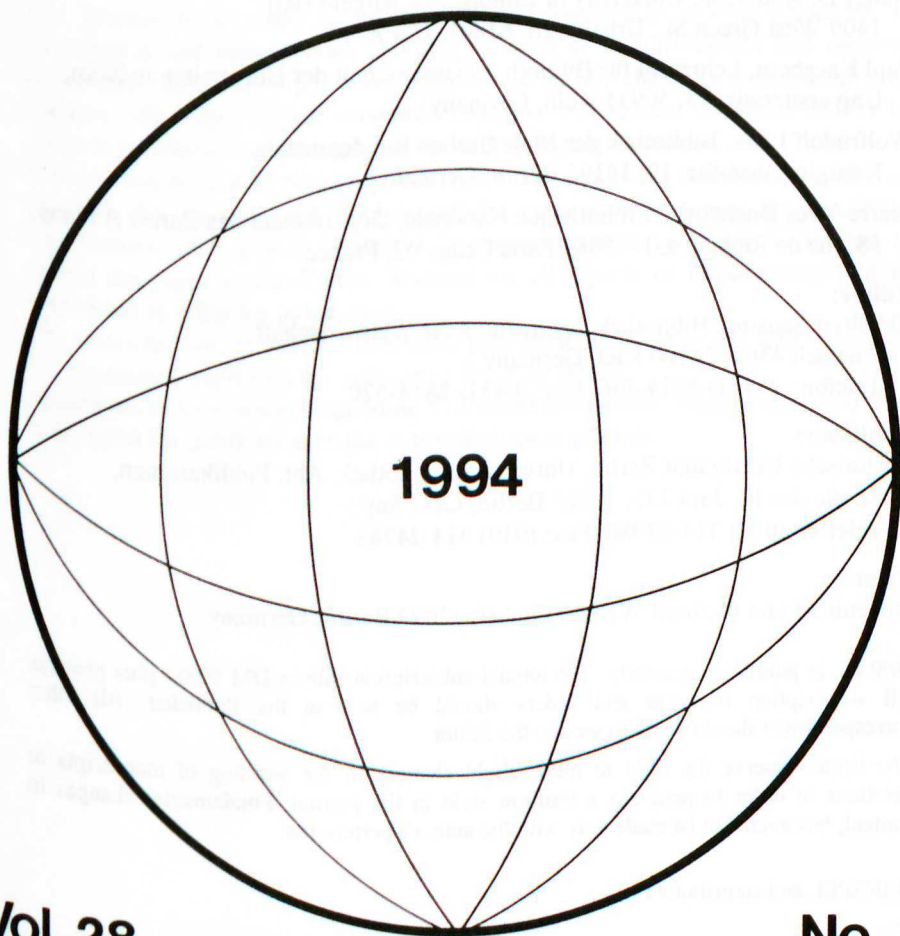


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The journal is directed to an international readership among librarians in government and international agencies, as well as in universities and research institutions. Librarianship is a key subject in a rapidly changing world. Improved practice will help produce economic benefits, and special attention should be given to problems concerning libraries in Developing Countries.

Articles will be drawn primarily from activities conducted within IFLA. But on occasion the Journal will publish articles on specified topics by non-IFLA contributors. Any reader interested in preparing such an article is invited to submit the paper to the Editor. Material on all aspects of librarianship will be considered eligible for publication.

The views and interpretations in articles published are those of the authors and do not necessarily represent the policies of IFLA or ASpB.

Comments or brief notes responding to Journal articles are welcome and will be considered for publication to the extent that space permits.

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INTRODUCTION

CONVERSION OF MAP CATALOGUES BARCELONA - AUGUST 1993

The Groupe de Cartothécaires de LIBER held its 8th Conference in september 1992 in Barcelona. The officers of the IFLA Section of Geography and Map Libraries were invited to attend this meeting. The 59th General Conference of IFLA was to take place in august 1993 in Barcelona. Due to this conjunction in space and time, the IFLA Section of Geography and Map Libraries asked the Groupe de Cartothécaires de LIBER to include in its september 1992 agenda the theme of map catalogues conversion. 9 papers were given on this subject and later published in ERLC *The Liber Quarterly*. Several papers were dealing with projects already running or ready to start. So, it was considered as interesting to keep the same theme in august 1993 in order to analyze what has been done within one year.

The number of papers from Europe and United States of America largely exceeded the speaking time offered by the open session and the usual thursday workshop. Consequently, for the first time in its history, the IFLA Section of Geography and Map Libraries organized a satellite meeting and invited the Groupe de Cartothécaires de LIBER to attend. Held during the week before the general Conference and hosted by the Institut Cartogràfic de Catalunya (with all our thanks), the Seminar consisted in 9 papers, discussions and visits of institutions. During the Conference itself, 4 more papers were given on the same theme. So it is a unity of 13 papers, fully discussed in Barcelona, that is presented in this publication, in order of speakers.

These meetings between the IFLA Section of Geography and Map Libraries and the Groupe de Cartothécaires der LIBER made two important points evident: from one way, the conversion projects described or intended in september 1992 are on their way; from the other hand, the debate between "quality" and "quantity" between "re-cataloguing" or "retrospective cataloguing" and "retrospective conversion" has not yet come to an end!

In 1992 as well as during the two 1993 meetings, this topic was the heart of the discussions and raised interesting ideas it was not possible to bring to a conclusion: too much elements have to be considered that prevent to adopt a final judgement; if one considers the amounts of money involved, the available professional staff, the available periods of time, the size of the collections to be treated, the origin and past of these collections, one gets as a result too different situations according to the considered institutions to be able to make a choice. For example, problems in the Map Library of the British Library or in the Département des Cartes et Plans de la Bibliothèque Nationale, with huge collections, with heterogeneous catalogues, cannot be considered in the same way as problems in younger or smaller institutions.

The main goal of these discussions was not to elaborate recommendations, guidelines or standards to run a conversion project: they already exist. They have been written in 1990 by Anton Bossers and Derek Law. Entitled *Guidelines for retro-conversion projects*, they have been published in *IFLA Journal*, 1990, Vol. 16, n° 1 (p. 32-36), in the general purpose of the conversion of printed material catalogues. With a few slight modifications, they may be used for conversion projects of cartographic documents.

During the discussions, all the participants agreed on one point: a multilingual hierarchical thesaurus for geographic names is urgently needed; its absence prevents cooperation to go further. Whatever its name, EUROCARD or not, whatever the subsidizing corporate body, the European Community or not, it is waited and needed as a final product in order to make the achievement of conversion projects easier. If it is a first aid tool pour librarians in charge with cartographic collections, it could also be largely used for any document needing a geographic entry, and be a toponymic database for historians, geographers, cartographers, genealogists, etc.

The creation of this thesaurus is the mandatory first step in order to reach a world wide international cooperation. Money and staff restrictions are reaching such a level that it will become more and more impossible to begin a large conversion project without cooperation. Whatever inside or outside the European Community, the use of standardized cataloguing rules, such as ISBD (CM) and ISBD (A), the use of the IFLA international format UNIMARC as a standard for the exchange of data, whatever the working format used in the database, can promote the flow and exchange of data in order to make possible a large scale international cooperation as well as the building of an international network.

It is hoped that the publication of the Proceeding of the Barcelona Seminar that gathered around the same theme the IFLA Section of Geography and Map

Libraries and the Groupe de Cartothécaires de LIBER will increase the international audience of this meeting, as well as the cooperation spirit existing between the two organizations. The INSPEL Editors be thanked for their help

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THE SPANISH MINISTRY OF DEFENCE'S HISTORICAL IBEROAMERICAN CARTOGRAPHY DATABASE (CARHIBE)

By Luis Barreiro

The rich collection of documents preserved at different Ministry of Defence offices is known to many. A praiseworthy effort has been made to preserve this cultural heritage, prevent its loss and, on many occasions, perform the unsung work of cataloguing, ordering and circulating these collections.

To give just one example, the Servicio Histórico Militar and the Servicio Geográfico del Ejército have been publishing a joint work "Cartografía y Relaciones Históricas de Ultramar" (Overseas Cartography and Historical Relations) since 1949, six volumes of which have been brought out to date, divided into various sections separating descriptions from the maps proper. This work of indubitable value and worth is now nearing completion. Furthermore, the Ministry also published a file titled "Cartografía Histórica de Iberoamérica" (Historical Cartography of Iberoamerica), containing reproductions of Iberoamerican and Philippine originals, dated between 1522 and 1831, compiled as a symbolic sample of the cartographic riches it has in its custody.

In 1985, however, an event took place that was to mark the beginning of a new era. Under the auspices of the National 500th Anniversary Committee, the three ministries with the largest cartographic collections - Culture, Defence and Public Works - were called upon to join forces. The objective was twofold:

- a) set up a large database with the cartography held by the abovementioned institutions and, at the same time, microfilm the originals, and
- b) use the results to prepare historical atlases of the different Iberoamerican countries and the Philippines.

The well-planned project, obviously of immense interest and with a great future, did not get past this first stage for reasons that it is neither appropriate nor fitting to analyse here. It was, however, not in vain as the Ministry of Defence, particularly interested in making its documentary collections available to researchers, went ahead with what would have been its share of such an attractive project and

allocated the financial resources needed to go it alone. This was how it came to undertake the enterprise of auditing the cartographic documents held at the three main (but not the only) deposits: the Museo Naval, the Servicio Geográfico del Ejército and the Servicio Histórico Militar. The size of the three departments' collections differed, as did knowledge about them and how the documents had been processed. It was the Ministry's job to offer support as required by each institution, supplying identical tools, staff and financial cover to recatalogue the agreed cartographic documents and enter the results into one database, CARHIBE (Historical Iberoamerican Cartography), which was to be open to queries by the three abovementioned institutions and any other interested office or researcher, whether as a whole or separately by the place where the originals are deposited. In sum, the idea was to recatalogue and circulate the great cartographic riches, not even known to exist by many.

A Committee, composed of qualified representatives of the interested parties, was set up to establish the necessary working standards. One of the decisions it took was to opt for the MARC format for cartographic materials as a suitable instrument for data input. The format finally used was based on the above, one or two fields having been added, such as 310 for rounded off dimensions. Moreover, the collections were catalogued in line with the Cataloguing Rules for library materials published by the Ministry of Culture, also taking into account AACR2 provisions and ISBD standards (CM).

Through the Centre of Publications (Subdirectorato General), the Ministry of Defence's Technical Secretariat General prepared a working plan, specifying schedules and financial allocations, designed to process an estimated 11,000 documents. These calculations were amply surpassed in practice, and the number of documents actually catalogued in CARHIBE add up to over 53,000, as, apart from the documents related to America, almost all the Servicio Histórico Militar pre-1900 documents on Spain and other parts of the world have been processed.

The data were collected on site by different companies which were awarded blocks of documentation by tender. There was a person at each of the three participating institutions to control and coordinate the work performed with the company concerned. Another person at the Ministry of Defence's Documentation Centre coordinated all the work performed at the three institutions to see to overall uniformity, answer queries and choose between different solutions, all of them valid, as required.

The data collection format was as shown on transparency no.1. It is composed of 95 fields with their respective subfields. The two main objections that might be raised are the absence of separators between the subfields of given labels (100,

300, 600, 700, 773, among others), which hinders their conversion to Marc interchange format, and the establishment of labels (E-131, E-132, E-133, E-134, E-135, E-136, E-137 and E-239) for what in MARC are only subfields of another label.

It should be pointed out that the equivalent to label E-151 did not exist at the time in the MARC format for cartographic materials. This meant that by deciding to take geographic area as the main heading, this label had to be selected by analog with the MARC bibliographic format field 651 (for subject headings that begin with geographic place) and authorities field 151 (field that controls geographic name headings). The relevant 651 subfields were used -"a", "x", "y" -, and it was decided to introduce a subfield \$g for scale, which, as you will know, contains miscellaneous information in MARC.

All the problems related with the particularities that arose from adopting this data collection format were finally overcome, and it is now possible to convert to MARC interchange format. The solution came when the data were ported to a new computer program and it was decided to use descriptors instead of subject headings and to follow the main heading format of the latest version of IBERMARC for cartographic material, and thus replace the old E-151, E-152 and E-131 by a 130 with \$a: geographic name, \$d: contents date, \$f: date of the work, \$g: scale, \$k: subject. The latter solution has enabled us to control the main geographic area heading from the authorities file.

It should be underlined that each cataloguing company was supplied with abundant information so as to leave as little as possible to their discretion in the interest of maximum uniformity. The different contractors were familiarized with the collections with which they were going to work and how they were to be processed beforehand. Everything related with notes (their writing and order), descriptors and authorities was insisted upon time and time again, the latter two control and uniformity elements being established, accepted and authorized by the Documentation Centre.

Depending on their reference, the notes were ordered as follows:
scope of the work; title dedications and forewords; notice of responsibility; edition; area of publication and printing; manuscripts; manuscript production; scale range; different scales; projection; coordinates and meridian; geographic grid; orientation; mathematical data; relief; hydrographic data; key; explanatory notes, legends, comments, etc.; other significant details of the document; ornamental elements, stamps, etc., correspondence with other documents; annexed materials; inserts; origin; with note; local or internal note; observations.

The composition of each kind of note provides for the set of different cases to be reflected and, at all events, the first words of the text are previously established. Each possible type of note is preceded by an explanation to make it easily understandable and provide the most suitable model composition

Each company was obliged to use the professional bibliography required for this kind of work and deliver the products obtained as part of the project.

The data were stored in the computer by loading tapes recorded to previously supplied specifications. The data were loaded at the Ministry of Defence's Data Processing Centre, and no less than 10% of each delivery were sampled for quality. Any deliveries with more than an acceptable maximum of 5% errors were rejected. Nevertheless, the entire CARHIBE database had to be debugged afterwards.

The final result was a database with over 53,000 descriptions of the same number of documents, of which 25,839 are deposited at the Servicio Histórico Militar, 14,385 at the Servicio Geográfico del Ejército and 12,584 at the Museo Naval.

There is almost an equal number of manuscript and printed documents, as manuscripts total only a hundred or so more than prints.

The collection of catalogued documents is made up of 27,236 maps, 22,479 plans (including profiles, layouts, etc.) and 3,093 nautical charts. There are 580 atlases which were catalogued differently as the work progressed and also at the discretion of the company in question: on some occasions, the atlas was catalogued as one item, listing its contents and, on others, each component of the atlas was catalogued as if it were a series.

Most of the documents recorded in CARHIBE date from the 1700-1849 period, which is only logical in view of the fact that 80% of the Servicio Histórico Militar's, 70% of the Servicio Geográfico del Ejército's and 80% of the Museo Naval's collections date back to this period. There are earlier ones, as 16%, 2% and 10%, respectively, of the above institution's collections date from 1500-1699.

As regards the geographic areas represented or referred to, maps of the American continent are prominent, whether they reflect one or several countries. It is important to single out Cuba in particular, of which there are 5,200 representations, and Mexico with a figure bordering on 1,000. Other countries well-represented in number are Colombia, Chile, Venezuela or Puerto Rico, among others. There are more than 300 representations of South America and over 200 specimens that reflect Central and North America or the continent as a whole.

The number of documents on the Philippines also deserves a special mention, as it surpasses the 4,000 mark.

As regards Spain, there are more than 4,500 documents of the country as a whole and over 16,500 documents of parts of it. It is worth mentioning that Barcelona is one of the areas most often depicted, and is the subject of 1,500 documents, a figure only surpassed by Cádiz.

With respect to the subjects represented, general maps are the most prominent and amount to more than 12,000, although nautical charts, layouts, fortifications and profiles are also plentiful. There is a large number of maps on logistics, military architecture and battles. To give an example of some of the subjects represented, I will mention: water supply, military architecture, bastions, batteries, roads, castles, administrative divisions, military strongholds, wars, railway lines, bridges, surface routes, etc., etc.

The scales in the CARHIBE database are very diverse, which is explained by the variety and richness of its contents. If it is at all possible to make an overall assessment of such a collection, the scale that appears in the largest number of documents is 1:200. Documents to the scale 1:20000 also abound. There are a similar number of documents with scales of 1:100, 1:500, 1:5000 and 1:10000.

As regards language, most of the documents are in Spanish, and French (over 9,000), English (almost 5,000) and Latin (almost 1,500) are also very popular. Other languages used in order of the number of documents are: German (852), Italian (687), Portuguese (196), Russian, Norwegian, Dutch, Danish, Swedish, Catalan (3), Arabic and Greek.

This is an outline of the Ministry of Defence's CARHIBE database. It is not the end of the line; collections at other Ministry of Defence departments, no less important than those already recorded, remain to be entered, and there is the job of unifying and improving what has been done so far, which is never amiss. It is a complex and slow job, but one which scholars and researchers will appreciate.

Thank you.

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For the annexes see the Spanish version of this paper.

Anexo 1

MINISTERIO DE DEFENSA
SECRETARIA GENERAL TÉCNICA
SUBD. GRAL. CENTRO DE PUBLICACIONES

Centro de Documentación

CARHIBE. Formato de recogida de datos

<u>Campo</u>	<u>Subcampo</u>	<u>Contenido</u>	<u>Explicación</u>
E-001		Referencia	Número correlativo
E-005		Fecha 1ª	Cuatro dígitos
E-006		Fecha 2ª	Cuatro dígitos
E-007		Tipo de documento	Mapa/globo/microforma
E-008		Color	S/N
E-009		Medio físico	Papel/madera/piel/etc.
E-010		Tipo de material	Impreso/manuscrito
E-011		Nivel bibliográfico	Monografía/serie/colección
E-012		Meridiano	Greenwich/París/etc.
E-013		País	País de publicación del documento
E-014		Lengua	En forma desarrollada, en español
E-015	a	Número de la bibliografía nacional	a= nº de la bibliografía nacional
E-017	ab	Número de copyright	a= nº de copyright b= oficina que lo asigna
E-020	a+cz	ISBN	a= nº de ISBN c= precio z= nº ^s de ISBN cancelados
E-021	a	Depósito legal	a= nº de D.L.
E-035	az	Número de registro local	a= nº de registro z= nº ^s de registros cancelados
E-045	b	Fecha cronológica	b= fecha que figura en el documento cuando sea distinta la de publicación

E-052	a+b	Código de clasificación geográfica	a= Área geográfica principal o más extensa b= subárea dentro de la anterior
E-080	a	CDU	a= notación de la CDU
E-081	a	Otras clasificaciones	a= antiguas signaturas topográficas
E-086	az	NIPO	a= NIPO z= NIPO cancelado
E-090	cod+a	Signatura topográfica	cod= MN/SH/SG a= Signatura topográfica
E-100	a+bcd+e+q	Encabezamiento principal de autor personal	a= apellidos y nombre b= números romanos c= títulos y palabras asociados al nombre d= fechas e= relación autor-obra q= calificación del nombre
E-110	a+b+cd+e	Encabezamiento principal de autor corporativo	a= nombre de la entidad o lugar y nombre b= unidad subordinada c= lugar d= fecha e= relación autor-obra
E-111	a+cd+e	Encabezamiento principal. Nombre de Congreso	a= nombre del congreso c= lugar d= fecha del congreso e= unidad subordinada
E-130	a>P.N.R.+d	Encabezamiento principal. Título uniforme	a= encabezamiento de título uniforme d= fecha (P.N.R.= palabra no representativa)
E-131		Fecha de la obra	Fecha de publicación, entre paréntesis, cuando no coincide y no ha sustituido a la del contenido científico
E-132		Información varia adicional	
E-133		Designación general de material	
E-134		Número de parte o sección	
E-135		Nombre de parte o sección	

E-136		Versión	
E-137		Título de una obra	
E-151	a+x+g+y	Encabezamiento principal de lugar geográfico	a= área geográfica x= especificaciones g= escala y= fecha
E-152		Términos que delimitan o acotan el área geográfica	
E-239	b	Fecha de la firma del tratado	
E-240	a>P.N.R.	Título uniforme	
E-241		Título transcrito	
E-245	a>P.N.R.	Título propio	a= título propio
E-246	b	Resto de título	b= resto de título
E-247	c	Mención de responsabilidad	c= mención de responsabilidad
E-250	a+b	Mención de edición	a= mención de edición b= mención de responsabilidad de la edición
E-255	a+b+c+d+e	Datos matemáticos	a= escala b= proyección c= coordenadas d= zona e= equinoccio
E-260	a+b+c+e+f+g	Pie de imprenta	a= lugar de publicación b= editor c= fecha de publicación e= lugar de impresión f= impresor g= fecha de impresión
E-265	a	Fuente de adquisición	a= fuente de adquisición
E-300	abce	Descripción física	a= extensión y designación del material b= otros detalles físicos c= dimensiones e= material complementario
E-310		Dimensiones redondeadas	Se darán en cm., sin usar esta abreviatura, redondeando largo x ancho

E-315	a+b	Periodicidad	a= frecuencia real de la publicación b= fechas que cubre la publicación cuando hay frecuencias diferentes para el mismo mapa periódico
E-362	az	Fechas de publicación y designación del volumen	a= fechas de publicación y designación del volumen z= fuente de información
E-440	a>P.N.R.	Serie con entrada secundaria	a= título de la serie
E-490	a	Serie con entrada secundaria diferente o sin ella	a= título de la serie con entrada distinta o sin ella
E-500	a	Notas generales	
E-501	a	Notas "con"	
E-504	a	Nota bibliográfica	a= nota de bibliografía
E-505	a	Nota de relación de contenido	a= nota de contenido
E-506	a	Nota de uso restringido	a= condiciones de uso y distribución
E-510	ac	Notas sobre referencias	a= nombre de la fuente c= localización de esa fuente
E-534	patbmcef nzxk	Nota de versión original	p= frase introductoria a= encabezamiento principal t= mención del título del original b= mención de edición del original m= datos matemáticos c= publicación del original e= descripción física del original f= serie del original n= nota del original z= ISBN del original x= ISSN del original k= título clave del original
E-580	az	Nota de complejidad en entrada vincular	a= nota de complejidad z= fuente de información
E-590	a	Nota interna	
E-591	a	Nota local "con"	

