

THE DEUTSCHE NATIONALBIBLIOGRAFIE AND ITS FORMATS 1931 to 2030

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The Deutsche Nationalbibliografie and its formats: 1931 to 2030

National bibliographies are part of the DNA of nation states. They are comprehensive, permanent records of the published part of a country's written cultural heritage. Although they perform this task very consistently, their content and form can vary considerably over time¹, since they are influenced by numerous socio-historical factors, particularly by changes in technology and library science.

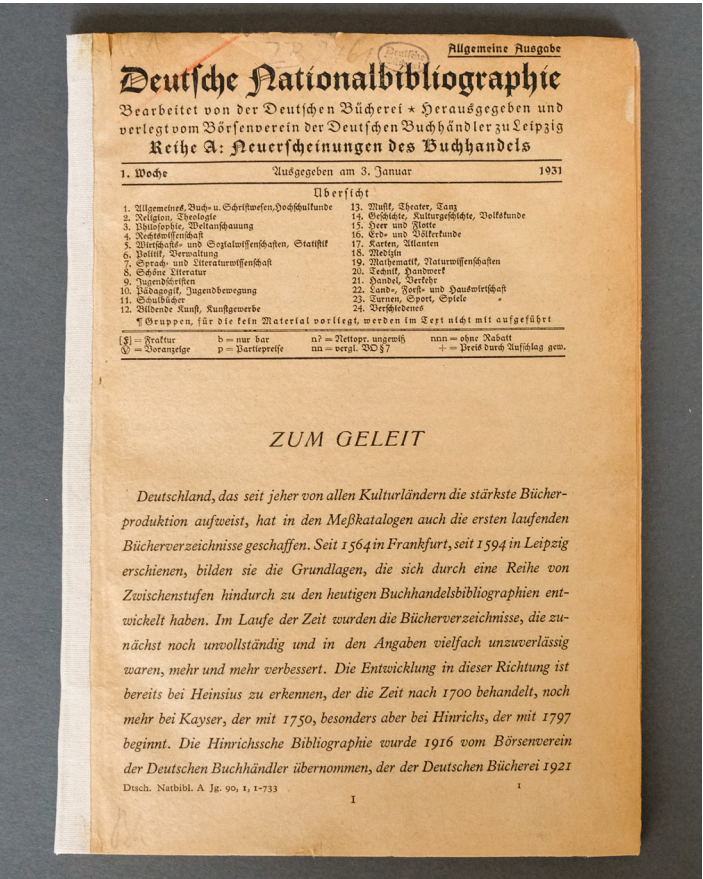
This article traces the history of the »Deutsche Nationalbibliografie« in its various forms since 1931, the year in which it was first published by the Deutsche Bücherei in Leipzig under this title. The name reflected its intention right from the start: every new work published in the country was to be fully indexed as soon as possible after publication in compliance with standard rules; moreover, the bibliographic information generated was to be made available in formats that could also be used by third parties.

Print formats (1931–2013)

The »Deutsche Nationalbibliografie«² was first published on 3 January 1931 by the Börsenverein der Deutschen Buchhändler (German Publishers and Booksellers Association) and consisted of 733 titles in 24 subject categories; from 1947 on, it was published by Verlag für Buch- und Bibliothekswesen Leipzig, which specialised in bibliography and library science. It was initially published as a weekly journal and later also appeared on a bi-monthly, monthly, quarterly and biannual basis depending on volume and demand. This standard edition of the printed national bibliography was supplemented by cumulative registers, annual directories, and directories spanning several years. The same applied to the »Bibliographie der Deutschen Bibliothek«, which was published for the first time on 1 March 1947 by the Börsenverein der Deutschen

Buchhändler in Frankfurt am Main following the political division of Germany. The first issue listed 311 titles, also in 24 subject categories, and had a print circulation of 13.000. Like the Leipzig bibliography, it had a multi-layered structure and was initially published monthly, increasing to weekly from 1950. From 1954, publication continued under the title »Deutsche Bibliographie«. Despite being almost identical in structure and content, the Leipzig and Frankfurt versions of the national bibliography developed along divergent lines due to differences in historical conditions and technical standards; however, in essence they remained very similar.

The bibliography's structure was and still is based on series, in which the titles are grouped accord-



Title page of the first volume of the Deutsche Nationalbibliografie of 1931, series A

ing to descriptive and subject-based criteria. The purpose of this was to »accommodate the interests of each user group and maintain clarity«³. The editions initially published in Leipzig in 1931 accordingly consisted of series A, »New Publications from the Publishers' Book Trade«, and B, »New Publications from Outside the Publishers' Book Trade«. Following various intermediate phases and numerous special series, Frankfurt's series C, »Maps«, was created in 1965, while Leipzig's series C, »Dissertations and Post-Doctoral Theses«, came into being in 1968. During the 1970s, Frankfurt released series H, »University Publications« (1972), T, »Recorded Music« (1974), N, »Pre-Announcements Monographs and Periodicals: (CIP)« (1975) and M, »Printed Music and Music Publications« (1976), in quick succession. Following the reunification of Germany and the amalgamation of the two libraries into »Die Deutsche Bibliothek«⁵ in 1990, the two bibliographies also became one and were published from 1991 as »Deutsche Nationalbibliographie und Bibliographie der im Ausland erschienenen deutschsprachigen Veröffentlichungen« (German National Bibliography and Bibliography of German-Language Publications Published Abroad), consisting of series A, B, C, H, M, T and

N. Series G, »Germanica and Translations«, was published from 1992, and series O, »Online Publications«, from 2010. However, series O was not released in print format.

From 1931, library editions of the Deutsche Nationalbibliographie using India paper printed on one side were offered as an alternative to the standard issues printed on both sides.⁶ A corresponding special edition was printed in Frankfurt from 1947. The library editions enabled users to cut out bibliographic data without losing any other information, glue it to media such as catalogue cards, and re-use it for other purposes. This process offered tremendous potential for rationalisation, particularly in the libraries' cataloguing departments: it was up to more than one-third faster than the standard practice at the time, which was to have library staff catalogue works in their own handwriting or using a typewriter.⁷ Demand from libraries was correspondingly high. They usually subscribed to several copies of the library edition, since they often had several card catalogues which had to be furnished with the same information. By the end of 1938, 348 customers in Germany and abroad were subscribing to the library edition of series A



Five-year directory of the Deutsche Bibliographie 1976-1980

and 156 to series B.⁸ The Deutsche Bücherei itself used this process for many decades to maintain its numerous main and special catalogues.⁹ The same was true of the Deutsche Bibliothek in Frankfurt. However, the development of alternative means for transporting bibliographic data caused a gradual decline in demand for the library edition. The last edition in Leipzig was released at the end of 1973, the last in Frankfurt in 1994.

In 1937, the Leipzig publishers also began distributing the Nationalbibliografie in the form of bibliographic cards, which served as a supplement to the printed standard and library editions. These were an extension of the library editions, the difference being that the bibliographic information was printed on individual catalogue cards. Produced on high-quality card in international catalogue card format (7.5 x 12.5 cm) with a ten-millimetre hole in the centre of the lower margin, they could be sorted directly into the standard card catalogue boxes, which were secured by a rod. These »Leipziger Zetteldrucke«¹⁰, as the catalogue cards were initially officially known, allowed the Deutsche Nationalbibliografie to strengthen its influence on the field of central cataloguing still further. Once they had been issued centrally, the catalogue cards could be re-used decentrally as often as required, thus eliminating additional expense.¹¹ The fact that the cards appeared two weeks later than the printed bibliography did nothing to change this.¹² On the contrary, demand for the catalogue cards skyrocketed almost as soon as they were launched: »By the end of March 1937, 89 libraries were already subscribing to the catalogue cards. Around 110 were still making use of the cut-out-and-glue procedure [...] in 1942, during the war, (the statistics recorded) 426 subscribers who had received more than two million catalogue cards in all.« (Franz 1962:162) Although there was a war on, sales had almost tripled in the five years since 1937 and now numbered 740,000 cards¹³.

Following World War II and the partition of Germany, the catalogue card service relaunched in Leipzig in 1954 was slow to reach the figures achieved in the early 1940s. In 1960, 222 customers were supplied with 1,337,636 catalogue cards

printed by the organisation's own printers. The current validity of the cards was a key criterion of their quality, since the efficiency of the central service declined with every day's delay. »There is not one staff member at our library who is not fully aware of how important it is to deliver an issue of the »Deutsche Nationalbibliographie« or a set of catalogue cards on-time and how this benefits librarianship in general« (Röttsch 1972:23)¹⁵.

From 1964, the production of the cards accelerated significantly following a switch from single-card printing to eight-up printing, which allowed eight cards to be printed simultaneously during each print run. In 1969, the number of catalogue cards passed the two million mark for the first time since 1942. After the »Regeln für die Alphabetische Katalogisierung« (Rules for Alphabetical Cataloguing) (RAK) were introduced in 1974 and made obligatory for all libraries in the GDR from 1977 on¹⁶, demand for the catalogue cards rose so sharply that more than five million catalogue cards were printed each year in the 1970s and up to 7.3 million each year in the 1980s, while the number of subscribers exceeded 380.

Batch production on this scale could only be achieved by switching from lead typesetting to phototypesetting with small-format offset printing; this switch was finally accomplished in 1974. From 1979, this meant that »the catalogue cards were usually available much earlier than the bibliographies«¹⁷ and since there was a lack of digital alternatives in the GDR, the next logical step was to make »catalogue cards the primary bibliographic publication«. This happened with effect from 1 January 1987, and because there were no digital alternatives, publishers and users were confident that the cards would remain viable well into the future: »In the long term, the 'Leipziger Titeldrucke' will remain the dominant form for re-use in the context of bibliographic activities.« (Röttsch/Plesske 1987: 116)¹⁸

In Frankfurt, the catalogue cards were produced and distributed from 1951 by the Börsenverein's Buchhändler-Vereinigung GmbH. However, since sales of the cards remained low, distribution ceased

in 1963 and only »30 cards per title were issued at the expense of the Deutsche Bibliothek and Börsenverein in order to cover their own needs.« (Blum 1966:103)¹⁹

In 1972, the library in Frankfurt began producing the catalogue cards itself using phototypesetting technology. At first, this was merely to meet their own needs, then in 1973, they began producing series A and B cards for other interested parties. At first, it was only possible to subscribe to whole bibliographic series, which meant that many users were encumbered with what could at times be considerable amounts of unnecessary information. However, from the mid-1980s, catalogue cards could also be ordered selectively by subject category (from 1986), as packages for public libraries, or for university publications only (from 1989). The catalogue card selection service TISEL, introduced in 1991, finally allowed users to order catalogue cards individually by ISBN or DB number and to have their own local data added if necessary.²⁰ At the beginning of the 1990s, this service was of particular interest to the libraries in the new German Länder, most of which still used conventional methods, since their card collections were in part incomplete and their collections had to be rebuilt on a large scale following the fall of the Berlin Wall. However, despite the increased demand from these new federal states, production of the catalogue cards rose only marginally. While the Frankfurt library distributed 3.1 million catalogue cards in 1990, mostly to smaller and medium-sized libraries, the numbers distributed during the 1990s peaked at 3.7 million cards (1995). This was certainly due not least to the fact that libraries were obtaining more and more of their bibliographic information in digital format, as the impressive rise in digital sales from 3 million data records (1990) to 9.4 million data records (1995) testifies (see image: The Deutsche Nationalbibliografie's sales figures from 1954 to 2021).

