CAN AN INTEGRATED LIBRARY MANAGEMENT SYSTEM FUNCTION AS AN INTEGRATED COLLECTIONS MANAGEMENT SYSTEM?

EXPERIENCES WITH EX LIBRIS'S ALEPH 500 AT THE LEO BAECK INSTITUTE ARCHIVES

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Berliner Handreichungen zur Bibliotheks- und Informationswissenschaft

Begründet von Peter Zahn
Herausgegeben von Konrad Umlauf
Humboldt-Universität zu Berlin

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Abstract:

Inwieweit können Archivsammlungen in einem Bibliothekssystem nicht nur katalogisiert, sondern auch in Bereichen wie Akquise und Umlauf verwaltet werden? Das Leo Baeck Institute in New York, ein Spezialarchiv zur deutsch-jüdischen Geschichte, hat das Bibliothekssystem ALEPH 500 nicht nur in seiner Bibliothek, sondern auch im Archiv eingeführt. In dieser Darstellung werden die Schwierigkeiten der Konvertierung und Implementierung dargestellt, sowie die Beschränkungen in der Anwendung beschrieben.

Diese Veröffentlichung ist eine überarbeitete Version einer Master-Arbeit im postgradualen Fernstudiengang Master of Arts (Library and Information Science) an der Humboldt-Universität zu Berlin.

The Leo Baeck Institute New York, a research center for the study of German Jewish history, has implemented the integrated library system ALEPH 500 for both its library and archives. This paper documents the problems encountered during the conversion and implementation and describes the challenges faced in the daily application of a library system in an archival setting with special focus on the acquisition process.

This publication is a revised version of a master's thesis for the Master of Arts (Library and Information Science) correspondence degree course at the Department of Library and Information Science at the Humboldt-University of Berlin (HU).

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1. Introduction

The implementation of integrated library systems (ILS) – both first-time automation as well as migration to different systems – has been a common process for libraries all over the world for several years. However, there are a number of recent articles showcasing the particular challenges and problems of specific implementations, as a review of the literature shows. Examples include collaboration between two libraries in the choice and implementation of an ILS (Cannell, 2001), the development of a new module in cooperation with the vendor (Prowse, 2000), the special needs of a large state research library system (Julich, 2003) and of a union catalog (Hoffmann, 2000), the first implementation of a system in a specific country (Sudell and Robinson, 2000), and the issues involved in retaining existing practices (King, 2000). Even though system implementation is frequent and widespread, it is still a complex process that needs to be adapted to local needs.

This paper focuses on the implementation of Ex Libris’s ILS ALEPH 500 in an archival setting. There is no lack of specialized automation software available for archives. However, the Center for Jewish History (CJH), which is comprised of several institutions, most consisting of libraries and archives, sought a system capable of supporting the workflows and addressing the needs of both libraries and archives. This paper describes the background of this project and problems and challenges encountered by the CJH during the implementation of the selected system. It focuses specifically on the issues encountered by the archives of the Leo Baeck Institute, one of the CJH’s partner institutions.

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1 Breeding, 2004b, lists 452 legacy migrations in the USA for 2003. In 2005, the number had decreased to 348, and Breeding expects most legacy systems to be nearly extinct by 2009, but points to a continuing market of smaller libraries who have never automated (Breeding, 2006b.)

2 For an overview of archival management software see Lake et al. (2003). This survey lists 25 products.
2. Context

2.1 Center for Jewish History

The Center for Jewish History was incorporated in New York City in 1995 as a partnership among five institutions dedicated to Jewish culture and research. Located at the CJH are the:

- American Jewish Historical Society, which collects materials documenting the religious, communal, cultural, and political life of American Jewry;
- American Sephardi Federation, which focuses on the preservation of the history of Jews descending from the Iberian Peninsula or who came from communities in North Africa, the Middle East, or Asia;
- Leo Baeck Institute, whose library and archives offer the most comprehensive documentation for the study of German-Jewish history;
- Yeshiva University Museum, which showcases the culturally diverse intellectual and artistic achievements of Jews through changing exhibits and programs;
- YIVO Institute for Jewish Research, the preeminent documentation and research center for the Eastern European Jewry.

The combined holdings of these five institutions consist of approximately 100 million archival documents, one half million books, and thousands of photographs, artifacts, paintings, and textiles, making the CJH the largest repository documenting all aspects of Jewish life outside of Israel. The CJH leaders have described it as the “Library of Congress of the Jewish people.”

Public access to these holdings is provided through a shared reading room, where representatives of each partner institution – except the Yeshiva University Museum – assist patrons with their research. In the reading room, researchers have access to an extensive reference collection and to a wide selection of electronic resources. The bulk of the library and archival holdings are housed in closed stacks. A variety of online and card catalogs point researchers to the materials they are looking for.