E-600	a+bcdeq	Descriptor de nombre personal	a= apellidos y nombre b= numerales romanos asociados al nombre c= títulos y otras palabras asociadas al nombre d= fechas de nacimiento/muerte e= relación autor-obra q= cualificación del nombre
E-610	a+b+cde	Descriptor de nombre corporativo	a= nombre b= cada unidad subordinada c= lugar d= fecha e= relación autor-obra
E-611	a+cd+e	Descriptor de nombre de congreso	a= nombre de congreso c= lugar d= fecha del congreso e= unidad subordinada nombre
E-650		Descriptor temático	
E-651		Descriptor de lugar geográfico	
E-652		Subdivisión temática	
E-653		Descriptor cronológico	
E-654		Subdivisión geográfica	
E-700	a+bcd+e+q	Encabezamiento secundario de nombre personal	a= apellidos y nombre b= numerales romanos asociados al nombre c= títulos y otras palabras asociadas al nombre d= fechas de nacimiento/muerte e= relación autor-obra q= cualificación del nombre
E-710	a+b+cd+e	Encabezamiento secundario de nombre corporativo	a= nombre b= cada unidad subordinada c= lugar d= fecha e= relación autor-obra
E-711	a+cd+e	Encabezamiento secundario de nombre de congreso	a= nombre de congreso c= lugar d= fecha del congreso e= unidad subordinada

E-730	a>P.N.R.+d	Encabezamiento secundario de título uniforme	a= título uniforme d= fecha
E-740	a>P.N.R.	Encabezamiento secundario de título en forma diferente	a= título en forma diferente
E-773	a+bdg+k+r +s+t+uxvz	Entrada de obra principal o vincular	a= entrada principal b= edición d= lugar editorial y fecha de publicación g= información sobre la relación k= serie para el título relacionado r= número uniforme s= título uniforme t= título u= número normalizado de informe técnico (STRN) x= ISSN y= CODEN z= ISBN
E-800	a+bcd+e+q	Encabezamiento de serie de nombre personal	a= apellidos y nombre b= números romanos asociado al nombre c= títulos y otras palabras asociadas al nombre d= fechas e= relación autor-obra q= cualificación del nombre
E-810	a+b+cd+e	Encabezamiento de serie de nombre corporativo	a= nombre b= cada unidad subordinada c= lugar d= fecha e= relación autor-obra
E-811	a+cd+e	Encabezamiento de serie. Nombre del congreso	a= nombre del congreso c= lugar d= fecha e= unidad subordinada
E-830	a>P.N.R.+d	Encabezamiento de serie. Título uniforme	a= título uniforme d= fecha
E-837		Fecha de la obra	
E-838		Información diversa	
E-839		Designación general del material	
E-840		Número de parte o sección	
E-841		Nombre de parte o sección	

E-842		Versión	
E-843		Título de una obra	
E-835		Volumen o número	
E-836		ISSN	
E-850	a	Existencia en los centros	a= centros que tienen el documento
E-930		Thesaurus	
E-940		Comentario	
E-950		Autor de la ficha	
E-960		Fecha de la ficha	
E-970		Autor de la validación	
E-980		Fecha de la validación	

Anexo 2

MINISTERIO DE DEFENSA
SECRETARIA GENERAL TECNICA
SUBD. GRAL. CENTRO DE PUBLICACIONES

BUENOS AIRES (Argentina). Planos de población. 1:6430. 17--?

SH

6267/ARG-3/5

Plano de la ciudad de Buenos-Ayres : Situada en la margen meridional del Rio de la Plata sobre un Terreno elevado del nivel del Mar 156 varas Castellanas, en la Latitud Austral de 34°36' ; y respecto del Meridiano de Madrid en la Longitud Occidental de 54°46' según últimas observacs. - Escala [ca. 1:6430], 900 varas castellanas [= 11,7 cm.]. - [17--?]

1 plano : ms., col. ; 50 x 87,5 cm

Orientado con lis

Fecha de ejecución, finales del S. XVIII o principios del S. XIX

Manuscrito coloreado a la acuarela en varios colores

Relación de los principales puntos de la ciudad, indicados mediante clave numérica

Figuran dibujadas siete naves en el río de La Plata

Planos de población / Ríos / Dibujos

La Plata (Argentina) (Río)

S.XVIII

(821.1 Buenos Aires)

MINISTERIO DE DEFENSA
SECRETARIA GENERAL TECNICA
SUBD. GRAL. CENTRO DE PUBLICACIONES

AMERICA. Mapas generales. 1760

SH
7249/G-3/7

L'Amérique Meridionale et septentrionale : Dressée sur les
Nouvles. Decouvtes. et dernieres Relations de meilleurs
Navigateurs decetemps Conformes aux observations Astronomiques
/ Corrigée et Augmentée par L.C. Desnos Ingénieur por les Globes
et Spheres. - [Escala indeterminada]. - A Paris : A.P.D.R., Rue
St. Jacques au Globe, 1760

1 mapa : montado sobre tela ; 50,5 x 71,5 cm

Comprende América y parte de Africa y Europa
Coordenadas referidas al meridiano de Hierro. Red geográfica de
10º en 10º

En el ángulo superior izquierdo, título enmarcado en cartela
decorada arriba con escudo real y ángeles y, abajo, con el dios
Mercurio y un aborígen

Nombre y fecha de descubrimiento de algunas de las islas
representadas

Orla enmarcando el mapa con retratos de personajes relacionados
con los descubrimientos de América, y representación de los
signos del Zodiaco, escudos de diversas naciones y motivos
vegetales

Leyenda explicativa sobre los descubridores retratados

Límites administrativos coloreados

En el ángulo inferior derecho, inserta mapa con los
descubrimientos rusos en el Círculo Polar Artico

Mapas generales / Divisiones administrativas / Descubrimientos
geográficos / Heráldica / Dibujos / Océanos / Atlántico (Océano)
/ Pacífico (Océano) / Africa. E

1760

(7/8)

Desnos, Louis Charles

A CATALOGUING CONCEPT FOR SPATIAL DATA

By Patrick Mac Glamery

The Evolving State of Describing Spatial Information: An Assessment and Recommendations for the International Community.

- *Geomantics*, "Geomantic Data Sets Cataloguing Rules", 1992; "Report on Geomantics for the National Archives of Canada," 1989.
- Burnhill, Peter, "Metadata and Cataloguing Standards: one eye on the spatial," in Metadata in the Geo-sciences, 1992
- National Center for Geographic Information and Analysis; Initiative 9: "Sharing Spatial Information," Specialist Meeting, Feb. 27-29, 1992, San Diego, CA
- U.S. Federal Geographic Data Committee, "Content Standards for Spatial Metadata," 1992; Adjudication of the Comments to the Content Standards for Spatial Metadata," 1993
- Armstrong and Mangan, "Past, Present and Future of Cataloguing Spatial Data," a paper presented at the '93 ALA Annual Conference, June, 1993, New Orleans, LA

Geomantic Data Set Cataloguing Rules

"These rules arose out of the initiative of the Inter-Agency Committee on Geomatics (IACG), a federally-sponsored committee consisting of members from Canadian federal agencies. In 1989, the IACG recognized the need in Canada for standards to promote the sharing of geomantic data. Under the auspices of the Canadian General Standards Board, the IACG established a committee with representation from three levels of government, universities, public utilities as well as industry and trade organizations to further identify and prioritize areas for standard development.

It was determined that geomantic standards were needed for the following areas: feature classification, cataloguing, data encoding, geographic referencing, data quality and symbology. Working groups were established to develop standards for each area. The Working Group on Cataloguing Standards (Working Group 4) was further subdivided into two groups - one responsible for the data dictionary/directory with the other responsible for descriptive cataloguing."

Geomantic Data Sets Cataloguing Rules, 4th Draft, 1992

"Metadata and Cataloguing Standards: one eye on the spatial"

- Three basic assumptions:
 1. Information is a resource ultimately more important than technology.
 2. We need to know "what is where"
 - 3: We need to know "how to say what is where"

Burnhill, Peter, "Metadata and Cataloguing Standards: one eye on the spatial," in Metadata in the Geo-sciences, 1992

"Metadata and Cataloguing Standards: one eye on the spatial"

- The Computer File Cataloguing Group outlined four broad areas of interest:
 1. Identification and availability:
"what is it called and how do I obtain it?"
 2. Subject and content:
"what is it about and how did it come about?"
 3. Computing information and physical characteristics:
"if I get a copy, what do I get and what do I need in order to make use of it?"
 4. Access and management information:
"now I have it and intend providing access to it, how do I record the information that I need in order to manage it and that my patrons need in order to access it."

Burnhill, Peter, "Metadata and Cataloguing Standards: one eye on the spatial," in Metadata in the Geo-sciences, 1992

"Metadata and Cataloguing Standards: one eye on the spatial"

- Actionable Metadata:
 1. metadata with a program button,
 2. a gateway
 3. graphic metafile.

Burnhill, Peter, "Metadata and Cataloguing Standards: one eye on the spatial," in Metadata in the Geo-sciences, 1992

**National Center for Geographic Information and Analysis
Initiative 9: Sharing Spatial Information
Specialist Meeting, Feb. 27-29, 1992, San Diego, CA**

- Libraries as Institutions for Sharing Information
 1. Describe the Depository Program:
 - Policy for Sharing
 2. Describe MARC:
 - Procedure for Sharing
 - Mechanics for Sharing (Fields, Utilities ...)
- Five Issues for Libraries
 1. Cataloguing/Indexing
 2. Storage/Archiving
 3. Networks
 4. Dessimination
 5. Education

National Center for Geographic Information and Analysis, "Technical Report 92-5. Specialist Meeting Initiative 9, Sharing Spatial Data," 1992

**National Center for Geographic Information and Analysis
Initiative 9: Sharing Spatial Information
Specialist Meeting, Feb. 27-29, 1992, San Diego, CA**

- Metadata
- Infrastructure
- Legal, Economic and Cultural
- Organizational Aspects of Sharing Geographic Data
- Methodological and Substantive Case Studies

National Center for Geographic Information and Analysis, "Technical Report 92-5. Specialist Meeting Initiative 9, Sharing Spatial Data," 1992

**National Center for Geographic Information and Analysis
Initiative 9: Sharing Spatial Information
Specialist Meeting, Feb. 27-29, 1992, San Diego, CA**

- **Metadata**

"Digital information that allows the potential user of spatial data to understand that data's fitness for use."

National Center for Geographic Information and Analysis, "Technical Report 92-5, Specialist Meeting, Initiative 9, Sharing Spatial Data," 1992

**Federal Geographic Data Committee (FGDC)
Content Standards for Spatial Metadata**

Draft Data Elements

- **Identification Section** - describes the general data content, spatial extent, and use of the data
- **Projection Information** - describes the horizontal and vertical coordinate systems used for the spatial data.
- **Data Custodian Information** - provides points-of-contact for the data.
- **Access Information** - provides details about the means of and conditions for accessing information.
- **Status Information** - describes the state of, maintenance cycles for, and policies on availability of the data.
- **Table Definitions Portion of the Data Dictionary/Schema** - describes the thematic content of features portrayed in the data.
- **Table Attributes Portion of the Data Dictionary/Schema** - describes the thematic content of characteristics of the features portrayed in the data.
- **Source Information** - describes documents used to compile data.
- **Processing Steps** - describes the procedures and parameters used to convert the source materials to the final data.

- Data Quality - describes the quality of the data to assist potential users to determine if the data is suitable for an application.
- Metadata Reference Section - describes the currentness of and contacts for the metadata.

Federal Geographic Data Committee (FGDC) Content Standards for Spatial Metadata

General Issues

- Scope of the Data
- Mandatory/Required/Optional Metadata Elements
- Content versus Implementation and Relationship to Other Standards
- Purpose of the Standard
- Standard Terminology

Past, Present, and Future of Cataloging Spatial Data

Past

- There are two traditions of cataloging cartographic material:
Author Main Entry vs. Geographic Areal Main Entry.
- Development of MARC and MARC MAP.

Armstrong and Mangan, "Past, Present and Future of Cataloging Spatial Data," a paper presented at the '93 ALA Annual Conference.

Past, Present, and Future of Cataloging Spatial Data

Present

- Format Integration
- Multiple Versions

Armstrong and Mangan, "Past, Present and Future of Cataloging Spatial Data," a paper presented at the '93 ALA Annual Conference.

Past, Present, and Future of Cataloging Spatial Data

Future

- Ridding ourselves of preconceptions from the paper world
- Cataloging a dynamic database
- Cataloging digital versions of a paper production
- Cataloging a paper output
- Databases not in the library, but in virtual library that is an information service on the Network.
- CD-ROM: passive storage media or active with programming and data.
- Extracts and enhancements of data from a storage medium
- Deriving titles for databases where none exists
- Standardizing new terminology
- Streamline MARC or metadata coding
- Making full use of various fields like the 007 and the 520 field.

Armstrong and Mangan, "Past, Present and Future of Cataloging Spatial Data," a paper presented at the '93 ALA Annual Conference.

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**RETRO-CONVERSION BY KEYBOARDING OF THE
DANISH NATIONAL BIBLIOGRAPHY. CARTOGRAPHIC
MATERIALS 1986-1990. A PRECIS**

and

**NATIONAL AND INTERNATIONAL CO-OPERATION FOR
THE EXCHANGE OF BIBLIOGRAPHIC RECORDS**

By Susan Vejlsgaard

A year ago, at the LIBER conference for map curators here in Barcelona, I read a paper on retro-conversion by keyboarding of the Danish National Bibliography. Cartographic Materials 1986-1990. This being a different forum, I shall make a precis of that paper, especially since the map department has not had the chance and time to continue the retroconversion.

For the Map Department of the Royal Library the decision to retro-convert was easily made, as we were asked by our Director to do so. The Map Department had already produced "The Danish National Bibliography. Cartographic Materials 1990", based on the map department's computer records in the Royal Library's bibliographic database REX. This being a success, it seemed natural to make the quinquennial culmination of "The Danish National Bibliography. Cartographic Materials 1986-90" in the same way. As the records for 1990 were already in REX, we had to retro-convert the entries for 1986, 1987, 1988, and 1989.

We were of course asked to make an estimate as to how much extra work this would involve. The number of records in question was about 800, and after having made a few tests at reformatting different types of catalogue cards we estimated, that on average it would take 15 minutes per record to keyboard-convert a catalogue card into danMARC (CM), the Danish machine readable format for cartographic materials.

Realizing that this was a rough estimate, and that the project would involve quite an amount of pre-editing and proofreading, we allowed for an overhead of 8 minutes per record for this.

Accordingly, we applied for what equals 1 full-time staff member for two months or 272 what we call "wage hours", ier. including social time, holidays etc.

As it is not realistic to assume that 1 person can sit at a terminal and do this type of work for a whole day, we asked for two persons and were allotted two clerical staff members familiar with cataloguing.

Preparations

We have always maintained that the Danish National Bibliography for Cartographic Materials was a by-product of our card catalogues. Before 1990, the annual publication was produced by means of copying our catalogue cards and adapting these to the format of the bibliography by providing the entries with special headings consisting of geographical subject, subject, scale plus the price of the item, and by removing local notes and classification codes etc. Since 1986 we have kept extra copies of the catalogue cards in their original form with a cumulated edition by computer in mind.

The catalogue cards were now collated with their respective entries in the bibliographies, and discrepancies in cataloguing procedures during the five year period were amended, bringing the records to a uniform standard. As the computer record allows for more subject headings, these were added as well.

Briefing the clerical staff

The two clerks were given a brief introduction to the Map Department and its holdings. The fact that they were both familiar with cataloguing monographs was a great advantage, but they had to have a thorough introduction to the format for cartographic materials as well. One preferred to work in the map room, the other in her own office. So for her I prepared two floppy disks and a sample of the information stored in our special function keys. For the first records, we simply sat together reformatting the records. Moreover, they were provided with a small self-made manual, and a copy of a catalogue card with marc-corrections served as a model.

Having formatted a record they would mark the entry in the bibliography with a diagonal line, "half a cross".

At the end of the day, they would make prints of their work for proofreading. In the beginning, it was necessary to proofread once more the corrected records, but later on it proved not necessary. When a bulk of fifty records were correct, they would transmit them to REX and completely cross them out in the bibliography, after having checked that the records were updated in REX.

The project started Midmay, and by August 23rd 1991 all records were reformatted and transmitted to REX.

The next phase took place in the computer department and the map department respectively.

The data had to go through various processes in the computer department. The previous year we had prepared a conversion table, so that the formatted records would appear in the proper form for the bibliography, and also in the correct sequence. But as the number of data to be processed multiples, so does the number of possible errors. So the first proof had to be checked both for system errors and formatting errors. The proofreading was done in the map department. The records that had to be amended were downloaded, corrected and retransmitted to REX. The system errors I would discuss with the computer department for possible solutions. The computer department now repeated their procedures and a new proof was made for the final proofreading. Errors found in this phase can only be corrected in either the word processing program or in the desk-top publishing program Ventura, where the lay-out for the bibliography is made.

Conclusion:

On average, it took an estimated 22 net minutes, i.e. half a "wage hour" to reformat a record, including the time spent on enriching the records and on the proofreading. As it was to serve two ends, the bibliography and our online computer base, it was more time-consuming than ordinary retrospective conversion. Entries in the medium of print will inevitably invite comparison. Hence a higher degree of homogeneity is required in print, than is necessary in an online catalogue. Also it took some time before the clerical staff became familiar with the technical terms used for cartographic materials, the format for maps, and the working process in general. They soon became very professional, so should we have continued retro-converting, the time spent per record would have been considerably lower.

Our online data have also served another purpose. Since 1992 The Danish Library Center inc. has published a cd-rom called BamC. This cd-rom contains, among other library catalogues, the Danish National Bibliography, including the one for cartographic materials since 1990. It is of course for sale,, and it is possible for the customer individually to define a version to suit his needs.

Retro-conversion by keyboarding as opposed to scanning is a slow process, but had the advantage, when done in-house, that relevant information can be added, such as subject headings, subsequent classification codes, etc.

I do, however, foresee many difficulties when it comes to the retro-conversion of our handwritten catalogues. Some of them are even in gothic hand, the cataloguing differs from AACR II, the classification codes are out of date, and the information level in general is lower than that of to-day. In my opinion though, it

would be all too time-consuming to compare the catalogue card with the item itself. So albeit on a lower level, I think it preferable to have all catalogues converted to our online system rather than working with both card catalogues and an online catalogue. As our card catalogues are arranged according to region and subject, we hope, that in a future conversion process done by scanning, it will not prove too difficult to enrich the computer records with this information.

The retro-conversion policy of the Royal Library in general.

The policy of the Royal Library as a whole is to have all catalogues retro-converted by the year 2000, primarily by means of scanning. In 1991, the library started a scanning project, and by now, more than 3000,000 catalogue cards have been scanned, reformatted by computer, and are retrievable in REX, or to put it differently, all foreign monographs from 1950 and onwards are retrievable in REX. The computer programme for conversion of ASCII-strings to our MARC format was developed by the Royal Library itself, and the standard of a reformatted record is on a very high level, needing only cursory proofreading and few subsequent corrections. Since autumn 1991, the Royal Library has offered an automated lending system to our readers, so the books can be ordered or reserved online. Therefore it is of great importance, that as many items as possible can be retrieved in REX. This of course puts great demands on the computer capacity, which is in the process of being enlarged, allowing for a total amount of 2,230,000 records.

During the summer and autumn of 1993 the 300,000 books have to be bar-coded. So for the second time within two years, all staff - without exception - are recruited to undertake this job.

The barcode stickers are produced from the scanned records, and are, in general, correct, the biggest problem being multipart monographs, where the system encounters difficulties in recognizing how many volumes a given work consists of.

NATIONAL AND INTERNATIONAL CO-OPERATION FOR THE EXCHANGE OF BIBLIOGRAPHIC RECORDS.

Since the theme of the satellite meeting also deals with co-operation opportunities and the quality-quantity dilemma I should like to say a few words about the Danish research libraries and our co-operative project of derived cataloguing, SAMKAT, to which, since the late seventies, 20 research libraries have delivered data. Each library is responsible for the data it delivers. The libraries follow the AACR2

cataloguing rules and data are delivered in danMARC, the Danish version of the international MARC format.

A standard filtration- and reformatting programme operates, during the transmission of an entry to the work file in SAMKAT. During the filtration process local data from a number of libraries are removed. Records with identical control numbers will be displayed as one bibliographic description with holding statements from all records linked together by this number. Records with identical titles, but different control numbers will be displayed as several hits in the database.

The SAMKAT records form, together with the Danish union catalogue, the shared bibliographic database for the research libraries called ALBA, which contains appr. 7 million bibliographic records, representing the holdings of more than 200 Danish research libraries.

The ALBA base is maintained by The Computer Department of the Danish Research Libraries. The retrieval language is the CCL. The base covers the following data:

The acquisition of monographs by Danish research libraries since 1981.

The holdings of serials by Danish research libraries.

British National Bibliography and Library of Congress for monographs since 1981

The Danish National Bibliography. Books and the Danish National Bibliography. Serials

ISDS (International Serials Data System)

Deutsche Bibliographie 1992 ff.

The next stage in the Danish co-operation project will be the merging of the shared system for the research libraries, ALBA, and the shared system for the public libraries, BASIS.

The merging will mean the creation of an all-purpose bibliographic database for the entire Danish library system. This new base is called DANBIB and will, besides entries for books, serials, cartographic materials etc., also contain entries for sheet music, cd's and other audio visual materials. The DANBIB base is scheduled to be in full working order by the end of 1995.

