Developments in Retrospective Conversion

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Introduction

The emergence of on-line catalogues as electronic services via graphic user interface and www-services have been significant rallying points on the evolution path of the libraries. Retrospective conversion of the library card catalogues to machine-readable form lies among the first signs of the paradigmatic change in libraries which actually has meant “breaking the code” of the former hierarchical structures of information systems and - of whole organization cultures.

Near and far, in next to no time as the automated systems were planned in the libraries, the question of converting the manual records in machine-readable form was raised. During the years 1987-1988 the possibilities to convert library card catalogues into electronic format were tentatively examined also in the Library of Parliament. In 1989 a survey was conducted on retrospective cataloguing/conversion of the library card catalogues. Major questions were the amount and the quality of the records as well as the running time and expenses of the whole conversion process. The prioritization of the library collections was considered, too.

Librarians were mainly more or less suspicious of the reasonableness of the suggested project at that time (the year was 1989). They did not see the conversion very realisable - even if they unanimously went along with the idea that all information about a library’s holdings should be available in the longed-for future electronic on-line catalogue - if the system was to meet the needs of the users. An informal debate was triggered off about whether conversion and upgrading really were arguable and realisable. However, the protracted operational period with the micro- and paperformat cumulations of the current cataloguing was felt as a frustrating phase of stagnation before the pending implementation of the integrated library system. Maybe this situational state of affairs was partly reason for giving an impetus to the decision-making and for putting the retrospective projects into operation. On the other hand, it was about time and resources for keeping going, developing the services, training and staying the pace.

Today, we do not speculate any more whether conversion of card catalogues would be possible or not; many library projects of present day are concerned with digitization of whole books and documents as well as with conversion of multimedia in diverse data recording and preservation formats. Internet, portals and network services have changed a lot the functionalities of the libraries and the focus of the library sciences.

In the light of the present movements, the developments in retrospective conversion in the Parliament Library of Finland have no more any substantial news value. There are various new and advanced systems on the market to realize any retrospective conversion of card catalogues. However, every now and then, there has been interest in libraries in the methods used in the Finnish Library of Parliament. During the progression of the retrospective conversion several interim reports were provided. After the final correction activities of recent years, this document aims for summarizing, filling out and reporting on the phases of development and on the various conversion approaches and methods used in the Library during the years 1989-2004.
Approach to retrospective conversion

Outward circumstances and confines of action

The software application used in the very first electronic catalogue of the Library was made by TRIP data management system which was, and still is, in use in the Finnish Parliament. The preceding batch processing phase had been started already in 1982. In 1989, the expected implementation of the integrated library system of the Finnish research libraries had fallen already three years behind schedule of the estimated timing for the autumn period 1986. The principal aim of taking advantage of TRIP pro tempore was to facilitate and guarantee the library’s services during the period of transition and to prepare the staff for the foreseeable era of the integrated library system as well as for the new services as they were emerging.

In consequence, the first electronic catalogue EKI, holding records of ca 25,000 items, loaded from the so far current cataloguing repositories, was introduced in 12.9.1989. As time went on, the purposes of the use of the electronic catalogue were expanded to include several databases of monographic, periodical and article materials. The databases were developed for the materials of the Library’s collections but also for two major bibliographic databases of the yearly printed bibliographies, Bibliographia Iuridica Fennica (in print: 1985-1995) and Government publications in Finland, in print: 1961(1962)-1996(1998).

Because of the pre-planned temporary character of the EKI, the strategy was not to bind too much resources in the system design and engineering but, instead, to use a semi-automatic method of implementation; the solution was to update the databases 10 times a year from the basic repositories in tandem with the schedule of the batch processing of the off-line cataloguing process of the research libraries. At that time – until 1992 – the library automation of the Finnish research libraries was still based on LSP software of British origin. The Library of Parliament had affiliated to the shared cataloguing co-operation with the research libraries in 1984 and continued promoting it but wanted simultaneously to utilize the possibilities to improve the services for the Parliament. TRIP fulfilled these requirements and served the needs of the Library for years to come.

By the near adaptation phase of the integrated library system (VTLS), it proved to be uncertain whether the future production of the printed bibliographies would immediately or at all be possible from the new system. Additionally, it was quite sure that the module for cataloguing the article materials (component parts) would not be readymade in time, and consequently there were delays to be anticipated at least in the production of the Bibliographia Iuridica Fennica, where two thirds of the materials consisted of component parts. This, however, could not be accepted by the Library.