2.2 The Leo Baeck Institute

The Leo Baeck Institute (LBI) was founded in 1955 and was named for the rabbi who was the leader of German Jewry during World War II. Rabbi Baeck, who survived the concentration camp of Theresienstadt, became the first international president of the Institute.
The Institute works through three centers: Jerusalem, London, and New York. All three centers regularly hold local and international conferences, lectures, and other events on a variety of themes.

The LBI London publishes the *Leo Baeck Institute Year Book*, which contains articles on cultural, economic, political, social, and religious history, the *Schriftenreihe wissenschaftlicher Abhandlungen des Leo Baeck Instituts*, and other symposia volumes and monographs. The LBI Jerusalem is responsible for the publication of the *Juedischer Almanach* and books in Hebrew and German. It also maintains a small archives and library.

The LBI New York is the main repository of archival and library material. The 70,000-volume library is recognized as the foremost reference source in its field. It includes a comprehensive collection of *belles lettres* by Jewish writers, extensive material on the so-called "Jewish Problem" and anti-Semitism, and more than 800 periodicals put out by Jewish publishers from the 18th to 20th centuries. The personal and family papers, community histories, and business and public records deposited in the archives touch upon virtually every phase of German-Jewish life. The art collection holds paintings, sculptures, and thousands of drawings, watercolors, and prints by German-Jewish artists. In addition to these resources, the LBI New York offers specialized services to assist genealogists and family historians. In 2000, the LBI moved from a townhouse on Manhattan’s Upper East Side to its present location at the CJH.

Descriptions of all library and archival holdings are available in an online catalog. Starting in the late 1980s, the LBI used Inmagic’s DB/TextWorks to manage its collections. DB/TextWorks is a textbase software that allows for the indexing, management, and retrieval of text and images. Several databases were created to support the various task and functions needed in both the library and the archives. The bibliographic databases are based on MARC fields; however, they are not MARC-compliant. In addition, there are several databases containing administrative data necessary for the acquisition and accessioning process.

2.3 **The LBI New York Archives**

The archival collections of the LBI New York consist mainly of personal papers and topical collections. Organizational records are the minority.\(^3\) No current organizational records are deposited. A large number of collections are continually growing and added to and pose particular challenges in terms of accessioning and collection management.

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\(^3\) Rein (2002) gives an overview of the fate of the archives of the former Jewish communities in Germany.
Unlike “living” organizational records (Hackbart-Dean et al., 2002, p. 133), which usually originate from the same donor or institution, the LBI’s personal papers and topical collections are frequently added to by different donors. In the case of personal papers, additional donations are made by various family members or branches; topical collections grow from a large variety of sources, including members of former Jewish communities, newly formed communities and museums in Germany, and individual researchers. Especially individuals who donate family memorabilia need to be assured that future generations will be able to identify the specific items given to the LBI. Often, these items were brought out of Germany under difficult circumstances or are the only connection to family members who perished during the Holocaust. Thus, the provenance of all items must always be easily traceable.

Another complication of these additions is that their nature is not easily predictable. With the help of record management processes, organizational records can be arranged intellectually in such a way that new additions are easy to integrate. For example, minutes and reports are records that are produced and handed over to the archives on a regular basis, whereupon they are added to existing series of minutes and reports. The items arriving at the LBI archives on a daily basis usually do not follow these rules. This makes intellectual control more difficult.

Therefore, the effective and efficient management of new acquisitions and the accessioning process as well as the preservation of all information regarding provenance are of vital importance to the LBI archives.

2.4 The NHPRC Grant Project

In 2000, the CJH was awarded a major grant by the National Historical Publications and Records Commission (NHPRC)\(^4\). The grant consisted of four distinct components:

- a survey of the archival collections at the CJH;
- the integration of public services;
- the establishment of a CJH-wide disaster plan; and,
- the selection and implementation of an integrated collection management system.

This paper will focus on describing and analyzing the last component, system selection and implementation.

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\(^4\) The National Historical Publications and Records Commission (NHPRC) is a statutory body affiliated with the U.S. National Archives and Records Administration (NARA) and supports a wide range of activities to preserve, publish, and encourage the use of documentary sources relating to the history of the United States. See http://www.archives.gov/grants/index.html.
The goal of the integrated collection management system was to provide efficient access to the combined holdings of the partner institutions and to effectively manage their collections. This concept was conceived by the Automation Committee, which was created in 1999 and consisted of archival, library and museum staff members representing the partner organizations. During the project’s first year, the Committee created subcommittees for each functional area: library, archives, and museum. Their work focused on defining functional requirements for the system, as well as working with systems consultants to draft a Request for Proposal (RFP). The final RFP listed the requirements for archives, libraries and museums separately, but strongly encouraged vendors “to bid on two or more functional components to provide the highest level of functional integration.” The CJH sent the RFP to 14 vendors recommended by the consultants, nine of which submitted a proposal.