When SAMKAT started, the online catalogue was a very novel thing in Denmark, and many hard copy catalogues and catalogue cards were produced on the basis of these records. Hence the AACR II was followed strictly and the danMARC format was made on the basis of these rules. But in the late eighties, after 10 years of experience, cataloguing practice was found to be in need of revision. A user group asked the National Library Authority to instigate a reform work in the cataloguing

area. I quote: "Several research libraries have independently been considering the application of existing cataloguing rules and formats in online catalogues. They reached the conclusion that it had become necessary to clarify certain principles (e.g. choice of bibliographic level, the priority of the online catalogue to the manual catalogue, main entry headings, forms of names, reduced redundancy) to ensure that the libraries do not reach different and incompatible conclusions when having to consider principles of cataloguing and subject registration seen in the light of considerable staff reductions".

Accordingly, a group was formed to look into these matters, the FORMKAT Group, and after several hearings, Guidelines on Reduced Cataloguing of Monographs in Research Libraries was published in 1989. They include recommendations on reuse, modification of the cataloguing rules concerning headings, standardized bibliographic level, for data entry of monographs (later also serials and analytics), and proposals of reduced redundancy.

To make a standardized reduction possible, the FORMKAT Group has tried to present a number of recommendations to those libraries, who want to reduce their cataloguing efforts. On the other hand they refer to the cataloguing rules and danMARC, whenever libraries want to exceed the standard level. Also the FORMKAT Group based their reductions on expectations of the fairly high level of the national bibliography.

This standard bibliographic level reflects the demands of the shared database ALBA. For some libraries it means a reduction, for others it means an increase of cataloguing effort.

One of the more controversial parts of the guidelines is the recommendation, that the distinction between main entry heading and added entry headings be abandoned. Headings as such are not considered necessary in an online catalogue. Furthermore it is recommended that the name of the author is entered as it appears on the item, "as on piece", and should a deviant form of the name appear later, a cross reference record is made, in which all forms of the author have the same value. The cross reference record in the online system has the same function as the cross reference known from the card catalogue: it will produce a hit in a search on any of the represented names. The system might even establish an automatic further search on all the names represented in the cross reference record.

In autumn 1988 a workinggroup was formed with the object of looking into the format for cartographic materials in order to include the format in dan-MARC and also to recommend a minimum record standard for ALBA based on a stan-

standard version of the format for cartographic materials. As we had already established a format at The Royal Library, based on the ukMARK format for cartographic materials, this format formed the basis for the danMARC format for cartographic materials. For the standard format for cartographic materials we found, that the most important access points for cartographic materials are place name, scale, year of publication, theme and, to a certain extent, size of the item. The four first access points were made mandatory in the standard format as they are part of the bibliographic description according to AACR II. As the theme is not always apparent from the bibliographic description, it was recommended that a special field should be reserved for this purpose.

The standard format for cartographic materials looks as follows:

Overhead:

The highlighted fields and subfields portray the standard format

As you can see, this is a very reduced format, and is considered a minimum, always allowing for extensions according to the full format. If, or should I say when, we start to retroconvert by scanning in the map department, I think that except for the information concerning scale, the record standard would meet the minimum level.

In the Royal Library, we follow the same policy as ALBA concerning authorized headings, and have consequently abandoned the 100 fields in the MARC format. The author is entered "as on piece" and cross reference records are created. Up to now the map room has made standardized geographical headings, basically because we produce a printed bibliography. For Danish material we use the forms agreed upon by the National Survey and Cadastre - Denmark. For foreign material we call countries by their Danish name, and other place names by their native name. But were we to have a pure online catalogue, we could follow the above mentioned policy, using the place name of the item and making cross reference records of other forms of the name. We have in fact already made a format for such a geographical cross reference record.

Would it be pure heresy for mapcurators to consider this policy in a joint online base for cartographic materials? And would it be feasible to have this feature on a cd-rom? If it is a possibility, it might save us a lot of work concerning authorized forms of geographical headings.

When I agreed to read this paper I had no idea of what I was letting myself in for. As is often the case, it seemed that the more I read and heard about co-operation and shared cataloguing the more ignorant I felt, and the more insurmountable

seemed the problems. What I did gather though, was that the overall problem is standards.

As to format, UniMARC might be a choice, character sets have to be agreed upon, conversion tables made, etc. And will we choose an online base (the network solution) or a cd-rom as the end product?

Denmark is a small country, and Danish a language spoken by few. And although the Map department of the Royal Library is a large one, there are not many more map libraries within Denmark. Mapcuratorship is, so to speak, a fringe activity in the Danish library world. The data that Denmark can deliver to a shared international base, will not be numerous; the national bibliography for cartographic materials since 1986, and perhaps later on retroconverted records. Hopefully, our overworked computer department will find time to make a conversion program for these data, so the data could meet the specifications of the base, and vice versa for the data we receive. The map department would greatly benefit from receiving retroconverted records from other countries. This is wishful thinking, but if the contents of a publication such as Dr. Koemans Atlantes Neerlandici was suddenly accessible as MARC-formatted records, many of our most precious atlases would, as if by magic, be indexed and online retrievable.

Within LIBER Groupe des Cartothécaires, a paper by Tony Campbell of the British Library has been distributed, dealing with possible future international co-operation in regard to exchange of data in the cartographic materials field, pinpointing the various aspects that have to be agreed upon before the setting up of a shared base. Allow me to take up a few of these aspects.

Concerning the quality/quantity aspect I think it impossible to work with the single record approach, with one authoritative record for each bibliographic item. I am, however, in favour of minimum standards, so that future records will at least meet an agreed minimum standard. All records could be marked somehow in a coded field indicating on what level they were catalogued or whether they were machine-converted or retroconverted from substandard information sources.

As regards geographical thesaurus and name thesaurus, the system adopted in Danish research libraries, which I mentioned earlier, seems to work well, in other words, the information concerning author or place name is entered in the form it appears on the item, and cross reference records with co-ordinated name forms are created. The ideal solution would be that all recorded name forms in the cross reference record would automatically produce the group of entries in question. Whether this system might work in a cd-rom environment would need to be looked into.

Under what auspices the co-operation should take place would also have to be investigated. In all events, if a co-operation project for cartographic materials is decided upon, it is important to rely upon the experience already gained from other co-operation projects, as for instance the European National Libraries Project on CD-ROM. A paper on the results, experiences and perspectives of this project will be given at the IFLA conference.

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Satellite Meeting of the Section of Geography and Map Libraries, IFLA, and the Groupe des Cartothécaires de LIBER, Barcelona 1993.

danMARC for CARTOGRAPHIC MATERIALS. Minimum version

FIELD	SUBFIELDS	
001	"a	Record identifier
008		Coded information block
	"s	Material designation e = cartographic material, printed f = cartographic material, manuscript
	"t	Form of publication codes (m, p, a)
	"v	Cataloguing level
021		ISBN
	"a	ISBN
	"x	Erroneous ISBN
245		Title and statement of responsibility
	"a	Title proper
	"c	Other title information
248		Second level information
	"g	Number or designation of volume or part
	"a	Title proper
	"m	Scale
250		Edition statement
	"a	Edition (if different from 1st. edition)
256		Mathematical data
	"a	Statement of scale
260		Publication
	"b	Name of publisher
	"c	Date of publication
300		Physical description
	"a	Indication of the number of pieces
	"n	Specific material designation
	"c	Dimensions
440		Series - access point form
	"a	Title proper of series
	"v	Numbering within series
530		Contents note
	"a	Contents note/note on inset
539		General Notes
	"a	General notes/note on base map
621		Subject headings
	"j	Subject

700

"a
"h

Personal name
Entry
Forename

710

"a
"c

Corporate body name/meeting
Entry element
Subordinate body

Record catalogued according to the full format

001 00 *ax500015464
008 00 *as1985*bdk*1spa*se*tm*v0
089 00 *a1111*b39*c1986
096 00 *aKBK 1111-39-1986/6*b1986-427/2
245 10 *aDinamarca de todo coraz'on*cmapa e informaci'on de viajes 1986*eOfici
a de Turismo de Dinamarca ; LegindKort/Folia
256 00 *aMålestok 1:730 000
260 00 *aCopenhagen*bla oficina de turismo*c1985*r<Herlev>*tRecato
300 00 *a1*nkort*bi farver*c49 x 42 cm, falset til 21 x 10 cm
530 00 *aKort over Bornholm indsat
530 00 *aMed vejlængdetabel og turistinformationer
559 00 *aTrykt recto-verso
559 00 *aTitlen gengivet fra omslaget
595 00 *aKF86
599 00 *bKBK910516
620 00 *aDanmark*bTurisme*c1:730 000
710 20 *aOficina de Turismo de Dinamarca
710 20 *aLegindKort/Folia

Record catalogued according to the standard (minimum) format

001 00 *ax500015464:kbk0
008 00 *se*tm*v3
245 00 *aDinamarca de todo corazón *cmapa e información de viajes 1986
256 00 *aMålestok 1:730 000
260 00 *bOficina de Turismo de Dinamarca *c1985
300 00 *a1 *nkort *c49 x 42 cm, falset til 21 x 10 cm
530 00 *aKort over Bornholm indsat
530 00 *aMed vejlængdetabel og turistinformationer
559 00 *aTrykt recto-verso
559 00 *aTitlen gengivet fra omslaget
621 00 *jTurisme
710 00 *aOficina de Turismo de Dinamarca
710 00 *aLegindKort/Folia

GRUNDSÄTZE UND ERSTE ERGEBNISSE DER NEUKATALOGISIERUNG VON ALTKARTEN IN DEUTSCHEN BIBLIOTHEKEN

By Egon Klemp

Im folgenden soll ein seit 1985 laufendes Projekt vorgestellt werden, das von der Deutschen Forschungsgemeinschaft unterstützt wird. Es ist Ziel dieses Unternehmens, die Altkartenbestände der größten deutschen Sammlungen in verbesserter Form zu erschließen. Die bei der Neukatalogisierung angewendeten Grundsätze und die bereits erzielten Ergebnisse werden hier kurz vorgestellt.

1. Zeitliche Begrenzung

Erfaßt werden die gedruckten Karten aus der Zeit von 1500-1850. Die Zeitgrenze 1850 wurde aus kartenhistorischen und bibliographischen Gründen gewählt. Sie entspricht auch anderen Altbestandprojekten der Deutschen Forschungsgemeinschaft.

Handgezeichnete Karten sind zunächst aus dem Projekt herausgelassen worden und werden später erfaßt. Dabei werden die handgezeichneten Karten der Archive eine besondere Rolle spielen. Für diese Karten müssen noch Sonderregeln erarbeitet werden.

2. Gegenstand der Erfassung und Katalogisierung

Neben den Karten werden auch die Atlanten erfaßt, sind doch in vielen Fällen einzeln erschienene Karten zu "Atlanten" zusammengebunden worden. Andererseits befinden sich unter den Einzelkarten viele Kartenblätter aus aufgelösten Atlanten. Aus diesem Grunde war schon in den Instruktionen für die alphabetische Katalogisierung der Preußischen Bibliotheken von 1908 die Katalogisierung der Karten in den Atlanten bis zum Erscheinungsjahr 1750 vorgesehen.

Auch Faksimiles von Karten und Atlanten, die bis 1850 erschienen sind, werden mit erschlossen

3. Teilnehmer an dem Projekt

An dem Projekt beteiligen sich seit 1985

- a) die Staatsbibliothek Preußischer Kulturbesitz in Berlin
- b) die Niedersächsische Staats- und Universitätsbibliothek in Göttingen
- c) die Bayerische Staatsbibliothek in München

Bedingt durch die Vereinigung der beiden deutschen Staaten ist in das Projekt eine weitere Sammlung einbezogen worden und zwar die der ehemaligen Deutschen Staatsbibliothek in Ostberlin, die seit 1992 mit der Staatsbibliothek Preußischer Kulturbesitz vereinigt ist. Beide Einrichtungen tragen jetzt die neue Bezeichnung "Staatsbibliothek zu Berlin - Preußischer Kulturbesitz". Seit März dieses Jahres werden auch diese Bestände aufgenommen.

4. Aufnahmeregeln

Dem Katalogunternehmen wurden sowohl Regel für die Form als auch für die Sacherschließung zugrunde gelegt:

- a) Für die Formalkatalogisierung bilden die Sonderregeln für die alphabetische Katalogisierung (RAK-Karten) von 1987 die Aufnahmegrundlage. Sie entsprechen in allen wesentlichen Punkten der "International Standard Bibliographic Description for cartographic Materials" (London, 1977). Da diese Regeln in erster Linie für neue Karten bestimmt sind, mußten sie der Altkartenkatalogisierung angepaßt werden, aber nur soweit, wie es zur exakten bibliographischen Kennzeichnung erforderlich ist. Die Ergänzungen beinhalten meist typische Zusätze, zum Beispiel die Angabe von Kartuschen, aber ohne deren Kennzeichnung.

Die Orthographie wurde vereinfacht. Sind z.B. ganze Worte oder Zeilen in Majuskeln gesetzt, so werden nur die Anfangsbuchstaben groß geschrieben.

Bei der Personenangabe erfolgt keine Beschränkung im Gegensatz zu den RAK-Karten, nach denen nur bis zu drei an der Erarbeitung bzw. Herausgabe von Karten beteiligte Personen Nebeneintragungen erhalten.

Zusätze zum Sachtitel und die Verfasserangabe werden nicht gekürzt. Ausgenommen sind Widmungen, Personal- sowie Privilegienangaben bei datierten Karten. Bei fehlendem Erscheinungsjahr werden neben der Angabe "s.a." (sine anno) weitere Hinweise gegeben, zum Beispiel "s.a. [nach 1680]" oder "s.a. [zwischen 1710 u. 1730]".

Die Kartengröße wird, wenn neben dem eigentlichen Kartenfeld noch ein breiter Kartenrahmen existiert, zweifach angegeben. Sie wird in Zentimetern - nicht in Millimetern - angegeben, da sich das Kartenmaterial aufgrund unterschiedlicher Aufbewahrung oft stark verändert hat.

Bei Faksimile erfolgt die Haupteintragung in der Regel unter dem Sachtitel des Originals. Hat das Faksimile einen neuen Titel, so erhält dieser die Haupteintragung, während der Originaltitel eine Nebeneintragung erhält, wenn er sich im Begleitmaterial befindet.

- b) Der Sacherschließung dienen die "Regeln für die Schlagwortkatalogisierung" (RSWK), die 1983 vom Deutschen Bibliotheksinstitut herausgegeben wurden.

Die sachliche Erschließung richtet sich

- nach dem geographischen Bezug, das heißt, nach dem dargestellten Territorium
- nach dem Kartentyp, das heißt, nach dem Thema der Darstellung (geologische Karte, Wirtschaftskarte usw.)

Für die Kartentypen wurde eine normierte Begriffsliste erarbeitet, die nach dem Prinzip des weiten Begriffs aufgebaut ist. So wird zum Beispiel von der "paläontologischen Karte" auf die "geologische Karte" verwiesen.

Dem geographischen Schlagwort wird ein Sachschlagwort als Unterschlagwort zugeordnet.

Der geographischen Schlagwortgebung wurden bestimmte Nachschlagewerke zugrunde gelegt, insbesondere der Territorien-Ploetz" (Geschichte der deutschen Länder, 1964) und der "Große historische Weltatlas", Bayerischer Schulbuch-Verl. Durch Permutation wird das Sachschlagwort zum Hauptschlagwort und das geographische Schlagwort zum Unterschlagwort.

5. EDV-Einsatz

Als technisches Hilfsmittel der Erschließung bot sich die elektronische Datenerfassung an. Für alle drei Bibliotheken wurde das Bayerische Datenerfassungsformat (BKV-N) für verbindlich erklärt, kam jedoch nicht in allen Punkten einheitlich zur Anwendung. Problematisch wurde es, als 1987/88 in München eine Umstellung von BKV-N-Format auf MAB-Felder (Maschinelles Austauschformat für Bibliotheken) erfolgte. Jetzt ging die Struktur der Göttinger und Berliner Daten mit den Münchner Daten auseinander.

Durch die Einrichtung einer Altkarten-Datenbank beim Deutschen Bibliotheksinstitut in Berlin wurde die Voraussetzungen für die Zusammenführung aller Daten

geschaffen. Dafür mußten die Göttinger und die Berliner Daten aus dem BKV-N-Format nach MAB umgesetzt werden, um sie mit den im MAB-Format vorliegenden Münchner Daten in einer Datenbank zusammenzuführen. Die Umsetzung dieser Daten erforderte umfangreiche manuelle Nacharbeiten.

Die Vereinigung der Berlin-Göttinger Daten mit den Münchner Daten soll nun in den kommenden Wochen vollzogen werden. dabei sind jedoch noch einige Schwierigkeiten zu überwinden bzw. Anpassungen vorzunehmen.

Beschlossen ist, bis September 1993 die gesamte Altkartendatenbank unter der Bezeichnung "IKAR-Datenbank" (Ibas-Karten-Datenbank) der Öffentlichkeit zugänglich zu machen.

Über den Online-Zugriff zu der Datenbank sowie zum Retrieval wird eine Broschüre Auskunft geben, die zur Zeit vom Deutschen Bibliotheksinstitut vorbereitet wird und von dort auch bezogen werden kann.

6. Publikumsfragen

Die Form der Publikation dieser Daten ist noch nicht entschieden. Erwogen werden Papierausdrucke für einzelne Bestandsgruppen, Mikrofiche- oder CD-ROM-Ausgaben. Die Veröffentlichungen des gesamten Bestandes in Buchform erscheint zur Zeit recht unwahrscheinlich.

7. Stand der Erschließung

Nach dem gegenwärtigen Stand sind die Altkartenbestände in München (rd. 62.000 Kartensätze) und Göttingen (rd. 35.999 Kartensätze) vollzählig erfaßt. Von den Beständen im Haus 2 der Staatsbibliothek zu Berlin (chem. SB-PK) sind etwa 30.000 Kartensätze in der Datenbank nachgewiesen, rd. 17.000 sind bereits auf Datenblättern erfaßt und werden z. Zt. eingegeben, ca. 35.000 Karten sind noch aufzunehmen.

Die neu in das Projekt einbezogenen Kartenbestände der ehemaligen Deutschen Staatsbibliothek umfassen ca. 75.000 Karten (40.000 Einzelkarten und 35.000 Karten in Atlanten). Mit der Eingabe der Kartendaten ist im März 1993 begonnen worden. Drei Arbeitskräfte sind mit der Katalogisierung betraut worden.

In ca. 4 Jahren soll das Projekt abgeschlossen sein. Dann werden ca. 250.000 Karten in der Datenbank nachweisbar sein.

Erwogen wird die Einbeziehung weiterer großer Kartensammlungen. Von besonderer Bedeutung wäre die Aufnahme solcher Sammlungen wie die der Sächsischen Landesbibliothek in Dresden, die über einen hervorragenden Altkartenbestand verfügt.

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CONVERSION OF THE BRITISH LIBRARY'S MAP CATALOGUES: THE KEYS TO SUCCESS

By Tony Campbell

In this paper I shall outline the reasons, both historical and technical, which led to the British Library's choice of retroconversion method. I shall describe our progress to date and our future plans, with particular attention focused on the "Data Conversion Specification". Even when I descend into detail, the intention is to describe an experience which might be shared by others following in our footsteps. It is not my concern - you will be relieved to hear - to itemise every peculiarity of the BL's catalogues and our ingenious solutions for dealing with them.

Unlike many long-established institutions, the British Library has been able to produce printed map catalogues. The last of these was published only fifteen years ago. Why do these need to be converted?

I hope that so distinguished an international gathering as this does not require a serious answer to that question. The benefits of automated access should be now be too well established to need explanation or justification. In the British Library's case, there were the added advantages that would flow from merging separate catalogues and the improvements made to authority controlled headings. The overriding impetus, however, came from the automated needs of the new BL building at St Pancras, into which we shall be moving in a few years time.

The question then, was not whether we should convert but how. To understand why there was only one realistic procedure it is necessary to review briefly the history of the BL map catalogues. Many of you will know The British Museum catalogue of printed maps, charts and plans, published in 15 large red volumes in 1967. What might seem surprising is the comment on the verso of its title, 'first published 1885'. How is this possible when so many of the entries are post-1885? The explanation is that the catalogue was first published in 1885 (in 2 volumes) followed thereafter by printed annual supplements. To update the master set of the catalogue, these supplements were chopped up and their entries distributed into guard-book volumes. The preparatory work for the 15-volume publication therefore involved tidying up the sequence so that it could be lithographically reproduced. Whereas the 1885 catalogue had been typographically uniform, the 1967 catalogue was a *mélange* of type styles and variant layouts. In addition, some en-

tries were almost too faint to be read and there had been a number of handwritten annotations.

Thus, when the possibility of conversion was first seriously discussed in 1989, optical character recognition was quickly ruled out. This meant the catalogue would have to be keyed. Because of its size - about 210.000 main (i.e. geographical) records - the operation would have to be done outside the BL by a commercial bureau. As the anticipated costs were more than the BL was prepared to meet, it was also necessary to offset the keyboarding costs against exclusive publishing rights. The publisher and the conversion bureau were therefore sought through a two-part tendering process.

The complexities and inconsistencies in the catalogue were such that a detailed Specification had to be drawn up, giving precise instructions about identifying and converting every type of data element involved. Two successive managers, James Elliot and Geoff Hutt, worked on producing the 'Data Conversion Specification' (a 93-page document). Preparation took well over a year, followed by a further six months for completion of the tender process. The Tender Board, comprising a range of expertise from across the Library, completed its work before new European Commission rules came into force. The requirement that publicly-funded tenders must be advertised throughout the EEC will significantly lengthen such operations in future. Finally, in April 1992, we were able to sign a contract with Research Publications International, awarding them the right to publish the catalogue on CD-ROM (with a royalty payable to the BL). They, in turn, subcontracted the keying to Access Innovations (of New Mexico). Keying of the 15 volumes, and the similarly organised 10-years supplement covering the period up to 1974, was scheduled to have been completed within about two years. In the event, the test phase took longer than expected but the project is now running smoothly.