Offering qualified services was the main reason to choose the pro term policy of two systems. Further, the library director of that time, Eeva-Maija Tammekann reckoned with the interim period of debilitated services – as also proved to be
the turn of events. For better or worse, all library services for the parliament should continue undisturbed also during the time for the future change of library system. The further producing of the bibliographies was the main reason to continue with the TRIP based system further ahead.

In passing, bearing this in mind, the demands of librarians to develop the bibliographic databases further more suitable for purely searching purposes were actually a ramification phenomenon, even if intelligible.

Accordingly, by technical means, there were both opportunities and restrictions for realising also the retrospective conversion projects. The recording process had to be planned on the terms of TRIP and the batch processing of the current cataloguing. Furthermore, the philosophy and rationale behind the choices concerning the contents had to be addressed together with the options on hand. Integrating also the old catalogues with the current electronic materials to be available on workstations would substantially improve the quality of services.

In actual fact, the Library had already had some experience of successful retrospective in-house work during the years 1984-1987, for at the beginning of the automated cataloguing work some bibliographic materials were catalogued retrospectively and in 1987 circa 1800 periodical records were loaded from the automated national FINUC-S catalogue and integrated with the electronic catalogue of the Library of Parliament.

Finally, separate and regular retrospective projects were started in 1989 and were continued until 2000 utilizing different methods and policies. After-treatment and in-house editorial work has continued fragmentarily until 2004. In the course of the latest projects the checking has been applied to the monographic materials of ca 250,000 records by proofreading, by spot checking and editing/amending. In the final phase of 2000-2004, some 25,000 records have been modified and over 3000 duplicates have been merged or deleted.

The basic conditions set by the Executive Board of the Library presumed definitely that the recon project should under no circumstances disturb the activities of the Parliament and the Library, neither the services nor the current cataloguing. Next among the principled questions, the problem of the availability of work premises and staffing turned up.

At the beginning, outsourcing abroad was seen the strongest possibility for the conversion project, because of the cheap labour cost. However, it proved to be non-acceptable to let the library catalogues to be shipped abroad; neither was microfilming of the catalogues seen any cost-effective alternative. (E.g. preparing instructions for foreign staff would have been a time consuming extra task and combining the information from different card catalogues would have raised the costs furthermore.) All things considered, the estimated total cost turned out to become too high after all, and the process scheduling too binding and inflexible. And so, choosing in-house projects as advisable was posed as an alternative. Anyhow, the uppermost reason for casting aside the planned use of outsourcing was the complex character of the library catalogues to be converted.
The nature of the card catalogues

As an old library the Parliament Library has been rich in its traditional working methods and catalogues of different kind of printed material. The holdings range from law material, official publications to important special collections from various countries. The spheres of cataloguing responsibilities used to be shared according to the collections. Acquisition and cataloguing units produced various card catalogues and printed publications - each having their diverging principles and rules. Of particular merit were Government publications in Finland 1961-1996 (1962-1998) and Bibliographia iuridica Fennica 1985-1995, which was the basic document in the implementation process of the library automation. Bibliographia iuridica Fennica and the national bibliographic co-operation entailed the bibliographic cataloguing principles and Anglo-American cataloguing rules into the Library of Parliament. At the same time, the quality level was set at a high level in the Library.

Ever since the Library was founded in 1872, different cataloguing rules - domestic, national and international - had been in use in the alphabetic catalogue of the Library. Different levels of description had been used for different collections and bibliographies. The cataloguing cards were of highly variable level and quality. The most recent rules of the card catalogues were a hybridization of the Finnish cataloguing rules (conformable to AACR) for description, and older rules tailored for the Library of Parliament for access points of main and added entries. So bringing the records up to some level of standards in the course of retrospective conversion had to be considered.

The description of the items in the keyword card catalogue was often shortened. Further, the keyword catalogue did not include any main entries showing which index words were given to each item in question. Consequently, using the subject catalogue could not be brought soundly into play for the retrospective conversion.