The proposals can be broken down as follows:

- Archives, library, and museum functionality: 1
- Archives and library functionality: 2
- Archives and museum functionality: 1
- Museum functionality only: 4
- Library functionality only: 1

The subcommittees reviewed the proposals and invited selected vendors for on-site demonstrations. In addition, colleagues working with the potential systems at other archives, libraries, and museum were asked for their opinions. The review processes lasted almost four months.

The museum staff decided early on that a separate system would likely be necessary. The core business functions of a museum differ greatly from archives and libraries. Even though all three acquire materials and make them available to the public, the majority of museum items have object-character, whereas most archival and library collections consist of text-based items. In addition, museums need to manage complex exhibitions and loans, both in-house and off-site. Indeed, only one vendor submitted a proposal meeting the specifications of all three components. The subcommittees agreed that the proposal was not convincing and that the required functionalities were not adequately met. The system, which the museum representatives chose unanimously by, supports only museum and registration functionality.

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5 The use of RFPs for library systems has been criticized and its usefulness questioned because of the “state of near-identical development among integrated library systems” (Waller, 2003, p. 5). In this case, however, three different functional areas – library, archives, and museums – were included in one RFP, thus providing vendors with a detailed overview of functions needed in areas, which were not the primary focus of their system and therefore new to them.
Thus, descriptions of the museum holdings will be available through a portal, which searches both the museum system and the archives/library system. Management functions, however, will be performed in separate systems.\(^6\)

The library committee approved the functionality of three systems and decided that the archival functionality should be the deciding factor.\(^7\) Since no vendor had bid for a stand-alone archival system, the chosen system would have to support both library and archival functionality.\(^8\)

All three short-listed systems clearly target a library-dominated market. None of them use any specific archival terminology or provide specific functionality. However, the answers to the RFP were promising and made it seem as though the systems could be able to fulfill almost all of the archivists’ requirements.\(^9\)

In the end, only two systems remained under serious consideration, and in August of 2002, the majority of the CJH partners voted for Ex Libris’s ALEPH 500. One of the decisive factors was the relational database management system (RDBMS) used by the vendor. ALEPH 500 is based on Oracle, which has become the preferred RDBMS for library systems (Breeding, 2004a, p. 51). The CJH’s IT department is able to provide support for Oracle; it recommended not to choose the other system, which uses Sybase.

ALEPH (Automated Library Expandable Program) was developed in the early 1980s by a team of librarians, systems analysts and computer programmers at the Hebrew University of Jerusalem. It was implemented at several other Israeli libraries and eventually turned into a private commercial venture under the company name Ex Libris. The current version,

\(^6\) Part of the contract with both the library/archive system vendor and the museum vendor is the development of an import/export function, which will eliminate the need for re-keying information when using the museum system to administer archival loans for example.

\(^7\) This view seems to be in-line with the assessment of several leading figures in the field of library automation, who attest that “all major library automation products can be considered fully functional and complete” (Breeding, 2003, p. 46) and that “the traditional system functionality that libraries now expect out of an integrated system – acquisitions, cataloging, online catalog, circulation – has reached a development plateau.” (Pace, 2004a, p. 64)

\(^8\) None of the five vendors suggested by the archival consultant submitted a bid. Requirements that might have been difficult for archival vendors to meet include the support of Unicode (necessary for the multitude of languages present in the collections of the partners) and the support of a “consortial” agreement with the appropriate permissions and security features. It is interesting to note, though, that apparently these vendors preferred not to respond to the RFP at all rather than providing a proposal that would not meet several requirements.

\(^9\) Record management functions were not a priority for the archives at the CJH and were thus not included in the RFP. If they had been a requirement, it is very likely the libraries and archives would have needed separate systems. During the implementation of Endeavor’s ILS Voyager at the United Nations Office Geneva (UNOG) libraries, the archives were asked to consider using the same system. They decided that “Voyager does not offer all the functionalities required for records and archives management according to professional standards. Especially, it did not offer any possibility to extend the system to records management in the future.” (Blukacz-Louisfert, 2002, p. 5)
ALEPH500, was released in 1997. ALEPH is currently used by over 900 institutions, ranking fifth in the category of public and academic libraries as well as consortia behind Unicorn and Horizon (both SirsiDynix), Voyager (Endeavor Information Systems), and Innovative Interfaces’s Millenium (Breeding, 2006b, p. 41.)