Publication of the first CD-ROM is currently planned for 1995 and work has already started on the interface design. To help devise appropriate screen menus and search facilities, an international editorial board has been appointed, under my chairmanship. Those members who were available met for the first time at the International Conference on the History of Cartography in Chicago in June. At the LIBER conference, here in Barcelona last September, a questionnaire was circulated to obtain librarians' views on the type of use anticipated and details of the search strategies required. A reworked version of the questionnaire will be sent out later to those in the recently published Third Edition of the World Directory of Map Collections - for the which the IFLA Geography and Map Libraries Section thanks Lorraine Dubreuil.

I will now talk in more detail about the Specification and how this controls the transformation of the printed text into machine readable data. The complexity is the result of the same long history to which I have already referred.

Had all the catalogue descriptions been created according to consistent rules, or had the body of each record (rather than just the geographical headings) been edited before publication of the 15-volume catalogue, the Specification would have been slim and straightforward. The reality was very different. Records created since World War II, while not conforming to the Anglo American Cataloguing Rules we now use, nevertheless contain most of the necessary elements. Material described pre-War, however, was treated according to the cataloguing rules current at the time. There have been several of these, stretching back to the minimalist entries for King George III's Topographical Collection (K. Top.), received by the then British Museum in 1828.

For the bibliographic archaeologist it may be an interesting exercise to reconstruct the rules and the periods during which they operated. As far as the Retroconversion was concerned, though, it meant that the conversion bureau had to be systematically warned of all the situations they might meet so that the coding staff would correctly identify the fields and subfields.

The variations that are signalled in the Specification are of three types: elements that are not always present in the entry, elements that may be found in different relative positions, and variations of typography and punctuation. The most rudimentary entries of all - those for K. Top. - may occasionally contain no more than a title. Most of the other records have at least the basic ingredients of a catalogue entry but may lack one or all of the following: place of publication, publisher, size, scale, engraver's name or notes. It is worth pointing out that it has never been BL policy to include coordinates or to specify the projection. Nor do we catalogue map series at sheet level.

The second unpredictability concerned the relative positions of elements in a record. The most important inconsistency relates to the place of publication and publisher, which were inverted in earlier cataloguing rules. Typeface variation is the least noticeable of the inconsistencies that have to be described. Precisely for that reason is proved the most complex to analyse. If a heading type was to be recognised by the coding staff because it was in bold or italics, then it was essential to note that sometimes the same kind of heading might be in capital letters. The same applied to punctuation and to prescribed combinations of typefaces. The many variations produced by cataloguers working over a period of more than 150 years, and the wide range in the types of original material being described, produced a large number of distinct situations to be treated in the Specification.

At the end of the conversion, the data is delivered in a simplified UK MARC format. However, the coding staff do not need to know the UK MARC tags nor the subfield structure. Their task is to identify correctly each bibliographical element (title, scale, the three imprint elements, physical description, shelfmark, etc.) and assign the appropriate letter code to each. These initial codes are later converted automatically to the MARC format. Coding is in many ways more important than keying. Data allocated to the wrong field may well not appear when the completed file is later searched.

Once a section of the catalogue has been coded, it is passed to the keyboarders for data capture. The Specification contains detailed rules of capture to ensure that consistency is imposed on typography, punctuation and spacing. Bold, italics and small capitals are not used - although colour - coding and highlighting on screen can serve similar purposes. Thus, many of the instructions concern typeface simplification. Others explain how to deal with name added entries, cross-references and non-Roman scripts. For name added entries, just the heading and shelfmark are captured. By matching these shelfmarks against those in the main geographical entries, the name headings will be automatically inserted into the appropriate main entry at a later date. With the exception of cyrillic, non-Roman scripts have not been captured; instead they have been flagged for future transliteration by language specialists.

The most complex issue concerns the catalogue's use of modular rather than the more usual unit records. All editions, facsimiles, impressions etc. of a work are listed perfunctorily as part of a single record, rather than as separate unit records. The printed catalogue is arranged, however, by the date of the first edition. An atlas of 1934, is an admittedly extreme example, appears under 1816 in the sequence, since it is the 10th edition of a work of that earlier date. In conversion, each edition had to be given a proper identity of its own. They have therefore been captured as a distinct subrecord within the main record for the earliest edition. This enables each edition to be searched by its own date and retrieved separately, for instance in a geographical query, while also continuing to allow all editions of a map to be retrieved together. Thus, in the example given, anyone searching for atlases from the 1930s would be offered that 10th edition of 1934, once the catalogue is converted.

Other keyboarding operations add elements or repeat them. While dropped headings are appropriate for a printed catalogue, each automated record must be complete in itself and so the headings are repeated. For ease of searching, the representative fraction, which may occur in the title or the verbal scale statement, is written into a special field as a pure number (i.e. "Scale 1:63,360" becomes simply

"63360"). The date of publication is copied into a searching field in a similar way. The remainder of the Specification is taken up with sample pages from the catalogue showing the correct coding, and instructions on conversion to MARC format and output to magnetic tape. A long appendix describes the character sets used in the conversion - the same specially extended range of characters devised for the conversion of the BL's general book catalogue (BLC).

As a general rule, the catalogue was converted unchanged. There was no attempt to look for errors and inconsistencies and no material was recatalogued. Given that the equivalent of less than two members of staff are available to work on the project, this decision was unavoidable.

However, it did prove possible to carry out some pre-editing, mostly to make the geographical headings more consistent and useful.

This in turn will make possible the automatic insertion into each record of a code (lifted from the Dewey Decimal Classification) representing the geographical area covered. The codes themselves are hierarchical, and will therefore enable a region, and all the places within that same region, to be retrieved in a single search. The other pre-editing operations involved transferring hand-written corrections from four working sets of the catalogue to the conversion master, and reinstating some subject-headings that had been suppressed during the 1960s editing operations.

My final remarks describe current progress and future plans. After some delays, the first volume has now been accepted. A random 10% sample (selected by the BL) was proof-read and the errors were found to fall below the permitted maximums: 1.5 errors per thousand characters for codes and the more significant fields and 3 per thousand for the rest. If a sample fails, the entire volume has to be corrected and a new sample proof-read.

We now expect to deal the volumes at the rate of one a month. Following that, attention will turn to keying the 3-volume catalogue of manuscript maps, produced in the period 1844-61. Those two new files will then be merged with the current file containing material catalogued since 1975, which has been in machine readable form since 1988.

A range of automated concordances will be run against the converted data. Among other enhancements, these will impose consistency on the shelfmarks, supply normalised place of publication and the country of publication code, and add the geographical coding already mentioned. Like much else, these operations involve close collaboration between the Map Library and the BL's computer departments. Map Library staff prepare the concordance lists, usually in the form of

paired columns running to several hundred entries each, in either word-processed or database format. The computer section then provides the necessary programming to apply this data to the converted records, just as they had earlier been responsible for the detailed analysis of our requirements. This paper has, I hope, spared you the highly technical aspects of our retroconversion. Nevertheless, the contribution of specialist computer expertise to a project such as this is considerable.

The resultant file will be published as the first edition of a CD-ROM. It will also be made available on the OPAC that is now being developed for the new BL building. Later editions, which will punctuate the 15-year partnership agreement with Research Publications, will incorporate the results of manual editing and add further cartographic descriptions: records from the BL book files, entries in general BL catalogues, handwritten catalogues of specialised map collections, and material never previously catalogued. This last category includes the descriptions of atlas maps on which the independent researcher Rodney Shirley is engaged. The ultimate aim is for comprehensive and unified access to the 300,000 identified cartographic entities spread throughout the various BL departments.

The end of the story, perhaps, is the contribution such a file might make to international record sharing. I shall be talking about such possibilities in my paper to the Geography and Map Libraries Section meeting on Wednesday, which I hope many of you will be able to attend.

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THE RETROSPECTIVE CONVERSION OF THE CATALOGUES IN THE DEPARTEMENT DES CARTES ET PLANS OF THE BIBLIOTHEQUE NATIONALE

By Pierre-Yves Duchemin

In the paper given during the 8th Conference of the Groupe de Cartothécaires de LIBER in Barcelona in september 1992, I talked of the many projects on the way to be created in France at that time.

The economic situation was not enhanced, elections were run, a new government was created, the situation became clearer and some projects have been left apart.

Among the projects that are still supported, we are involved in two of them: the retrospective conversion of the card catalogues of the Bibliothèque Nationale and the birth of the Catalogue Collectif de France, the French Union Catalogue. The Département des Cartes et Plans is in the heart of the question and has a heavy work to do: the whole retrospective conversion of the card catalogues in the specialized divisions in the Bibliothèque Nationale has to be over at the time when the Bibliothèque Nationale de France (conjunction of the Bibliothèque Nationale and of the Bibliothèque de France) will be quite ready to run, at the end of 1996.

The Catalogue Collectif de France will not be useful before the end of this first task: the shared retrospective conversion, of which I had talked last year, is out of time now. Cooperation seemed to be a power for the retrospective conversion in France but it will not be realized before several years. In fact, the converted catalogue of the Département des Cartes et Plans will be the heart of the Map French Union Catalogue. In this way, a reference record will be available and other institutions or map collections will add their own data (shelfmarks, etc.) and if necessary, add the description of cartographic documents they have in their collections and that are not present in the Union Catalogue.

Before leaving the "cooperation" aspect, I have to say that the Union Catalogue of cartographic documents published before 1815 and stored in the Région Centre libraries has come to an end: bibliographic descriptions have been loaded in the BN-OPALINE database, links have been created between these descriptions and the authority files (geographic names, names of persons, corporate bodies and

subjects) and indexed. At date, the BN-OPALINE database offers 17 locations in France.

The whole project is in the hands of the Département des Cartes et Plans de la Bibliothèque Nationale and the ability of the BN-OPALINE database to become the heart of the French Map Union Catalogue.

My paper will be very practical: the very political and economic context in which we are now, makes theory out of date: as money is devoted for a limited period of time, one could even say that the situation claims for urgency. I shall talk of the existing situation, of the problems to solve, of the solutions imagined and of the final products.

At first, I shall say that we have not chosen between "quality" and "quantity", between retrospective conversion and re-cataloguing, in the discussion led by the Groupe de Cartothécaires de LIBER. Because of the historical situation of the Département des Cartes et Plans de la Bibliothèque Nationale, it is not possible to support such a direct choice and we have to make concessions in one way or the other: we prefer middle quality bibliographic descriptions than no description at all, with the condition that headings and entries have a high quality standardization level.

1. The existing situation

The Département des Cartes et Plans keeps about 1 100 000 cartographic documents out of which about 350 000, printed, engraved or manuscript, have been published before 1815. Among them, about 50 000, i.e. 5% of the whole collections, were not catalogued. I say "were" because, from 1986 onwards, these cartographic documents are catalogued by students through the AFNOR Z44-067 and Z44-074 cataloguing rules, that is to say the French versions of ISBD (CM) and ISBD (A). This work is not a part of the retrospective conversion project; it should come to an end a few months before the end of the general project.

Therefore, one has to note that all documents, whatever the quality of their cataloguing, are at least registered and shelf-marked, i.e. all of them have a minimum bibliographic description, allowing to get and re-catalog them if needed.

Several printed catalog exist: for example, velum portolan maps. Paris maps, Cuban maps, globes and spheres, large size Ektachromes duplications, etc. The standardization level of quality of the descriptions is function of their publication date but all of them have an inner coherence and generally present very complete descriptions. Through any easy-built interface, most of them will be converted in INTERMARC (CP) with an OCR process.

Up to 1986, bibliographic descriptions of cartographic documents were printed on standardized cards classified into three files: geographic (the most important), personal names and corporate bodies (except anonyms), subjects (from 1936 onwards). From 1986, the BN-Opaaline database assumes the description of any new document, ancient or modern, entering the Département des Cartes et Plans and retrieves information through 43 boolean entries.

Therefore, several topographic or thematic important cartographic series, from France or Europe or anywhere in the world, have been completely retroconverted by keyboarding and copying previous editions. So, the 1:25 000, 1:50 000, 1:100 000 and 1:250 000 IGN series, the 1:50 000 BRGM series, the 1:200 000 Michelin series, the 1:25 000 and 50 000 Ordnance Survey series, the 1:50 000 Spain, 1:50 000 Portugal, 1:50 000 Netherlands, 1:25 000 Switzerland, 1:50 000 Belgium, 1:25 000 and 1:50 000 Japan series, 1:50 000 Panama, the AMS 1:50 000 series from Poland, Hungaria, Romania, Czechoslovakia and Yugoslavia, that is to say about 16 000 bibliographic records may be retrieved in the database; at date, BN-OPALINE is more than 120 000 bibliographic records and more than 220 000 geographic names.

In the Reading room, the three files are 640 drawers; there are 1 200 cards in each of them; so the retrospective conversion project has to deal with about 770 000 cards. The reason why this figure is not the same as the total number of documents is that, for a long time, cartographic series were not catalogued sheet by sheet, but only registered on Kardex type large cards; for years, different editions of the same document were grouped in the same bibliographic description; at last, a small number of documents, - for instance the velum portolan charts -, are not described in the card files.

2. The major problems

The first problem to consider is of course the great amount of bibliographic information to deal with. Another important problem is the very different quality of bibliographic records. During the LIBER Conference, last year, I talked of "geological stratum" ... If the recognition of each stratum is very easy, each of them need a specific solution, a different analysis, different encoding specifications and different computer programs, leading to a lot of "work packages".

- The oldest stratum goes back to the opening of the Département, in 1828, and runs to the 1870s. It is made of about 32 000 cards. These cards have been hand-written on the back of playing cards; more recently, in the 1960s, they have been reproduced by photographic means on 12.5 x 7.5 cm standard size cards.

These descriptions cannot be used in the retrospective conversion project: some of them have only a title and a shelfmark; they will be recatalogued according to the ISBD (CM) and ISBD (A) specifications and indexed in the authority files.

- The second stratum lasted about 50 years from the 1870s to the 1920s. It was also hand-written and made of 40 000 cards.

The main problem in this stratum is that the bibliographic information lacks with coherence: one may find an author, a title, a publication place, a data and no size; on another example, one may find a geographic name, a title, a date and a size. Tests have been run on this kind of material; the whole stratum cannot be directly converted. The cards have to be selected through some verifications: only the best examples will be converted by keyboarding and, if needed, by autopsy of the cartographic document. The rejected cards will be recatalogued as in the first stratum.

- in the following stratum, 65 000 typed cards show a better cataloguing level.

Although they have not been written according the modern cataloguing rules, all these cards will be converted by keyboarding and linked to the authority files. Several examples of unidentified different editions will need to go back to the maps themselves.

- the 192 000 cards belonging to the next stratum have been written before the birth of ISBD. They show nevertheless very complete descriptions, including scale, several notes, sometimes coordinates, etc. The whole group will be directly converted in format and linked to the authority files. A small proportion of documents will need to go back to the maps themselves to identify different editions.

- the next stratum is 197 000 cards thick. Written between the end of the 1950s and the beginning of the 1970s, these cards are of course not ISBD catalogued but they have a high level in cataloguing. Due to the good quality of typing, this group could be converted through OCR, then linked to the authority files.

- 220 000 cards may be found in the upper stratum. They have been written according the ISBD (CM) rules and have standardized geographic names and personal names. The good typing quality could allow the use of OCR to convert this group.

At last, although not a real "stratum", the question of cartographic series has to be solved. These documents are not catalogued by sheet but only by one card with their common elements (title, author, scale, etc.) in the main files in the Reading Room. They are described at the sheet level in another file used by staff members. Considering the cartographic series already converted in BN-OPALINE, about

357 000 sheets - out of which 90 000 deal with France - are to be converted by keyboarding, OCR and copying in the BN-OPALINE database.

This look around the files raises another problem: personal names headings are not standardized and many different names may be found on the cards. Therefore, all the cards have been classified under the standardized heading, but the cards themselves have not been corrected; the conversion of these cards may raise some problems of coherence ...

On the opposite, from the birth of the Département des Cartes et Plans, all the geographic names, even not quite standardized, have always been gathered under one entry, most of the time the French name.

3. Problems to be solved

The main problem to be solved is obviously the huge number of cards to be converted. Among other problems, may be quoted the limited period of time devoted to the project - 3 years - and the limited number of staff members it will be possible to affect on the project, in order to disturb as least as possible the daily life in the Département des Cartes et Plans. In fact, except at the very beginning of the project, one and a half persons will follow the retrospective conversion up to the end.

One of the conclusions of the feasibility study was obviously that all the cards could not be converted by OCR; consequently, the first step will be to select which cards will have to be recatalogued, which ones will have to be converted by keyboarding in the Département (if a look at the primary document is needed), which ones will have to be converted by keyboarding outside the Département and which ones will be converted by OCR. According to the specifications for encoding and conversion written for each category, several working packages will be tendered.

Whatever the level of care brought to the initial preparation of documents to be keyboarded and the quality of the encoding staff, tests and controls have to be run to have the best results. If outside keyboarding seems to be the cheapest solution, the costs will raise with the creation of links of the authority files in the database. Keyboarding inside the Département is already a daily practice for students who are cataloguing ancient maps. If typing is slower, the ergonomics of the database, the cataloguing controls through validity tables, the crossed controls, the automatic links to standardized headings in the authority files raise the cataloguing level to an unexpected quality.

As a whole, the retrospective conversion project of the catalogues in the Département des Cartes et Plans will be a compromise between OCR, outside keyboarding and inside keyboarding.

4. Solutions

To solve these problems, two ways are being realized:

- from on way, the writing of "technical specifications" for each cataloguing stratum. These specifications consist in recommandations about encoding the data by keyboarding or OCR, transforming them in INTERMARC (CP) format, the possible enhancement of data, the computer treatments to introduce to have real MARC records linked horizontally or vertically to other bibliographic records or to the authority files. Intended to be finished in October, these specifications will result in a 250 pages booklet.
- from the other way, continuing the work on the standardization of entries (personal names, corporate bodies, geographic names, subjects). For several years, the Département des Cartes et Plans has been working on this subject:
 - from oneway, in the framework of a European project for identifying cartographers, Monique Pelletier is keyboarding very complete records in the personal names authority file in BN-OPALINE. It is a deep work of identification and standardization, including all the variations one may find on the cards.
 - from the otherway, when the EUROCARD project was a possible reality, the standardized coordinates of the 36 500 French communes have been loaded in the BN-OPALINE geographic names authority file. Then, ancient names, foreign variations have been added in the records. This work is not yet finished for the smaller cities. The same kind of work has been run for the political and administrative divisions of France, whatever modern or before the Revolution. The work is also done when retroconverting foreign series.
 - at last, subject indexing is done through RAMEAU (Répertoire d'Autorité-Matière Encyclopédique et Alphabétique Unifié), French version of LCSH (Library of Congress Subject Headings). The indexing words created from 1936 to 1986 are progressively made compatible with modern concepts.

As the retrospective conversion project will use several ways of proceeding, the work will be done by non librarians. It seems evident that standardized entries will make the work easier: they will type the name they see on the card and the system will provide the standardized form in the bibliographic records, with the addition of coordinates for geographic names.

When converting collections or cartographic series, the system will provide "modèles", kind of "abstract bibliographic records in which are all the specific fields and sub-fields necessary to the treatment of the collection and the series. Sometimes, it is possible to write common elements to the sheets belonging to the series in the modèle (for instance, shelfmark, size, etc.).

In order to prevent the European tenders that could be very long-lasting, it has been decided to divide the number of cards in "thematic" working packages, each of them divided according to the specifications of the cataloguing stratum:

- French cities maps (150 000) cards
- Paris maps (21 000 cards)
- French Regions and administrative divisions (160 000 cards)
- France, from Ptolemy to 1986 (10 000 cards)
- Former Colonies and French speaking countries (38 000 cards)
- European Community (79 000 cards)
- Rest of Europe (72 000 cards)
- Africa (70 000 cards)
- America (83 000 cards)
- Asia (55 000 cards)
- Oceania, Arctic and Antarctic (15 000 cards)
- Globes, Spheres, geographic games, relief maps, etc. (15 000 cards)

According to the working time devoted to the project and the money estimations calculated from the feasibility study, the project will need standardized authority files, proper models, specific keyboarding screens and clear encoding specifications to have presumable chances to be achieved by the end of 1996.

A tender has been published in August 1993 in order to choose the company that will be in charge to invite tenders for each piece of work, from the Specifications prepared by the Département des Cartes et Plans.

5. Final products

The first aim of the project is obviously to provide the whole of the collections of the Département des Cartes et Plans in a MARC format. After 1996, the users will have a database offering 43 ways to retrieve a cartographic document. The project aims also to provide the heart of the French Map Union Catalogue. It may at last, in a European or even more international context, provide a database to share with other institutions.

That is why the project will begin with "French" documents, that is to say showing France or parts of France. At the end of this first step, bibliographic records,

including standardized entries, will be made available to other French or foreign libraries or institutions. As the project will progress, other pieces of work will be made available in the same way. When the step of foreign documents will be reached, it will be the opportunity to have a real worldwide cooperation process.

The data will be retrievable in the database BN-OPALINE itself; other products will be available - magnetic tapes or floppies, profiles, etc. - as well as on line access through the Union Catalogue network. At last, a CD-ROM is intended as a final product after 1996.

Money is credited for three years ... It is not a long period of time ... and there is a lot of work.

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France

AMIENS (Généralité). 1667.

- Picardie et les Pays-Bas Catholiques / Par N. Sanson d'Abbeville. R. Cordier Abbavil. sculp. - [A Paris :] 1667. - 1 flle col. 37x54,5 cm.

[Ge AF Pf 181 (2492)]

Réédition d'une carte de 1648. Les couleurs indiquent les limites de la généralité d'Amiens divisée en élections.

SANSON (N.). - CORDIER (R.).

