

The Specialised Information Service (SIS) Cartography and Basic Geodata

Wolfgang Crom

The Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) has transferred the system of supraregional literature supply to a new funding programme. Until now the idea was that the responsible special subject collection acquires every scientifically relevant publication which was not published in Germany and makes it available via the inter-library loan system. This guaranteed that the subject disciplines were well provided with specialised literature and consequently delivery times were also short. As a result of the increase in digital provision of specialised literature and the current focus on this development, the belief was that this system needed reforms, so that after an evaluation the creation of Specialised Information Services has been introduced as a new funding programme.¹ The former institutions which were in charge of the special subject collections were invited to participate in the new system by entering a competition and submit applications, in which tasks and concepts for the realization of their plans had to be detailed. Therefore the General Director of the Staatsbibliothek zu Berlin (SBB) asked the map department to write a detailed application. Altogether, the SBB submitted four applications (International and interdisciplinary legal research, Slavistics, CrossAsia – Specialised Information Service Asia as well as Cartography and Basic Geodata), which all have been positively evaluated by the expert commissions of the DFG.

The task of the Specialised Information Services is to supply top-level research with specialised literature and research-specific information, which can not be supplied by the local university libraries, it is to be understood as a complementary service to these libraries. It is important to observe the development of the scientific discourse in a subject discipline, so that it is possible to create – with an eye to the future - new and subject-specific services. When developing Specialised Information Services the interests of research have to be the main focus, this creates an added value in comparison with the basic tasks of scientific libraries. Accordingly Specialised Information Services are mainly directed to researchers in university but also non-university research institutions.

The map department of the SBB was in charge of such a former special subject collection and then it had to be considered whether and how the work of the department could be transferred to the new tasks, what, if necessary, could not be continued and what had to be redeveloped and offered as an additional service. Until that moment the acquisition of cartographic specialised literature and topographic map series for the supraregional literature supply and long-term use were the main focus², it complemented the acquisition of the map department. The new funding programme of the DFG contains clearly more possibilities to support the subject-specific interests and needs regarding topical questions.

¹ Leaflet and guidelines of the DFG: http://www.dfg.de/formulare/12_10/12_10_en.pdf
http://www.dfg.de/formulare/12_102/12_102_de.pdf

² Crom, Wolfgang: Die Arbeit der Kartenabteilung der Staatsbibliothek zu Berlin. – In: Vermessung aktuell, 1/2009, S. 62-74 (http://www.geobasis-bb.de/GeoPortal1/produkte/verm_bb/pdf/1_09_Crom_62-74.pdf)
Crom, Wolfgang: 150 Jahre Kartenabteilung Staatsbibliothek zu Berlin. – In: Kartographische Nachrichten 59. - 2009, Heft 3. - S. 152 – 156

As a result four objectives could be formulated, which were substantiated in the application for the creation of the Specialised Information Service Cartography and Basic Geodata (short: SIS Maps) and explained as work programmes for the three year funding period:

- Transfer of the Bibliographia Cartographica (BC) to an open access platform and connection with a subject repository
- New orientation of the acquisition guidelines for cartographic works
- Support of various projects and research projects by making available digitised items
- Establishment of a central office for the provision of basic geodata

Bibliographia Cartographica

The acquisition of analogue publications on the relevant subjects was completely excluded from the application, since January 2016 the Staatsbibliothek zu Berlin completely finances this part of the acquisition. The comprehensive literature supply in this field continues to be guaranteed, it is the basis for the bibliography. Acquiring only highly specialised literature for top-level research would reduce the scope of the holdings. The department can therefore continue to acquire a broad range of cartographic publications and make them available in systematic order in the maps reading room. However the first objective of the SIS Maps was the BC, which as the unique and freely available online database in this field has become the internationally renowned search tool for cartographic literature.³ The first step will be the integration of freely accessible digital publications. This includes the relevant contributions which are published retrospectively as digital documents. The reason behind this is the current dynamic phenomenon that publishers make available online many international core journals on cartography, mostly free of charge. These parallel editions which are published a certain time after the original publication will be included in the BC with a hyperlink, so that they are easily searchable and can also be directly consulted.

In a second step the connection with a subject repository has to be established. The idea is to include current original publications and also allow authors to re-publish their works. It would unite the electronic publications which until now are hosted by many different providers and make them all available via the BC portal, the BC could then be the central portal for carrying out the literature search in the field of cartography. The range of publications to be included should also cover conference proceedings, publications from the sections and commissions of the Deutsche Gesellschaft für Kartographie (DGfK, German Cartographic Society), or theses of outstanding quality, a catalogue will be supplied as soon as the technical requirements are met.