In the early 1990s, TISEL elevated the Deutsche Bibliothek's catalogue card service to the status of the service which had been offered in Leipzig 30 years previously.²¹ However, the production process was now completely different. The cards were no longer printed using lead typesetting or offset

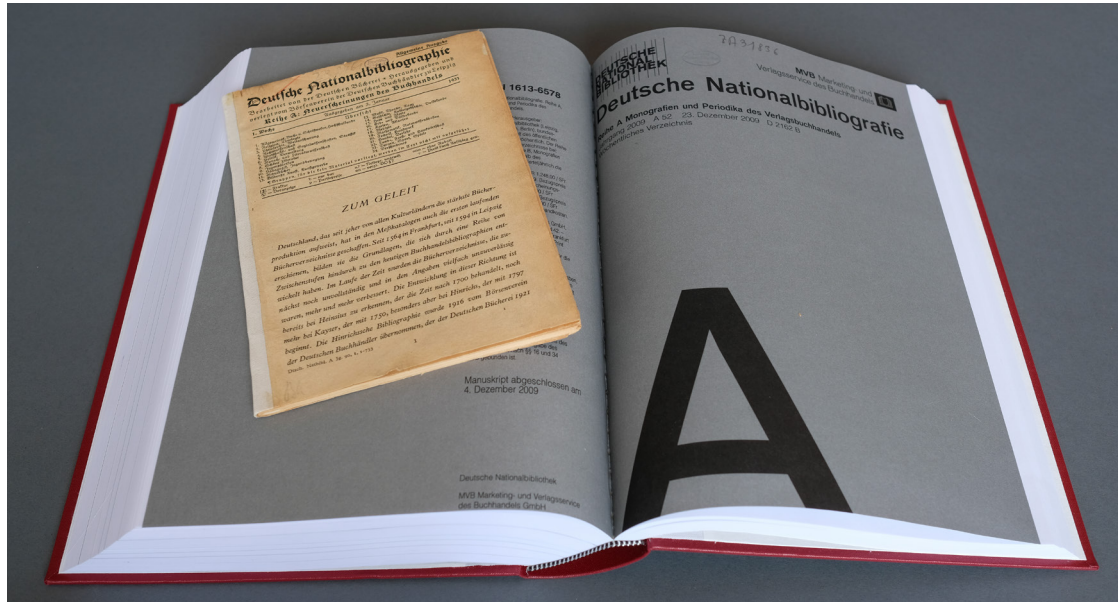


Catalogue cards before delivery

techniques; instead, from 1986, they were produced using digital typesetting and laser printers. This new process shortened the interval between the printing of the catalogue cards and the release of the print version of the bibliography to such an extent that the cards could actually be delivered two weeks before the printed bibliography became available.

Although German libraries became increasingly computerised during the 1980s and 1990s, interest in the printed Nationalbibliografie remained relatively high until the end of the millennium. Afterwards, however, demand declined steadily, with the result that the print editions of series M and T were discontinued in 2003 and the bibliographic data in series G was re-integrated into the Deutsche Nationalbibliografie's series A from 2004 on. By 2009, the situation had deteriorated so far that the Director of »Central Bibliographic Services« was forced to announce the discontinuation of the printed Nationalbibliografie with effect from the following year: »In recent years, the number of subscribers to the Deutsche Nationalbibliografie's printed directories has decreased so far that the production costs can no longer be covered. This means that we now have to cease printing the Deutsche Nationalbibliografie after almost one hundred years.« (Werner 2009:39)²²

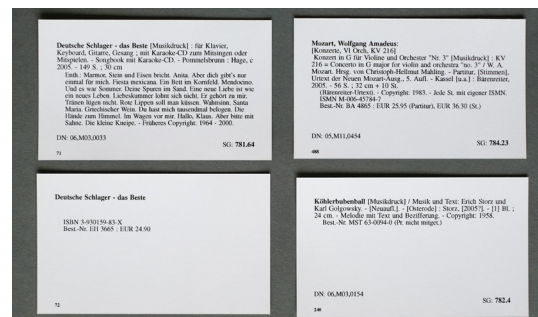
Initially, however, this only meant the end of those editions of the bibliography distributed by MVB Marketing- und Verlagsservice des Buchhandels GmbH. In 2010, the German National Library



Title pages of the first and last issues of series A of the Deutsche Nationalbibliografie, 1931 and 2009

took the initiative and began publishing a replacement, an online journal in PDF format consisting of the print editions of the various series. It can still be downloaded²³ free of charge through the DNB's online catalogue and printed as required. The structural division into bibliographic series A, B, C, H, M and T was retained, as were the publication intervals. The online journal's visual appearance also largely resembles that of its predecessors.²⁴ However, unlike the print version, the bibliographic information is supplemented with hyperlinks which lead to the corresponding data records in the DNB's online catalogue and to digitised tables of contents, abstracts, and full texts. The PDF editions of the Nationalbibliografie are still among the most requested publications issued by the German National Library. However, even the demand for this format is falling off rapidly. In the last two years alone, usage events have declined from 300,000 (2019) to 186,000 (2021), a decrease of 37 percent. It is not known whether users still print these publications, and if so, whether they are subjected to treatment with scissors and glue.

In 2013, the fate of the printed bibliographies also befell the catalogue card service. In the years preceding 2009, distribution figures had remained relatively high at up to 2.5 million catalogue cards per annum. However, demand plummeted from 2010 following the publication of the online journal in PDF format; at 1.3 million cards, the number distributed in 2012 was little more than half that of previous years. Since various service contracts for the ageing print system were also expiring at this time, the production and distribution of the last print-based format of the Deutsche Nationalbibliografie was discontinued at the end of October 2013. The story goes that this was regretted not only by the librarians that had to deal with the cards day in day out, but also by all the other library staff, since »all the staff liked to use (the blank backs of the catalogue cards) to make notes« (Oberfell/Thalhofer 2018:7).²⁵



Catalogue cards from Frankfurt

Digital formats on data carriers (1977–2009)

With the introduction of electronic data processing (EDP) in German libraries at the beginning of the 1960s and the first computer-assisted compilation of a national bibliography in Frankfurt in 1966²⁶, the idea of centralized cataloguing and the simultaneous decentralised use of data gathered momentum. This was due not least to the formation of regional library networks throughout the Federal Republic during the 1970s, since these were able to import machine-readable data into their central database and make it available for use by the increasing number of libraries joining them. However, the Deutsche Bibliothek in Frankfurt was the only library to succeed in making the digitally generated data available to third parties in digital format from 1977 onwards. In Leipzig, the data generated with the help of computer processing between 1971 and 1989 was used solely for the purpose of creating the printed versions of the bibliography.

Magnetic tape service (1977–2003)

Along with a few large libraries, it was the library networks in particular which subscribed to the magnetic tape service offered by the Deutsche Bibliothek in Frankfurt from 1977. The positive effects of central cataloguing multiplied with every library that joined: library work processes in the areas of acquisitions (choice of literature, order documents) and cataloguing (data transfer, further data processing) were simplified and the associated workload significantly reduced. Moreover, long-term improvements were made to the options available in terms of bibliographic information and research. Since the Frankfurt data was delivered two or more weeks before the publication of the printed bibliography, the delay between the central cataloguing of new releases and the provision of data for use in other systems shortened considerably. This was another significant advantage for libraries which were members of the library networks. It offered both current and retrospective data for all series of the Nationalbibliografie. The only exceptions were the data for series M and T, which was not made available until September 1989.²⁷ In

1983, it also became possible to obtain selections, e.g. of subject groups, and in 1995 to obtain data exclusively for university publications dating from 1945. Magnetic tape, digital audio tape (DAT), and later higher-density magnetic tape cassettes were used as carrier media.



The Nationalbibliografie on magnetic tape

In July 1989, the magnetic tape service went international. The data was no longer available only in MAB (Maschinelles Austauschformat für Bibliotheken, Machine-Based Exchange Format for Libraries) format, which had been commonly used in Germany since the 1970s, but could also be supplied in UNIMARC (Universal Machine Readable Cataloging) format. For the first time, foreign libraries were now able to obtain comprehensive, up-to-date information about mandatory deposit copies and specimen copies of the writings collected by the Deutsche Bibliothek and to import current bibliographic data into their databases for further processing.

Floppy disk service (1991–2008)

Although the libraries and software companies initially showed only a very restrained interest in a floppy disk service²⁸, this, the »little brother« of the magnetic tape service, was introduced as a regular national bibliographic service at the beginning of 1991. The content matched that of the magnetic tape service. The intention was to make the data usable in a format adapted to local PC systems,

i.e. one that catered in particular to the needs of public and special libraries that were not connected to the library networks. The carrier media initially consisted of 5¼-inch floppy disks with a capacity of 1.2 MB, later supplemented by 3½-inch HD diskettes with a storage capacity of 1.44 MB, which was ultimately the standard format used by many PC systems.

From 1995, every bibliographic series was delivered regularly on floppy disk at the accustomed intervals along with a selection of series A titles for public libraries and the data from the CIP service. As with the magnetic tape service, it was also possible to order subject-specific and other selections of data retrospectively.

At more than 200, the number of subscribers to the machine-based services first exceeded the number of catalogue card subscribers in 1993. That year, more than 4.6 million data records were supplied on magnetic tape, 660,000 of them in UNIMARC format for the international market. Moreover, 2.3 million data records were delivered by the floppy disk service. In contrast, only about half this number (3.4 million) of catalogue cards were distributed (cf. diagram showing the Deutsche Nationalbibliografie's sales figures from 1954 to 2021).