GDE 930708 n0em
→ 008 930708sl667 fr 4 freb
→ 009 ac2aa01 cxams
→ 044 Sc 1667
090 Sc BN
Sd C. Pl.
→ Sa Ge AF Pf 181 (2492)
→ 100 Sa (167135) Sanson Sm Nicolas Sd 1600-1667
→ S4 18 S4 65
→ 245 Sa Picardie et les Pays-Bas Catholiques
Sf par N. Sanson d'Abbeville Sg R. Cordier Abbavil.
sculp.
260 Sa Paris

260 Sc N. Sanson
Sd 1667
280 Sa 1 carte
Sc col. Sd 37 x 55 cm
300 Sa Rééd. d'une carte de 1648
Sa Les couleurs indiquent les limites de la généralité
d'Amiens divisée en élections
→ 700 Sa (212326) Cordier Sm Robert Sd 1...-1673 ?
S4 35
→ 607 Sa (169293) AMIENS So GENERALITE D' Sg France
S7 1667
→ 042 Sd E0011354 Se E0032716 Sf N0505909 Sg N0493949
256 Sc E 1|13'54" - E 3|27'16" / N 50|59'9" - N 49|39'40"

CAEN. 1875.

-Plan de la ville de Caen en 1875 dressé par A. Pinchard, conducteur des Ponts et Chaussées à Caen. 1:10.000 Gravé par Delamare.-Caen, Lemonnier, 1875.1 file 535 x 430. [D. L. 122, 1875].

[Ge.D. 14107

(Plan aux armes de la ville avec, en carton, le répertoire des rues et des monuments.)

Pinchard (A.).-Delamare,
gr.-Lemonnier.-Plan de
ville.-Armoiries.

GDE 930710 n0em
→ 008 930710s1875 fr freb
→ 009 ac2aa01
→ 036 Sa DL 122, 1875
Sb 18750000 Sc BN Sd C.Pl.
090 Sc BN Sd C.Pl.
Sa Ge D 14107
→ 042 Sa a
→ Sa b 10000
→ 044 Sc 1875
→ 100 Sa (212942) Pinchard Sm Auguste
S4 18
→ 245 Sa Plan de la ville de Caen en 1875

245 Sf dressé par A. Pinchard, conducteur des Ponts et Chaussées à Caen
245 Sg gravé par Delamare
256 Sa 1:10 000
260 Sa Caen
Sc Lemonnier Sd 1875
280 Sa l carte
Sd 54 x 43 cm
300 Sa Plan aux armes de la ville avec, en carton, le répertoire des rues et des monuments
→ 700 Sa (212943) Delamare Sm ? Sd 19e s.
S4 35
→ 606 Sa (007459) Plans de ville

→ 607 Sa (002638) CAEN Sg Calvados
→ 642 Sd W0002136 Se W0002136 Sf N0491104 Sg N0491104
256 Sc W 21'36" / N 49'11'4"
607 S7 1875

→ zones indexées

PROJECT FOR THE CONVERSION OF THE BIBLIOTECA DE CATALUNYA MAP CATALOGUE

By Maria Antonia Montmany, Concepcio Isern, Assumpta Lagüens,

1. Introduction

The cartographic holdings of the Biblioteca de Catalunya began to be formed in 1918. They are held mainly in the Prints, Maps and Engravings Section, as was usual in major Spanish and European libraries at the beginning of the century, when the Biblioteca de Catalunya was founded.

The Prints, Maps and Engravings Section has a separate index for all its own material. There is also a separate index for the wood engraving blocks, metal engravings plates and photogravures. Reference works regarding cartography or the section's other holdings - prints, bookplates, illustrated broadsides, *goigs* (illustrated religious poems), *auques* (illustrated stories), portraits etc. - have an index number from the library's main index.

The Prints, Maps and Engravings Section also has its own classification system, which follows the guidelines of the German librarian H.W. Singer¹. This system divides the section's holdings into 24 subject areas. Doctors J. Rubió i Balaguer and A. Durán i Sanpere gave Roman numerals to each of these 24 areas: the number XV corresponds to maps. This is followed by an Arabic number indicating the printing or engraving method and a letter indicating the size. The location mark ends with a number identifying each individual item. eg:

XV	.3	B	RE	2408
Maps	Metal engravings	Size	Print Index	index number

A computerised catalogue was set up in 1991 and the cataloguing of new cartographic material has been computerised since then.

¹ Hans W. Singer. Handbuch für Kupferstichsammlungen: Vorschläge zu deren Anlage und Führung. Leipzig: W. Hiersemann, 1916.

1.1 Cartographic holdings

These consists of four groups:

- a) 4,432 maps and charts, catalogued on index-cards and indexed 15 folders containing an unknown number of maps, most of which come from the holdings bought from the Barcelona bookseller, Josep Porter.
- b) The Mossen Colomer Collection², ceded to the library via the Institut d'Estudis Catalans, with an index given by the Institut. It has about 7,000 maps, 3,977 of which are indexed.
- c) 103 atlases, not including those held in the rest of the library. Some of the most valuable bear the book plate of the Fundació Patxot³.
- d) The section's reference library, comprising 385 works, which will expand considerably when the several hundred reference works at present in the rest of the library are recuperated.

1.2 Collections

Prior to about 1978 the following collections had been formed from the library's cartographic holdings:

- "Mapa geográfico catastral de España, 1:50.000"
- "Mapa geológico y minero de España, 1:50.000"
- Coello's "Atlas de España y sus posesiones de Ultramar, 1:1.000.000"
- "Mapa general de España, 1:500.000"
- "Atlas Historique de la France, 1:2.850.000"
- "Mar Mediterrani" (showing the naval domains of European countries with possessions in the Mediterranean)
- "Mar Atlántico" (A collection of maps published by the Dirección de Hidrografía)
- "Mapa geológico de Portugal, 1:50.000"

Since then, about 20 more Spanish collections have been formed, from the XVIII and XIX centuries in particular.

The first steps have also been taken in the process of gathering together, in the Prints, Maps and Engravings Section, all the atlases held in other sections of the library. Those from the XVII and XVIII century have already been recovered, and will be followed by those from the XIX and XX centuries.

² Ignasi Maria Colomer. See bibliography.

³ Founded by Rafael Patxot i Jubert (1872-1964)

1.3 Catalogues

The section's holdings can be accessed via the card-index catalogues. These catalogues were up-dated until 1991 when computerised cataloguing started.

2. The Computerisation of Map Cataloguing

The Biblioteca de Catalunya computerised its catalogue in 1990 and joined the SICAB system (Sistema d'Informació per a Catàlegs Automatitzats de Biblioteques), run by the Generalitat de Catalunya's Servei de Biblioteques and Patrimoni Bibliogràfic. This database system allows different types of document in various bibliographic and print media to be included, with standardised descriptions based on ISBD norms. The norms for this database are: ISBD norms, the AACR2 and the Llista d'Encapçaments de Matèries en Català⁴.

The inclusion of cartographic material in the SICAB system started in 1991.

2.1 Cataloguing

- Modern map cataloguing has a clear, up-to-date set of rules: ISBD (CM)⁵, in conjunction with those of other documents, eg. ISBD (M), ISBD (S), ISBD (NBM), and ISBD (A). In case of doubt, these cataloguing rules are the first points of reference.

The cartography section of the Prints, Maps and Engravings Section has produced a set of further specifications "Concrecions de l'aplicació de l'ISBD (CM) a la Biblioteca de Catalunya" (May 1993). A number of problems were encountered when applying the cataloguing rules to the Biblioteca de Catalunya's holdings, and this document describes the solutions adopted. Some go beyond ISBD (CM) and others clarify certain aspects.

These further specifications included the following:

- The main source of information is, in order of preference:
 - the map frame
 - the sheet
 - the recto
 - the verso
 - the cover or container

⁴ Subject Headings in Catalan. Llista d'Encapçaments de Matèries en Català. Barcelona: Generalitat de Catalunya. Institut Català de Bibliografia, 1991.

⁵ ISBD (CM) International Standard Bibliographic Descriptions for Cartographic Materials. Revised ed. London: British Library Bibliographic Services: IFLA, 1987,

- Additional information in the title. In the case of generic titles additional information is added between square brackets. eg:

[Mapa militar: España 1:20.000]

As this information is taken from the document, the language of the original is maintained.

- Sizes. It was decided to give the size of the map per se, rather than that of the sheet or plate. This applies to printed maps, engravings and lithographs.
- As most of the maps are pre-1900, we have chosen to include a note (in tag 531), giving the printing or engraving method used.

It should be mentioned that this section deals with much more historic material than modern, and could be described as an historic maps section. Amongst the problems in the cataloguing process we would like to mention the following:

- 1) cases where responsibility for a document is difficult to define:
 - a) it is often difficult to establish whether a statement of responsibility refers to the draughtsman, the engraver, the mapmaker or to whom.
 - b) the mapmakers responsible for some reproductions have not been identified and responsibility is assigned to the original mapmaker. Ptolemy (II century), for example, is still considered the mapmaker of XV century reproductions of his maps by anonymous mapmakers.
 - c) some important cartographers also published other people's work. Examples include Hondius and Jansonius.

The statement of responsibility has become increasingly more complicated from the XVIII century onwards, when institutions began to make maps or commission them from private companies, It is often difficult to establish the role played by these institutions in the making of a given document. This is one of those areas where acknowledge of the history of mapmaking is essential.

- 2) The scale of the maps in the Biblioteca de Catalunya is often given in old units of measurements. No conversion is made, the scale being given as in the document, followed by the equivalent of the old unit in the unit used in the document. eg:

- 100 canas malloquinas = 3,3 cm

Where no scale is given the following note is added:

- No scale given

- 3) In many maps, particularly antique maps, the role of the person named as the printer is not always clear. This person is, in fact, sometimes the engraver, the draughtsman or the mapmaker. These different functions are often confused.
- 4) Dates are also a common problem as they are often lacking in historic maps. Maps must be looked up in specialist reference works in order to discover their date. If this is not possible an approximate date is given.

2.2 Classification

We have kept to the UDC (5th Spanish edition) in order to stay in line with other documents in the Biblioteca de Catalunya, entered in the library's database from 1990. Thus, in UDC 912 we find all documents that describe a geographic area in a form other than text. eg:

912 (467.1) "17"
Map of Catalonia (XVIII century)

2.3 Alphabetical catalogue by subject

We use, as does the rest of the library, the Llista d'Encapçalaments de Matèries en Català, published by the Institute Català de Bibliografia. This catalogue is a particularly useful reference work for cartographic material, as many users request material concerning a particular geographical area rather than by author or title. This makes it especially important to use a comprehensive list of subject headings which give ample scope to readers requesting documents by geographical area. The mapmaker and the title are also important in historic maps, but not in modern and contemporary ones. In both the card-index catalogue and the library database, we include the year of publication with the subject headings, as we have found that this is very useful for readers.

3. The Map Catalogue Conversion Project

3.1 Objectives

- a) The creation and maintenance of a single, on-line, database catalogue for the Biblioteca de Catalunya, in order to achieve greater efficiency in access to documents.
- b) Greater access to information about the section's holdings.
- c) The protection and conservation of the section's indices.
- d) To contribute to Universal Bibliographical Control. (UBC)

3.2 Procedures and methods

Before the catalogue is computerised a comprehensive study of the material to be converted will be carried out.

Following this study the conversion of the map catalogue (formed between 1918 and 1991) will begin. This conversion, subject of this paper, forms a part of the project of conversion of the library's general catalogue. It has been decided to contract a company which specialises in coding and transferring data. This decision was based on the conclusion that this procedure will result in:

- minimum interference with the section's day-to-day work.
- a high level of quality in the cartographic description (99.5% reliability)
- a lower total cost

The work will be carried out in the following way:

- 1) Study of the catalogue
- 2) Writing of the specifications governing the codification of the entries in machine-readable language.
3. Micro-filming of the index-cards to be converted.
- 4) The micro-films and specifications will be sent to the company.

3.2.1 Current state of the library's card-index map catalogues

They comprise index-cards in wooden drawers, grouped as follows:

- a) General
- b) Europe
- c) Spain
- d) Catalonia
- e) Asia, Africa, America
- f) Military maps

These are all main index-cards classified in accordance with the UDC.

- g) Atlases and reference library

These are main index-cards ordered by author.

- h) Mapmakers

This catalogue could be obtained from the main entries if they contained all the required information. Unfortunately, this is not the case. A comprehensive study was undertaken of atlases and other works which include maps, the entries of which only give the classification number and the translators or co-authors listed in the original work.

Approximately 70% of the index-cards to be converted present problems due to the legibility of the handwriting, the use of antiquated local cataloguing systems or awkward classification systems. On the other hand, we have holdings which are remarkably rich in historic documents and in maps of Catalonia, which should be made more accessible.

3.2.2 Volume of entries

There are about 6,500 index-cards in total, some of which relate to collections.

3.2.3 Types of index-cards:

- a) Incomplete main entries: those which lack some of the elements which make up the minimum information to be entered in the database. 18%.
- b) Main entries with ISBD standard descriptions: complete. 2%.
- c) Handwritten component cards: fairly complex, with slight problems of conversion due to the hand-writing. 22%.
- d) Handwritten component part cards: complete. 4%.
- e) Collection index-cards: old control cards with list of the elements in collections. 1%.
- f) Handwritten main entries: with the necessary information but often with hand-writing that is difficult to read. 50%.

3.2.4 Problems with the location marks

As the section's location marks include both classification number and index number, conversion presents some problems which were almost certainly not imagined when the system was designed. The location marks include elements which tend to group similar items together (the subject area, in this case maps, the printing or engraving method employed, and the size) and elements which separate (the index number, which results in material being kept in numerical order in folders, cupboards, boxes etc., thus splitting up collections). This problem affects 70% of the index-cards to be converted, i.e. all the entries with the section's own location mark.

3.2.5 CATMARC coding

The index-cards will be coded in CATMARC format, the Catalan version of UKMARK 1⁶. The recent, second edition of the handbook⁷ will be used,

⁶ Lluís M. Anglada i Ferrer. *El format MARC i l'intercanvi d'informació bibliogràfica a Catalunya*. Barcelona: Escola Universitària Jordi Rubió i Balaguer de Biblioteconomia i Documentació, 1988, p.12.

⁷ *Manual CATMARC*. 2^a ed. rev. i augm. Barcelona: Generalitat de Catalunya, 1992.

as it is for the computerised cataloguing of maps.

3.2.5.1 'Mandatory' CATMARC tags and subfields marks

These tags are recommended for the successful conversion of entries regarding post-1801 maps.

We have established the following tags and subfield marks for this project:

- 008 \$a (information re publication date)
- \$b (country of publication)
- \$o (illustration code) : b (maps)
- \$p (type of material) : A (cartographic document)
- \$e (government publication)
- \$f (Conference indicator)
- \$g (Festschrift indicator)
- \$i (heading repeated in title indicator)
- \$j (literary text code or type of publication) : c (cartographic documents)
- \$k (biography code)
- \$l (language code)
- \$q cataloguing source code) b
- 043 \$a (geographic zone code)
- 090 \$b (index number)
- \$d (classification number)
- \$j (source of entry) : conversion
- 245 \$a (title)
- \$z (type of material) cartographic document
- 256 \$a (mathematical data) : scale (for post-1801 maps)
- 260 (area of publication)
- 300 (area of the physical description)
- 600/651 (subject headings: subject/geographical name)
- We follow the Llista d'Encapçaments de Matèries en Català, as indicated in 2.3..
- There are two further tags which we would like to include whenever the information is given on the index-card:
- 440/490 (aera of the collection)
- 531 note re the physical description) printing or engraving method used in the maps

3.2.5.2 CATMARC tags for component parts cards

- 008 (information code) complete

100/110 (main heading: author or body)
/245.3
245 \$a (title)
773 \$t (title of document source)
\$d (document source imprint)
\$g (related information: volume, part, pages etc)

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For the annexes see the Spanish version of this paper.



Biblioteca de Catalunya

EJEMPLOS DE CATALOGACION

DADES EN FORMAT M.A.R.C.

PROCEDÈNCIA:

ET. I.

VALORS DE L'ETIQUETA

ACCH: 000027071

008 00 \$x 921002\$a c1706 \$b Irto b6c \$p 1A4 \$e OSI 06q 06h OSI 15j \$k \$l fre\$a
\$q b
040 00 \$a BCSb cat\$c BC
043 00 \$a e-spc--
080 00 \$a 912(467.1)
090 00 \$b N.Col. 5sc Ex. estripat. taques d'òxid i humitat, ex. acolorit a mà p
osteriorment\$d R.M.Col. 56j Donatiu
092 2l \$a Colomer i Presensh Ignasi M.
100 10 \$a SansonSh GuillaumeSr /1703
245 10 \$a Principauté de Catalogne ou sont compris les comtés de Roussillon et
de Cerdagne divisés en leurs vigueriesSz Document cartografic\$d par le S
r. Sanson ...\$e Cordier sculptit
256 00 \$a Echelle 30 milles pas geometriques, ou milles d'Italie. 12 lieues com
munes de France. 8 lieues communes d'Espagne. 7 lieues communes d'Allema
gne. 10 lieues d'une heure de chemin 18,5 cat.
260 00 \$a A Paris\$b chez le S. Jaillot ...\$c 1706
300 00 \$f 1\$u map\$a\$b col.\$c 54x74,5 cm
531 00 \$a Gravat calcoqr., sobre paper verjurat
534 00 \$a Coloner (1966) 16-11
65j 00 \$a Catalunya\$aX Napesy Obres de 1706
700 01 \$a CordierSr S. XVII\$y grav.

PRENEU: - PF2 CONSULTA DEL MÒDUL D'AUTORITATS - PF7 PANTALLA ANTERIOR
- PE1 AMELIAR L'ESPAI DE LA LÍNIA - PF8 PANTALLA POSTERIOR
- PE5 REPETIR L'ÚLTIMA LÍNIA - PF12 CANCEL·LAR EL PROCÉS
- PE6 CANVI ORDRE DE LES REPETICIONS - PF3 GRAVAR EL DOCUMENT



Biblioteca de Catalunya

FORMAT I.S.B.D. DEL DOCUMENT SELECCIONAT

ACCN: 000027071

Sanson, Guillaume

Principauté de Catalogne ou sont compris les comtés de Roussillon et de Cerdagne divisés en leurs vigueries (Document cartographique) / par le Sr. Sanson ... ; Cordier sculpt. -- Echelle 30 milles pas geometriques, ou milles d'Italie. 12 lieues communes de France. 8 lieues communes d'Espagne. 7 lieues communes d'Allemagne. 10 lieues d'une heure de chemin 18,9 cm. -- A Paris : chez le S. Jaillot 1706. -- 1 mapa : col. ; 5x74,5 cm
Colomer (1966) 16-11. -- Gravat calcogr. sobre paper verjurat
1. Cordier, grav. II. Titol I. Catalunya -- Mapes -- Obres de 1706 912(467.1)

R. M.Col. 5. Ex. estripat, taques d'oxid i humitat. ex. acolorit a mà posteriorment. Top.: R.M.Col. 5

PF7 - PANTALLA ANTERIOR

PF8 - PANTALLA POSTERIOR

PE12- CANCEL·LAR

NO HI HA MÉS DESCRIPCIÓ

PF2 - OBTENCIÓ DE FITXES

PF1 - CORREGIR

PE3 - GRAVAR·CONTINUAR



Biblioteca de Catalunya

DADES EN FORMAT M.A.R.C. PROCEDÈNCIA: -

ET. I. VALORS DE L'ETIQUETA ACCN: 00004816

008 00 \$z 930809\$z \$1883 \$b cat\$z b\$C \$p \$A\$d \$e \$O\$f \$O\$g \$O\$h \$O\$i \$I\$J \$k \$l \$pa\$z
\$q \$b
040 00 \$a BCS\$b cat\$C BC
043 00 \$a e-spc--
080 00 \$a 912(467.1)
090 00 \$b M.Col. 48\$C Ex. entelat\$D R.M.Col. 48\$J Donatiu
092 21 \$a Colomer i Freser\$H Ignasi M.
100 10 \$a Brossa\$H Eduard\$R 1848/1924
245 10 \$a Catalu\$H\$a\$z Document cartogràfic\$b descripció geogràfica de las cuatr
o provincias catalanas indicándose las vias de comunicación ...\$d Eduard
o Brosa
256 00 \$a Escala kilomètrica 50 km 1-13,6 cm
260 00 \$a Barcelona\$b is.n. \$C 1883
300 00 \$f 16a mapa\$b col.\$C 86.4x77,2 cm
531 00 \$a Litogr. color, sobre paper
557 00 \$a Index gràfic
651 00 \$a Catalunya\$a\$K Kapes\$y Obres de 1883

PREMU: - PF2 CONSULTA DEL MÓDUL D'AUTORITATS - PF7 PANTALLA ANTERIOR
- PF1 AMPLIAR L'ESPAI DE LA LÍNIA - PF8 PANTALLA POSTERIOR
- PF5 REPETIR L'ÚLTIMA LÍNIA - PF12 CANCEL·LAR EL PROCÉS
- PF6 CANVI ORDRE DE LES REPETICIONS - PF3 GRAVAR EL DOCUMENT



Biblioteca de Catalunya

FORMAT I.S.B.D. DEL DOCUMENT SELECCIONAT

ACCM: 000044816

Brossa, Eduard

Cataluña [Document cartográfico] : descripción geográfica de las cuatro provincias catalanas indicándose las vías de comunicación ... / Eduardo Brossa. -- Escala kilométrica 50 km [=13,6 cm]. -- Barcelona : ts.n.l, 1883. -- 1 mapa : col. ; 86,4x77,2 cm
Litogr. color, sobre paper. -- [índex gràfic
1. Títol 1. Catalunya -- Mapes -- Obres de 1883
912(467.1)

R. M.Col. 48. Em. entelat. Top.: R.M.Col. 48

PF7 - PANTALLA ANTERIOR
PF8 - PANTALLA POSTERIOR
PF12- CANCEL·LAR

NO HI HA MÉS DESCRIPCIÓ

PF2 - OBTENCIÓ DE FITXES
PF1 - CORREGIR
PF3 - GRAVAR-CONTINUAR

REPORT ABOUT DEVELOPMENTS IN RETROCONVERSION FROM THE GROUPE DES CARTOTHECAIRES DE LIBER

By Jan Smits

On request of the IFLA, Geography & Map Libraries section part of the 8th conference of the Groupe des Cartothécaires de LIBER, held in Barcelona in 1992, was devoted to the subject of "retroconversion". This was to have a follow-up during the IFLA conference in 1993 in Barcelona. This paper is based on the papers read and on the ensuing discussions. All papers will be published this year in one of the issues of "ERLC The LIBER Quarterly" (See list at the end of this paper. Summaries in English, Spanish and Catalan are distributed with the conference papers).

