Report on the 11th Conference of the Groupe des Cartothécaires de LIBER 15-18 September 1998, Kraków, Poland

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Based on the former *LIBER Special Newsletters*, this report attempts to provide a general summary of the conference, extracting salient details from each of the papers, and describing events in the order that they were presented at the conference. This is necessarily a subjective distillation of facts, in order to highlight general trends and provide briefer overviews, and readers are therefore referred to the complete versions of these papers, which will be published in *The LIBER Quarterly*, and also on the GdC Website (<http://www.konbib.nl/kb/skd/liber/overview.htm#subject>).

INTRODUCTION

The theme of the conference arose out of discussions at earlier conference meetings, particularly those in Zürich and Berlin that had been concerned directly or indirectly with new technology in map collections. However, the questioning of technology, exploring its potential for success or failure, its constructive as well as destructive impacts, and the degree to which people feel they can control, or rather are controlled by new technology, has been a recurring theme in human history. And in looking at ends to which particular technologies are directed, evaluating existing and alternative means for reaching these ends, and in questioning whether certain technologies have become ends in themselves, a great deal can be understood about our society and the tools at our disposal.

Within map libraries, the use of computer technology has of course increased exponentially in recent years, moving beyond the traditional areas of library automation such as catalogues, acquisition, and administration, to embrace digital cartography in all its guises, including both the vast range of products published and acquired from external sources, to images created in-house by

digital cameras and scanners. More recently still, the use of digital technology in communications has perhaps been a greater transitional force as the Internet and World Wide Web have proliferated and come to dominate new channels of interaction. How well have cartographic libraries implemented these and other technologies? What opportunities and problems have been encountered in these developments? How are the traditional roles of map publishers, librarians, and users altering as a result of new technology? And how far do map curators feel able to direct and control technology, or do they rather feel at the mercy of more powerful technological imperatives beyond their control?

These and other questions were addressed in the Conference, which appropriately enough was held in Poland, a country currently undergoing a very rapid implementation of the newest information and communications technology. As with past conferences, there was a diverse range of papers presented around the general theme from the theoretical and abstract to the specific and practical, presented by those both within and beyond cartographic institutions, and with implications for all functional areas of map curatorship.

CONFERENCE

The conference was held in Kraków from 15-18 September 1998, and was attended by 68 participants from 17 countries. This was the first time the conference had been held in an Eastern European country, and therefore the Groupe welcomed a greater number of participants from Central and Eastern Europe than in the past.

During the conference 16 papers were read on various topics, and there were 4 poster displays. The Bookshop Okregowe Przedsiebiorstwo Geodezjno-Kartograficzne from Kraków also had a stand selling relevant cartographic and geographic publications. The Jagiellonian University's Instytut Polonijny provided an excellent base for the conference, set in attractive woodland on the edge of Krakow with commanding views across the Vistula to the south to the Tatra Mountains (on a good day!) As the lecture theatre, restaurant, and accommodation were all on the same site, there was considerable opportunity for discussion outside of the formal programme, providing the opportunity for many useful contacts to be made. Communication across languages, which have often been more difficult in past conferences, were particularly facilitated by these campus arrangements at the Instytut.

NATIONAL PROGRESS REPORTS

Since 1988 it has been usual for National Progress Reports to be read, providing a means of describing developments in the interval between the bi-annual conferences. National correspondents are asked to report on relevant activities of map curators' groups, acquisition and collection development, automation, education, conservation and restoration, conferences and symposia, exhibitions and important publications. During this conference 12 reports were given, and these are included with this *Special Newsletter*. Collectively, the reports provide a good general overview of developments all over Europe.