The actual implementation of ALEPH500 at the CJH began in February 2003. After four test loads and many changes, modifications and compromises, which will be described in detail in this paper, Ex Libris completed the final load in February 2006. By August 2006, ALEPH is used for cataloging and acquisition purposes, while the Web OPAC and the circulation module are still in the process of being set-up and tested.10

10 Eventually, the Web OPAC will be accessible via the CJH website at http://www.cjh.org.
3. Library and Archives Automation

Library automation and integrated systems are topics widely discussed on a regular basis in the professional literature. Journals such as *Computers in Libraries* and *Library Hi Tech* are devoted exclusively to library technology. Several journals provide regular columns devoted to the newest developments in the market, such as *Library Journal*’s Info Tech section. Librarians frequently share their experiences and provide helpful tips and advice in brief articles.\(^{11}\) More extensive case studies of implementation projects are also common.\(^{12}\)

The issue of archival automation has been severely neglected in the professional literature over the past decade.\(^{13}\) A bibliography compiled for the International Council on Archives in 2002 lists only 16 such articles published after 1995, out of a total of 306 items (Lake, 2002).\(^{14}\) The cessation of discussion about archival automation coincides with the development of EAD, the standard for Encoded Archival Description, which was released in 1998. EAD has become a major focus of archival literature and discussion. Its main achievement, however, is to provide convenient online access to standardized finding aids. It does not provide support for basic archival management functions such as accessioning and circulation – functions for which libraries have sophisticated integrated systems. Whereas improved access and standardized description are of major importance to archivists, the automation of their daily workflows should be just as essential: “On-line catalogs should serve all of those who use them – researchers looking for collections containing desired information as well as archivists who need to organize and manage information about the activity record of their archival collections.” (Walters, 1994, p. 108).

Of particular interest to this paper are articles about the integration of archival functions in library systems. A substantial number of archives are part of institutions that also consist of libraries (such as university libraries and historical societies). Archivists wanting to make descriptions of their collections available to a wider audience made use of the existing bibliographic systems in their libraries and have been entering records in these systems since the mid-1980s. This was made possible by the extension of the USMARC Format for

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\(^{11}\) Just a few representative examples of these kinds of articles include Zhu’s (2004) comments on migration issues, Singer’s and Nelson’s (2004) advice on how to hire the right consultant, and Rumph (2001) descriptions of the RFP process.

\(^{12}\) See the articles mentioned in the introduction.

\(^{13}\) Most professional library journals, however, frequently publish articles on library automation; some even have dedicated regular columns that discuss the latest developments.

\(^{14}\) The bibliography does not include any information regarding its scope or sources. It does seem fair to assume, though, that newer articles were not excluded on purpose.
Bibliographic Data to include standards for *Archival and Manuscript Control* (AMC) as well. Even though archival materials are in many ways different from the items collected by libraries, it became obvious that archivists and librarians describe their collections in similar terms and that the USMARC format was able to accommodate them both. Some of the key innovations of USMARC-AMC include the option to link records and to use a hierarchical structure to express the arrangement of a collection in series, sub-series, and items; the addition of fields recording changes associated with the description of the materials; and the possibility to define parts of the materials being described. Within just over a decade after its introduction, Martin was able to conclude that “MARC AMC is here to stay, and it is fully entrenched in archival theory and practice in the United States.” (Martin, 1994, p. 496). Thus, bibliographic and archival description can now be based on a common standard.

One of the first articles written on the integration of archival and library systems posed a question, still key today, in its title: “Information systems for libraries and archives: opportunity of incompatibility?” (Szary, 1986). Szary sees the main opportunity for integration in the area of bibliographic description and retrieval, which is commonplace today. A recent successful implementation, which made full use of USMARC-AMC’s potential is described by Fitzgerald for the archives of the Royal Botanic Garden in Kew, England (Fitzgerald, 1995). Ray and Hopkinson report on a similar project based on UKMARC (1994). The areas of collection management/acquisitions and reference management/circulation, however, are more problematic. Most articles on these issues describe a separate system used for management functions, while brief, descriptive records are uploaded to a library system to make them accessible to users. Roe summarizes in 1990: The differences between library and archival functions become most evident at the point when an archives attempts to adjust its operation to automated library systems. The acquisitions and circulation modules designed for library systems are sufficiently unique that archivists have made no efforts to employ these with their holdings. Archival efforts have relied solely on using library bibliographic modules for archival automation. (Roe, 1990, 149)

15 USMARC-AMC was developed by the Society of American Archivists (SAA) in cooperation with the Library of Congress, and approved by SAA in 1982. In 1994, Lyn Martin surveyed the literature on MARC-AMC, which reached a peak between 1984 and 1991 (Martin, 1994, p. 484).
16 A brief summary of the development leading to USMARC-AMC can be found in Hensen (1998).
17 See the summary in Weber (1990).
18 This possibility, however, has not translated into the structure of archives management software. Of the 25 products surveyed on behalf of the International Council on Archives’ Committee on Information Technology, only 6 are listed as supporting MARC (Lake et al. (2003).
19 See for example the articles by Prietto describing the Washington University Special Collections Department’s use of dBASE (Prietto, 1994) and by Watry on the use of ProCite at the University of Liverpool (Watry & Watry, 1996).
The use of separate systems, though, puts additional financial strains on an institution. A shared system reduces the initial cost and the cost for continuing support and maintenance.