During the LIBER-conference some 9 papers were devoted to the subject retroconversion by speakers from 7 countries. Some of these may be read to this meeting in an adapted form, as the process of retroconversion is continuing and new insights or developments may have changed the nature of these papers. When I summarize the papers I can say the following. 4 were concerned with pre-conversion research -OCR = optical character recognition (Belgium, Spain), keyboarding (Denmark, Great-Britain), codification of elements (Great-Britain, Spain), enhancements of records (Denmark, Great-Britain); 3 of them were concerned with actual conversions (Denmark, Germany, Great Britain); 2 were concerned with end-products (Denmark, bibliography; Great-Britain, CD-ROM), and 3 were concerned with co-operation (France, The Netherlands). When I wrote this report unfortunately only summaries of the two Spanish papers were available.

Let us have a look at the four aspects I mentioned one by one.

Pre-conversion research

Obviously a lot of this research is done in general by libraries who are concerned with retro-conversion. The most efficient would be Optical Character Recognition (OCR) which is a technique already used within and outside the library-field. However as the data to be captured is of different quality depending on the age of the records to be converted it takes a lot of error and trial before satisfactory results are available. OCR combination with database- or textbase-programmes can

result in data with less than 1% errors. Of course unclear type and handwritten data may make it necessary to use a mixture of techniques to convert the whole of a catalogue. The OCR-technique could well serve better if libraries in Europe would file more proposals for the 'European Communities Telematic programmes, Libraries programme, Action Line I, part 2': "Retrospective conversion of catalogues of important collections at international level". Till now an insufficient number of proposals have been submitted and accepted.

Another way of converting the data is by keyboarding. This will make the amount of errors almost neglectable, presuming that some paleographers will help. One of the items to be carefully checked against the original catalogue card or bibliography description are the shelf-marks or call numbers, to prevent lost items. But the costs of keyboarding will be higher than using an OCR-technique. However the next phase may be made cheaper by this. Because when we have captured the data in one way or another they have to be encoded to be able to serve in a MARC-environment. This encoding can be done simultaneous with the keyboarding - which means that it has to be done by qualified personnel- or afterwards.

The last phase is the enhancement of the converted record. This can mean that further searchable elements are added - by depending on the description or by the document in hand- and the addition of new headings (personal and corporate names, area, subject, etc.).

Actual conversions and end-products

One retro-conversion project is completed. The Royal Library of Denmark converted by keyboarding and enhancement all its 1986-1989 records to their database REX (using the danMARC(CM)-system, an adaptation of UKMARC) and in this way could produce *The Danish National Bibliography, Cartographic Materials 1986-90*, which was presented during the conference. However as the policy of the Royal Library is to have all catalogues retro-converted by the year 2000, the harder part will come yet. As far as is known now, this will mainly be done by OCR-techniques. However Mrs. Vejlsgaard will inform you how the retro-conversion in her department has and will run.

Another project was well on its way already. In Germany three state libraries (German State Library, Bavarian State Library, State and University Library Göttingen) decided to create a database through a project called *Cataloguing of historically relevant pre-1850 map holdings*. In its first phase this IBAS-database (using the marc-format MOSES) will comprise approximately 140,000 records of sheet maps and maps from atlases. However this is not a pure retro-conversion project. Some 40,000 map-records of a previous project indeed will be made ma-

chine-readable. But all records will be re-catalogued by autopsy, as the Deutsche Forschungsgemeinschaft (DFG, the subsidizing body) saw consistency in the quality of records as more important than quantity. The other 100,000 records to be created are not retro-conversion records, but retro-cataloguing records, i.e. they have not been catalogued before. This project is only the beginning of a far greater project: an union catalogue of maps and atlases in Germany.

A retro-conversion which usually is outside the scope of the ordinary mapcurator is that of the Ministry of Defence, Military Survey, Acquisition and Library Group in Great Britain. Till november 1992 they retroconverted some 485.000 map records (approximately 40% of the whole collection) at a rate of ca. 520 records a day into their system MODMAP. This system is based on a ORACLE SQL forms application, with functions enabling graphic searches and plots designed around GIMMS software. Some of the functions are a higher version of Cartonnet¹ which enables searchers to retrieve maps by using geographical co-ordinates. Unfortunately for us they do not use a MARC-format, which makes possible exchange of records rather difficult. Few of us can say that initial database population is carried out by 40 data entry staff, which makes for the high figures. The Ministry of Defence is very satisfied with the new retrieval possibilities MODMAP offers.

The conversion in the British Library, Map Library of the 15 volume "*British Museum catalogue of printed maps, charts and plans*" and its supplements will be well on its way by now. The project is contracted to a private company, which eventually will produce a CD-ROM containing almost 250,000 records. The conversion is done by keyboarding and concordances will be run against the file to impose consistency. As with the German project the converted records will be added to a single file, which contains converted and current records, to maintain a continuum. Though the British Library would like to opt for quality out of circumstances they opted for records which are not enhanced by autopsy, but which are flagged to show their origin. This has been done out of practical necessity, because the project can only take place in a limited span of time and because the money is available only now.

Cooperation

In France there were two parallel developments which helped to convert existing records. The area-thesaurus of the BN-OPALINE system was loaded with all the historical names of the French cities. Together with some activities in the regions of France, and the efforts of the Commission de Documentation du Comité Français de Cartographie this provided opportunities to combine work on retro-

conversion and on an union catalogue. I hope that Mr. Duchemin can assure us that his euphoria about this sudden surge for co-operation is still in vogue.

As said before the same kind of co-operation is taking place in Germany. This of course has also the potential of developing into a union catalogue which may consist of retro-catalogued and current records.

There was one paper by Mr. Dirk de Vries of Leiden University with a distinct call for quality through co-operation. As this paper will not be published I shall quote it at large.²

His first remark was that European map librarianship was at risk to fall behind with developments in the world of books, where retro-conversion appeared much more pressing by the sheer fact of the quantities involved. In the past years two conferences have taken place in München which derived "from the fact that projects involving retrospective cataloguing were under way or about to be initiated almost everywhere in Europe, without a common European concept, often even without precise knowledge of achievements elsewhere which might be taken into account".

On the problems of quantity and quality Michael Smethurst, director-general of the British Library and president of LIBER, explained that, when most European research libraries started huge retroconversion projects of their card catalogues, they had no other choice than the *conversion* of the existing records. The number of records are too large to permit re-cataloguing. As long as it is for the rather simple purposes of retrieval and circulation of current material and the OPAC is primarily used as a finding list, only conversion of the existing card-title will be enough. But when you need exact and consistent documentary information on behalf of scholarly and historical research and you have not the collection at hand, than a mere finding list of converted titles of different quality and by consequence inconsistencies, will turn out to be inadequate and re-cataloguing based on the examination of the document will be inevitable.³

This resulted in a wish to form an pan-European database for books of the hand-press period (1453-1830), based on the following reasons:

- It will give better service to scholars and researchers;
- Sharing cataloguing means sharing costs;
- Recognition of a common European printed heritage asks for exchange of bibliographic information at an international level;
- Libraries in Eastern and Central Europe need external assistance to provide access to their research collections.

Based on a study by the Center for Bibliographical Studies and Research of the University of California⁴ the Working Group gave the following recommendations:

1. the creation of a single computer utility in Europe to house a database of ca. 1450-1830 records on the European printed heritage;
2. the adoption of UNIMARC as format
3. the structure of (ISBD(A) (= antiquarian) becomes the suggested cataloguing code for new titles;
4. the records for the period 1830-1950 should be assembled, as a separate project, as quickly as possible by means of retro-conversion projects.

The main drift of the rest of his paper was focused on how we can and should profit developments like this in a technical and an operational way.

EUROCARD

Several papers referred to the *EUROCARD*-project. One of the problems one encounters when retroconverting is headings. Most catalogues, lists, bibliographies use a heading-system which usually is out of date or not detailed enough for present purposes. To alleviate this problem a collection can of course create a new system of headings which can be used for retro-conversion and current cataloguing.

However when we would like to exchange bibliographic data it would be easier if headings can be exchanged as well, to alleviate the work-load of the receiving party. Of course there are universal systems like Dewey, UDC, etc., but especially area-headings are not very detailed and are not easily usable for historical entries.

In 1991 some 7 national libraries came together to discuss this matter, which resulted in a proposal under the "European Communities Telematic Programmes", called *EUROCARD*. This was a project proposal for the development of a multilingual geographical names thesaurus for the benefit of (European) end-users and libraries with large and/or important cartographic collections of modern and historical [= old] maps. The key aims of the project are:

- improve direct access for end-users, via geographic access points, to large and/or important cartographic collections ...;
- improve subject access for end-users to geo-referenced materials in non-cartographic collections ...;
- develop a cataloguing tool for (large) cartographic collections;
- reduce the costs of cataloguing cartographic materials;
- develop a common standard for access and encourage the general adoption of this standard;

- support future exchange of cartographic records via UNIMARC.

Multi-linguality means that the entries will be multi-lingual. but also that the system itself will be multi-lingual.

However I have used the word *was* on purpose. Not that *EUROCARD* is dead, but the European Commission did not accept the proposal in first instance. At the moment the proposal is redrafted, emphasizing especially that it concerns a thesaurus and not a standardized classification, and it meant for end-users in and outside the library field. Hopefully will be developed one way or the other, with or without acceptance by the European Commission.

By the way. The Munich Consortium wants to use the *EUROCARD* thesaurus for its area subject-headings in its 1453-1830 database!

Discussions

These focused mainly on the controversy *quantity* versus *quality*, though closer examination showed that it is not really a controversy, but more an economic principle. Tony Campbell referred to the search for quality as a problem rather than an ideal. Not that he is against quality, but forced by pragmatism he has to be satisfied with less, at least for the present. In the Munich consortium they have opted for quality by the method of autopsy and consequently have to put up large amounts of money to achieve their goal. Some like Lothar Zögner have opted for quality, but their project is concerned with retro-cataloguing and not with retro-conversion. However when one opts for quantity this does not necessarily mean that quality never will be achieved. Retro-converted records without data-enhancement can be flagged or coded. In this way their quality can be recognized in a single database for retroconverted and current material. If the flagging or encoding is done in levels of quality than later groups of the same level may be selected and retrieved for enhancement of data.

However if one is willing to co-operate and one has not a too tight time-schedule one can guard quality by limiting oneself in the records to be converted. As I have understood from Pierre-Yves Duchemin they limit themselves first to "French" records and later hope to acquire quality records of foreign holdings from other libraries. Indeed when a profile of a database can be made and matched with ones wishes a profitable exchange can ensue. The profile should give answers to questions as: How many records are there of a certain country or area with a certain subject and in a certain era, and what is their bibliographic quality. With the possibilities for data-manipulation computerized systems provide it must be possible to create such profiles.

Because of restraints in personnel and means everybody agreed that retroconversion programmes may not interfere with current routines. If possible work should be contracted outside the department. If necessary library-schools may give short specialized courses to train non-library personnel in such a way that they can work for retroconversion. If collections in a certain area or country do not all at the same time retroconvert their catalogues, but one after the other, skills and experience of the thus educated personnel may be used more profitably.

Dirk de Vries questioned if it would not be better to use the personnel and means one could possibly get for retro-conversion for cataloguing the backlog map departments may have. Or would it be more advisable to start cataloguing the maps in books and serials and in this way save them from oblivion!

Finally I would like to remind you that the 'LIBER Library Automation Group', on order of the 'Council of Europe' (Council for Cultural Co-operation), prepared *Guidelines for retroconversion projects*, published in the *LIBER Newshett* and the *IFLA journal*.⁵

List of papers read and to be published

Agenjo, Xavier (Biblioteca Nacional, Madrid, Spain): The automatic purge of cartographic records originated by retroconversion processes: the integration module ARIADNA.

Campbell, Tony (The British Library, Map Library, London, United Kingdom): Retroconversion of the British Library's map catalogues: the art of the possible.

Duchemin, Pierre-Yves (Bibliothèque Nationale, Paris, France): Retroconversion of french cartographic material card catalogues: an overview of the situation.

Herrero, Ana (Biblioteca Nacional, Madrid, Spain): Retroconversion of cartographic material in the national library.

Parkin, Murray (Ministry of Defence, Military Survey, Surrey, United Kingdom): MODMAP.

Milis-Proost, Greta (Universiteitsbibliotheek, Gent, Belgium): Experiencing of the Ghent map catalogue.

Veijlsgaard, Susan (Det Kongelige Bibliotek, København, Denmark): Retroconversion by keyboarding of the Danish National Bibliography, Cartographic Materials 1986-1990.

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1. Morris, Barbara A., R.G. Healey and T.C. Waugh, From map catalogue to database with graphics in view. In: Bulletin Ligue des Bibliothèques Européennes de Recherche, No. 28. 1986, p.22-29.
 2. Vries, Dirk de. Retrospective cataloguing of maps in Europe: a call for quality and co-operation. (Not published).
 3. Smethurst, J. Michael, Opening address. In: Retrospective cataloguing in Europe: 15th to 19th century printed materials: proceedings of the international conference, Munich 28th-30th November 1990. München, Saur, 1992. 194 p.
The proceedings consists of two parts: I: country reports on retrospective cataloguing, 14 articles; II: From principle to practise, 18 articles.
For more information on this one can read: "European Working Group on Retrospective Cataloguing: Final Report. In: ERLC The LIBER Quarterly, Vol. 2 (1992), No. 1, p. 47-60".
 4. Snyder, Henri and Heidi L. Hutchinson, A comparative and analytical study of cataloguing rules employed in Europe for the cataloguing of the hand press: prepared for the Working Group appointed by the organizers of the Munich 1990 conference on retrospective cataloguing and conversion in Europe 1500-1900: Revised draft. 1991, 195 p.
 5. Bossers, Anton and Derk Law: Guidelines for retroconversion projects. In: IFLA journal, Vol. 16 (1990), No. 1, p. 32-36.

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NL - 2509 LK The Hague
Netherlands

ACCESS POINTS AND AUTHORITY CONTROL FOR CARTOGRAPHIC MATERIAL

By Rosa Martin y de laVega

As today of our working environments are automated, I would like to present, or perhaps better suggest, some plans or projects for work and research on data input and interchange formats adapted to the peculiarities of cartographic materials and allow records to be controlled by the authority files like any other library and documentation materials. My report will, therefore, concentrate above all on access points for records containing cartographic information,

1. Access points for cartographic materials.

There has been much discussion on which should be the main access point for cartographic materials. The experts are divided between those who opt to follow the general rules applicable to other print and non-print materials, using the author or corporate body heading, if any, - irrespective of the problems in determining the authorship of many of these materials - and those who favour use of the geographic area covered, this being the most characteristic feature of a map or individual plan.

Differences arise among the latter when it comes to deciding which data elements are constitute the heading to label each bibliographic item. Some experts think that the geographic area is sufficient. Others include additional elements: the subject of the document, the date of contents, the scale and/or projection used, the date published and even the size. However, even those who come out in favour of the same elements do not always agree on the order in which they ought to be structured.¹

Without going into a discussion of which is the best option - it depends very much on the centre or library, the type of users ... -, I would merely like to put forward a series of considerations.

1. When we talk about the geographic area covered by a map, for example, what we are really saying is that the map "deals with" or "contains information on". In other words, it is exactly the same as saying that any physical geography manual deals with a physical description of Spain or Europe or a video con-

tains information on a given region. The same information on a geographic area can be supplied in different ways: book, video, map, illustration, ...

Furthermore, not only do cartographic materials reflect geographic areas, they also - and increasingly so - deal with very varied subjects, depicting them graphically as books do textually.

2. Why if other materials - for example, official publications - are not processed differently from other printed publications, using the author or title as the main heading even if they are better known by their contents or subject than by their author, can this be done with maps?
3. In the automated environments in which most of us work, is there any sense in arguing about main entries and added entries? Wouldn't it be better to just talk about labelling access points so that the user can search for and locate what he is really looking for and classify and order the documents retrieved as he sees fit - geographic area, author, ...?

2. Data Input Formats

Let us consider automated environments. To work in an automated environment, we need a data input format that includes all the data elements required to label each bibliographic item and to be able to access it. The ideal thing would be for this format to facilitate data interchange with other institutions, either because the computer system's input and interchange formats are the same or because, irrespective of how the data are entered and stored locally, they can be obtained in standard format on interchange tapes.

Moving on to the big family of MARC formats, and especially USMARC, on which our most recent IBERMARC's are based and which is both the interchange and the data input format used by many of our institutions, it is possible to write in even the most specific data on cartographic materials, such as scale, projection and coordinates, either textually (fields 255 and 507) or in code (different positions of 008 and 034), for them to serve as special access points. As with other print and non-print materials, the traditional author, other responsibilities and title access points, whether main entries (1XX, that is, fields 100, 110, 111, 130 and 245 with the first indicator at 1) or added entries (7XX, that is, 700, 710, 711, 730 and 740), obviously do not cause any documentary or format problems. But what happens when we try to "translate" the geographical area entry to these MARC formats?

There is no 1XX field with its respective 7XX in USMARC to give account of such a heading. This, however, does not lead to major problems provided we

consider it as a subject added entry by geographiname place and use a field 651, although it wouldn't be possible to write in all the data outlined in view of the present structure of this field.²

Field 651 is not a type or "category" of field different from 600, 610, 611, 630 or 650 entries, for example. It is like any other subject added entry.

Now, what happens if we want to convert that geographic area entry into a 1XX? What's more, if we need to write two entries for one and the same map, which 7XX fields are to be completed?

Several solutions have been found to date. I will concentrate on some of the cases with which I am most familiar, involving institutions in Madrid. Up to very recently, a 151 field has h'generally been used, not always with its respective 751s, even though this field does not appear in Formato MARC para materiales cartográficos (MARC format for cartographic materials), published by Saucó Excedero, Llorent Gil and Anglada i Ferrer in 1987. For example, up to last spring, the Centro de Documentación del Ministerio de Defensa was working on its CARHIBE database - a separate data bank for the Centrés collection with over 52,000 documents - in the BASIS environment, with a data input format based on MARC, but not strictly speaking IBERMARC, using a 151 field and 4 subfields: geographic area (\$a), subject (\$x), scale (\$g) and contents date (\$y). These were associated to another two display-linked fields: \$c, for any explanations of the geographic area, and \$f, for the date of map publication.

Additionally, a 152 was used for any specifications of the geographic area in 151 \$a. If any geographic area added entries were required, the appropriate 651s were completed.

These access points were controlled manually because they were not integrated into the computer authority control system.

There was no lack of proposals for similarly structures 151s: geographic name (\$a), subject (\$t), subject subdivision (\$p), scale (\$g), dates associated with the geographic name (\$d) and date of the work (\$f).

In other cases, as in Bibliografía española.. Suplemento de cartografía (Spanish Bibliography, Cartography supplement), for example, geographic name added entries for "inserts" or "with note" have appeared in ISBD descriptions with their respective geographic main entries as provided in our Reglas de catalogación (Cataloguing rules), which would be equivalent to an author added entry, preceded by an Arabic numeral as if they were subject added entries.

Recently other solutions have been found, above all for internal operation, such as considering the geographic area entry as a kind of uniform title (130, 730), prepared by the cataloguer on the basis of the contents, and I stress, the contents of the document, which differentiates or removes these uniform titles from what has traditionally been considered as such in cataloguing, that is, "any title taken to catalogue a work known under several titles". Thus, the subject fields 650 and 651 do not need to be completed and the respective data pass to the appropriate 730s.

This solution gets round the problem of proper correspondence between the authority data input formats and the bibliographic file access point fields, which must have an equivalent or parallel structure to be consistent with each other.

Neither the USMARC for authority data nor the planned IBERMARC for authority data provide for controlling a 151, or the respective 751s, for cartographic material entered by geographic area in bibliographic files. Moreover, even if we wanted to use the bibliographic 651s to reflect the geographic area access data elements - as we looked at beforehand -, their structure would be incomplete, because authorities format 151 is "incomplete". If it is "doctored", however, authority field 130 can be used to control bibliographic fields 130 and 730 for cartographic materials, as is being done at some institutions today, including, to my knowledge, the Centro de Documentación del Ministerio de Defensa and the Spanish National Library.³

However, this solution does not avoid other problems. If an institution with different materials opts, in practice, for a single authorities file in the interests of simplification, how are such different 130s as pure uniform and cartographic titles to coexist? If it elects to separate the cartography 130s, is it worthwhile controlling one and the same form for a geographic area in a general authorities file 151 and in a uniform titles 130 \$a for geographic area entries. If we exit the authorities file, what facility are we going to give the user for retrieving information on, for example, the street of Madrid, whether in a monographic book on the subject (651 \$a Madrid \$x Streets) or in the shape of a map (130 \$a Madrid \$t - or \$k - Streets)? Obviously, we could tell the computer system to search both subfields of these two fields in such cases.

The solution, however, could perhaps be much easier and more straightforward. If we insist on maintaining the geographic area entry as the main entry for cartographic material, it might be more logical to continue with and respect the MARC philosophy as regards the harmony of field and subfield structure and/or names for the same data elements and add optional subfields for recording the date of publication (\$f, for example) or scale (\$G, miscellaneous information) to authorities field 151. Obviously, we still face the problem of which punctuation to employ

to separate these different elements - a full-stop (.), being the usual practice in map cataloguing -, or the hyphen typical of subject headings (-), but this would be, in my opinion, the least of it.