PAPERS

The formal programme began with a highly stimulating and broad keynote speech by Dr Krzysztof Zamorski, Director of the Jagiellonian Library. Although officially titled, *The Jagiellonian Library - its history and present state*, the talk ranged across much broader themes, setting the Library within the context of Polish history, ideology, and culture, and providing a critical insight into the recent changes and current pressures within Poland. The Jagiellonian Library's history is bound up with the University which was officially founded in 1364, and for centuries was the primary educational establishment in Poland, and a centre of European scholarship. As the Library and University suffered very little damage during the Second World War (in contrast to many other Polish institutions and archives) the Jagiellonian has uniquely important historical collections, including the state archives. During the post-war communist era, the Jagiellonian was vitally important, not just in preserving access to censored materials, but in symbolising the importance of maintaining free ideas and intellectual debate. Dr Zamorski emphasised the importance of these free ideas and the information revolution elsewhere in promoting the fall of communism; this in turn has had a tremendous impact on Poland, and its effects on the Jagiellonian are very much in evidence. In a tour the previous afternoon led by Dr Zamorski the conference had already seen the ambitious building work in progress for expanding the Library, and the vast scale of IT infrastructure projects that are part of these plans. There are also many plans underway for automating the Library and its catalogues, co-ordinating policies with other Polish libraries, modifying legal deposit laws, and the formidable tasks of conservation and restoration of library archival materials. Despite Dr Zamorski's contagious enthusiasm, and realistic long-term vision, there are many problems to be overcome, often problems that are less evident from a Western European perspective. Like Poland the Library is

facing a difficult era of transition, with an urgent need to come to terms with the capitalist money-based society and the price of developments, many competing demands for scarce financial resources, and hopes and expectations running ahead of the ability to meet them.

Jan Smits of the Koninklijke Bibliotheek, Den Haag, The Netherlands, discussed some theoretical and practical aspects of the transition from analogue to digital cartographic collections (*The necessity and nuisance of survival or how to keep to our senses*). As with the transition from manuscript to print materials, we are witnessing a degeneration of map content and cartographic image which hopefully will improve in the longer term as the technology becomes more established. We are also witnessing new uses and new users of digital technology, forcing map curators to redefine their roles and conceptions of cartography. Rather than define cartography in terms of map-making, a more perceptual focus enables a proper emphasis on users' visualisation of cartographic images, as representations of reality that communicate at both emotional and rational levels. This broader definition will allow a greater integration between fields that have been relatively disparate in the past; in particular, through the integrating power of spatial data, many areas of librarianship can be linked, and map curatorship can move closer to geoinformatics, looking at the modelling and processing of spatial data. There will therefore need to be greater attention given to information infrastructures and distributed archiving. It also will allow map curators to shift their activities more towards the study, analysis and representation of spatial data. Yet many map curators have not yet risen to the challenge posed by new technology, and continue to think and act in ways that place doubts upon our future survival.

Sue Antonelli of the Libraries Division, Directorate of Geographic Information, Military Survey, United Kingdom, examined the practical issues of dealing with digital data (*Breaking with conventions: what does digital spatial data require?*). The Ministry of Defence Map Library has perhaps the most comprehensive automated catalogue in the world, and is at the forefront of acquiring and using digital topographic data in its collection. This has been possible by breaking with a number of traditional cataloguing conventions, in particular, the demise of the card index, the replacement of the traditional sheet-series relationship by a focus on sheet records with summary series information, relaxing cataloguing rules to enhance system usability, and allowing access to the catalogue for external users. Further conventions will need to be challenged to properly catalogue digital data, and although the metadata that needs to be recorded will include new subjects, on the whole it will be more succinct, requiring perhaps half of the fields that were needed for

analogue mapping. Also the metadata for paper maps, books and digital data may initially need to be held separately, but with common functionality such as searching and loans. Behind all this is a more fundamental change in the function of the map librarian as less contact with both the materials and users is required, the former as digital mapping often does not need to be seen to be catalogued, and the latter with the increasing proportion of external users. Perhaps the digital map librarian is becoming more a supplier of metadata rather than a source of expertise and advice.

Göran Bjäärnhielm of The Royal Library, Stockholm, Sweden spoke about developments in digital spatial data at the Royal Library, and various difficulties of its management and use. In terms of production, there are a larger number of digital map publishers, including the National Land Survey, but costs of data are also high and there is very little spatial data in the public domain. For the Map Library, there are now about 50 CD-ROMs in the collection, helped particularly by the legislation in 1994 for the legal deposit of fixed-form digital data. Although this may be amended, it is unlikely that it will comprehensively include all digital data products. Some digital data has also been downloaded (such as the Digital Chart of the World) for GIS usage, but the main way in which users can access data is via publishers' Web sites, not the Library. In this context, a recent development to extend the Royal Library's national bibliographic role has been *Kulturarw3*, cataloguing and archiving Swedish WWW pages using Dublin Core metadata. However, for many cartographic images on the Web, their resolution is too low to be of value for preservation purposes.

