents

(autographs, papers, early printed books etc.) and to create central reference tools for these sources. Within the framework of co-existence of conventional (such as libraries, archives, museums) and digital tools the need is stressed for full-text access to documents on a digital basis. The textual entirety of cultural heritage in the public domain should be accessible this way within a foreseeable future, organisational barriers between different institutions should be removed. The position paper at the same time defines the main focus areas of the funding scheme. Given the central importance of the DFG for German academia, these guidelines are of utmost importance. Further papers and guidelines of the DFG will shortly be revised, too, to meet the present needs of digitisation (*see also under E*).

#### **Monument preservation**

The monument preservation agencies of the 16 German states have formed a joint group in 1951, under the organisational umbrella of the "Conference of the Ministers of Culture (KMK)". The group deals with all general aspects of monument protection, and has recently built an Internet portal offering such general information. It is linked to the homepages of the respective state agencies thereby offering access to all relevant information available in Germany. <<http://www.denkmalpflege-forum.de>>.

#### **Library scene**

It is to be noted that today, cataloguing in almost all scientific libraries is carried out exclusively digitally. The retro-conversion of old card-catalogues continues and will do so for a quite a while. Digital publication, and cataloguing of and access to dissertations is being installed in more and more universities, very much in line with the open access philosophy. Digitisation of complete works (e.g., books) cannot be carried out on a large scale and, due to the general situation of resources, must be restricted to special copies and certain ranges of books (determined by age, or deteriorating paper quality) that most urgently need digitising from a conservational point of view.

*"Catalogue enrichment"*: Several libraries resp. networks of libraries in Germany provide, attached to

the catalogue information of a book, further information such as tables of content, publisher's information, text samples, frontispieces/cover images etc. so that users can access more information about the books already in the electronic catalogue, and their choice of books is made much easier.

In the following, German projects from 2005 of an exemplary nature are being shown for the 5 action areas of the NRG Dynamic Action Plan. Projects already described in previous reports are, by and large, not repeated here.

## A. Users and content

### *vascoda*

Vascoda is a central online access gateway for scientific and scholarly information, launched in summer 2003. Currently it offers access to resources of more than 40 German libraries, research institutions and other information providers. Vascoda's backbone are the 'virtual libraries', i.e. Internet-based, subject-specific access points to a variety of information resources.

Subjects covered in Vascoda range from 'art history' to 'wood technology', searches are organised along the categories 'Engineering and Physical Sciences', 'Life Sciences', 'Law, Economics and Social Sciences', and 'Humanities and Area Studies'. Co-financed by the Federal Ministry for Education and Research (BMBF) and the German Research Council (DFG) Vascoda has recently assumed the legal status of an incorporated society. This change is considered to be an important step towards organisational sustainability.

<<http://www.vascoda.de/>>

### *TEL-ME-MOR*

In the field of libraries, TEL-ME-MOR is a project funded by the European Commission under the Sixth Framework Programme of the Information Society Technologies (IST) Programme and led by Die Deutsche Bibliothek (Frankfurt/M.). The project started on 1 February 2005 with the overall goal of stimulating and facilitating the participation of organisations from the New Member States of the European Union in projects funded within the Information Society Technologies area. In line with its main goals, this site, besides informing on the project's activities and results,

presents information on the opportunities for New Member States for participation in future European projects within the Cultural Heritage and Learning sectors of the Information Society Technologies Programme.

<<http://www.telmemor.net>>

In the field of archives, some of the State archives of the 16 German States have continued to extend their Internet-based information offers.

### *Online digital image database of the Archival Directorate of Rhineland-Palatinate*

The Archival Directorate of the State of Rhineland-Palatinate has, in recent years, completely digitised its photo holdings and the major parts of its holdings of posters and maps, using the institution's own manpower. These are presented, in reduced image resolution, together with the relevant cataloguing data in the archive's online database. An online shop for ordering and processing of payments will follow shortly. Thus, in future not only selected finding aids but the entire database (except materials under legal restrictions) of this archival agency will be at the disposition of the users.