The important thing, as I see it, is to:

1. Maintain the logic of the data input formats;
2. Have cartographic materials controlled by authority files;
3. Make data input and interchange formats for geographic area authorities flexible enough for each institution to be able to establish "how far" it wishes its authority to go - geographic area only, area and subject ... - or to incorporate any other data elements it sees fit - optional subfields.

Notes

1. Let us consider, for example:

Cataloguing Rules (Spain)

(Reglas de catalogación. II, Materiales especiales. -- Madrid: Dirección General del Libro y Bibliotecas, 1988)

Geographical area. Subject. Document date (Date published) N.B.: The date of publication is optional.

AFNOR (Z 44-068) : Catalogues de documents cartographiques: présentation de la notice cartographique. Paris: AFNOR 1982)

Geographic area. Subject. Scale. Date.

N.B.: Both the document contents date and date of publication can be considered.

See also the overview given on this subject by Mary Lynett Larsgaard (Map librarianship: an introduction. -- 2nd ed. -- Littleton, Colorado: Libraries Unlimited 1987), from which the following practices can be singled out:

S. Miller (1971):

Area

Boggs and Lewis (1945):

Area. Subject. Date

Drazniowsky / American Geographical Society (1969):

Area. Date. Subject.

Special Libraries Association (1956):

Area. Date. Subject. Scale. Size

Gerlach (1961):

Area. Subject. Date. Scale. Projection

2. Correspondence between the data elements of a geographic area entry and MARC field 651

GEOGRAPHIC AREA ENTRY

FIELD 651 (Repeatable)

Geographic area ----- \$a Geographic name

Subject ----- \$x Subject subdivision (general subdivision for USMARC format)

Scale

Time period of content ----- \$y Chronological subdivision

Date of publication

..... \$j Form subdivision
(IBERMARC subfield)

..... \$z geographic subdivision

3. Field 130 of the draft IBERMARC format for cartographic materials*:

FIELD 130

Main Heading - Uniform title (NR)

Subfields:

\$a	Uniform title (<u>or geographic name</u>)	NR
\$d	Date of treaty signature (<u>or content for maps</u>)	R
\$f	Date of the work	NR
\$g	Miscellaneous information (<u>map scale</u>)	NR
\$h	Material type	NR
\$k	Form term (<u>subject for maps</u>)	R
\$l	Language	NR
\$n	Part or section number	R
\$p	Part or section name	R
\$s	Version	R

* Information supplied by the National Library (Madrid).

The present format for CARHIBE database also contains fields X30, divided into five subfields (\$a, \$d, \$f, \$g, \$k) with the same value as indicated for IBERMARC.

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CARTOGRAPHIC MATERIAL ON THE ARIADNA SYSTEM AT THE BIBLIOTECA NACIONAL

By Ana Herrero

This paper describes a live demonstration. Consequently, the text refers only to general aspects of the system which were seen in the demonstration on a practical level.

Before I begin, I would first like to thank all those who have made this paper possible, and especially Fernando Fernández Monzón, our systems technician, and María Jáudenes Casaubón, director of the EDP Coordination Unit.

ARIADNA is the name given by the Biblioteca Nacional (Spain's National Library) to the ILIAD library management software developed by it in conjunction with Software AG España.

To manage the Biblioteca Nacional, ARIADNA uses a number of subsystems or modules which can be grouped into three classes on the basis of their function, as follows:

1. Database Management

- Database administration
- Database operation
- database metastructure maintenance

These three modules allow the user or system administrator to define data, access points, user interfaces, and delimiters and to manage users, help screens, etc. That is, they enable the administrator to adapt the application to the users' needs and to the information which must be handled, since both factors can vary with time.

2. Information management

- Cataloguing and cross-referencing of records
- Information retrieval
- OPAC
- Importing/exporting information

These modules are used to feed and update the database (either by on-line cataloguing or by batch data input), and to retrieve information from the database (through on-line queries or by exporting records or publishing such products as *Bibliografía Española*).

3. Management of the Biblioteca Nacional's collection

- Circulation of collections
- Acquisitions
- Reprography

These modules provide for automated control of the Biblioteca Nacional's collection in all aspects of adding to the collection and monitoring its status and the inflows and outflows.

ARIADNA is also the automated catalog of the Biblioteca Nacional, in which the information is structured under three major headings:

- Keywords
- Bibliographic records
- Collections

Authorities are all the features used to as points of access to a document, are common to various bibliographic records, and which therefore must be standardized: e.g. author (person or entity), titles, standard titles, subject matter.

Bibliographic records contain all the information regarding a specific edition of a work. There is a different type of record for each type of publication (printed monograph, manuscript, map, sheet music, video recording, etc.) The format for maps includes all the specific data relating to scale, projection, coordinates, physical descriptions, notes, etc.

The information relating to collections involves all the data regarding the specific copy held by the Library: record number, signature, state of preservation, form of acquisition, etc.

This demonstration concentrates on the Information Management Subsystem (i.e. cataloging and retrieval).

Cataloging is performed by availing of the following features linked to the data screen:

- Validations: against tables or other modules. Validations can also be performed by programs. For example, date formats are validated.

- The system generates certain initial values (date, user number, etc.) or supplies the default values to guide data entry by the user.
- Help, accessed by: consulting tables, consulting other records, or undertaking a process of retrieval to find the desired record. There is context-specific help and general help. Access control is imposed by the system.

The purpose of retrieval is to provide the user with all the necessary resources to enable him/her to find the desired information. Three basic functions are used for this purpose: searching, browsing and output.

Using the search function, the user can access all the screens for which he/she is authorized and can:

- Sort results by specific fields
- Delimit the results of a previous search using certain conditions
- Avail of interactive help, e.g. view tables (as mentioned above), keyword records, help screens and general help; and store sets of queries.

The search language provides the following features:

- truncation (right, left, center)
- Boolean, relational and proximity operators
- different search modes (precise, synonyms, phonetic)
- nesting of previous searches

The recovery function allows the user to view the summary, called an EXTRACT, of a pre-selected series of records, each comprising two lines of salient data. The same operations can be performed as with any view or list of records:

- View or print the entire record
- Select records for viewing or printing
- Browse through the database to obtain all the records linked to a given record, using the associations established between the different records in one or several modules.

Once the record has been located, the user can view or print it. ARIADNA provides the user with a choice of view modes (MARC, ISBD).

From 1993, ARIADNA will be used to publish *Bibliografía Española*: the 1992 cartography supplement, including 10,000 records of maps of America and 2,000 pretwentieth century maps of Spain held by the Biblioteca Nacional. The maps

will shortly be available for consultation in the OPAC of the Biblioteca Nacional, the second version of which is currently being prepared and which will include special formats.

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LA RETROCONVERSION DES DOCUMENTS CARTOGRAPHIQUES DANS LE PROJET D'INFORMATISATION DE L'ARCHIVO GENERAL DE INDIAS DE SEVILLE

Par María Antonia Colomar

1. Les Archives des Indes

L'arrivée de Colomb en Amérique suppose pour la couronne espagnole un élargissement de ses horizons géographiques et administratifs: la gestion des nouvelles terres devient plus complexe au fur et à mesure que la colonisation s'étend vers le Mexique, le centre et le sud de l'Amérique et les îles Philippines.

Aux premiers temps, cette gestion est la compétence du Conseil de Castille mais, en 1524, est créé le Conseil des Indes, qui s'occupe presque en situation de monopole des affaires d'outre mer pendant le XVIe et le XVIIe siècles. Au XVIIIe, ce sont les Secrétariats d'Etat, antécédents des Ministères du XIXe qui héritent d'une partie des fonctions et compétences du Conseil.

Plusieurs autorités en délégation partagent les responsabilités du gouvernement avec le Conseil et les Secrétariats: à Séville, c'est la Casa de la Contratación, fondée en 1503, qui s'occupe du commerce, de l'émigration, de la cartographie, etc. En Amérique et aux Philippines, une bureaucratie assez complexe prend les compétences du gouvernement civil et ecclésiastique, la justice, le commerce, les finances, la marine, la guerre, etc. On y trouve les Vice-rois, les Audiencias, les Gouverneurs, les Capitaines Généraux, les Intendants, les Corregidores, les Maires, les Archevêques, les Evêques ... c'est-à-dire quasiment tout le fonctionnariat espagnol est à peu près reproduit dans le Nouveau Monde.

Séville est en outre le siège d'une autre institution qui établit des liens entre les deux côtes de l'océan: le Consulat. Fondé en 1543, il devint un important organisme de caractère civil pour l'administration et l'économie et comme un complément de la Casa de la Contratación.

Les constants rapports entre ces institutions ont produit tout au long de quatre siècles une énorme quantité de documents que chacune gardait dans ses dépendances. En 1785, le Roi Charles III fonde l'A.G.I. (1). Il veut réunir dans un seul

bâtiment toute la documentation existante sur l'histoire de l'Amérique et de l'Asie administrées par la Couronne espagnole. Le siège choisi est l'ancienne Casa Lonja de Séville. On y trouve aujourd'hui tous les fonds produits par les dites institutions depuis la découverte jusqu'à l'émancipation, réunis en plus de 43000 liasses qui occupent quelques 10 km. de rayonnement².

La classification de ces fonds est organique: c'est une fidèle copie de la structure des institutions qui les ont produits et de leurs services, ainsi que de leurs fonctions, compétences et matières traitées.

Les documents des archives ne sont pas des unités isolées mais ils font partie de dossier et sont le résultat de multiples activités. Un projet d'organisation, de rangement ou de description de ces documents doit donc être conçu en considérant l'ensemble et la collectivité plus que l'individualité, bien que ce dernier concept ne soit pas négligeable.

Cette caractéristique fait la différence entre les archives et les bibliothèques, ces dernières plus enclines au rangement et descriptions particularisées.³

La documentation cartographique de l'A.G.I., bien qu'elle ait été unie à d'autres documents figuratifs dans une série factice ou collection, la **Série des Cartes et Plans**, participe de ce caractère organique des documents de l'A.G.I. Les pièces ont été extraites de leurs dossiers d'origine en raison de leur conservation, sécurité et facilité de consultation, mais elles gardent les liens avec les dits dossiers, ce qui doit être évident dans les descriptions.

Les documents cartographiques de l'A.G.I. s'étendent chronologiquement du XVI^e au XIX^e siècle et le cadre géographique est le même que celui des documents.

La Série des Cartes et Plans est composée de quelques 7000 pièces, dont 80% sont des documents cartographiques. C'est une collection assez modeste si l'on considère seulement le nombre, mais elle est très importante par son caractère continental - des représentations de l'Amérique presque entière - et par la continuité de ces représentations pendant quatre siècles⁴.

II. Le Projet d'Informatisation des Archives des Indes

Le Projet d'Informatisation de l'A.G.I. de Séville fait partie des activités du Cinquième Centenaire de la Découverte de l'Amérique et c'est le résultat d'un accord signé en 1986 entre le Ministère de la Culture, l'entreprise I.B.M. Espagne et la Fondation Ramón Areces.

Conservation et diffusion des documents sont les pivots de ce projet. Pour parvenir à ces objectifs, on a développé un système automatisé pour la gestion des activités essentielles des Archives que l'on peut résumer ainsi⁵:

- a) Gestion des usagers. Le système rend plus simples les tâches administratives des Archives associées aux travaux des chercheurs (accréditation des usagers, statistiques de recherche, accès à la salle de travail et demandes de documents, mouvements des fonds, etc.).
- b) Information et référence. Le système permet l'accès aux documents des Archives (identification et localisation) grâce à une base de données descriptives qui remplace les anciens instruments de recherche. Cette base de données a été constituée par des informations provenant de ces instruments traditionnels dûment normalisés et soumis à des projets de "conversion rétrospective" et "catalogage rétrospectif".
- c) Consultation des documents. Le système permet finalement de visualiser, sur écrans à haute résolution, l'image numérique des documents, conservée sur un support optique, ce qui constitue les archives d'information visuelle. Le chercheur ne travaille plus sur les documents originaux des séries déjà numérisées, évitant de cette façon manipulation et détérioration. C'est la partie la plus spectaculaire du projet des points de vue technologique et pratique.

III. Le Systeme d'Information et Reference

Pour le sujet qui nous préoccupe, la "conversion rétrospective", il est intéressant d'insister sur la partie du projet concernant la base de données, moins frappante que les archives d'information visuelle, mais non moins importante.

Identification, localisation et consultation sont les trois étapes que le chercheur doit suivre dans son travail de recherche.

Pour la réalisation des deux premières, il faut absolument l'existence de descriptions préalables des documents. Dans les archives, ces descriptions se trouvent dans ce qu'on appelle les instruments de recherche, qui peuvent être différents en raison de leur détail et caractère (il y a des descriptions collectives, tels les guides et les inventaires, ou individuelles comme les catalogues, en plus des index, tables d'équivalences, etc.). Comme ces instruments ont été réalisés à des époques et avec des critères différents, ils manquent d'unité et de normalisation.

Le projet envisage la "création d'un seul système d'information permettant de recueillir et traiter toute l'information descriptive qui est aujourd'hui éparse dans de nombreux inventaires, catalogues, guides et index"⁶.

La création d'un système unique d'information implique aussi l'existence de ce que l'on pourrait appeler un "catalogue d'éléments de description" suffisamment large pour pouvoir satisfaire à tous les besoins des Archives et en même temps très souple pour que les tâches de description des différents types de documents puissent être réalisées à n'importe quel niveau de détail.

Ce "catalogue" permet donc la description individualisée de pièces complètes et indépendantes (aussi bien les documents textuels que les documents cartographiques) en même temps que la description collective des groupes de documents à caractère organique, comme on l'a expliqué. De cette façon, on a ajouté à la base de données toute information des Archives, soit au niveau général, soit au niveau des séries et des sous-séries, au niveau d'unités d'installation ou conservation (liasses ou livres), dossiers, documents textuels et documents cartographiques.

Le "catalogue d'éléments de description" se concrétise dans un format contenant les groupes d'éléments descriptifs suivants (Appendice I):

1. Information du contrôle du système.
2. Information de base avec les étiquettes obligatoires:
type d'entrée qui indique la sorte de description à produire (description de documents, de dossiers, de liasses, des séries, etc.)
vedette, simplement identificative
date ou dates extrêmes avec les qualifications habituelles
cote, "inclus dans la cote" qui met en rapport cette unité avec l'unité supérieure dans le niveau hiérarchique des fonds
possibilités de consultation pour la protection de l'article descriptif
clé de la personne responsable de la documentation.
3. Information descriptive, pourvue d'abondantes étiquettes à choisir selon le niveau de détail dans la description que l'on veut adopter pour chaque type d'article, soit pour une description individuelle soit collective. Il y a des éléments descriptifs communs à toute sorte de documentation et d'autres spécifiques d'un type de documentation.
 - Etiquettes communes:
contenu (remplacé par "titre" dans la description des matériaux figuratifs)
clé de l'auteur de la description
lieu d'émission du document

caractéristiques internes avec des étiquettes indicatrices: support, forme, dimensions, reliure, couleur, décoration, légendes ou explications, références à sceaux, etc.

nombre d'unités, état de conservation; système de versement; bibliographie; cotes sur d'autres supports cotes anciennes.

- **Étiquettes, spécifiques, pour la description des documents figuratifs, spécialement pour les cartographiques**

titre principal; d'autres titres; auteur/s édition (imprimés)

données mathématiques, avec les étiquettes; échelle, projection, coordonnées données de publication, avec les étiquettes: lieu de publication, éditeur, imprimeur, date (imprimés)

documentation annexe (description du dossier qui accompagnait le document cartographique)

cote de la liasse d'où la pièce cartographique a été tirée) notes.

4. **Références de localisation**: ce sont les descripteurs ou termes employés en guise d'index pour trouver l'information demandée par chaque usager dans la base de données.

Pour incorporer l'information à la base de données, on élabore dans chaque cas un format ("plantilla") en choisissant les éléments du "catalogue" qui correspondent le mieux au type de l'article que l'on veut produire et au niveau de détail projeté dans la description. C'est un modèle flexible qui peut être développé ou réduit au besoin.

IV. Les Documents Cartographiques et le Projet d'Informatisation: La Retro-conversion.

La documentation cartographique de l'A.G.I. reçoit le même traitement que les matériaux textuels, c'est-à-dire qu'elle n'a pas été l'objet d'un programme spécial. Comme l'on a remarqué, l'informatisation de l'A.G.I. a été conçue dans sa totalité en tenant compte de ses fonds et des relations hiérarchiques entre les documents et, de ce point de vue, les cartes et plans font partie de ces relations et ne peuvent pas être organisées isolément. Les données ajoutées au catalogue des éléments de description pour ce type de documentation, ont été citées dans le paragraphe ci-dessus.

Bien que le format employé pour l'enregistrement des données ne coïncide avec aucun de ceux employés dans les bibliothèques, on est en train d'étudier la récupération de l'information dans un format standard.

Etant donné que la plupart des documents cartographiques de l'A.G.I. sont des manuscrits anciens et qu'ils manquent de numéros normalisés et de données de série, ces deux éléments ne sont pas inclus dans ce catalogue.

Environ 70% des cartes et plans de l'A.G.I. ont été décrits dans des catalogues imprimés, le reste dans des catalogues en fiches. Avant le projet, il n'y avait pas de données automatisées de ces documents. L'inclusion des descriptions existantes dans la base de données a été faite par un procédé de **retroconversion** en deux phases:

1. La préparation et la normalisation des données ont été faites par les archivistes de l'A.G.I. mais l'enregistrement des informations a été fait par des dactylos qui n'appartenaient pas au Centre.

Les catalogues imprimés et surtout les fichiers n'étaient pas tout-à-fait complets, les aires de description n'étaient pas toujours bien définies; les fichiers manquaient d'index. La préparation, préalable à l'enregistrement, consista ainsi à ajouter quelques données essentielles et obligatoires à la description et à normaliser la dite description en donnant à chaque élément ou aire un numéro conventionnel (interprété par les dactylos au moyen des feuilles qu'on leur avait fournies, contenant prescriptions ou spécifications techniques pour chaque cas), à corriger les index des catalogues imprimés, utilisés comme descripteurs, en supprimant les termes qui pouvaient produire un doublonnage dans la base de données, et à élaborer de nouveaux descripteurs dans le cas des fichiers.

On facilitait ces nouveaux descripteurs en listes à part ou bien on les signalait sur le texte. Dans cette phase, on saisit l'information, telle qu'elle était, sans la compléter ni élargir les articles. Cependant, certaines erreurs furent corrigées et dans de nombreux cas, il fallut effectuer un travail de catalogage rétrospectif. Il est prévu dans l'avenir l'enrichissement systématique des articles descriptifs incorporés à la base de données, grâce à un procédé de "Actualisation différée", en usage à présent.

2. L'enregistrement a été fait par les archivistes eux mêmes. Dans ce cas, il n'a pas fallu la préparation des informations à incorporer à la base de données, ce qui a permis d'une part de gagner du temps, mais par contre l'enregistrement est plus lent car les archivistes ne sont pas des dactylos très experts.

Ce procédé de rétroconversion a été utilisé non seulement pour les matériaux cartographiques mais aussi pour toute autre information ajoutée à la base de données.

Parallèlement au procédé de rétroconversion, on a développé celui du catalogage des nouveaux documents. L'entrée de ces nouvelles descriptions a été directement réalisée pas les mêmes archivistes ou par des dactylos, mais dans ce cas à partir de fiches préparées *ex-professo* par le personnel technique des Archives.

C'est aujourd'hui ce personnel qui entre directement les descriptions de la documentation à sa charge.

V. La Recuperation de l'Information

L'appel de l'information peut être réalisé selon trois méthodes:

- a) Par la cote ou l'élément identificateur physique des documents.
- b) En suivant la structure hiérarchique de l'A.G.I. à la façon d'un arbre et ses branches. On essaie de reproduire par des moyens informatiques" ... le chemin de recherche traditionnel des archives historiques qui va du général au particulier et qui parvient aux documents concernant un sujet à travers la connaissance des institutions qui ont produit une documentation d'intérêt sur ce sujet"⁷.
- c) Par des "descripteurs" qui sont ou bien des termes simples renvoyant à un article, ou bien des termes divers reliés entre eux par des relations spécifiques préalablement dessinées, ou bien des termes qualifiés par la fonction qu'ils réalisent dans l'article descriptif. L'élaboration d'un thésaurus est prévue.
- d) Par les texte libre dans les champs de contenus.

Notes

1. Désormais, tout au long de cette communication on utilisera les sigles A.G.I. (Archivo General de Indias) pour citer les Archives des Indes.
2. Les fonds de l'A.G.I. fournissent une importante information historique sur les pays suivants: les îles de Cuba, Saint Domingue et Puerto Rico et d'autres des Antilles; Mexique, Guatemala, Nicaragua, Honduras, El Salvador, Costa Rica, Panama, Equateur, Pérou, Chili, Colombie, Bolivie, Venezuela, Argentine, Paraguay, Uruguay et, dans le continent asiatique, les îles Philippines. Les

Etats-Unis, le Brésil, le Japon et quelques autres îles du Sud du Pacifique ont aussi leur place dans les fonds de l'A.G.I.

3. "Les documents [d'archives] ont été produits par une personne ou institution dans l'exercice de ses activités et, d'habitude, ils sont générés en même temps que d'autres qui les précèdent ou les accompagnent. C'est à dire que dans les travaux d'archives on ne doit pas envisager le document isolé mais les liens entre documents: le plus important c'est la description d'ensembles de documents en les reportant à leur origine. Le respect des fonds, le respect au "principe de provenance" est la règle archivistique essentielle". En: Proyecto de Informatización del Archivo General de Indias / Pedro Gonzáles. - IV Curs d'orientació sobre tècniques i problemes d'Arxivística. Dossier I. - Cerdanyola: Ajuntament, 1991, p. 133.