CD-ROM and DVD (1989–2009)

In 1988, the Deutsche Bibliothek broke completely new ground with a test version of the Nationalbibliografie on CD-ROM (Compact Disc Read-Only Memory). There were no forerunners among any of the world's national bibliographies that could have been used as a guide. 35 German libraries and book dealers and six foreign national libraries took part in the first test run using the new storage medium, which turned out to be a resounding success. As a result, Buchhändler-Vereinigung GmbH, Frankfurt am Main, began issuing the »Deutsche Bibliographie aktuell CD-ROM« (DB-CD aktuell) at regular intervals starting in May 1989.²⁹

The »DB-CD aktuell« of 1989 contained the Frankfurt data for the bibliography years from 1986 and

was initially released three times a year in DOS format for use at a single workplace. From 1991, it was published four times a year together with a network version; from 1995, it appeared six times a year, and in 1999, a Windows version was released.³⁰

In 1993, »DB-CD was followed by »Diss-CD«³¹ and shortly afterwards by »DNB-Musik«³². »DNB retro 1« was unveiled for the first time at the Frankfurt Book Fair of 1995. This contained the bibliographic data of all the works published in Germany and catalogued in Frankfurt between 1945 and 1965. The data for the years up to 1971 was added in 1998, while the bibliographic records for the years from 1972 to 1985 were made available on »DNB retro 2«.³³

This meant that from 1998, all the Deutsche Bibliothek's bibliographic data starting 1945 was available on CD-ROM with a standard, menu-controlled user interface and identical user options for the first time. At the time, this was regarded as a particularly powerful medium for modern information processing, and demand from libraries, the book trade and other interested parties was correspondingly high. "DB-CD aktuell" alone, the flagship among the CDs, was subscribed to by 100 institutions during its first year of publication and reached its peak of distribution in 1995 with a total of 528 subscribers.



The Nationalbibliografie on CD-ROM and DVD

Like the Deutsche Bibliothek's other bibliographic services, the CDs were also able to streamline acquisition and cataloguing processes by transferring data into the library's own system and, from 1993 on, by additionally pre-formatting it for printing

on catalogue cards. However, the CDs were mainly predestined to revolutionise bibliographic research.

This applied not only to people using the CDs at libraries and bookshops but also to the Deutsche Bibliothek itself. In 1989, after only six months of testing, it was already clear that the CD could also function as a user catalogue since it was so easy to handle. Both library staff and library users with no specific prior knowledge could use it for research purposes. For these users in particular, the CDs opened up a whole new dimension when working with bibliographic records: it was no longer necessary to spend hours leafing through name, subject heading and subject catalogues or to laboriously copy personal and bibliographic information; instead, the CD quickly guided the user to their goal and enabled them to import the material found into their applications or to print it as required. The advantages were felt particularly strongly from 1998, i.e. 10 years after the release of the first DB-CD, by which time all the Frankfurt holdings had been digitally catalogued and made available on CD-ROM. From then on, the great card catalogues in Frankfurt were obsolete, which was why they were gradually dismantled and replaced by terminals capable of supporting CD technology.

The most recent development in carrier-based bibliographies took place in 2002: the Deutsche Bibliografie's data, which had by then expanded to 6 CDs, was consolidated on a single DVD (Digital Versatile DISC). This type of data carrier, which



National bibliographic data carriers at a glance

was still new at the time, had a storage capacity of up to 17 gigabytes and could hold 25 times more data than a CD-ROM. This meant that the 4.8 million bibliographic records dating from 1945 to February 2002 could be stored on one DVD. In terms of catalogue research, this was another big step forward: when researching literature on Thomas Mann, for example, it was no longer necessary to enter the same search query six times to search six different CDs, but only to search one DVD using one search query.

However, the DVD was only issued once, and – like the CD-ROMs – was not distributed after 2009. As transitional technologies for catalogue searches, the DVD and CD-ROMs were soon superseded by the online catalogues (OPAC) in Leipzig and Frankfurt, which had been developed at the same time.³⁴

The Nationalbibliografie as a data service (since 1996)

Like the carrier-based catalogues on CD and DVD, the carrier-based magnetic tape and floppy disk services were gradually replaced by data services which enabled users to obtain national bibliographic data online through FTP (File Transfer Protocol), and some time later also through HTTP (Hypertext Transfer Protocol). These services required access to a library FTP server (1996) or WWW server (from 1998). Subscribers could enter a password and gain online access to data sets from the bibliographic series which had been prepared for them individually.

The library networks and larger libraries in particular were quick to adopt this new form of data transfer, which had numerous advantages compared to the carrier-based magnetic tape and floppy disk services: the data provided was still more up-to-date, e.g. because there were no postal delivery times, and it was still easier to process because there was no need to handle cassettes or floppy disks.

Data access via FTP and WWW is still standard practice for subscribers to the Nationalbibliografie's current data. However, password-protected access for individual users was scrapped in April 2021; instead, the data is now made available via the DNB's website using a simplified procedure with no access restrictions. Since then, users have been able to download the constantly generated selections of data from the national bibliographic series freely via the internet, also in formats that are particularly important for libraries.³⁵

Online databases (from 1981)

BIBLIO-DATA (1981–2009)

The research database BIBLIO-DATA, which was developed between 1975 and 1980 as part of the federal government programme for the promotion of information and documentation (I&D programme)³⁶, is the first online version of the Deutsche Nationalbibliografie. As Germany's largest literary database, it offered »the most comprehensive, up-to-date and fastest access«³⁷ to German publications. It was the first to offer electronic data retrieval options for professional research outside the library. At the time it went live in 1976, it could only be used by the Deutsche Bibliothek's bibliographic information librarians, who were able to access the database for four hours a day via a dedicated line to the computer centre where the data was held. From the end of the 1970s, the database was also tested outside the Frankfurt library by eight other institutions in the fields of book studies, documentary records and the book trade. However, it was not routinely offered until 1981. After connecting with STN (Scientific & Technical Information Network) INTERNATIONAL in the summer of 1988, it became possible to research more than 1.5 million of the Nationalbibliografie's data records dating from 1972 onwards by accessing them online via the information provider INKA, which was housed at the specialised information

**STN International**
The Scientific & Technical Information Network

BIBLIODATA
Description:
Producer: Deutsche Bibliothek, Germany
Coverage: 1972 to date
File Size: 2,932,354 records
Updates: Weekly
File Type: Bibliographic, Directory
Content: Multidisciplinary
Language: German

BIBLIODATA is a national bibliographic database with current references to publications collected and registered by the database producer, the central archives library of the Federal Republic of Germany. Sources for BIBLIODATA include reports, conference proceedings, journals, visual materials, and maps. Bibliographic information and classification codes are searchable. A learning file, [LBILO](#), is available.

BIBLIODATA is a member of the following file clusters:
[ALL BIB.](#), [AUTHORS](#), [CORPUSOURCE](#).

Producer:
[Deutsche Bibliothek](#)
Adickesallee 1
60322 Frankfurt/Main
Frau Ute Bärmann
Phone: (+49) 69 1525 1632
Fax: (+49) 69 1525 1636
E-mail: barmann@dbf.dtb.de

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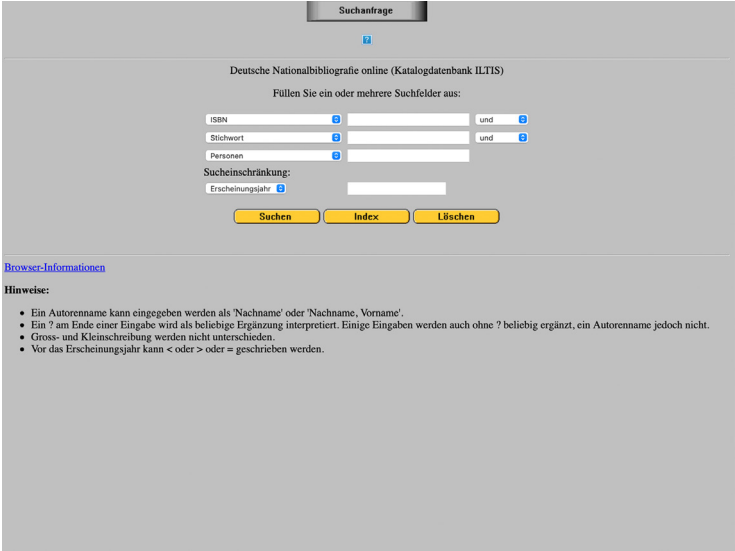
BIBLIODATA: homepage at STN International (1998)³⁹

centre FIZ Karlsruhe. By 1997, the number of data records had doubled; in 1999, there were approx. 3.4 million sets of bibliographic data. The database was updated every week. However, it was intended as a source of information and was not designed for transferring data to other systems. Neither did it provide any stimuli for rationalisation measures in library acquisitions and cataloguing departments.³⁸

From 1997, BIBLIO-DATA was also made available through GENIOS (Frankfurt, later GBI-GENIOS Munich). With approx. 2 million data sets, and from 1999 approx. 2.2 million, BIBLIO-DATA offered fewer searchable data records than STN since it only contained records dating from 1986 onwards.

Anyone who wanted to use the database in dialogue mode first had to conclude a user agreement with the database operators and familiarise themselves with the search language MESSENGER, which was oriented on command lines. While this language facilitated complex research using an extremely wide variety of criteria, it was so challenging that the database could not be used by non-experts, and interested end-users could often only use it with professional assistance.

The Deutsche Bibliothek also deployed BIBLIO-DATA in its user domains. The bibliographic information centre in Frankfurt housed five terminals which very soon became the most important research tool for librarians in the user areas; these terminals were also used by the signing service. The positive experiences with the database were the decisive factor. BIBLIO-DATA dramatically reduced the time required for bibliographic research and significantly improved the hit rate, particularly when searching in specific subject areas.⁴⁰ However, in the early 1990s, STN became unable to cope with the demands of the staff in Frankfurt, who were using the database for more than half of the approx. 7,300 hours of connect time. This meant that staff working in user advisory services soon had to switch to the internal catalogue database PICA/ILTIS.