Another project, which is carried out in cooperation with the University of Cologne's Department of Cultural Informatics, is the digitisation of "Working films" which have resulted from the earlier German Civil Protection programmes of security filming of important cultural holdings. The digital material produced will, in a next step, be linked to the already existing catalogue data in the online database.

<<http://www.landeshauptarchiv.de/>>

### *Online archival database Lower Saxony*

The initiative, designed to bring the archival finding aids to the Internet in order to allow for easier and time-reducing archival research also pertains to other States in Germany. E.g., Lower-Saxony has now online its AIDA database with some 8.9 mio data records describing archival records, including the database on emigrants. The functionality of the data base also allows electronic ordering of archival records so that these are available when the user arrives at the archive to consult them.

<<http://www.staatsarchiv.niedersachsen.de/>>  
<<http://aidaonline.niedersachsen.de/>>

#### *ARIADNE online archival database Mecklenburg-Vorpommern*

ARIADNE (Archive information and administration network) is the name of archival software and of a network for archives in the German North-Eastern State of Mecklenburg-Vorpommern. The project is being funded by the DFG. Free software is being created for optional use by any small or medium-size archive in the State. It is a precondition established by the project that only open-source components are being used for the development of the software. The source code and other features of the software are freely available. This approach aims at, and allows for, a network to emerge from the participating archives, with a central Website on which the results of user searches are displayed. The entry page to the search Website is already a multilingual offer in English, Swedish, Danish, Polish, Russian, German and French.

<<http://ariadne.uni-greifswald.de/>>

#### *Hessen: HADIS*

In the State of Hessen, an online key-word search functionality providing access to the holdings of the archives is presently being built. It is structured in a very clear way according to the 6 types of archives represented in the State, and within these, according to the different types of archival documents and the provenance of the holdings.

<<http://www.hadis.hessen.de/>>

#### *MIDOSA 21 further developed*

The State Archive of the State of Baden-Württemberg, in the process of introducing comprehensive software for its own activities, has further developed the existing German archival software MIDOSA 21. This software allows for the presentation and Internet-accessibility of finding aids, offering structural views and full-text functionalities.

More than 2,600 finding aids can now be consulted via the Internet <[www.landesarchiv-bw.de](http://www.landesarchiv-bw.de)>, including the finding aids for digitised archival documents like the "Photo collection Prager".

<[http://www.landesarchiv-bw.de/prager\\_auswahl](http://www.landesarchiv-bw.de/prager_auswahl)>

#### *Historical watermarks*

One specific area within the cultural heritage is that of historical paper watermarks. Such watermarks are important indicators in the history of paper and

therefore important tools in research, e.g. in dating historic documents. A specific database serving as the central digital repository for a large collection of watermarks was created by the State Archives of the State of Baden-Württemberg (Stuttgart), with funding by the DFG and is accessible at <<http://www.piccard-online.de>>. This online database comprises the entire "Piccard collection" of watermarks (some 95,000 cards and some further 25,000 blueprints of watermarks, collected from ca. 1930 up to 1989 and originating from this State and its neighbouring countries, from over 85 archives and other institutions). The collection is organised by "Type of watermark" and has now some 25 such groups. Only about 2/3 of the watermarks have previously been published in printed volumes. With the online database, a richer and easier-to-access offer is now available. The database is also directly linked to the "Wiener Wasserzeichen des Mittelalters" (WZMA) database <<http://www.oead.ac.at/ksbm/wz/wzma2.htm>>. It is planned to initiate an EU-funded project for creating an Internet portal to watermarks which is planned to include piccard-online, wzma-online and WILC <<http://watermark.kb.nl>>, the online database of the Koninklijke Bibliotheek, Den Haag.

#### *Emigration from Southwest Germany*

Research on emigration and family research are two of the fastest growing areas in the Internet today. Consequently a lot of archival work is devoted to this topic. Individual genealogical searches, genealogical associations and Websites have a high attraction.