Ludmila Kildushevskaya from the National Library of Russia, St Petersburg spoke about *New technologies used in the major cartographic libraries of Russia*. Despite the innate conservatism of libraries there have been a number of developments, with new CD-ROMs being acquired (although there is no legal deposit legislation for digital data at present) and progress on automated cataloguing (despite different standards). There have also been developments in retroconversion, with OCR scanning of catalogue cards at the Russian State Library in Moscow, and manual re-typing of cards at the National Library in St Petersburg. There is a growing need for training both users and staff in new technology.

Wieslaw Babik, from the Institute of Librarianship and Information at the Jagiellonian University, Kraków, Poland discussed how knowledge about map collections can be represented, and how this has changed due to technology in recent decades (*Knowledge representation in map collections for information retrieval systems)*. There has been an increase in the quantity of

information and the number and range of users of maps. Maps have their own special language, modelling reality, and some aspects of this language - such as distortion and transformation through projection, reduction of information, and specificity in time - were discussed. For information retrieval there are 21 distinctive features of maps that need to be modelled, and many existing standards, such as the ISBD(CM), have a much more limited conception of the spectrum of information that should be considered.

Halina Sowa-Babik from the Institute of German Philology at the Jagiellonian University, Kraków, Poland, looked at *Cartographic materials as a means of multi-media communication,* a theoretical discussion of developments in digital maps and their mental comprehension. Developments in information and communications technology are re-defining the communication of information, with new information, new uses, and new users. These various parts of the communication chain were defined and examined, with particular reference to multi-media, hypermedia, and electronic cartography. Users have a more active role in this process and this role is changing with increasing interactivity and non-linear processes of exploration. The development in the future of cartographic materials as part of three-dimensional electronic environments will further transform the way in which cartographic information is communicated.

Nick Millea, from the Bodleian Library, Oxford, United Kingdom, evaluated the Digimap Project, an experimental scheme to deliver Ordnance Survey digital data to British higher education users (*Delivering digital data into the Library: the Digimap project and its impact on the map room*). Although administered at the University of Edinburgh, Oxford was one of six trial sites chosen for the implementation of the Digimap service, and the background to the project, the required technology, available datasets, and data usage were all explained (see <http://digimap.ed.ac.uk:8081/>). Whilst the Bodleian was grateful to be included in the project, and was keen to promote digital mapping to new users, the reality has unfortunately fallen short of expectations in some areas. As Digimap is an online service, its effects in promoting new technology in the Map Room have been relatively limited, and it has also been difficult to obtain feedback from remote users. Ordnance Survey's concern over data leakage severely restricted the geographic coverage of the data they were prepared to let Digimap have, and forced a registration scheme for users, administered by Edinburgh University Data Library. Finally, there have been technological problems – in particular, poor response times over the Internet, communication problems between computing staff and librarians, and difficulties for users in successfully integrating databases, which range in scale from 1:1,250 to 1:625,000. The continued funding of the

Digimap Project, for a further two years until September 2000, will provide an opportunity to address some of these problems.

Kazimierz Trafas, from the Geographical Institute of the Jagiellonian University, Krakow, Poland illustrated *New types of regional and thematic atlases* with a case study of the new Cracow Voivodship Computer Atlas. This will be a ‚computer atlas’ with previously customised electronic visualisations, as well as a ‚GIS atlas’, allowing the user to interact with spatial and non-spatial data to create new mapping. However, many of the principles of atlas design - such as representation, scale, format and content (completeness, sequence, complexity, and presentation) - are still relevant. The main users of the atlas will be government, local authorities, and public institutions, and their needs have also shaped the content. The main 1:50,000 and 1:100,000 base maps from the prior analogue atlas will be updated with satellite images and digital terrain models, supplemented by statistical and gazetteer information. New types of specific query that can be performed and dynamic map results were illustrated, which would have been impossible with a static paper medium. Finally, the use of standard GIS technology and open systems will allow the continuous addition and modification of the atlas in future years.