DDB-Online: homepage (2009)⁴¹

Afterwards, the use of BIBLIO-DATA declined significantly. This development continued from the mid-1990s. In 1995, there were still some 900 external users using the database for 2,200 connect hours and accessing 160,000 data records online, but the usage statistics four years later showed that the database had been used for just 440 connect hours to access a mere 44,000 data records. This was due to the evolution of the online user catalogues, which were becoming increasingly efficient, were much more user-friendly, and could also be used free of charge. Since user figures continued to decline, BIBLIO-DATA was discontinued at the end of 2009.

Shop systems: DDB-Online (1998 – 2010) and data shop (from 2007)

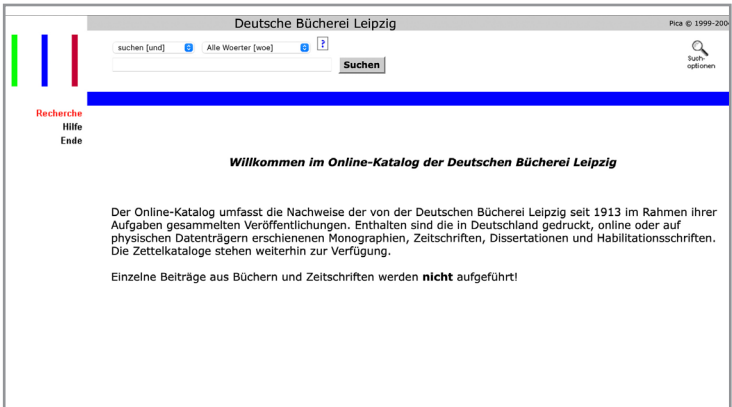
Like the magnetic tape, floppy disk and data services before them, the shop systems were mainly designed for professional data users who were interested in importing the data into their own applications.

»DDB-Online«, the first online data shop, went live in September 1998. Based on the online interface Z39.50, a standard protocol for searching bibliographic databases which was used by libraries all over the world, DDB-Online enabled users to research the Deutsche Bibliothek's entire data stock

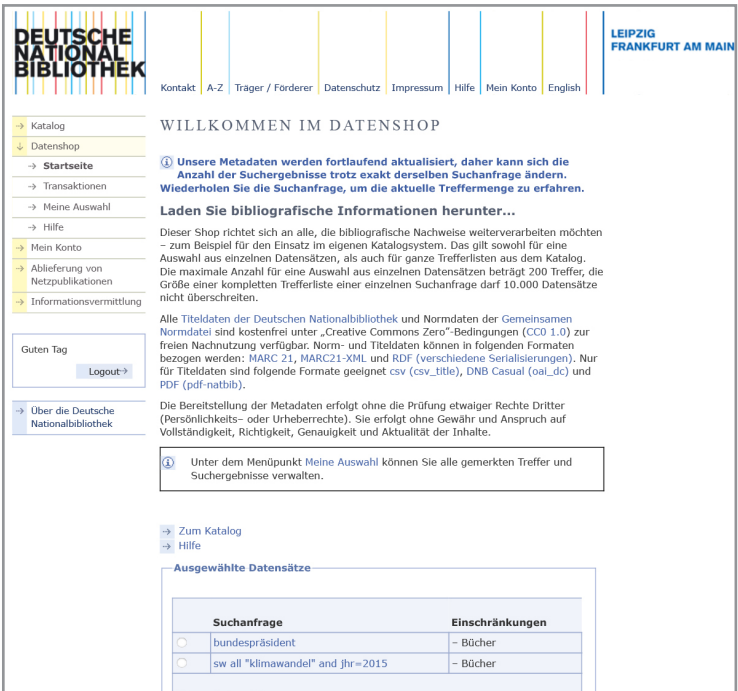
and to import bibliographic data online into their own library systems, where it could be processed further. Because of its graphic interface, the shop was easy to use and attracted interest especially from smaller and medium-sized institutions which were not connected with the network and which only needed data sporadically or in relatively small quantities.

All that was required to use the service was to have access to a web-enabled computer and to conclude a user agreement with the library. After receiving their password-protected user ID, users could use numerous criteria to search the database, make a selection from the records found, add their own local data if required, download the records, and import them into their own system for further processing.

In 2007, »DDB-Online« was replaced by the German National Library's »data shop«. While DDB-Online was a fully independent system with its own authentication tool and research interface, the newly developed data shop is a web service offered by the DNB's new portal catalogue. This enabled users to switch from the catalogue to the data shop with just one click, transferring the selected bibliographic data as they went. Moreover, the new shop system had a number of advantages over its predecessors: users could also subscribe to data from the Deutsche Nationalbibliografie's series M and T and download them in several library data formats.⁴²



The Deutsche Bibliothek's OPAC, Leipzig (2004)⁴⁶



Data shop homepage (2022)⁴³

Online user catalogues (from 1994)

While the data service and data shop are primarily intended for interested parties who have a professional background and use the data in their own databases, the online user catalogues mainly target end-users with no library training who are more likely to consult the library catalogues for private reasons than for professional ones.

The first online user catalogues, formerly known as OPAC (Online Public Access Catalogues), were developed as early as the 1980s. They gradually superseded the card catalogues and other older types of catalogue in the libraries.

In Frankfurt, this meant that the Siemens library administration system »BVS«, which had been in use since 1982, had to be replaced by the system developed by the Dutch PICA foundation (Leiden). This not only had a central cataloguing system but also facilitated the addition of an online user catalogue with a graphic user interface, which could be enhanced by offering user-oriented services such as media ordering and borrowing.⁴⁴



The Deutsche Bibliothek's general online catalogue (2005)⁴⁸

The problems that arose when the PICA central system was used online were finally resolved in 1993. On 1 August 1994, just eight months later, the first online catalogue went live in Leipzig. Initially, however, it could only be used by library users on site searching the bibliographic data generated since 1990.⁴⁵

The Leipzig catalogue went live in March 1996, followed shortly afterwards by the Frankfurt catalogue; these had a far greater volume of searchable data stock. Even though the two catalogues were still offered separately at that time, interested parties were now able to research the Leipzig data from



The German National Library's portal catalogue: homepage (2010)⁵¹



The German National Library's portal catalogue: homepage of the test version (2007)⁵⁰

1974 on and the approximately six million bibliographic records in Frankfurt from 1945 on outside the library for the first time. At first, the catalogues could only be accessed through Telnet (terminal emulation VT 102). The number of parallel access ports was still very limited. People with questions about using the system had access to extensive help texts which could be downloaded via FTP.

In the new web version of the online catalogue, which went live on 16 October 2001, the data stock from Leipzig and Frankfurt was still separate. However, the user interface and indexes had been standardised. Along with shorter search times and im-

proved search options, this version was most notable for its integrated order function. Moreover, since the display had been changed from ISBD to labelled format, the search results could now be shown in a much more visually appealing manner.

By the time the retroconversion of the alphabetical catalogues was completed at the end of 2004, almost all the holdings at both libraries were indexed in the catalogue database. Ute Schwens and Jörg Räuber summarise this development as follows: »That means this database is the Deutsche Nationalbibliografie.«⁴⁷ It has been viewed as the primary form of the Nationalbibliografie ever since. This is where the initial bibliographic indexing takes place. It is the source of all the Nationalbibliografie's output formats. These include the online catalogue, which, unlike the Nationalbibliografie's other formats, was designed to be used freely via the internet right from the start – at that time a milestone along the long road to opening and ultimately democratising the use of the Deutsche Nationalbibliografie and the services associated with it.

This process reached an early milestone when the integrated online catalogue went live in May 2005. Users could then access the national bibliographic data of both locations in one research system with a standardised layout. It was now possible to research the entire data stock, which at the time consisted of some 11 million bibliographic records which had been issued in Leipzig and Frankfurt since 1913. The new layout and additional functions also made it more convenient to use. Since then, the catalogue has for example provided links to abstracts of publications and enabled users to determine whether books are available and can be ordered from booksellers.⁴⁹

Other versions of the catalogue followed. Since the print and CD-ROM editions of the Nationalbibliografie had been discontinued and user requirements were changing, the 2010 version in particular offered direct access to a number of additional bibliographic functions. Users can now filter the bibliographic data in the various series of the Nationalbibliografie, perform specific searches for

bibliography journals, access them, and print them as needed. It is also possible to select individual types of media such as online publications or dissertations, save created search profiles, and export hits lists as HTML files.

Online interfaces (from 1998)

The data services and data shops are not the only channels for obtaining data from the Nationalbibliografie. The data can also be directly integrated into third-party applications via a number of application programming interfaces.

Z39.50

Z39.50, a network protocol for retrieving data from bibliographic information systems developed in the USA from 1984 and introduced in Germany between 1993 and 1997 as part of the DBV-OSI-II (Deutscher Bibliothekenverbund – Open Systems Interconnection) project funded by the German federal government and the DFG, first made this possible for some of the most important American universities in 1998. However, the Deutsche Bibliothek did not initially offer regular data access via this interface since the necessary billing mechanisms were not yet available. This changed ten years later, as a result of which data in full library format also became available through this interface from 2008.

SRU

The web service protocol SRU (Search/Retrieve via URL) began gradually taking over these functions from February 2010. This is an improvement on the Z39.50 protocol and was issued by the Library of Congress in Washington; it builds on established internet standards, and – unlike Z39.50 – is also commonly used outside the library sector.

The SRU interface is used not only by numerous libraries, which can use it for processes such as the automation of acquisition workflows, but also by research systems such as the »Karlsruhe Virtual Catalogue« (KVK) and the European Library. These accounted for the majority of the queries sent to

the SRU interface every day. The daily average in 2010 was 20,000 queries, from which 118,000 data records were provided.⁵³

OAI

Moreover, from October 2012, users were offered the option of integrating national bibliographic data into external databases via an OAI (Open Archives Initiative) interface. This is based on the OAI protocol for metadata harvesting (OAI-PMH), which enables metadata to be transferred automatically between databases and allows subscribers to harvest metadata using an OAI harvester.

This interface is particularly suitable for regularly updating large databases and keeping them synchronised with the supplier database so that new bibliographic records and changes to existing records can be automatically updated in the connected system with no delay. However, the Nationalbibliografie's current data stock first has to be imported into the subscriber's database.

Because of the sheer size of the Nationalbibliografie, which currently (spring 2022) consists of 25 million data records and is growing by approx. two million data records a year, the number of potential users of this interface is subject to strict limitations right from the start. However, if required, the automated data transfer function can also be limited to specific data sets, e.g. individual subject categories or series A of the Deutsche Nationalbibliografie, which means that the application is also attractive for users with specific needs.⁵⁴

The OAI interface offers its users considerable advantages in terms of scope and current standing: all national bibliographic data since 1913 is automatically updated as soon as it has been imported to or modified in the user's database.