The only article reporting in detail on the possibilities of using a library system for archival functions was written in 1994 by Walters, who worked with NOTIS at the Northwestern University Archives and at Iowa State University. He notes the improvements made in the full implementation of USMARC-AMC fields – fields related to acquisition and provenance, which were previously not supported in NOTIS, are now available and can be suppressed from public view, another important requirement for archives. He also comments on the extended record capacity: since archival records contain more descriptive information, they tend to be larger than regular library records. Other improvements include enhanced indexing and OPAC design capabilities. In addition to these positive developments Walters also describes what he calls “continuing obstacles”. These include the difficulties involved in creating complex reports needed for management functions and the lack of sophisticated applications for entering and maintaining information related to appraisals, accessioning, preservation and conservation.20 Walters states “NOTIS needs to develop basic application software to simplify data entry and to categorize and streamline the workflow.”(Walters, 1994, p. 114).

In 2002, the CJH decided to implement Ex Libris’s integrated library system ALEPH 500 to manage both its library and archival collections. Bibliographic and administrative functions are supposed to be carried out in one system. The following section describes the challenges and obstacles faced by the CJH a decade after Walters’ observations.

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20 Other problems listed by Walters, such as the implementation of linking fields and indexing capabilities for all archival fields, are solved in current integrated library systems.
4. Implementation

After the CJH had signed the contract with Ex Libris at the end of 2002, the actual implementation began in February 2003 with a weeklong meeting with two Ex Libris project team leaders from Israel and the Ex Libris Implementation Team (ELITE), consisting of the partner organizations’ library and archives representatives and three CJH staff (the project manager, the database coordinator, and the systems librarian).

The following discussion of the implementation of ALEPH 500 at the CJH is divided into two parts: Data Migration focuses on the issues involved in transferring information from previously used systems into ALEPH, while Archival Workflows concentrates on adapting the system to archival management functions and includes an in-depth overview of the “Archival GUI” developed by Ex Libris in cooperation with the CJH.

4.1 Data migration

After the initial meeting, which for the most part consisted of a comprehensive introduction to the ALEPH system, the first undertaking was to prepare the current data for conversion to the new system. The LBI archives was in a unique position. A lot of functions were already automated with the help of Inmagic’s DB/TextWorks and an online catalog with bibliographic information was available. However, because the databases had all been created locally and were not MARC-compliant, the migration was not as straightforward as if the data had simply resided in a different integrated library system. On the other hand, migration from one database to another seemed a realistic possibility, whereas other electronic files, such as word-processing documents or spreadsheets, would have been impossible to convert.

4.1.1 Mapping

Since the LBI databases were not MARC-compliant, the existing fields first had to be mapped to the corresponding fields in USMARC. Most of the fields were straightforward. Since ALEPH 500 has implemented all USMARC fields, including the AMC format, corresponding USMARC fields for almost all internal fields were found. The following is an excerpt from the internal documentation of this process, which was provided to Ex Libris in conjunction with the data:

---

21 The table shows only a few sample fields; the actual conversion tables contains between 20 and 35 fields.
<table>
<thead>
<tr>
<th>LBI Fields</th>
<th>MARC/AMC</th>
<th>Description of usage</th>
<th>Field type</th>
<th>Validation</th>
<th>Display in OPAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>001</td>
<td>Unique retrieval key, system number</td>
<td>Text</td>
<td>unique, single only, required,</td>
<td></td>
</tr>
<tr>
<td>Creation Date</td>
<td>008</td>
<td>Automatic Date (when created)</td>
<td>Automatic Date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Call number</td>
<td>094</td>
<td>Local call number</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Creator</td>
<td>100$a</td>
<td>Used for author in Memoirs and Microfilms</td>
<td>Text</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>245$a</td>
<td>… Collection</td>
<td>Text</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Span</td>
<td>245$f</td>
<td>Dates of the material, not standardized:</td>
<td>Text</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>300$a</td>
<td>Size of the collection in linear feet, box and folder numbers, items, etc., not standardized; for memoirs and microfilms often number of pages</td>
<td>Text</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Arrangement</td>
<td>351 $a</td>
<td>Rough overview including titles of series</td>
<td>Text</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Inventory</td>
<td>505$a</td>
<td>Inventory down to the folder level</td>
<td>Text</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Restriction</td>
<td>506$a</td>
<td>Any restrictions on access or use of the material</td>
<td>Text</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Contents</td>
<td>520$a</td>
<td>Summary of the contents of the collection, sometimes comparable to folder level descriptions</td>
<td>Text</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Biography</td>
<td>545$a</td>
<td>Biographical information</td>
<td>Text</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Language</td>
<td>546$a</td>
<td>Textual, not coded</td>
<td>Text</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Finding Aid</td>
<td>555$a</td>
<td>Note pointing to finding aids available in the archives, like 5 catalog cards, 7 page inventory,</td>
<td>Text</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Provenance</td>
<td>561 $a</td>
<td>History of the transmission of the material, from its creation to its acquisition by the LBI</td>
<td>Text</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Obvious problems included the lack of use of subfields and of standards for date and language fields and the fact that in the case of the restrictions information, two MARC fields were merged into one LBI field. Restrictions on both access and use were recorded in the same LBI field, whereas USMARC provides field 506 for “Restrictions on access note” and field 540 for “Terms governing use and reproduction note”. These issues will have to be addressed in ALEPH as a data cleanup project.
4.1.2 Internal Fields