Another online database of the same State Archive (Baden-Württemberg), therefore, is that of emigration from this region "Auswanderung aus Südwestdeutschland" <<http://www.auswanderer.lad-bw.de>>. This is a database joined from 2 previously independent sources, now comprising some 350,000 entries on persons emigrated from South-West Germany (mainly to the U.S.) from 1750 until about 1930.

#### *Cloisters in Southwest Germany*

A third electronic online resource from South-West Germany is <<http://www.kloester-bw.de>>, by the Landesmedienzentrale (Regional media centre) Baden-Württemberg. This Website provides access to the

description of over 700 cloisters that existed in the region until 1803. The information can be retrieved by the users by searching for place, religion, or full-text with a lot of additional information being offered. The database is continuously being updated with additional information as it emerges.

#### *BAM Portal*

With the BAM Portal (Portal for Libraries, Archives and Museums), archives, libraries and museums in Germany are for the first time offering a common, overarching search tool for and within their digital finding aids, catalogues and inventory lists. Following the example of successful Internet search engines, a central index of the holdings of the institutions is being built. Search results are linked back to the record holding institutions, and may include digital images. In 2005 the BAM-Portal has continued its development, especially in further developing and improving its technology. A comprehensive user evaluation was started and will result in adapting content and functionalities according to the perceived requirements. In particular, by significantly multiplying the number of contributing data sources, the BAM Portal is coming ever closer to the predefined goal of offering a cross-domain search possibility that covers many of the main data sources in this field. It is envisaged to ultimately integrate the BAM Portal with the eEurope Action Plan, i2010 and eContentPlus.

#### *Portal Digitalisierter Drucke*

A very timely tool, not only for researchers, that is urgently needed due to digital developments, is a central digital catalogue and access point to all digitised library materials. Such tool is provided by the portal "Zentrales Verzeichnis digitalisierter Drucke" (Portal of digitized prints - <<http://www.zvdd.de/>>). It aims at listing all fully digitised library documents which are free for Internet access and which satisfy average science quality criteria. Digitised documents include newspapers, serials, music prints, broadsheets and, of course, monographs. In its first phase, the project concentrates on documents that were created with DFG funding, namely the prints of the 16<sup>th</sup> and 17<sup>th</sup> century.

#### *www.digicult-sh.de*

This project, which started in 2003 and covers the region of the State of Schleswig-Holstein (SH), provides an

online platform for presently 33 museums of this State showing important parts of their holdings. It has developed the software x-tree which allows the museums to catalogue their objects in a Web-based interactive mode. A central sever hosts all digital assets produced by the museums (catalogues, images, descriptions) while the original digitals remain locally with the museums. Presently, some 20,000 objects are in the system of which some 13,000 are already accessible online. The software connects the documentation process with national and international authority data and with other resources such as wikipedia. The project also includes multi-media products such as a 360° image presentation of all participating museums in the "media dome" of the State's capital, as well as regular training courses for museum staff to allow for their professional participation in the system.

#### *Digital Audio Resources: 4 projects*

In the field of digital audio resources, the University of Heidelberg, Chair for Semitic Studies, is presently digitising a collection of audio recordings in various Semitic languages and dialects. This repository includes the university's collections but is also an offer to private owners of audio recordings and related documentation in this field, for the preservation of their recordings and for being included into the central audio files database, while fully retaining their copyright of their own materials.

<<http://www.semarch.uni-hd.de/info.php4?PAGE=semarch.html>>

In the same area, that of audio recordings, the German Broadcast Archive (Deutsches Rundfunkarchiv, DRA Frankfurt/M. – Berlin) is presently transforming the sound archive of its Babelsberg outlet into a digital sound collection. Sounds and noises originating in modern, machine-based traffic of the 19<sup>th</sup> and 20<sup>th</sup> century are included. These are not the least important documents of the history of technology which have often been used in radio and TV productions and now also form an important source for e.g., museums and their presentation and reconstruction of authentic objects of history. Another project of the Archive is the digitisation of the entire collection of political broadcasting as delivered by East German TV in a specific programme ("Der schwarze Kanal") until 1989, a document of the cold war in central Europe.