At the beginning of 2021, it became possible to use the interfaces without having to register and obtain authorisation from the German National Library. With the exception of the Z39.50 interface, which was decommissioned in October 2021 on technical grounds, they have been available without restriction ever since.

Costs and free services

Like the printed editions of the Nationalbibliografie and the CD-ROM editions distributed commercially by booksellers and the Börsenverein's publishers, a fee was usually charged for the national bibliographic formats issued by the library itself.⁵⁵

With regard to the catalogue cards, a unit price per card was charged right from the beginning. This did not change until the catalogue card service was discontinued in 2013. Only the price itself was adjusted on several occasions.

In Leipzig, regular subscribers were charged 0.02 marks per card from 1931 until well into the 1970s, and it was not until the 1980s that the price rose to 0.04 marks per card. In Frankfurt, subscribers to entire series paid 0.04 DM from 1973 and 0.06 DM from 1975. Following an average price increase of 50 per cent in 1992, the price of the Frankfurt catalogue cards was raised to 0.12 DM (EUR 0.06) with effect from 2002. Afterwards, the prices remained stable for another 20 years. Only in 2012, the final year before the catalogue card service was discontinued, were they raised by another cent per card; this was because overall revenues were down and the previous price could no longer cover the production costs.

At first, machine-readable bibliographic data was also billed per unit. Users who subscribed to a whole series on magnetic tape, for example, paid 0.06 DM per data record from 1977 to 1991 and 0.12 DM per record from 1992 to 1997.

From 1998, the fee structure changed as a result of the increasing use of online services. Along with unit prices, flat-rate prices were introduced for subscriptions to the Nationalbibliografie. Moreover, the prices varied considerably depending on the type of use. In 1998, library networks and service centres, for example, paid a flat rate of 21,000 DM for an annual subscription to series A. Individual users who only wanted to use the data for their own purposes paid around a third of this price, while subscribers who processed the data for commercial purposes had to pay triple the network prices.

Flat-rate fees were also charged when the data was exported or used by third parties. Following a resolution by the Administrative Council, which makes decisions on all matters of fundamental or significant economic importance relating to the library and its development, these amounts increased by 3 per cent per annum with effect from 1999.

When the shop systems were launched from 1998 on, a price scale was introduced as the third billing method, with different price categories applying depending on the data contingent selected. Customers paid 500 DM for up to 1,000 data records, 2,000 DM for 5,000 data records, 8,000 DM for 20,000 data records etc. The data supplied through the SRU interface from 2010 was also billed in this way for a short time.

The annual income generated by the library's bibliographic services rose steadily from the mid-1970s on and reached more than one million euro per annum between 1995 and 2009 (peak: EUR 1.2 million in 1999). In addition, regular income was generated by publisher contracts for the supply of the print and CD-ROM versions of the Nationalbibliografie, which meant that the total income from data distribution could be anything up to EUR 1.7 million (1998); this income could then be used for the further development and ongoing provision of the bibliographic services.

Besides unit prices, flat rates and scaled pricing, certain services were offered free of charge. The online user catalogue could be used for free, and no costs were charged for data from series O, which was generated on the basis of publisher reports on online publications and was only available in digital format. However, even for the fee-based services, there were exceptions to the rule. In 1991 and for several years afterwards, the libraries in the former GDR, for example, were supplied with catalogue cards free of charge as an efficient means of support when cataloguing the basic book collections they had acquired with extensive special funding. Bibliographic data was naturally also supplied free of charge for test purposes or when cooperating with partner institutions; this was the case as early as 1931, when the Nationalbibliografie was given

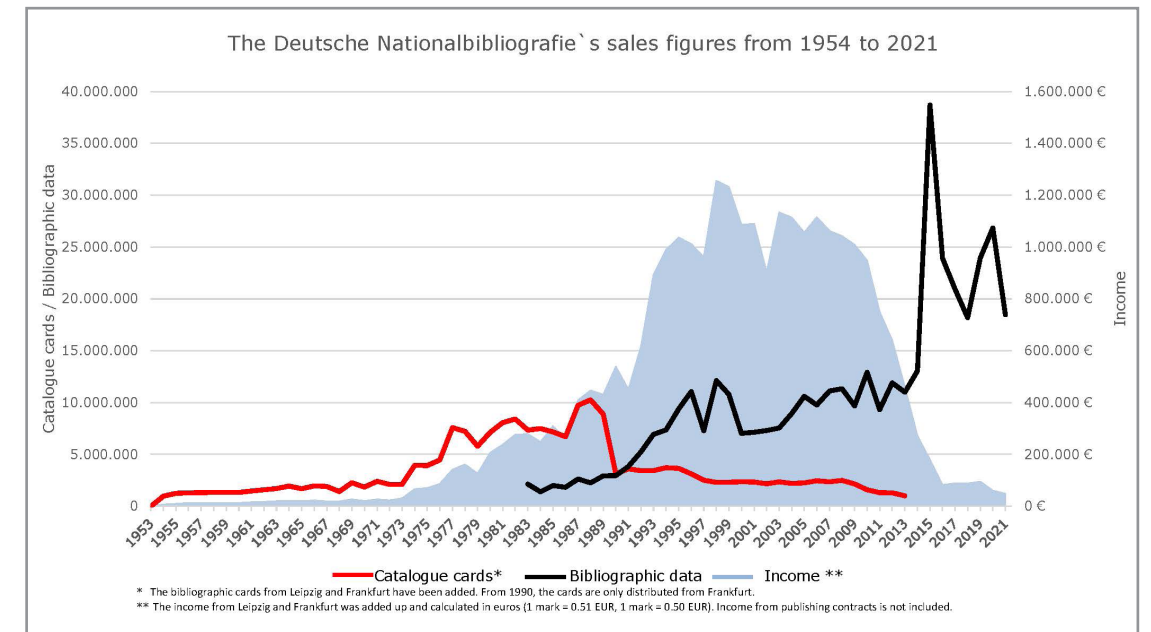
to a number of libraries free of charge for one year »in return (...) for information on their experiences with the library edition.« (Flachowsky 2020:426)⁵⁷

Initially conceived as an exception applied to the services for professional users, the end of the first decade of our century saw the elimination of fees become an end in itself: the data was to be made available to the public free of charge and be as unencumbered by rights as possible. This was due to the rapidly increasing data exchange between libraries and the new national and international research platforms that had come into being since the beginning of the millennium. These included portals such as the European Library (2004), European (2008) and the Deutsche Digitale Bibliothek (German Digital Library, 2009), which could only function if data unencumbered by rights was transferred free of charge. Moreover, in the PSI (Public Sector Information) Directive of 2003, the European Parliament and the Council had already called for the data generated in the public sector to be re-used, its economic and social potential exploited, and for the public to be granted free access to it with as little red tape as possible.

In 2010, the German National Library accordingly changed its data subscription business model and undertook a multi-stage procedure which culminated on 1 July 2015, when all the Deutsche Nationalbibliografie's bibliographic data was made available free of charge through the internet under Creative Commons Zero (CC0 1.0) conditions, regardless of the format required. In doing so, its goal was to increase the dissemination and re-use of the Nationalbibliografie's metadata as much as possible and to strengthen the free flow of data in the »web of data«, as was subsequently proclaimed three years later in the Open Data Charter⁵⁹ signed by the G8 countries.

Customers and end-users

It is not so easy to make statements about the customers who pay to use the Nationalbibliografie, firstly because it was not distributed directly



The Deutsche Nationalbibliografie's sales figures from 1954 to 2021

through the library but through booksellers and the publishing company which issued it, and secondly because there are no comprehensive records of this information. It is even more difficult to make statements about end-users, i.e. groups of people who have been browsing the printed bibliographies, particularly in libraries, for many decades, or, as has now been the case for more than 25 years, have direct access to the German National Library's catalogue database and have the advantages of using a web-based search system via the internet. After consulting sources in the in-house archive, questioning colleagues who work for the user and data services, and adding one's own observations from about fifteen years in charge of digital services, the following picture emerged:

the Deutsche Nationalbibliografie has a highly diverse subscriber and user base, the nature and number of which vary considerably over time depending on the Bibliografie's content and the formats offered.

It consists first and foremost of scientific, public and special libraries of various sizes, which subscribe to the Nationalbibliografie and use it in all fields of their work, from acquisitions and cataloguing to user services. The creation of the Nationalbibliografie was and still is predominantly oriented on their need for reliable information which is

uniformly generated, as comprehensive as possible, and can be accessed without delay.

Booksellers and publishers have also been among the Nationalbibliografie's subscribers right from the start; after all, the fast supply of comprehensive information about newcomers to the book market is vital to their very existence. Last but not least, publisher's directories, inventories and literary indexes required for other purposes also need professional management. Since the introduction of music bibliographies and their digital formats, the same has applied to the music and audio trade as well as to broadcasting institutions and producers of sound recordings and AV media.

The advent of digital services at the end of the 1970s marked the development of a new customer group consisting of German and foreign library networks. As service providers, they now make the data they prepare available online for more than 2,500 libraries, archives and museums of various sizes in Germany alone.

With the launch of the interfaces in 2010, the number of direct subscribers to the Nationalbibliografie's data grew significantly. From 2015, when data access fees were abolished, they increased six-fold, reaching about 1,200 institutions and individ-

uals by the end of 2020. Along with a large number of library institutions in Germany and abroad, the majority of which are special, municipal or school libraries, they include numerous library service providers and providers of bibliographic management programmes.

Universities and other research institutions are also increasingly using the Deutsche Nationalbibliografie. This development has accelerated since the Nationalbibliografie became available in digital formats and evolved into an open-access database with a wide range of options for submitting queries and performing analyses. While bibliographies have been the starting point for statistical analyses in book market research⁶⁰, since as early as the mid-19th century, they have gained still more importance over the last 10 years, particularly in the fields of scientific, academic and educational research⁶¹. After all, »several scientific studies performed in recent years... (have demonstrated) the scientific relevance of the German National Library's expurgated catalogue for research.«⁶² This quality is also exploited by the digital humanities, for which the Nationalbibliografie is an interesting research data base.⁶³

The number of individual end-users of the Nationalbibliografie increased considerably with the release of the CD-ROMs, and even more so with the online catalogues, since these formats are specially tailored to their requirements and enable them to obtain results quickly and easily with the minimum of effort. This is confirmed countless times a day: in 2021, the average number of search queries a day was 71,000, i.e. more than 26 million catalogue queries a year, 24 percent of which came from abroad. Since only 13 percent of the queries were made in expert mode, we can assume that the Nationalbibliografie has found its way into the lives of hundreds of thousands of non-professional users. The new version of the catalogue, which will soon be going live in a new design and with new functions, was specifically developed with them in mind.