For the few fields that could not be mapped to USMARC, new internal fields were defined in ALEPH. These include \texttt{SHL$a} for the complex shelving location in the LBI archives and \texttt{IMA$a} for the identification number of microfilms stored in an off-site facility. In addition, fields needed to be added to the existing LBI databases to facilitate conversion. The field \texttt{STA $a} is necessary to suppress certain records for the OPAC. With the help of field \texttt{MAT $a}, the correct material type was assigned during the conversion.

4.1.3 Linking

The LBI decided not only to include its archival collections, which were already available via an online catalog, in ALEPH, but also to include its photograph and art and object collections. It would also have been possible to handle these collections with either the museum system or with Ex Libris’s digital asset management system DigiTool, which are both available at the CJH. Since all the photographs and a substantial number of artworks were separated from an archival collection, the LBI decided to integrate all materials in one system and to use the linking capabilities provided as part of the USMARC format to keep the relationships between these items intact and easily traceable.\footnote{ALEPH allows for the creation of predefined subsets (logical bases). This enables the researcher to choose to search in a virtual collection consisting of either only photographs, art objects, or archival collections in the online catalog. A search across all formats is possible as well. In the same way, researchers will be able to limit their search to the collections of one or more partner organization at the CJH.} Thus, the fields of three databases had to be mapped to USMARC. Both the photograph and the art and object databases were based on the archives database and to a large extent consisted of the same fields, so that only a few additional fields had to be mapped. In the photograph database, this included the link to a digitized image, which was mapped to the \texttt{856} field. This allows users of the OPAC to click on a link to view the digital image. To create links between the item records in the photograph and the art and object collections, an additional field was added to both databases. The field \texttt{773$w} in the item or “child” record allows for the creation of a link to the archival collection, the parent record, or host item via an internal ALEPH field called \texttt{LKR}.

The same field was also used to link items in a fourth database, the “inventory” database, to parent records in the archival collection. This inventory database, which only consists of a few fields, was used to create inventory lists and box or microfilm labels for archival collections. It includes box and microfilm level records for over 2,000 items. The LBI decided to incorporate these records in the conversion process and link them to the entries for the collection to which they belong. This allows for the creation of a large number
of items that can be requested directly from the online catalog right from the beginning. For collections that do not have these kinds of box or microfilm records, “item records” will be created after the conversion to enable patrons to place hold requests from the online catalog.

4.1.4 Administrative data

In addition to descriptive data, the LBI archives also used a database for administrative data. The “acknowledgment” database is used to track accessions and also to prepare print acknowledgments, which are sent to the donors. It seemed obvious that these local accessioning procedures would not be easy to map into a library system, which does not by default provide a separate archival accessioning module. It was therefore decided not to convert this data into the administrative module of ALEPH, but to map its fields to USMARC and local fields and migrate it as legacy data simply to have the information still available. This decision was supported by the fact that a considerable amount of this information had generally been added to the descriptive information as part of the accessioning process, such as the donor’s name, the donation date, and a brief description of the materials donated.

Additional information available in the administrative database includes mainly the dates when the acknowledgment was sent and when the donor was mentioned in the semi-annual LBI newsletter. Just as with the photograph, art and box/microfilm records, these administrative records were added to the bibliographic database in ALEPH. It was planned to link them to the archival collections they refer to via MARC field 773 as the basis for the creation of the ALEPH internal LKR field, which makes the links functional. Since all these records contain only internal administrative information, they were supposed to be suppressed from the OPAC via the ALEPH internal STA field. However, during testing it became clear that even though these records cannot be retrieved by a direct search they do appear as links from the record for the archival collection in the OPAC, which is not acceptable. In the end it was decided to not create LKR fields for administrative records or any other records such as photographs and art work, which for some reason are not supposed to display in the OPAC. 23

Unfortunately, the suppression function in ALEPH is inadequate when used in combination with linked records and not well documented.