Piotr Cichociñski, from the Department of Land Information Systems, University of Mining and Metallurgy, Kraków, Poland described the advantages of the transition to *Digital cadastral maps in Land Information Systems*. Hitherto, existing Polish land cadastre has used paper maps and land registers, but these have a number of shortcomings, such as low precision, low speed of access, potential divergences between the map and the land register, and analytical problems. A digital land information system can integrate both spatial and descriptive ownership information, in a number of separate layers, allowing more details to be recorded and queried, and has been underway in Poland from 1991. Through correct spatial database linkage, many new queries can be performed, both on quantitative and qualitative values and the results presented in a range of graphic and textual ways. At present only parts of the country have been automated, and the full power of the digital cadastre will only be realised with its integration at a regional and national scale.

Wolfgang Crom from the Württembergische Landesbibliothek, Stuttgart, Germany spoke about and practically demonstrated the value of Web indexes and online mapping as a guide to his own map library collection (*A map collection on the Internet*). Most map collections record holdings information in analogue and (sometimes) computer-based forms, but Wolfgang had gone a stage further in converting this information into an HTML format.

Lists of mapping on particular themes (eg. topographic mapping) and of certain types (eg. town and city plans) could be scrolled online, and brief descriptive details could be viewed. In addition, clickable maps had been created of graphic indexes to series mapping, so that clicking on a certain sheet in the graphic index retrieved sheet and edition details. (<http://www.wlb-stuttgart.de/~www/referate/kartograph/bestand.htm>).
The results are of great value in providing detailed collection holdings information for remote users, and have been achieved within very limited budgets of machinery and time.

Jürg Buhler from the ETH-Bibliothek, Zürich, Switzerland, illustrated progress in developing digital mapping applications in the ETH Map Library (*Electronic maps – a new library service)*. He described these under five main headings. First, about 40 CD-ROM products, covering a wide carto-graphic field, focusing on Switzerland and Germany, but also Europe and the World have been acquired and made available. Second, a smaller set of GIS products, many running with ArcView or Adobe Photoshop can be used. Third, a search engine, *The World of Maps* for discovering maps on the Internet (<http://www.maps.ethz.ch/maps3.html>) has been set up. Fourth, electronic graphic indexes to show the availability of series mapping in the ETH have been created, and finally, maps and other documents held in-house have been digitised. These map images are being linked to textual information, both bibliographical and biographical and this was illustrated by the Virtual Library Eduard Imhof, an online exhibition of the famous cartographer (<http://www.maps.ethz.ch/imhof.html>).

Christopher Fleet from the National Library of Scotland in Edinburgh, United Kingdom described the process underway for the receipt of *Ordnance Survey digital data in the UK legal deposit libraries*. From March 1999, the Ordnance Survey will stop providing hardcopy mapping to the libraries at basic scales (1:1,250, 1:2,500 and 1:10,000) the detailed record of national topography. The libraries have therefore been actively exploring hardware to store about 40 gigabytes of data (increasing yearly) and software for selecting and displaying the digital data. Ordnance Survey have been fully involved in this process, as they have been keen to ensure the data can only be used in carefully controlled ways, and a viewer for the data based on MapInfo software (which has been developed with their approval) was demonstrated. The format of the data and its associated metadata, and its output from Ordnance Survey's database as an annual snapshot were explained, a process that should ensure much more regular archiving of landscape change than ever before. Finally, some advantages and disadvantages of this transition to digital data were presented from the perspective of the legal deposit libraries.