Conclusion and outlook

The Deutsche Nationalbibliografie has developed continuously since it was first published in 1931, a process to which the many changes and the variety of formats bear impressive testimony. This has been particularly true since the digital formats emerged at the end of the 1970s and still more in the years from 1990 to 2010. During this time, it has been made available not only in print but also in several different output formats, both on data carriers and online.

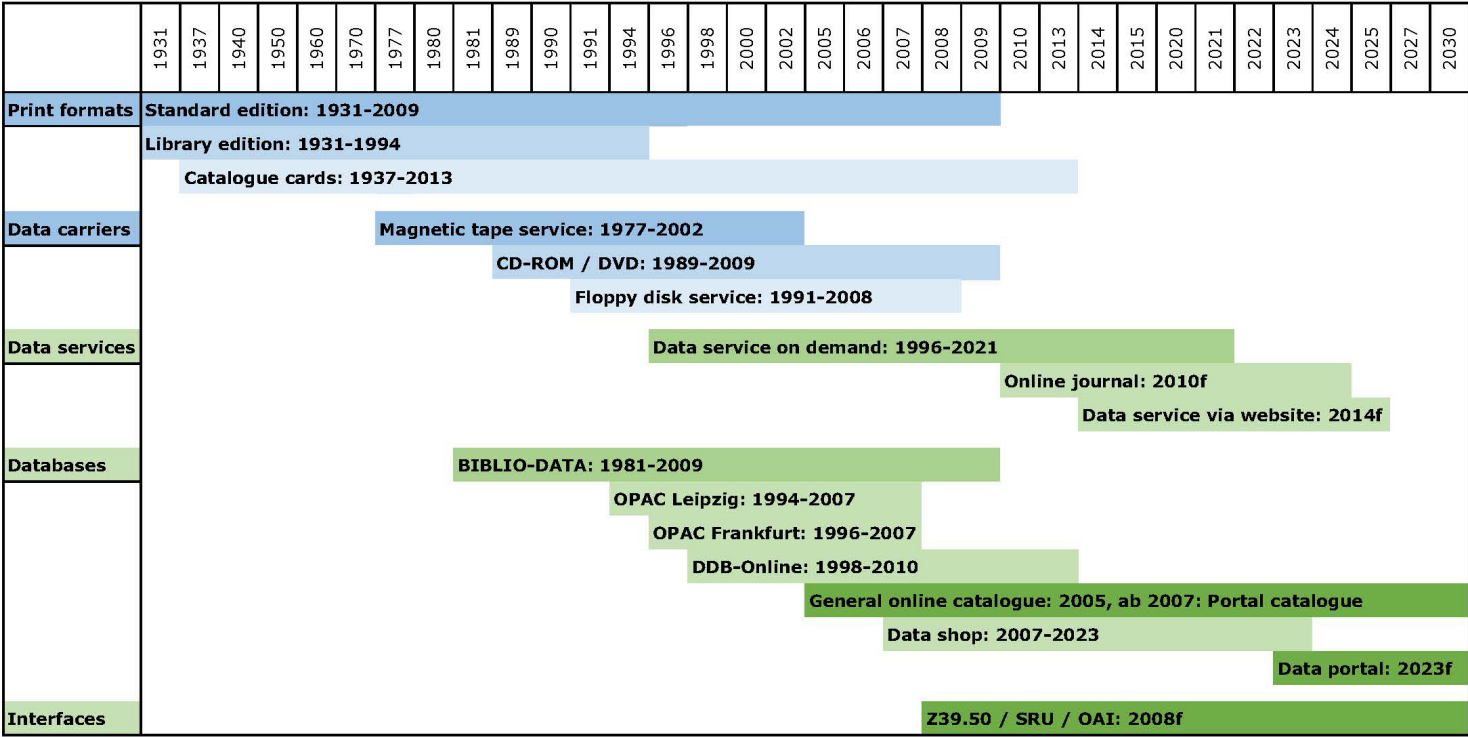
This diversity of offerings tended to match the variety of technical prerequisites and possibilities available to their users and recipients at the time. These have largely converged and are now mostly digital. It therefore comes as no surprise that the portal catalogue, online interfaces and access to preconfigured data sets via the German National Library's website have been the three dominant forms of access to the Nationalbibliografie for a good ten years now (see image: The Deutsche Nationalbib-

liografie's formats from 1931 to 2030: analogue and digital). They can be accessed online round the clock with no restrictions, and as such, they are an important part of the national information and data infrastructure.

In the future, it will therefore be important to make access to the data still easier and more efficient for the general public, to expand the delivery options available in particular to new user groups, e.g. in the fields of science and research, and to orient these options on their specific needs.⁶⁴

The new portal catalogue, for example, will feature improved search functions, even simpler navigation options, and additional graphic elements, all developed with end-users in mind. Moreover, a new »data portal« is currently being designed for everyone who would like to reuse the Nationalbibliografie's data in a more professional context; this will enable them to independently assemble data sets of any size using a wide variety of subject-specific and formal criteria and to download them

The Deutsche Nationalbibliografie`s formats from 1931 to 2030: analogue and digital



The Deutsche Nationalbibliografie's formats from 1931 to 2030: analogue and digital

on a one-off basis in various standard formats or have them delivered regularly as required. However, it will still be possible to subscribe to the long-established bibliographic data sets, e.g. to weekly deliveries of bibliographic data from series A. Moreover, it will also be possible to assemble data relating to non-independent literature, articles and essays from journals and anthologies that has not been supplied to date, and to select data depending

on whether or not the linked digital publications are freely accessible online.

As a database, the Nationalbibliografie developed by the German National Library since the 1960s and expanded in line with requirements over the last 30 years in particular, still has considerable scope for development to offer its current and future users.

Annotations

- 1 Elisabeth Niggemann: Änderungen bei den bibliografischen Diensten, [Changes to the Bibliographic Services], in: BuB, 54 (2002) 7/8, pp.436-438
- 2 The spelling of »Bibliografie« has changed over time. The word was spelt with »ph« until the end of the last millennium, but has been spelt with »f« ever since. The spelling used in the text varies accordingly.
- 3 Cf. »Neue Mitteilungen aus der Deutschen Bücherei«, [News from the Deutsche Bücherei], No. 10 (1969), p.2
- 4 CIP stands for Cataloguing in Publication. For detailed information on the history of this service and the factors that contributed to its success, please refer to Reinhard Rinn: Der CIP-Dienst der Deutschen Bibliothek [The Deutsche Bibliothek's CIP Service], in: Dialog mit Bibliotheken [Dialogue with Libraries], 2 (1990) 2, pp. 17-27
- 5 In order to prevent misunderstandings, please note that the library in Frankfurt was known as the »Deutsche Bibliothek« until 1990 in order to distinguish it from the »Deutsche Bücherei« in Leipzig. The two libraries merged into one institution known until 2006 as »Die Deutsche Bibliothek«. The Law Regarding the German National Library, enacted on 22 June 2006, then gave this institution the right to use the name »Deutsche Nationalbibliothek« (German National Library). The nomenclature used in the text therefore varies depending on the historical period under discussion
- 6 The »Wöchentliches Verzeichnis der erschienenen und der vorbereiteten Neuigkeiten des deutschen Buchhandels« (the »German Book Trade's Weekly Directory of New and Upcoming Publications«), the predecessor to the Deutsche Nationalbibliografie, had been producing this special format in Leipzig since 1921. For detailed information about the history of the printed national bibliography, please refer to Roland Grimmer and Christa Junker: Geschichte der gedruckten Deutschen Nationalbibliographie [History of the Printed Deutsche Nationalbibliographie], in: Dialog mit Bibliotheken, 14 (2002) 3, pp. 10-20
- 7 For more details on this and other advantages of the library edition, please refer to Wilhelm Frels: Die Bibliotheksausgabe der "Deutschen Nationalbibliographie" und ihre Verwendung für Bibliothekskataloge [The Library Edition of the 'Deutsche Nationalbibliographie' and Its Use in Library Catalogues], in: Börsenblatt für den Deutschen Buchhandel [Weekly Newspaper for the German Book Trade], 103 (1936) 65 and 67, pp. 247-250 and 255-259, https://nbn-resolving.org/urn:nbn:de:101:1-2015031512138_, S. 258f
- 8 cf. Wilhelm Frels 1936: 249
- 9 cf. Rudi Franz: Die Titeldrucke der Deutschen Bücherei. Beiträge zur Terminologie, Entwicklung und gegenwärtigen Lage, [The Deutsche Bücherei's Printed Bibliographies. Essays on Terminology, Development, and the Current Situation], in: Deutsche Bücherei 1912-1962. Festschrift zum fünfzigjährigen Bestehen der Deutschen Nationalbibliothek [Commemorative Publication Marking the Fiftieth Anniversary of the German National Library], Leipzig 1962, pp. 157-173, here p. 168
- 10 Please refer to Rudi Franz (1962) for detailed information on the history and terminology of printed bibliographies and catalogue cards.
- 11 The »Leipziger Zetteldrucke« had been preceded by a »catalogue printing battle« between the Deutsche Bücherei in Leipzig and the Prussian State Library in Berlin, each of which sought to be recognised as Germany's central cataloguing agency. This dispute lasted until the mid-1930s. The Prussian State Library had been trying to establish central cataloguing in Germany since 1892,

when it had started publishing the »Berliner Titeldrucke«, firstly as a library edition and from 1909 also in the form of catalogue cards. This hard-fought dispute between the two libraries went on for many years, but was finally resolved in 1936 by a ministerial decree issued in favour of the library in Leipzig. This ruled that libraries could in future only obtain catalogue cards for new German-language publications from Leipzig. For detailed information, please refer to Sören Flachowsky: »Zeughaus für die Schwerter des Geistes«. Die Deutsche Bücherei in Leipzig 1912-1945 [»Armoury for the Swords of the Intellect«. The Deutsche Bücherei in Leipzig 1912-1945], Göttingen 2018, Online edition 2020 (<http://d-nb.info/1211434095/34>) especially pp. 262-285 and 863-907.