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23 A large number of photographs and works of art only have very minimal catalog records, which are not suitable for public display. There is a plan to enrich these records and make them available eventually.
4.1.5 Test loads

All the LBI databases consisted of a relatively small number of records that need to be converted\(^{24}\), so that all records and not just a small sample were loaded into ALEPH during the first test load in April 2003. The data was prepared as follows: A report was created in DB/TextWorks, which added the corresponding USMARC field as a label to the data. The report was saved as a text file and delivered to Ex Libris. The following is an example of a record for a small collection, which consists of only one item:

```
$$$$
001  3812
005  5/25/99
008  5/5/99
094  $$aAR 3812
2450 $$aLeon Goldschmidt Collection
245  $$f1912
300  $$a1 item
5202 $$aHumorous poem for his 50th birthday (1912).
545  $$a1912
546  $$aGerman
583  $$x23-Feb-1990
690  4$$5Goldschmidt, Leon
690  4$$5Literarische Gesellschaft in Hamburg
852  $$bLBIAR
852  $$jAR 3812
SHL  $$aK 1/5
```

Unfortunately, Ex Libris did not have any tool in place to guide and manage the evaluation of the test loads. Both CJH and Ex Libris staff communicated problems very informally via a listserv set up for the implementation team by Ex Libris. There was no checklist or plan that would have facilitated the process and pointed to issues to look for. This was problematic, especially because the LBI data came from a non-MARC database, which only contained bibliographic records. Issues such as holdings and item records were completely new territory.

After a second test load in April 2004, a year after the first load, the LBI librarian and archivist created a shared list of evaluation issues that was emailed back and forth and commented on by the Ex Libris project team. This made it easier to keep track of “open issues” and also served as a record for conversion changes discussed and implemented. Eventually, there were four test loads leading up to the final load in February 2006.

Several smaller problems were easy to fix and correct by changing either the mapping on the LBI side and/or the conversion scripts on Ex Libris’s part. Other problems, such as diacritics and special characters, were embedded in the data and were to some extent not

\(^{24}\) Almost 55,000 records from the LBI archival databases were included in the first load, with the majority consisting of records for individual photographs (ca 35,000).
rectifiable. Larger issues mirror the obstacles mentioned by Walters with regard to the NOTIS system in 1994, (Walters, 1994) and include indexing and record length.

4.1.6 Indexing

In the initial set-up, not all fields used were indexed individually or searchable. Particularly for archives, the ability for staff to search administrative data in conjunction with descriptive information is important. An example would be a search including the name of the donor and a subject term. Thus, Ex Libris set up separate indexes for each field, including the subfields, added them to the staff search screen. The indexes were labeled with the corresponding USMARC field, such as “Words from 505”. This set-up might take getting used to, but eventually it will provide for a very precise search.

Another indexing issue arose from the fact that multiple fields were often included in a single index by default. Field 773$a, for example, which in a record for a photograph, box, or microfilm reel contains the name of the archival collection it is linked to, was part of the general ‘Title’ index and thus led to confusing search results. A search for ‘Georg Landauer Collection’ in the ‘Title’ index also retrieved several photographs from this collection. Thus, the decision was made to remove field 773 from the general ‘Title’ index.

A more strategic implementation plan could have avoided these indexing issues. They were not discussed before the first load, and even after the first load Ex Libris simply instructed the CJH to check the ALEPH tables to see how the indexes were set up. A detailed checklist asking for CJH input before the first load would have been a better approach to this issue.

4.1.7 Record length

Archival records tend to be longer than records for books and other print materials, because they usually describe a group of materials rather than a single item. To understand the context of an archival collection, interpretive and background information needs to be provided. In USMARC-AMC, these fields include the biographical/historical note (545) and the scope/content note (520). In addition, archival records may also require a larger number of indexing terms than most library records, particularly names. In the LBI archives, the container lists are also part of the bibliographic record and were mapped to field 505.

The USMARC standard allows a single record to be as large as 99,999 bytes, almost 100k. In ALEPH the record size limit is even smaller, only 45k.25 Thus, 43 records ended up

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25 This fact was not stated clearly in the RFP. In the RFP, the Center had asked for the following: “Shall allow fields, such as note fields and biographical histories, to be of arbitrary length.” Ex Libris responded “The ALEPH system conforms to the MARC 21 standard.” The same statement is found in Breeding’s overview of
being truncated after they were loaded into ALEPH. Since the records were simply cut off when the 45k limit was reached, which usually happened within the inventory list in field 505, all the following fields, such as fields 773 and 852, which are vital for linking and indexing purposes, were not included in the record in the test load. For the final load, the inventory lists in the 505 fields were deleted from these 43 records. Thus, the links resulting from 773 to the above-mentioned box records were established, which include the container list for each box. A complete inventory list in the “parent” record is no longer necessary. In addition, several of those records have a link to an online EAD finding aid in the 856 field, which also provides the complete container list. When new collections, which consist of more than one box and thus have "child" records for each individual box, are cataloged in ALEPH, the inventory will only be cataloged on the box-level, and not entered in the collection-level record.