Henrik Dupont of Det Kongelige Bibliotek, Köbenhavn, Denmark described the extension of legal deposit legislation in 1997 to cover electronic maps and Internet publications in Denmark. The main change in the text of the law is to focus on the deposit of *published* items (regardless of their form) rather than just *printed* materials, as in the past, and this definition therefore includes Internet web pages as publications that must be legally deposited (see <http://www.kb.dk/kb/dept/nbo/da/saml-en.htm#6>). The legislation has also forced publishers and authors to deliver metadata about their publications for the National Bibliography. However, despite these good intentions there have been difficulties with in the practical implementation of this law. Relatively few Internet homepages have been downloaded so far, partly because the legislation does not cover dynamic data, but also due to publishers' concerns over copyright and usage of their products. Perhaps for similar reasons, relatively few map and spatial databases have been deposited so far, although a useful inventory of electronic maps was developed in 1997 called „Infodatabase" (<http://www.geodata-info.dk/>). In general, the new law has exciting opportunities for receiving and archiving new electronic formats of material, but these opportunities will take time to be realised.

Margit Tohver from the National Library of Estonia, in Tallinn, presented a shorter report on preservation and automation in the principal cartographic collections in Estonia. Although the diversity of collections made generalisations difficult, there had been a movement towards the use of the ISBD(CM) format in archives, and a growing use of USMARC in the automated system INNOPAC in scientific libraries. Meanwhile there are large preservation and restoration tasks to be undertaken. Although a preservation workshop has existed for some time, it has been improperly maintained, and about 20% of materials require attention.

Finally, Lucyna Poplawska from the Biblioteka Uniwersytetu Mikolaja Kopernika at Toruñ, Poland, described the introduction of the HORIZON automated catalogue system in the University Library. Although many other Polish libraries have acquired VTLS and INNOPAC as automated systems in recent years, 54 have also acquired HORIZON, and the system is used internationally by over 500 libraries. The difficulties of converting both records and cataloguing practices from the existing ISIS system were explained, in part helped by the phased introduction of modules – cataloguing, OPAC, and Serials - through 1998. There has been agreement to standardise description using the ISBD(CM) and USMARC, and when this format is finalised in 1999, then online cataloguing of maps can commence.

This will allow the development of an online national union catalogue (NUKat) of records across Polish collections.

Although full details of the Working Groups which met during the Conference were sent out with the Minutes, the main details of their discussions are also included here.

WORKING GROUP FOR EDUCATION

The composition of the Group changed with Jürg Buhler from the ETH-Bibliothek, Zürich, replacing Susan Vejlsgaard as Chairman, and several new members joining the Group. There is now a new mandate, which includes the establishment of minimum standards for post-educational courses in map curatorship, and setting up an Internet platform for resources on the history of cartography, GIS and map librarianship. (Work has now begun on this at <http://www.maps.ethz.ch/gdc-education.html>) There are also plans to add more Internet information about LIBER GdC members and an online *Who is Who* amongst LIBER map curators.

WORKING GROUP FOR CENTRAL AND EASTERN EUROPE

Steffi Mittenzwei of the Staatsbibliothek zu Berlin has taken over from Dirk de Vries as Chairman. There are a number of new initiatives underway, including an idea to hold a training seminar in practical map curatorship in Moskva or Warszawa, exploring the possibility of linking with the IFLA Section for Geography and Map Libraries, and plans to establish a training programme of visits to Western and Northern European map libraries.

POSTERS

- Voenno-istoriceskij atlas russkich zeml Reci-Pospolitoj XVI-XVIIst. (Henryk Kotarski, Kraków, Poland)

- The oldest Martellus maps of the World and European regions (original facsimiles) (Werner Kreuer, Essen, Germany)

- The new completed full scale graphic reproduction of the Uppsala copy of Carta Marina (Margareta Lindgren, Uppsala, Sweden)

- The publications in the history of cartography edited by the National Library in Warsaw (Lucyna Szaniawska, Warsaw, Poland)

VISITS AND EXCURSIONS

On the first day our Polish hosts kindly arranged visits to Jagiellonian Library, where we were treated to a reception to mark the opening of the exhibition *From Sarmatia to Polonia,* featuring early maps of Polish territories by Jadwiga Bzinkowska, and a tour of the Library by Dr Zamorski. Later on in the proceedings we were taken on a guided tour of the Wawel Castle in Kraków, and the Collegium Maius, with its fascinating collection of early globes, maps and scientific instruments. The conference ended with an excursion to Zakopane and the Tatra Mountains.

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