- 12 The two-week delay following the publication of the printed volumes was production-related, since the typesetting material initially used to print the journal version of the national bibliography was re-used for cost reasons and had to be remounted to print the catalogue cards.
- 13 Unless otherwise indicated, the figures provided here and in other places are taken from the annual reports issued by the libraries in Leipzig and Frankfurt.
- 14 cf. Rudi Franz (1962:168)
- 15 Helmut Röttsch: »Seht, Großes wird vollbracht«. Die Deutsche Bücherei im sozialistischen Staat der Arbeiter und Bauern, [»See, great things are being done«. The Deutsche Bücherei in the Socialist State of Workers and Farmers], in: Jahrbuch der Deutschen Bücherei [Deutsche Bücherei Yearbook], Leipzig, 10 (1974), pp.9-27, here p. 23
- 16 Werner Bergmann: Vom buchhändlerischen Neuerscheinungsverzeichnis zur nationalbibliographischen Dokumentation und Information. Fünfzig Jahre »Deutsche Nationalbibliographie«, [On the Book Traders' Catalogue of New Publications of National Bibliographic Records and Information. Fifty Years of the »Deutsche Nationalbibliographie«], in: Deutsche Bücherei, Jahrbuch der Deutschen Bücherei, Leipzig, 17 (1981), pp. 39-73, here p. 65
- 17 Report on the Deutsche Bücherei's activities in 1979, in: Deutsche Bücherei Leipzig, Jahrbuch der Deutschen Bücherei, Leipzig, 16 (1980), p. 143
- 18 »The computerized bibliography production project will be perfected further still and its advantages will become increasingly evident. In the long term, the 'Leipziger Titeldrucke' will remain the dominant form for re-use in the context of bibliographic activities.« Helmut Röttsch and Hans-Martin Pleske: Die Deutsche Bücherei in Leipzig. Ein Abriß der Geschichte des Gesamtarchivs des deutschsprachigen Schrifttums 1912 bis 1987 [An Outline of the History of the Archive of All German-Language Writings from 1912 to 1987], in: Deutsche Bücherei: Jahrbuch der Deutschen Bücherei, Leipzig 23 (1987), pp. 23-123, p. 116
- 19 Rudolf Blum: Die Deutsche Bibliographie – Rückblick und Ausblick [The Deutsche Bibliographie – Review and Outlook], in: Die Deutsche Bibliothek 1945 – 1965: Festgabe für Hanns Wilhelm Eppelsheimer zum 75. Geburtstag [Commemorative Publication Marking the 75th Birthday of Hanns Wilhelm Eppelsheimer]. Ed. Kurt Kösters, ZfBB, special issue no. 3 (1966), Frankfurt am Main, pp. 91-116
- 20 Ute Valentin, Erweiterung des selektiven Titeltartendienstes ab 1991 [Expanding the Selective Catalogue Card Service from 1991], in: Dialog mit Bibliotheken 2 (1990), 3, pp. 12-13
- 21 Franz (1962:166), for example, reports that the Leipzig catalogue cards were not only available as a full package but that customers could also use order numbers to request specific cards and quantities, both individually, grouped by subject category, and for up to eight years following their issue.
- 22 Claudia Werner: Einstellung der Print- und CD-ROM-Ausgaben der Deutschen Nationalbibliografie [Discontinuation of the Print and CD-ROM Versions of the Deutsche Nationalbibliografie], in: Dialog mit Bibliotheken, 21 (2009), 2, p. 39, cf. <http://d-nb.info/100115908X>
- 23 Since 2010, the series A issues have been available for access at the permalink <http://d-nb.info/998466212> , while series B can be accessed at <http://d-nb.info/998467294>
- 24 PDF editions were offered on a trial basis for the newly established New Release Service as early as 2003, and from 2004 they were offered as a replacement when the hard copy versions of series M and T went out of print. Their evolution into an online journal containing all the printed directories from 2010 can be traced back to the strong objections expressed by numerous libraries to the discontinuation of the print editions. Despite the progress being made in the digitisation of library science, the printed issues were in many cases still an integral part of library transactions, and not all libraries were willing to modernise their internal workflows. Even the anachronistic print-on-demand service for the open-access online journal still had its users until 2014.

25 Jörg Oberfell and Anja Thalhofer: Mit der Wühlmaus »Anawülas« unterwegs. Das neue Auswertesystem der WLB für Titeldaten [Digging Around with »Anawülas«. The WLB's New Analytical System for Bibliographic Data], in WLBforum, 20 (1981), 1, pp. 7-19. <https://doi.org/10.53458/wlbforum.v20i1.142>

The blank backs of the catalogue cards were always much in demand because of the high quality of the card on which they were printed. This was particularly true during the paper shortages of the postwar years, which led the Leipzig's library's director at that time, Heinrich Uhlendahl, to remark in a 1948 edition of the library science journal Zentralblatt für Bibliothekswesen that »it is of course unacceptable to place orders or repeat orders for specific titles without actually needing them, merely to obtain the catalogue cards and use their blank backs for handwritten or typewritten bibliographic records« (ZfBB, 62 (1948), pp. 274-278, cited in Rudi Franz 1962:163).

And while the Deutsche Bücherei was purchasing catalogue cards from Frankfurt, many surplus, unneeded cards found their way into the off-duty lives of library staff, even though this was strictly forbidden on the grounds that the authorities did not want to encourage propaganda for Western literature.

26 In 1966, the Deutsche Bibliothek in Frankfurt became the first library in the world to publish an edition of a national bibliography using computer technology, a move which broke new ground in this territory. The Leipzig bibliography followed its example in 1971.

27 Dieter Wolf: Neuer Magnetbanddienst der Deutschen Bibliothek – Reihe M und T [The Deutsche Bibliothek's New Magnetic Tape Service – Series M and T], in: Dialog mit Bibliotheken, 1 (1989) 2, pp. 28-29

28 Dieter Wolf: Diskettendienst der Deutschen Bibliothek: Ergebnisse einer Umfrage [The Deutsche Bibliothek's Floppy Disk Service: Results of a Survey], in: Dialog mit Bibliotheken, 2 (1990) 1, pp. 26-29

29 cf. Dieter Wolf: CD-ROM-Test der DB erfolgreich verlaufen, [DB's CD-ROM test completed successfully], in: Dialog mit Bibliotheken, 1 (1989) 1, pp. 3-4

30 The test version of DB-CD aktuell, released on 28 April 1988, contained almost 300,000 data records, while the first regular edition released in 1989 contained approx. 447,000 data records, and the 1997 edition contained bibliographic data for 1.1 million publications.

31 The first CD-ROM of university publications from 1945 – 1992 contained approx. 650,000 bibliographic records; in 1998, it was updated and supplemented by bibliographic data for the years up to 1997, thus increasing the total number of data records to 766,000.

32 The CD-ROM »Deutsche Nationalbibliografie/Musik« was initially released twice a year, increasing to three times in 1997, and initially contained 175,000 bibliographic records from bibliography year 1982/4. Data from 1976 onward was added later on, while 125,000 bibliographic records for shellac recordings dating from 1896 – 1956 were added in 1996 and 44,000 data sets from the »Bonn Catalogue« were added in 1997. DNB-Musik was last released in 2006 and contained some 500,000 data records.

33 The first edition of Deutsche Nationalbibliografie retro appeared in 1995 and contained 600,000 data records dating from 1945 to 1965. From 1998, it was expanded and sold on two CDs as DNB-CD retro 1 (1945-1971) containing 710,000 data records, and on two additional CDs as DNB-CD retro 2 (1972-1985) containing 1.2 million data records. Versions were offered both for single workplaces and for networks.

34 The microfiche edition of the Nationalbibliografie had suffered a similar fate to the DVD a quarter of a century earlier. This too only stood out from its predecessors inasmuch as it offered a higher storage density accommodating scaled-down images of printed documents recorded on film. It too appeared once only – in 1977 – as a five-year directory for 1971/75, and remained inconsequential as a transitory phenomenon along the path to a digital bibliography.

35 The German National Library began providing full copies (dumps) of bibliographic data in RDF format on a test basis in mid-2012; since 2014, these dumps have been regularly available for free download via the DNB website (cf. <https://www.dnb.de/metadataupdate>). RDF is not a library format but rather a web-based one with links to numerous external data sources such as Wikipedia, DBpedia, VIAF, LCSH and RAMEAU. Bibliographic data dumps have also been available in standard library formats since 2015. For detailed information, please refer to Julia Hauser (2014): Der Linked Data Service der Deutschen Nationalbibliothek [The German National Library's Linked Data Service], in: DIALOG, 2014, 1, pp. 38-42. Now, in the spring of 2022, the dumps comprise more than 25 million bibliographic data records, have a volume of 8 gigabytes, are updated three times a year, and are offered in MARC 21, MARC21-xml and RDF (RDFxml, RDF-turtle, JSON-LD) formats.

36 German Federal Ministry of Research and Technology: Programm der Bundesregierung zur Förderung der Information und Dokumentation (IuD-Programm) 1974-1977 [Federal Government Programme for the Promotion of Information and Documentation (I&D Programme)], Bonn 1975, <http://d-nb.info/760499780>

37 Ulrike Keil: Die Deutsche Nationalbibliographie als Online-Datenbank auf STN International [The Deutsche Nationalbibliographie as an Online Database on STN International]: BIBLIODATA, in: Dialog mit Bibliotheken, 4 (1992) 2, pp. 9-11, here p. 9

38 cf. Reinhard Buchbinder: BIBLIO-DATA, die nationalbibliographische Datenbank der Deutschen Bibliothek [BIBLIO-DATA, the National Bibliographic Database of the Deutsche Bibliothek], in: Saevecke, Rolf-Dieter (Ed.) Die Deutsche Bibliothek, Düsseldorf 1980, p. 86

39 Internet Archive, screenshot taken on 3 September 1998, retrieved on 11 February 2022 <https://web.archive.org/web/19981203164845/http://www.fiz-karlsruhe.de/stn.html>

40 Peter Baader: Benutzung der DB-Bestände auf konventionellen und neuen Wegen [Conventional and Innovative Ways of Using DB Holdings], in: Dialog mit Bibliotheken, 1 (1989) 2, pp. 8-10

41 Internet Archive, screenshot taken on 12 March 2009, retrieved on 11 February 2022, https://web.archive.org/web/20090312050201/http://z3950gw.d-nb.de/z3950/zfo_get_file.cgi?fileName=DDB/searchForm.htm

42 Deutsche Nationalbibliothek: Bibliografische Dienste [German National Library: Bibliographic Services], Frankfurt am Main 2009, p. 19

43 Screenshot of data shop homepage on 11 February 2022

44 Christine Boßmeyer and Hans Liegmann: Konzepte der Deutschen Bibliothek für ein Integriertes Online-System [The Deutsche Bibliothek's Concepts for an Integrated Online System], in: Dialog mit Bibliotheken, 2 (1990) 1, pp. 3-7; for further information on the successive implementation of various modules of the PICA system at the DB's locations, please refer to Klaus-Dieter Lehmann: PICA und Die Deutsche Bibliothek [PICA and the Deutsche Bibliothek], in: Dialog mit Bibliotheken, 4 (1992) 1, pp. 19-21.