<<http://www.dra.de/project3.htm>>



Another project in the field of sound digitisation is the digitisation of an historical advertisement broadcast archive spanning from 1948-1987 and containing audio files of 50,000 advertisement spots in German radio (covering many of the best-known consumer products of their time in Germany), recorded on 8,000 magnetic audio tapes. After digitisation, a data base of the spots will be created that will be accessible online. The project runs from January 2005 until December 2006 and is funded by the DFG in its programme "Cultural heritage".

<<http://www.bibliothek.uni-regensburg.de/projekte/hwa/digitalisierung.htm>>

#### *Digitisation of a portrait collection*

The University of Regensburg is hosting a collection of portraits from the graphical collection of the House Thurn and Taxis (an important historical dynasty in the South of Germany). The portrait collection mainly consists of works of the 17<sup>th</sup> and 18<sup>th</sup> centuries that were collected in the 19<sup>th</sup> century. It comprises about 5,000 items, ordered along criteria adapted from art history. A prototype for online presentation of the collection is presently available. The cataloguing and description of the portraits will be done according to relevant library cataloguing rules – including the use of the German name authority file PND –, with results being displayed in the catalogue of the University library. On the other hand, description will be in line with the rules and requirements (iconographic, time and topographic aspects) of the MIDAS system for art historical documentation in Germany. The data format used is compatible with that of the German DISKUS-Verbund, a national network for the documentation of objects and images in art and architecture.

<<http://www.bibliothek.uni-regensburg.de/projekte/portraits/portraits.htm#prot>>

#### *Online database of broadsheets*

Single-sheet broadsheets (Einblattdrucke) are an important medium of graphical communication in early modern European history, often combining pictures and text. A database to build a full catalogue of these specific materials is presently under construction at the Bayerische Staatsbibliothek München (Bavarian State Library Munich). Thousands of broadsheets are being scanned, the digital images are online available in high-resolution quality. Searching is possible by keywords,

personal names, geographical names, institution names and by a classification list of genre terms for broadsheets. The Website also offers a large bibliography on the subject.

<[http://www.bsb-muenchen.de/Einblattdrucke\\_der\\_fruehen\\_Neu.178.0.html](http://www.bsb-muenchen.de/Einblattdrucke_der_fruehen_Neu.178.0.html)>

#### *Online database of historical bindings*

Since 2001 the DFG has financially supported the extension of a database of (book-)bindings, held by libraries in Berlin, Wolfenbüttel, Stuttgart and Munich. The rubbings (blue-prints, tracings with the help of a pencil), made from the bindings of books and preserved over long periods of time as graphical documents, are now being scanned as digital images and are kept in a database which will be consultable online.

<[http://www.bsb-muenchen.de/Einbanddatenbank\\_\\_EBDB.177.0.html](http://www.bsb-muenchen.de/Einbanddatenbank__EBDB.177.0.html)>

## **B. Technologies for digitisation**

#### *Digital library mechanics and gears*

An important area of conserving historical cultural knowledge as well as knowledge required for modern technological production, training at technical universities, etc. and for institutions dealing with the history of the sciences is that of technological / engineering knowledge. In this area, the "Gesellschaft zur Förderung der digitalen Mechanismen- und Getriebebibliothek" has joined forces with 3 technical Universities in Germany (Ilmenau, Aachen, Dresden) for running a "Digital library of mechanics and gears" (Digitale Mechanismen- und Getriebebibliothek - <<http://www.dmg-lib.org/dmglib/main/portal.jsp>>).

It is supported by the DFG within its programme "Centres of excellence for research information".

The portal allows for browsing of the existing knowledge in this area, and provides assistance for solving exercises in construction mechanics. A large number of mechanical and gear objects have been digitised for this library which underpin the descriptions from literature as to the making and functioning of gears.