The cataloguing in the Library had been based on the so called “immediate cataloguing” method, where all the information was taken of the item to be catalogued and concerning the names of persons and organisations no authority registers were used. Normative instructions had been used for materials which were placed on shelves according to the name of series, congress or proceedings or according to the publisher, organisation or department, and concerning especially the material catalogued before the year 1957 where the first noun in nominative was chosen as the sorting element and the (often only) heading of the catalogue entry (main entry). On account of all this, it was necessary to give the working team of the retrospective project some directive rules and guiding in order to harmonise the old rules with the modern standards, the rules of the descriptive cataloguing and the choice of the main entry. Also several obligatory information codes had to be added, such as country and language codes as well as some sampling codes. In other respect, the leading principle was to stick to the information in the card catalogue and not to collect the materials from the shelves to be recatalogued, which would have rendered the work far too slow and extremely expensive. The cataloguing format used was Finmarc.
The converted materials had one first hand checking and were added to the database as soon as possible according to the timetable of the batch processing. This “quick and dirty” method was estimated more serviceable for the customers than waiting for a proofread loading. Final completed corrections and additions have been/are been made in the course of time during the checking and proof reading phase by library professionals.

**Some prioritization issues; timing, premises and staffing**

The outcome of the planning phase was that the Library prioritized proceeding with small steps and several projects. Retrospective conversion funding and schedules would be confirmed on yearly basis. This enabled phased road maps and did not demand commitment to fixed budgeting for years to come. In case the projects would e.g. prove to turn unproductive, they could easily be interrupted or terminated. Further rationalization principles for the small steps’ projects were as follows:

Retrospective conversion will be made according to the catalogue cards on hand. Only in an exceptional case the concerned publication will be picked up, e.g. in case that the existing record is too much below standard or clearly flawed.

- All materials retained will be recorded in the online catalogue.
- The aim is to raise the standard at least to the minimum level where
  - Information concerning country codes and language codes will be added.
  - Description and selection of the main entry will aim to conform according to the ISBD and Finnish Cataloguing Rules (and AACR2) principles.
  - Information on Library Locations will be made according to given instructions.
- The progress reporting will be on monthly basis.
- Light first hand checking will be made by a librarian before the loading phase.
- Second checking and upgrading phase will be made by a librarian directly into the online database. The project manager will check at least 5% of all records.

The required commitment for avoidandce of disturbing the daily work in the library or in the parliament involved demands on scheduled working times, premises and staffing. In consequence, the most favourable point in time proved to be outside the office hours and during the holiday periods or leaves of absence when there were sufficiently work premises available. In addition to this, during the terms of leave, the project could make good use of the parliament’s computer class room with eight workstations.
The choice to use young workers (scholars of comprehensive school and students) tallied very well with the periodicity of the planned series of retrospective projects. Also some of the the cataloguing staff chose to use the possibility to work overtime within the retrospective project and functioning as support persons. At the beginning, the amount of the young workers was fourteen. Later on, when the quality of the catalogue cards turned more and more impaired, there were few experienced recorders. In the course of time, remote work projects proved to be functional and most appropriate reflecting both the interests of the remote workers and the placing of work in the library. Furthermore, remote work enabled the year-round working and speeding-up the projects.

The prioritized order of the conversion process and the level and format of cataloguing

At the beginning of the project, it was not clear what would be the coverage of the conversion relative to the card catalogue(s). The Management Group of the library decided in favour of recording the most demanded/borrowed materials and - at the same time the most modern and legible part of the card catalogue.

An the beginning, two collections in the closed magazine were chosen to be converted. Thereafter, it was possible to proceed on the other hand with some focal groups of publications, such as committee deliberations and reports or monographic series of judicial material, and on the other hand, systematically in order of the alphabetic catalogue. Grouping the material structurally by the cataloguing year respectively to the cataloguing rules used at different times was resulted in three periods: the materials from 1981- (descriptive cataloguing according to Finnish Cataloguing Rules and AACR2 principles); the materials 1957-1980 (Finnish cataloguing rules tailored for the Library) and the materials before 1957 (u.a. Preussische Intruktionen).

Payments

The principle for salary payment was based on fixed pay by record. This made the control of the work easy to care. There was no need for strict control of the workers. Further, in principle, the young workers could plan their working hours and working pace flexible. And first and foremost, the estimation of the expenses of the project was all the time very well under control, for using incentive wages facilitated substantially the in advance planning of the projects and the attainable amounts of the records to be converted. The young workers appreciated the flexibility they had during their working hours.
The research system. Comparative survey of the organisation and financing of fundamental research.