45 Wolfgang Honeit: Der Online-Benutzerkatalog im lokalen Betriebssystem der Deutschen Bücherei Leipzig [The Online User Catalogue in the Local Operating System of the Deutsche Bücherei Leipzig], in: Dialog mit Bibliotheken, 7 (1995) 1, pp. 38-45

46 Internet Archive, screenshot taken on 6 August 2004, retrieved on 11 February 2022, <http://opac.dbl.dbb.de:20080/IMPLAND=Y/SRT=YOP/LNG=DU/MAT=9001%05BTKOSEVCZ%05%06/DB=ext/>

47 Ute Schwens and Jörg Räuber: Aus Zwei mach Eins: Deutsche Bücherei Leipzig und Deutsche Bibliothek Frankfurt am Main seit 25 Jahren zur Deutschen Nationalbibliothek vereint [Two become one: 25 years since the Deutsche Bücherei in Leipzig and the Deutsche Bibliothek merged to become the German National Library, in: Dialog mit Bibliotheken, 27 (2015) 2, pp. 4-24, here p. 14

48 Internet Archive, screenshot taken on 16 May 2005, retrieved on 11 February 2022, <http://dispatch.opac.ddb.de/DB=4.1/HTML=Y/>

49 cf. German National Library: Annual Report 2005, Frankfurt 2006, p. 8.

50 Internet Archive, screenshot taken on 23 April 2007, retrieved on 11 February 2022, <https://web.archive.org/web/20070423061725/http://services.d-nb.de:80/portal/>

51 Internet Archive, screenshot taken on 23 April 2007, retrieved on 11 February 2022 , <https://web.archive.org/web/20100401193025/http://portal.d-nb.de/>

52 Christian Erlinger-Schiedlbauer: Der Literarische Speisezettell der TU Wien - Webtool zur kooperativen Sichtung der Deutschen Nationalbibliographie [The Literary Menu of TU Vienna – Web Tool for Cooperative Viewing of the Deutsche Nationalbibliographie]. In: Offen(siv)e Bibliotheken: neue Zugänge, neue Strukturen, neue Chancen [Open Library (Offensive): New Access, New Structures, New Opportunities], 32nd Austrian Librarians' Day, Vienna, 15-18 September 2015; Bauer, Bruno; Ferus, Andreas; Pauser, Josef. Vienna 2016. <https://resolver.obvsg.at/urn:nbn:at:at-ubtuw:3-2073>

53 Nicole von der Hude and Jochen Rupp: SRU in der Deutschen Nationalbibliothek: Eine neue innovative Schnittstelle zur Recherche und Datenübernahme [SRU at the German National Library: A New Innovative Interface for Research and Data Transfer], in: Dialog mit Bibliotheken, 22 (2010) 2, pp. 51-52 <https://d-nb.info/1011577879/34>

54 Nicole von der Hude and Jochen Rupp: OAI in der Deutschen Nationalbibliothek [OAI at the German National Library], in: Dialog mit Bibliotheken, 25 (2013) 1, pp. 83-84. <http://d-nb.info/1044619376/34>

55 For many years, the libraries in both Leipzig and Frankfurt focused on cost neutrality when calculating costs and prices. However, the additional costs incurred when producing and distributing the services had to be billed to the user. It was assumed that the basic costs of cataloguing the literature and issuing the bibliography were covered by the library budget. However, the libraries did not always have the same understanding of which additional costs should flow into the cost calculations. The Deutsche Bibliothek’s annual report for 1976, for example, states that the investment funds required to expand the computer system »will not (and do not have to) be provided in full by the funding body since the ‘Deutsche Bibliographie’ has been generating sufficient income since 1975 to gradually develop an integrated system within the Deutsche Bibliothek while improving its current standing and the information available« (p. 3). And in 1997, Klaus-Dieter Lehmann wrote, »The Deutsche Bibliothek (has) developed commercial services with libraries, book dealers and scientific institutions as its clients. Its national bibliographic records are used millions of times over in electronic and conventional format in order to relieve the libraries of their local cataloguing work. This yields considerable economic benefit, while the income generated eases the strain on the public budget. The Deutsche Bibliothek is commercially active in this respect but cooperates with the private sector and with foreign national libraries.« (Klaus-Dieter Lehmann: Haus der Bücher – Elektronisches Archiv [House of Books – Electronic Archive], in: Dialog mit Bibliotheken, 9 (1997), special issue, p. 10.

56 The price increase that took effect in 1992 was the result of an income review requested by the library’s funding body with the aim of achieving cost neutrality for the data services, which were becoming increasingly differentiated and subject to growing demand. See Werner Stephan: Erhöhung der Gebühren und Entgelte für die zentralen bibliographischen Dienstleistungen [Increased Fees and Charges for Central Bibliographic Services], in: Dialog mit Bibliotheken, 3 (1991) 3, pp. 11–12

57 Sören Flachowsky: "Zeughaus für die Schwerer des Geistes«. Die Deutsche Bücherei in Leipzig 1912-1945, Göttingen 2018, online edition 2020 (<http://d-nb.info/1211434095/34>) p. 426

58 See Directive 2003/98/EC of the European Parliament and of the Council of 17 November 2003 on the re-use of public sector information, cf. <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32003L0098&from=en>

59 Cf. the Open Data Charter of 18 June 2013, retrieved on 17 February 2022: <https://www.gov.uk/government/publications/open-data-charter>

60 Please refer to the detailed article on book market research in Wikipedia: <https://de.wikipedia.org/wiki/Buchmarktforschung> (only available in German). The Börsenverein des Deutschen Buchhandels (German Book Traders’ Association) has been publishing its comprehensive annual compendium of book market research statistics »Buch und Buchhandel in Zahlen« (<http://d-nb.info/010014098>) since 1952. This also contains information about the number of titles released annually in Germany and about translations into the German language. This data is based first and foremost on the Nationalbibliografie. It facilitates statistical evaluations on the basis of criteria such as new publication, first edition, subject category, edition format, genre, language, and place of publication. Selected digests can be found on the Börsenverein website: <https://www.boersenverein.de/markt-daten/marktforschung/wirtschaftszahlen/buchproduktion/>

61 Renate Martini and Werner Dees; Qualifizierungsarbeiten in der Bildungsforschung [Qualifying Work in Educational Research] 1998-2007. Frankfurt am Main 2013, cf. https://www.pedocs.de/volltexte/2013/7048/pdf/MartiniDees_2013_Qualifizierungsschriften_1998_2007.pdf

62 Johannes König et al.: Karriereentscheidungen und Karriereverläufe Promovierter – zur Multifunktionalität der Promotion. Studien im Rahmen des Bundesberichts Wissenschaftlicher Nachwuchs (Career Decisions and Career Paths of Doctorate Holders – on the Multifunctionality of the Doctoral Degree. Studies within the Framework of the National Report on Junior Scholars (BuWiN) 2021, p. 75, cf. https://www.buwin.de/downloads/begleitstudien/studie-b3_buwin.pdf/download and National Report on Junior Scholars 2021: Statistical Data and Research Findings on Doctoral Students and Doctorate Holders in Germany, ed. Consortium for the National Report on Junior Scholars, Bielefeld 2021, p. 205, <https://www.buwin.de/>

63 Cf. e.g. Frank Fischer and Robert Jäschke: Liebe und Tod in der Deutschen Nationalbibliothek: Der DNB-Katalog als Forschungsobjekt der digitalen Literaturwissenschaft [Love and Death at the German National Library: The DNB Catalogue as a Research Object for Digital Literary Scholarship]. In: DHd2018: »Kritik der digitalen Vernunft«, Digital Humanities im deutschsprachigen Raum [»Criticism of Digital Reason«, Digital Humanities in the German-Speaking Countries], Cologne 2018, pp. 261-266, cf. <https://hal.archives-ouvertes.fr/hal-01787558/document>

64 The historian and director of Leipzig’s university library recently issued an emphatic call for this in a paper on the status of Germany’s national catalogues, with special reference to the digital humanities. Please refer to Ulrich Johannes Schneider: Deutsche Nationalkataloge – Herausforderungen an das deutsche Bibliothekssystem [German National Catalogues – Challenges for the German Library System], in: ABI Technik, 40 (2020) 1, pp. 40–51.

Sources

The main sources were the annual reports and reports on the activities of both libraries and the budgetary planning of the library in Frankfurt. We also consulted information brochures and materials from the »Central Bibliographic Services« department, which was responsible for the distribution and marketing of the Nationalbibliografie at the Frankfurt location from 1983.

Acknowledgements

This publication was compiled with the support of numerous colleagues and friends. They include Jessica Charzynski, Angelika Cremer-Reiber, Barbara Fischer, Susanne Frank, Elisabeth Fründt, Renate Gömpel, Kathrin Jockel, Stephan Jockel, Ulrike Junger, Christa Junker, Verena Henning, Simon Herrmann, Sylvia Klein, Anke Meyer-Hess, Michaela Michel, Elisabeth Niggemann, Monika Pfitzner, Jörg Räuber, Elke Rötlich, Kristina Knull-Schlomann, Katharina Schöneborn, Stefanie Schust, Ute Schwens, Isabell Sickert, Susann Solberg and Claudia Werner. I would like to offer you all my sincere thanks!

Imprint

Dr. Kurt Schneider: The Deutsche Nationalbibliografie and its formats: 1931 to 2030
2022
ISBN 978-3-941113-57-2 urn:nbn:de:101-20220315205 CC BY-SA 3.0

Photos: German National Library, Stephan Jockel

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Editor: German National Library, represented by Director General Frank Scholze

Address of the Editor:
German National Library, Adickesallee 1, 60322 Frankfurt am Main