#### *Digitales Beethoven-Haus*

The museum "Beethoven-Haus Bonn" offers a virtual tour of its exhibition, and some Internet exhibitions as

well as an Internet version of each current special exhibition. It also offers a wide range of digitized documents thus allowing access to most of the important documents kept in the museum concerning Beethoven's work and life. In the "archive" ("studio for digital collections") over 5,000 documents are interlinked, by 26,000 high-resolution colour scans (music autographs, letters, pictures, first editions, ..), 1,600 audio-files, and 7,600 text files. This also includes topographic documents like maps and city views. Audio documents of all oeuvres of Beethoven can be consulted on-site. In a "virtual environment", which provides 3-D image and sound reproduction as well as interactivity, structures of musicology, dramaturgy, aesthetics of perception and of cultural history become perceivable. The concept of "Visualization of music" is implemented using modern digital technologies like "3D-passive-stereoprojection", 3-D picture sources, and "3D-Virtual-Reality Technology" / 3-D computer graphics. Some of the new technical inventions having been made during the process have been patented. Thus, a 20-minute version of Beethoven's opera *Fidelio* has been achieved, considerably shorter than the original opus, but still the longest VE-enactment achieved so far worldwide. Such digital reproduction and presentation of music together with its optical environment, to some degree, must be based on earlier (pre-)recorded versions of the music, and largely depends on a thoughtful and responsible arranging, cutting, and putting together of different resources to produce a digital presentation. Such very basic considerations for a responsible use and application of digital technology are an important part in the actual digitization work carried out with every digital media endeavour. These questions are also being explained, addressing not the least the visitor, the user of digital content, on the Website of the "Beethoven-Haus". Long-term preservation and colour matching are important criteria in the production of the digital documents. Emphasis is placed on "use-centred versions" of the digital documents.

<<http://www.beethoven-haus-bonn.de>>

**Federal Archives (Bundesarchiv):** <Daofind>  
<daofind> (Digitized archives in online finding aids) is a project of the German Federal Archives (Bundesarchiv) with support from the Mellon Foundation New York. In a pilot application, the linking

capacities of the three international standards EAD (Encoded Archival Description) for online finding aids, EAC (Encoded Archival Context) for biographical and contextual information and METS (Metadata Encoding and Transmission Standard) are tested for the online presentation of German archival materials. This includes structured presentation, classification based navigation and keyword searches across all or a selected number of finding aids and images on different levels of description. In a pilot application, easy-to-use tools will be developed which can be combined to form an archivist's workbench. Such "workbench" will provide functionalities for capturing data, converting data from other systems, and for editing the respective XML-documents, so that they can be easily used for joint presentations in union archival systems integrated in gateways offering single points of access.

The close combination of descriptive information and images will assure easy orientation during searches and will use and deliver the context needed for a full understanding of the documents.

<<http://www.daofind.de>>

### C. Sustainability of content

#### *National licenses for large databases and journal archives*

In order to provide a solid basis and improve the supply of scientific literature to German universities, the DFG financially supports the acquisition of "national licenses" for digital publications. This covers the acquisition of back file archives of journals as well as some 40 large text and opus collections. Thus, an important resource for research becomes freely available via campus-networks for humanities and science research in Germany.

The sustainability of this effort and the accessibility are further increased through the mirroring of the data on the university servers.

<<http://www.dfg.de/lis/ssg>>

#### *Networks*

In Germany, there is presently a continuous tendency towards forming networks and towards the consolidation of already existing ones, towards consideration of the long-term effects and consequences (archiving) of digital data and also a

great interest in new applications like net-based platforms for working procedures of content creation rather than purely retrieval of information.

[www.museumsvokabular.de](http://www.museumsvokabular.de)

Following a workshop on this matter, a national initiative was started in 2005 with a view to building an Internet platform serving the needs of museum documentation specifically by providing online access to vocabularies. In the first step, vocabularies in the public domain and available in digital form will be presented on this Website, as well as hints to further vocabularies to be found elsewhere. Rather than every single museum having to search for such resources, the platform will allow for easy identification of, and central access to, such resources. In a second step, in cooperation with the digicult.sh project (see above under A), software is being developed that will support:

- a) museums in their Web-based, interactive cataloguing work
- b) the groups that maintain the vocabularies in the further online development in collaboration with other experts, and to work towards harmonisation of presently diverging vocabularies.