After the inclusion of freely available publications into the BC, the next step will be to plan the integration of licensed specialised journals, because the creation of the repository will probably lead to an increased attention of the research community. Before that it will be necessary to ask the members of the research community about the necessity of license models, in order to evaluate the need for relevant journals and invite the providers to make offers. The department would negotiate in close contact with the already established Centre of Competence for Licensing (Göttingen and Berlin). Cooperations with the TIB Hannover (Leibniz Information Center for Science and Technology

³ <http://bc.staatsbibliothek-berlin.de/>

University Library) and the GeoForschungsZentrum Potsdam(German Research Centre for Geosciences) would be preferred in case of thematic overlap.

New orientation of the map acquisition

The special subject collection had the objective to acquire complete topographic map series, including different scale series, the SIS Maps offers to the research community the possibility to declare what is needed for topical research questions, and the map department will take care of supplying the material via their trade partners. This will not be limited to single maps, the aim will still be the acquisition of possibly complete topographic map series. There will remain sufficient flexibility to be able to react to market situations in case of unique offers of rare maps difficult to access. Comparative research may need time series of different editions, this will also be taken in consideration in the acquisition process.

The new orientation of map acquisition is not only influenced by the former special subject collection. A new field of acquisition in the SIS Maps will be thematic maps or map series and atlases with their broad range of possibilities of representation and illustration. This broadening element is based on the former acquisition profile of the map department regarding thematic maps with an emphasis on city plans, national atlases, historical maps, language maps, and geomedical maps (atlases respectively). Such a measure should be seen as a support for other subject- or region-specific Specialised Information Services, with which a consultation process would be started in case of a new funding.

Due to the increasing importance of official national or regional map portals, they have also been included in the work programme. During the last years, map portals have been made freely accessible online by official survey authorities, this development will continue in future years. However, the data and the tools provided are of rather different quality. In order to better use them, it is planned to create tutorials, which allow a quick and easy application and facilitate the use of the different Web Map Services. The focus will be on portals offering topographic map contents, which will be included in the database „Topo-Liste“ of the map department⁴.

Thematically focussed digitisation projects

Every year the map department of the SBB has to deal with ca. 3,000 – 3,500 digitisation requests concerning maps which are part of their holdings. The digital copies are provided as downloads. This indicates an enormous demand, however it is a random selection. The programme of thematically focussed digitisation will create quick availability of content-related digital copies of maps to top-level research. Thematically focussed digitised maps may have a regional as well as a subject-related focus. As an example: In case of questions regarding fortified castles, various fortification plans will be digitised, for a chronological view on the development of a city or a landscape relevant map material will be digitised. Members of the research community may submit applications concerning current research projects , including quantity details, and the SIS maps will evaluate the applications.

⁴ <http://staatsbibliothek-berlin.de/die-staatsbibliothek/abteilungen/karten/recherche-und-ressourcen/topo-liste/>

Alongside the digitisation of single maps, which in terms of their content are related with research questions, old land surveys will also be integrated in this programme and thereby prepared for the inclusion in map portals. Topographic mappings from the 18th and 19th centuries which belong to the holdings of map department are important sources, their value will be enhanced in a seamless presentation. The preparation for an integration in Web Map Services is only possible with detailed knowledge about the geodetic composition and the trigonometry used, in case it was applied. Therefore alongside the digitisation it is planned to also do cartometric analyses, in order to evaluate the efforts needed for a possible integration in modern map portals.

Provision of geodata

SIS Maps is meant to be an innovative service supporting the provision of basic geodata. In the countries of the European Union the gradual implementation of the political initiative regarding the geodata infrastructure (Infrastructure for Spatial Information in the European Community, INSPIRE)⁵ is being promoted. The aims are the harmonisation of basic geodata, which have been collected on national levels, and as far as possible, their free availability. In Germany the Law on the free access to digital geodata (GeoZG)⁶ does apply, accordingly it also applies on the level of the states (Länder) and is relevant for the survey authorities. The realisation and coordination is controlled and supervised by the Geodateninfrastruktur Deutschland (Spatial Data Infrastructure Germany, GDI-DE)⁷. Outside the countries of the European Union the availability and provision of digital geodata is very unclear and therefore time-consuming and legally problematic.⁸ Often the same restrictions apply which also apply to the publication of official analogue map series, for example for reasons of military secrecy. In this context the SIS Maps, which can build up on already established trade channels for analogue map material, is expected to establish a new service and thereby support the work in the GIS laboratories of research institutions.