1. France, Germany, United Kingdom. Paris 1972. 258 s.

Strategic priorities and rationale
To begin with, the aim of the retrospective projects was to prioritize the “live collection”. Performing the conversion work sideline could not have been possible for the library employees; they would not have had any free working time for extra projects. They also would have been far too well-paid staff for this kind of routine work.

The decision concerning the conversion of all the card catalogues remained open. In principle, however, the importance of the accessibility and resource discovery of the entire collections was widely recognised. There ought to be good enough and easy to use information about the contents and subjects of all the library collections. Accordingly, the retrospective conversion of the card catalogues would be actively promoted and completed in the future years presumed that the programme proved to be cost-effective.

During the projects it very soon became evident that the concept of the “live collection” was broadened. Thanks to the online catalogue the overall resource discovery was substantially enhanced. The process of searching the collections became very much easier as it was no longer necessary to search by turns the different card catalogues, microfiche and/or the online catalogue. Now also the converted old catalogue records could be simultaneously accessed. Awareness of the existence of useful collections significantly increased. Indeed, parts of collections which had arguably been fated to sink into oblivion became now unearthed, discovered and borrowed.

In the retrospective catalogue conversion process card catalogue records were entered by loading (usually about 2000) records onto the TRIP online catalogue. The process included transmissions between two systems (from TRIP to LSP and later from TRIP to VTLS).

The principle that the converted materials were included into the database as soon as possible was estimated to be the most advantageous from the library users’ point of view. Even if the quality checking phase was pushed forwards for which reason this ‘quick and dirty’ way of progress could be criticized by cataloguers to be ‘unprofessional’, this solution was estimated to be the most appropriate. For customers it was important to get the targeted materials searchable as soon as possible. And nonetheless, the quality level was aimed to be improved by upgrading at a later date.

Progress and working methods

Several kinds of working methods were used during the years of retrospective conversion.

1. Keyboarding
Keyboarding was the method examined during the first experimental projects (1988-1989) and feasibility studies where the profitability of the planned projects was reported. In the items, e.g. in many monographic series, where essential amount of information was equal, its was reasonable to copy the common data and keyboard the remaining data. This method was used
principally for recording the data of the eldest part of the card catalogue, especially of the cards with poor quality. The method was mostly in use at the end of the project, for the prioritization of the converted material mainly meant progress chronologically from the new to the old. In principle, key-boarding was always made on the basis of the catalogue cards. Only in exceptional cases the item to be catalogued was brought from the book magazine. This again, meant that the recorders of this material had to have better knowledge on changes of cataloguing principles to be able to complete the obligatory information and pay attention to the proper choice of the main entry. They also had to distinguish, when it was necessary to consult a librarian.

2. Scanning projects
The scanning project participants worked in pairs of two co-workers which could plan their working hours flexibly. In principle, the hours for scanning were 3-4 hours because the first scanners (DEST+Text Pac) did not work properly after becoming hot. On the other hand, it proved to be good for motivation that the young people changed the monotonous scanning work into something different. Later on, from May 1991, the Library could utilize a more effective Kurzweil 5200 scanner of the Parliament and its more diversified feasibilities, including wider identification of font styles and the feature of ICR (Intelligent Character Recognition). With Kurzweil 5200 the cost-benefit efficiency was dramatically improved, especially as were concerned recognition and conversion of the old part of the card catalogue.

3. Copying from CD
For some amount of domestic materials, e.g. of governmental publications, it proved to be successful using Fennica CDs (of Helsinki University Library) to get information directly in correct (proofread) form to be converted and included into the batch processing portions. For the library’s foreign and old domestic materials there was no reasonable source available to be exploited at that time.

4. Primary cataloguing
In the final checking phase and sometimes at situational turns, some uncatalogued materials were found in the magazine. This kind of material was catalogued by the experienced workers or, for the most part, directed to the current cataloguing units.

5. Network working
A modern way of retrospective projects is to use network links to for gathering up cataloguing information.
Lessons learned; pros and cons of the step by step inhouse retrospective project

Service orientation

Proceeding according to the call for publications facilitated the best services

- The most relevant material of card catalogues was searchable at an earlier stage

Flexibility

It was possible to change the method as soon as there was a new and more profitable method or model available, e.g.