The initiative is organised by a consortium and was initiated by the Institut für Museumskunde (Berlin), Konrad-Zuse-Zentrum (ZIB, Berlin), the Special Interest Group Museum Documentation of the German Museum Association (DMB), and the project digicult-sh (see above under A).

*Baden Württemberg: MusIS  
(Museum Information System)*

MusIS was initiated in 1994 as a project by the Ministry of Science, Research and Art of the State of Baden-Württemberg. It started in 1998 and aims at providing a technical and documentation infrastructure for the 11 State museums of this State. The successful realisation of the project requires, i.a., the following (activities are still ongoing):

- a) to set up a technical infrastructure and to build an internal network in each museum, integrating all departments (like documentation, restoration, loan department, educational services, general administration etc.)

- b) to implement uniform documentation standards
- c) to promote the computer-aided documentation of museum collections, the online presentation of the digitised data on cultural heritage, as well as national and international metadata and vocabulary standards in the participating museums.

<<http://titania.bsz-bw.de/cms/service/museen/kurzinfo/flyer-musis.pdf>>

## D. Digital preservation

### KOPAL

The Federal Ministry of Education and Research (BMBF) financially supports Die Deutsche Bibliothek (DDB), the Göttingen State and University Library (SUB), the Gesellschaft für wissenschaftliche Datenverarbeitung (GWDG) and IBM within the KOPAL project with a view to formulating long-term digital archiving strategies and developing corresponding tools and services. The results will provide two basic solutions. On the one hand a 'locker', i.e. a secure storage space that allows for data providers retaining administrative control of their own data, will be provided. This solution is thought to be beneficial for small institutions in particular. On the other hand the developed software solution – including practical tools – can be reused by larger institutions under their own control. KOPAL will adopt relevant standards for long-term archiving and metadata and thus ensures the reusability of the software. In a first visible step massive collections of digital materials of all kinds from two partner institutions, DDB and SUB, will be deposited and made available within the project. The project is expected to end its development phase in June 2007.

<<http://kopal.laengzeitarchivierung.de/>>

### NESTOR

The NESTOR-project (Network of Expertise in Long-Term Storage of Digital Resources, 2003-2006) saw some major events and developments in 2005. Two commissioned studies, one a comparison of existing long term archival systems and another one about digitisation and long-term preservation in German museums, were published. The NESTOR Working Group on digital repositories has actively extended the project's scope from libraries, museums and archives to research organisations and publishing companies. This Working



Group cooperates with RLG and NARA (Research Libraries Group/National Archives and Records Administration, USA) and prepares a catalogue of criteria for evaluating digital repositories. NESTOR started training and educational activities, offering day-long seminars about selected topics and/or for selected communities. Its network-building activities were supported by setting up a public database of experts. On 15-16 September 2005, a major "International Conference on Digital Preservation" with participants from many countries was organised in Göttingen. Another successful international activity pursued in 2005 was the mutual integration of the subject gateways of NESTOR and PADI (Australia). Through this and many other activities, the NESTOR Website and the project itself became an often frequented focal point for information and discussion regarding long-term preservation in the German-speaking part of Europe.

<<http://www.langzeitarchivierung.de>>

## E. Monitoring

As mentioned in the general remarks in the beginning, a study commissioned by a sub-department within the Federal Government (BKM) is being undertaken to do a status quo analysis of the present situation regarding digitisation, including requirements, recommended practices, and the role of individual organisations in the various processes involved. In relation to this, a study, commissioned by the DFG, was finalised in 2004 which looked at the results and the sustainability of the numerous digitisation projects funded by the DFG so far. This study issued a number of recommendations. In line with these, as well as considering the present and future situation of digitisation, these recommendations and guidelines will be continuously updated and revised in future.