The centre for the provision of basic geodata gives advice and help regarding necessary segments of space and the determination of different factors such as data format, scale, resolution, and content; factors which influence the price calculation, so that an individual and custom-fit data supply can be organised. For the negotiations with publishers or providers of basic geodata the map department will rely on their connections with the specialised trade. Finally, the basic geodata have to be acquired by the client directly from the publisher or provider.

As this service for top level research is a complete novelty, a workshop with users of basic geodata is being planned. The workshop will be an opportunity to exchange experiences, present examples, examine possibilities of provision and determine procedures for a sustainable development of the service. The plan is to organise this meeting during the Deutscher Kartographentag in 2017 (German Cartographers' Day).

⁵ <http://inspire.ec.europa.eu/>

⁶ <http://www.gesetze-im-internet.de/bundesrecht/geozg/gesamt.pdf>

⁷ <http://www.geoportal.de/DE/GDI-DE/gdi-de.html?lang=de>

⁸ Cp. the study: The Status of Topographic Mapping in the World. A UNGGIM – ISPRS Project 2012-2015 https://www.earthobservations.org/documents/articles_ext/201508_UNGGIM_ISPRS_Status_of_Topo_Mapping.pdf

Research community

The guidelines of the DFG present the Specialised Information Services as services for the top-level research, which according to a subject discipline targets a special research community. To define the members of this community is not so easy in the field of cartography, as only a few universities and universities of applied sciences have independent cartographic institutes or faculties. At the same time the subject discipline or parts of the discipline are established in research and teaching at many institutions. On the other side the field also touches geodesy or photogrammetry, the TIB Hannover however is responsible for providing the necessary specialised literature. For the start of the SIS Maps, it was drawn up a list of professors, who are responsible for cartography or geoinformatics in research and teaching, added were members of GIS laboratories and members of the management level of non-university research institutions. What was also taken into consideration were the professorships for the history of cartography which are often located in historical institutes. The research community will be regularly informed about the developments of the SIS Maps by circular emails and they will be invited to submit their applications. More recipients can be added to the mailing list at any time. As the resources are limited, it will be necessary to introduce selection procedures in case of extensive acquisitions or digitisations of maps, requests for single items are dealt with as normal purchase suggestions to the library.

Advisory board

Specialised Information Services are expected to be in close contact with their relevant research community, and the community should influence the future development. In the SIS Maps this process is supported by a scientific advisory board. It consists of representatives from the cartographic research community, every member having a different focus. The following scientists have declared their willingness to actively participate in the advisory board:

Prof. Dr.-Ing. Manfred Weisensee, Jade Hochschule Oldenburg, as the President of the DGfK

Prof. Dr. Frank Dickmann, Ruhr-Universität Bochum, as the representative of a university

Prof. Dr. Immelyn Domnick, Beuth-Hochschule Berlin, as the representative of a university of applied sciences

Prof. Dr. Francis Harvey, Institut für Länderkunde Leipzig, as the representative of a non-university research institution

Dr. Andreas Illert, Bundesamt für Kartographie und Geodäsie Frankfurt am Main, as the representative for geodata infrastructure

Prof. Dr. Jochen Schiewe, HafenCity Universität Hamburg, focus on geoinformatics

Prof. Dr. Iris Schröder Universität Erfurt/Forschungszentrum Gotha, focus on the history of cartography

The composition of the board takes into consideration the currently most important fields of cartography, the connection between research and teaching as well as non-university research. The function of the advisory board can be seen as a steering committee regarding the medium-term orientation of the FIS maps. The board also has the task to function as mediator between the scientists and the Specialised Information Service.

On the one hand, the Specialised Information Service Cartography and Basic Geodata is embedded in a broad context of Specialised Information Services, which support their respective subject disciplines and offer new services as a reaction to the changing requirements of science.⁹ On the other hand it is affiliated to the map department of the Staatsbibliothek zu Berlin, which with its rich holdings of maps, atlases and specialised literature, and its manifold activities in the field of cartography will continue to offer excellent services. In case of questions on the SIS Maps a specially established mail account has been created: fid-karten@sbb.spk-berlin.de

⁹ http://www.dfg.de/download/pdf/foerderung/programme/lis/uebersicht_laufende_fid_projekte_2016.pdf