Nous citons ici ce paragraphe parce qu'il contient la philosophie essentielle pour les descriptions d'archives.

4. Pour une étude préliminaire de la Série de Cartes et Plans de l'A.G. I., voir: Archivo General de Indias: Introducción al estudio de la Sección de Mapas y Planos / María Antonia Colomar. - En: Documentación y archivos de la colonización española: La Rábida 8-12 de octubre de 1979. - Madrid: Subdirección General de Archivos, D.L. 1980. T. I, p. 35-64.
5. "Ce projet a pour ambition d'améliorer sensiblement la conservation des documents originaux et ce, par le biais de techniques de numérisation. De même, la mise à disposition des ressources documentaires sera accélérée grâce à une localisation plus aisée, une visualisation directe à l'écran, l'accès à distance aux bases de données et la possibilité d'obtenir des copies de dossiers sur papier ou sur support magnétique. Tous ces facteurs contribueront à une meilleure utilisation de la part des chercheurs et documentalistes du monde entier". En: Projet d'informatisation de l'Archivo General de Indias. - Madrid: Ministerio de Cultura, [1990], p. 11.
6. Gonzáles, Pedro. Op. cit. p. 133.
7. Gonzáles, Pedro. Op. cit. p. 134.

ANNEXE

Catalogue d'éléments de description

1. **Information de contrôle** qui nous indique le type d'actualisation à réaliser dans la base de données. Les cotes interne et externe d'identification de l'article peuvent être incluses. L'actualisation prévoit ces actes:
 - **L'inclusion** (lorsqu'on crée n'importe quelle sorte d'information partant de zéro).
 - **La substitution** (lorsqu'il existe déjà une information enregistrée, même qu'elle soit minime).
 - **L'effacement**.Les actions peuvent être appliquées à toute l'information d'un article, à l'information essentielle, à l'information descriptive et aux références de localisation.
2. **Information essentielle:**
 - **Type d'entrée descriptive.** Il indique le type d'article à produire selon le niveau des matériaux à décrire dans l'ensemble hiérarchique: série, sub-série, unité de conservation/installation (liasse, livre), dossier, document, etc. De cette façon on connaît si la description est collective ou individuelle.
 - **Velette.** Il s'agit d'un titre court pour l'identification de l'article dans les consultations, mais qu'il n'est pas soumis aux règles strictes des vedettes bibliothécaires.
 - **Dates extrêmes,** avec les valeurs suivants pour leur qualification: [APR] date approchée, [CON] date connue, [SUP] date supposée, [ANT] date antérieure à, [POS] date postérieure à, [S/F] sans date, [SIC] tel qu'elle est écrite; il y en a aussi pour siècle.
 - **Cote.** C'est l'ensemble de termes alphabétiques et numériques servant à identifier les documents, bien individuelle bien collectivement.
 - Contratación, 5536 (cote de liasse)
 - Patronato, 295, N. 59 (cote de document)
 - MP, Filipinas, 230 (cote de document cartographique)
 - **"Inclus dans la cote".** C'est la cote ou identificateur de l'article précédent (appelé "père") dans la structure hiérarchique.
 - **Conditions de service.** Valeur codifiée qui indique si l'objet décrit dans l'article peut être servi physiquement pour consultation.
 - **"Niveaux de privacité".** Valeurs (entre 00 et 99) qui définissent le niveau de protection du document original, des descriptions et des images numérisées devant les consultations des usagers.
 - **Clé de l'auteur de l'information essentielle.** Numéro clé servant à identifier l'archiviste chargé de la série qui va être l'objet de description.
3. **Information descriptive:**
 - **Contenu.** C'est le texte descriptif de l'article; il est employé dans la description des matériaux non figuratives; pour ceux-ci et pour le même but on emploie l'étiquette de "titre".
 - **Clé de l'auteur de l'information descriptive** qui correspond au responsable de la description ou contenu.
 - **Lieu d'émission** du document.
 - **Caractéristiques internes** du document. Avec les étiquettes orientatrices: documents originaux, copies, dupliés, etc.; typologie générale, typologie spécifique, type d'écriture, langue.
 - **Caractéristiques externes** du document. Avec les étiquettes orientatrices: support, forme, dimensions, reliure, couleur, décoration, légendes, explications, références aux sceaux.
 - **Nombre d'unités.** C'est la référence à la quantité d'unités d'un ordre inférieur: feuilles d'un document, documents ou dossiers d'une liasse, pièces d'une unité cartographique, etc.
 - **Etat de conservation.** Information sur l'état de conservation actuel et sur les procès envisagés dans le futur.
 - **Système de versement** du document aux Archives: transfert, donation, dépôt, etc.

- **Bibliographie de référence.** Renseignements bibliographiques sur l'élément décrit.
 - **Titre.** Pour les matériaux figuratifs. C'est comme le contenu des documents.
 - **D'autres titres.** Pour les matériaux figuratifs.
 - **Auteur(s).** Mention(s) de responsabilité. Pour les matériaux figuratifs.
 - **Edition.** Pour les matériaux figuratifs imprimés.
 - **Renseignements mathématiques.** Pour les matériaux cartographiques. Des étiquettes orientatrices: échelle, projection, coordonnés.
 - **Renseignements de publication.** Pour les matériaux figuratifs imprimés. Avec ces étiquettes orientatrices: lieu, éditeur, imprimeur, date.
 - **Documentation annexe.** Comme les documents figuratifs ont été tirés des liasses et qu'ils appartiennent à des dossiers qui sont restés dans les dites liasses, dans cette étiquette on fait la description de la documentation qui accompagnait la carte ou plan.
 - **Cote de provenance.** Cette étiquette est employée essentiellement pour les matériaux figuratifs qui ont leur cote individuelle dans la série de Cartes et Plans, mais, puisqu'il s'agit de documents extraits des liasses, ils ont aussi leur cote d'origine, que l'on fait figurer ici.
 - **Notes.** Des renseignements rapportés à la documentation figurative de la série de Cartes et Plans.
4. **References de localisation.** Il s'agit de termes à la façon d'index servant à la localisation de l'information demandée par chaque usager dans la base de données. Ces termes peuvent fonctionner tout simplement comme des descripteurs, mais en même temps on peut établir des rapports entre les dits descripteurs par des relations spécifiques. Ils peuvent aussi être qualifiés par la fonction qu'ils réalisent dans l'article- qu'on décrit.
 5. **Dates de acotación.** Ce sont des dates ou des catégories de dates contenues dans l'article, qui ne sont pas visualisées dans la base de données mais qui seront utilisées pour le bornage cronologique dans la consultation par le méthode de recherche à travers les descripteurs.
 6. **Cotes ou identificateurs des documents sur autres supports (sur microfilm, photographie, etc.).**
 7. **Cotes anciennes.** Ce sont les cotes que les liasses avaient autrefois et que peut-être sont cités dans des catalogues anciens. Cette information permet de trouver aisement l'équivalence entre les deux types de cotes.
 8. **Références à l'inventaire.** Ces sont des références pour l'association des index. Etant donné que les renseignements contenus dans les guides, inventaires, catalogues, etc. dans quelque cas ont été incorporés à la base de données par un procès de retroconversion, il a fallu inclure les numéros particuliers des article descriptifs contenus dans les instrument de recherche qui servaient à la récupération des index. Le but de cette sorte de renseignement est de rendre possible l'utilisation postérieur de ces index comme des descripteurs ayant une référence d'union.

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POSSIBILITIES FOR THE INTERNATIONAL SHARING OF RETROCONVERTED MAP FILES.

By Tony Campbell

One of the main themes of the eighth biennial conference of the Ligue des Bibliothèques Européennes de Recherche (LIBER), Groupe des Cartothécaires (held in Barcelona, 28 September to 2 October 1992) was Retroconversion of map catalogues. Although most of the papers were descriptive accounts of projects proposed or in progress, discussion centred on the practical and theoretical possibilities for the international sharing of retroconverted map files in the future.

It became clear that there were two, apparently irreconcilable, strategies for achieving machine-readable records for historical cartographic materials. Not surprisingly, the approach favoured by each participant reflected both the nature of the materials held in their own library, and the automation decisions that had been already taken. For example, this author outlined the project, now well under way, to convert the British Library's catalogues of printed and manuscript maps.¹ The resulting file, due to be published on CD-ROM in 1995 by Research Publications International, will comprise nearly 250,000 records. The present paper will attempt to analyse the two different approaches and suggest possible ways in which they might be reconciled for the purposes of international record sharing. Reference will be made, at the end, to the strategy proposed by the Consortium of European Research Libraries for dealing with books from the hand press era.

The two approaches are, on the one hand, retrospective cataloguing or recataloguing, and, on the other, retrospective conversion or retroconversion. The first of these, the 'retrospective cataloguing' strategy, stresses the need to maintain the quality of the bibliographical records. The second - perhaps we should call it the 'let's make the most of what we have' strategy - stresses the practical difficulties of maintaining quality, given the large numbers of substandard records. The emphasis of the second is therefore on quantity. This distinction is mirrored in two different approaches to record-sharing:

1. The single record approach is favoured by those advocating retrospective cataloguing. In this scenario, there would be a single, authoritative record for each bibliographically distinct item, created according to agreed cataloguing standards, with each participating library contributing its holding statement to

the common location field. [The British Library's Eighteenth Century Short Title Catalogue is an example of this approach].

2. Common access to records of differing standards and styles - sometimes several for a single bibliographical entity - is favoured by those engaged in retro-conversion. [There is no obvious example of this approach as yet, although it forms part of the proposal of the Consortium of European Research Libraries' 'Primary Database'. These will be described later on].

For modern cartographic materials - essentially maps in series - the single record approach might be fully achievable as far as series level coverage is concerned. However, as the policy in some libraries (for example, the British Library) is to catalogue series only, sheet level coverage would be very incomplete. For historical materials, however, the situation is very different. Older map catalogue entries are generally of a poorer standard than their book equivalents. The elements that mark out map records from those for books (for example, scale) are, simultaneously, the most likely to have been omitted and the most time-consuming to provide. Unlike modern maps, earlier cartographic publications tended to omit dates, leading to considerable variation in the approximations assigned by cataloguers. For these reasons, common access to records describing each copy of a work seems the best way to deal with the large quantities of older converted records.

Few dispute that the single record approach represents the ideal. But has it any chance of being achieved? How will the necessary resources be made available for the retrospective (re)cataloguing of some hundreds of thousands of early maps? For example, only a tiny minority of the British Library's extensive file of map records (those created post-World-War II) are likely to be thought fully 'adequate', when measured against any kind of minimum record standard. This is hardly surprising, considering that the catalogue descriptions have been made over almost two centuries, following a succession of different rules. This situation will be repeated in other large and long-established collections.

While there are existing programmes to (re)catalogue categories of books (defined by period or national production), none such is even contemplated for maps. The single, authoritative record scenario, therefore, would inevitably exclude the great majority of converted records. This would leave most early maps undescribed, and present an insurmountable cataloguing challenge. There is also the particular bibliographic problem raised by maps (usually engravings) in determining, without side-by-side comparison, whether two items are identical or in some way distinct (different states of the plate). Thus the aim of creating a single authoritative record for a specific item (in the manner of a cartobibliography) is

likely to be unrealisable for early material until, perhaps, images of equivalent examples held elsewhere can be readily transmitted to allow the cataloguer to make a direct comparison with the map in hand.

Such problems occur less frequently with modern cartographic materials. These are also more likely to have been catalogued according to more rigorous recent rules and held in automated files. They would therefore lend themselves more readily to the single record approach. However, there would surely be little support for a strategy which separated 'modern' and 'historical' materials (however defined) into separate files constructed along quite different lines.

Where retrospective cataloguing concentrates on the bibliographical purity of the records, retroconversion emphasises the importance of gaining access to the widest possible range of records. It underlines the 'finding' function of a catalogue entry over the 'bibliographical' function. Since the British Library Map Library alone will eventually have available up to 300,000 records, and other large datasets are being prepared elsewhere, it is not unreasonable to imagine a potential combined file of up to a million records, accessible online or via CD-ROM.

Unless a very significant amount of previously unidentified resource is made available, and assuming it is agreed that there is no justification for splitting the continuum of mapping between 'historical' and 'modern', it is unrealistic to pursue the single record approach as a primary aim. Sub-standard records, most would agree, are better than none at all. But what do 'substandard' and 'quality' mean in practice? In attempting to define these concepts, a possible compromise will emerge - based on the thinking of the Consortium of European Research Libraries.

Nature of a future shared file

Though there might not be agreement on all the details, it is clear that many older records for historical material are rightly considered to be 'sub-standard'. There are perhaps three ways of dealing with this problem:

1. We could insist on certain minimum standards and flag those records that fail to meet these. 'Sub-standard' here would probably have to be defined in terms of the absence of data from particular fields or sub-fields.

Distinguishing the quality of data in a given field, for example the style of title transcription, does not readily lend itself to automated identification. Quality would often relate to the date of a record's creation but, for the British Library at least, there is no means by which this could be indicated. These records

could then be omitted altogether from any shared database. However, such a decision would effectively exclude the vast majority of historical records and would thus defeat the object of the exercise. Such a rejection of the possible data (perhaps 80%) would be a massive wasted opportunity.

2. We could insist on certain minimum standards, but present the 'sub-standard' records to the user with some sort of a general 'health warning'. When the deficiencies refer to absent, rather than poor, data, this would be immediately apparent to the user when the record is displayed on the screen (for instance, if the scale had been omitted).
3. We could accept and display all the available records in the same way. This has the merit of comprehensiveness, which many would consider to be the main aim of such a project. If this were the case, all records would presumably output according to a geographical thesaurus, to be mentioned in a moment. As long as all records included searchable dates, the entire file could supply answers to date-range queries as well. Those records which lacked relevant information (scale, author or thematic heading, for example) would fail to output under searches defined in those ways. In other words, as far as those elements were concerned, minimum standards would, in effect, have been achieved and the records suppressed. The fact that some searches would produce incomplete, and hence misleading, answers could be pointed out to the user.

Suggested aims of a shared file

Aims would normally be stated at the outset. It seemed sensible, however, to explore first the range of likely possibilities. If it was agreed to adopt the preferred strategy, the last of the three - in which all available records were welcomed - the combined file might have the following purposes:

1. For modern materials - as a cataloguing tool, in other words, providing fully acceptable records that could be downloaded.
2. For historical material - as a cataloguing guide. When valuable information is held in sub-standard entries, this could be used in the creation of a new record. The 'quality' approach is valid here, since the better the record the more useful it will be for this purpose. Where there are several entries for (apparently) the same publication, the best record would presumably be chosen.
3. For retrieval purposes - to provide as comprehensive as possible an answer to the bibliographer's or researcher's question: what material is there for region or place x, in period, and [perhaps] concerning theme z, in any of the contrib-

uting libraries? Since some enquirers would be interested only in the holdings of a single library, while others would wish to include or exclude specific institutions or search simultaneously as many libraries as possible, a range of output alternatives should be offered.

4. As a cartobibliographical aid - to enable continents, regions or individual countries to identify and download all material relating to their own history, as found in the participating libraries' files.
5. For the future -as a first stage in the creation of a file with single, authoritative records, if and when resources allowed. The combined database could itself bring together the separate records (apparently) relating to each item. In a re-cataloguing operation, these could then be merged into a single record with multiple locations. The argument that it would be difficult to find support for the second stage if it were separated from the first can be answered in two ways. It is better to have the first stage than nothing at all, and the proposal could be framed so that the two stages formed part of a single overall programme.

The Cartographic Context

Whatever the overall approach adopted for a co-operative map file, edited thesauri will probably be the essential pre-condition for international co-operation. Only in that way would it be possible to overcome the variations of language or the erratic spelling on earlier materials, which would seriously reduce the effectiveness of title-word searching. Three types of thesaurus can be identified:

1. *Geographical thesaurus*. The single most important difference between a book file and a map file is that a book catalogue is organized under author headings whereas a map catalogue requires some form of primary geographical control, usually in the form of a hierarchy. Author headings have a degree of predictability, but the ways in which particular libraries have subdivided the regions and areas of the world vary widely and unpredictably. Without edited geographical headings, access would depend on the accuracy with which title words could be anticipated.

'EUROCARD', a multilingual thesaurus of both current and superseded geographical names, was intended to perform just such a function. However, the consortium of European national libraries decided last year not to seek support from the EEC. The project's future is now less certain, but it is hoped that other arrangements will be found to achieve its aims. It is intended that

EUROPACRT would offer consistent access to users to users, who would not need to know which was the 'authoritative' form of their place-name. All recorded name forms would lead to the same group of entries, comprising all relevant material, however titled.

2. *Name thesaurus*. It would probably not be difficult to reach agreement that all author headings were held in their vernacular forms. However, there would certainly be a need for access via other-language forms. The creation and editing of such a combined name thesaurus would require a collaborative effort, perhaps with expert representatives from different countries dealing with their own names. Given that mapmakers, map engravers and map publishers feature infrequently in existing name authority files for books, and given the lack of a fully comprehensive and authoritative biographical dictionary for the mapmakers of the world, much basic work would have to be done.
3. *Thematic thesaurus*. Numerous local thesauri exist to control the thematic element of map collections (administrative maps, canal maps, military maps etc). Since there is no adequate thesaurus available 'off the shelf', many institutions (the British Library Map Library among them) have devised their own. It is hoped that the majority of the concepts used are sufficiently close to allow cross-reference and translation, via automated concordance. The best approach might be for a single, suitable qualified individual to examine existing systems and see how they might be merged. It would be impractical for the new authoritative heading forms to be manually assigned to the large numbers of records involved. However, a multilingual system that allowed continued use of a particular library's own headings, via concordance transparent to the user, would presumably be acceptable.

Consortium of European Research Libraries

Maps are not the same as books, and major difficulties are caused for map librarian when these differences are ignored. On the other hand, map collections are fewer in number and generally far smaller than their book equivalents. Since research grants and project resources are, understandably, more likely to be devoted to books than maps, it makes sense for us map librarians to watch closely those developments in the world of books that may have relevance for us.

The best example is the Consortium of European Research Libraries (formerly the European Working Group on Retrospective Cataloguing), set up to create a database of pre-1830 printed books held in the collaborating libraries. After a number of meetings and a consultant's report, the Consortium agreed on a compromise

between the contradictory 'quality' and 'quantity' approaches described earlier.² Their proposal combines the principles of retrospective cataloguing and retroconversion.

The plan is for the creation of two files, which would reflect the two approaches. The 'Primary Database' would represent a combined file of the existing records supplied by the contributing libraries. Each library would be responsible for its own records. Since these would not be edited centrally, they would be of varying standards. However, they would all be held in UNIMARC format, whose maintenance committee has agreed to accept the necessary amendment. The European Consortium's first target will be to issue a retrieval file, as soon as possible - on CD-ROM or online - containing the records that are readily available.

These records can be considered the raw material for the higher level 'Union File', whose creation would form the project's main, if longer-term aim. Here there would be a single record for each bibliographical entity, catalogued, according to ISBD(A), to an agreed standard. To this would later be added the holding statements of the contributing libraries. It is proposed that name authority would be the responsibility of the country concerned. These authoritative records would be distributed via an online host.

Although the starting-point was somewhat different, it is interesting how closely the Consortium's conclusions mirror those set out in an earlier draft of this paper (distributed in November 1992 via the LIBER mailing list).³ These are broadly repeated here. A number of other potentially contentious issues have been flagged by the Consortium for future resolution, such as funding, charging, the legal complexities surrounding copyright and ownership of the data, update facilities and, most vital of all, the practicality of merging highly varied files.

Suggested future action

By 1996, the British Library Map Library should have moved into the second phase of its long-term retroconversion project - for example incorporating the atlas-map descriptions currently being created by an independent researcher, Rodney Shirley. The Bibliothèque Nationale's map retroconversion and the collaborative German map project should also be complete. Other small and medium-sized files already exist (as documented in the recent LIBER survey), and further projects will no doubt be under way by then, if not finished, both in Europe and elsewhere.⁴ Within the next few years, therefore, sufficient historical and contemporary map descriptions will have become available to make the issue of an international collaborative map catalogue a realistic possibility. Since the planning

could take several years - although the European Consortium hopes to achieve its Primary Database within one year - now is the time to find out if there is serious interest in such a project. The British Library Map Library and our partner in the maps retroconversion venture, Research Publications, believe that such a combined cartographic file is the logical and necessary development to follow the creation of large retroconverted files.

If the foregoing analysis is seen as a useful starting-point, an international group will need to be formed. Its first task would be to define an overall strategy - whether, for example, to follow the European Consortium's example or to strike out in another direction. Thereafter, the detailed requirements would need to be specified, and the following operations, at least, planned:

1. The technical analysis of existing records (and of their mergability) and a detailed assessment of the online and CD-ROM options.
2. The planning and creation of thesauri for cartographic materials: author name, geographical name (EUROCARD?) and thematic.
3. Financial analysis - whether external funding needed to be sought - and clarification of the legal aspects already mentioned in the European Consortium context.

I look forward to the reactions of my colleagues to these suggestions.

Notes

1. 'Retroconversion of the British Library's map catalogues: the art of the possible', due for publication in European Research Libraries Cooperation: the LIBER Quarterly. A more technical description of the processes involved is to be given in the paper 'Conversion of the British Library's map catalogues: the keys to success', to be delivered to the Satellite Meeting (19-20 August 1993).
2. See the (unpublished) Consortium of European Research Libraries, 'Final Report on establishing a database for records of European printing of the hand press period (c. 1450-1830)', May 1993.
3. 'Maps retroconversion: a possible blueprint for future international cooperation', distributed as Appendix 2 to Groupe des Cartothécaires de LIBER, newsletter 26 November 1992 'To all colleagues concerned with retroconversion/cataloguing'.

4. ibid., p.1, listing European library initiatives.

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