- 1990 shifting keyboarding to scanning (DEST+textpac for good quality cataloguing cards);
- November 1990- exploitation of the FENNICA CD-ROM for conversion of the domestic publications of 1977-1983 and 1977-1992. The rest of domestic materials was 10-20% and had to be scanned. This was most useful for the materials 1984-1992. Average pace of picking the materials from Fennica CD was 16 card/h.
- 1991 shifting to the Kurzweil 5200 improved the pace and quality of the scanning projects.

Economic efficiency

It was possible to use the most profitable method in due course. The scanning method was most economical in the first phase recording and loading of the data. However, when quality demand is ranked high and there will be a checking phase by library professionals, the final price of the conversion of the scanned material will increase.

The keyboarding method is slowest and produced – at intervals - more erroneous recording than the other methods which were in use. Proofreading the human typing errors was demanding more and different kind of tentness than the typical and foreseeable scanning errors.

Picking the material from CD-ROM was the most economic way of retroconversion used in the Library of Parliament when considering the overall result.

- The price of an edited record (including the added library specific information) was 0,86 €

The long period of retrospective conversion of over 10 years is the most prominent weakness of the project. If more resources, staff time principally, had been available, the pace of progress would have escalated. Down the final line, only one professional was involved for the checking and upgrad-
ing phase.
Some preceding stocktaking would have reduced the expendable materials from the recording phase. On the other hand, the online catalogue can also partly be used for facilitating this work of expertise e.g. for making lists of materials to be removed from collections.

As outcome of thorough assessments of the collection management project, the Library of Parliament decided to discontinue the publication of the printed bibliographies (by the year 1999). At the same time a decision was made to stop cataloguing such kind of bibliographic material which was not to be archived in the Library. Consequently, some 40,000 (12,000 of which retrospectively catalogued) monographic records of official publications were deleted from the database of the Library collections. Even today, this kind of policy changes could be worthwhile to anticipate when considering retrospective projects.

The present amount of the retrospectively converted materials in the catalogue of the library collections is 212,983 records, 143,875 of which come from retrospective conversion projects and 164,222 from converted current cataloguing. 147,301 records of the total amount have index words; 64,789 of the indexed materials come from retrospective projects. This does not, however, mean that all these 64,789 were completely indexed, for it is not possible to estimate how large an amount of them holds all the given index terms or even the most relevant one. Inclusion of the index terms has been made proceeding in the subject catalogue on alphabetical order. There is no status report available on this project.

There are still some amounts of uncatalogued materials to be found in the collections. The inclusion of these materials into the present database will be made on the basis of retrospective cataloguing, i.e. cataloguing the material from the scratch and as part of the current working processes.

**Inclusion of the terms from the subject card catalogue**

The benefits for customers of gathering together all information from the different catalogues in a single, online source was recognised considerable. Already at the beginning of the project, the importance of the indexed (subject) catalogue was emphasized and it was suggested that the index terms should be included into the descriptive records as the conversion process went along. This would further enhance the profitability of the searching. The work was several years underway but recording of the terms did not keep the pace in the project and the developments in the terminology. Recording of the index catalogue was interrupted when the list of the subject headings of the Library was renewed for the management of this part of the project proved to be too time consuming. Following and linking the outdated terms with the renewed ones retrospectively would have been far too demanding for the short-term workers. In consequence, the present day situation is practically that the subject terms have been included into the database only partly and fragmentarily.
Conclusion
In the Finnish parliamentary library the retrospective conversion projects were initiating and underway in the period of time when a library was waiting for a new era of integration. Still unforeseeable were times of web-based networked services. Today, there are many more modern and flexible ways of doing retrospective conversions. All things considered, the results of the retrospective conversion projects in the Finnish parliamentary library may fairly be described encouraging. Proceeding stepwise and concentrating in one thing at a time makes it possible to nicely allocate the funds and activate more or less stressless development projects. These projects have sped up the development of library services and helped to set the scene for the www-based supply.

And if in the future -
If not money, what obstacles to simply outsourcing and buying records from commercial suppliers?
To ease more and more sophisticated systems to come it would be needful to reorganize all the shelving systems copper-bottomed to avoid addition and complementation of complicated closed interior shelving systems with extraordinary location codes.

APPENDIX
Distribution by periods of diverging cataloguing principles 1900-1956

Distribution by the predominant language codes 1800-1899