4.1.8 Item records

Another problem area in ALEPH is item records. Item records refer to the actual items or physical manifestations that can be requested by the patron. A book might be available in several copies; a manuscript might be available both as an original copy, as a facsimile and as a microfilm; an archival collection might have an item record for each box or folder. The LBI archives database only contains descriptive records; individual items are described textually.

Translating this information for the conversion process was problematic. As illustrated above, box and microfilm records for archival collections were represented by separate bibliographic records linked to the collection record. For these kinds of collections, no item records are needed on the collection level; each box and each microfilm has its own bibliographic record and one corresponding item that can be requested. Most memoirs and manuscripts have been microfilmed and have two call numbers in a single record – one for the original paper copy and one for the microfilm reel. Thus, two items that can be requested are needed. However, the reels usually contain several memoirs or manuscripts, so that these memoirs and manuscripts need to share item records. Ex Libris did not consider this complex situation part of the conversion process and refused to write a program based on the specifications provided

ILS systems, in which he states “The system should not have limitations on the overall length of a bibliographic record or on the number of fields or instances of a repeatable field.” (Breeding, 2004a, p. 62). In this case, Ex Libris also responded “Yes, within the bounds of MARC limits.” In an email on the MARC listserv, Warwick (2000) notes “The reality is that very few vendors have actually implemented this size within their own systems; most have lower size limits. In conversation, vendors frequently speak as if their system limit is the MARC limit (I’ve had to correct more than one vendor in conversation and they haven’t liked being corrected). . . . the sales people/customer support people often do not understand the distinction between the limit in the standards and the limit within their own system and can disseminate inaccurate information (i.e., that the MARC record size limit is 10K).”
by the archivist. The inventory database contains a brief bibliographic record for each reel, and the LBI decided to also migrate these records into ALEPH. The corresponding memoir/manuscript item records will have to be linked manually to this bibliographic record to correctly reflect the physical manifestations.

The migration of data as described above only forms one part of the implementation process. Another important aspect concerns the specific archival workflows, which need to be supported by ALEPH.

4.2 Archival functionality

The archives section of the RFP included not only general system requirements, but also detailed specifications for individual modules, such as accessioning, cataloging, tracking, authority control, and patron registration. When talking to the Ex Libris implementation team and trainers, it became obvious that they had no understanding of how, for example, archival accessioning differs from library acquisitions. A library usually buys one or more copies of an individual book, which is described in one bibliographic record and one or more corresponding order records. The book arrives and is paid for and cataloged, and the acquisition process is completed. An archival collection, on the other hand usually consists of a large variety of items and can be added to over time by different donors. An accession record has to keep track of the specific materials that were donated, their extent and condition, and any special restrictions.

In ALEPH, the acquisition information is always tied to a bibliographic record. If a book has more than one order record, all orders still refer to the same edition: author, title, and publisher, for example, will be the same for all orders. In general, the order record for a book only needs to keep track of the vendor and the price. In addition, ALEPH also allows for budget-related information to be stored. In terms of an archival collection with more than one accession, it is usually only the title of the collection that remains the same and can be taken from the bibliographic record. All additional information needs to come from the accessioning module.

Ex Libris had promised in the RFP a number of discrete fields for accessioning information, such as “legal notes” and “physical extent of accession” and the option to add custom fields. ALEPH’s out-of-the-box acquisitions module showed none of the fields. In the course of the implementation, it became obvious that custom fields could only be added to the cataloging module. The acquisitions module was not flexible in terms of adding or expanding fields. Ex Libris staff was quick to point out that, for example, restrictions on access and use
could be entered into the bibliographic module using existing USMARC fields. The archivists had to explain repeatedly that they were looking for a separate accessioning module, which would hold information related to distinct parts of a collection that were donated at a specific time, by a specific person under specific conditions, which referred only to a specific donation and not the collection as a whole.

While it is possible to record this information in USMARC fields, the CJH archivists had asked for more than just “the raw AMC fields where data can be input and tagged,” as Walters described the extent of archives automation in library systems in 1994. Archivists use subfield $3$, entitled “materials specified”, to indicate that a field only applies to a specific part of the collection. In field 541, which records acquisition information, subfield $3$ is used for information about separate additions to a collection:

```
541 $3 Diaries of Ernst Lissauer, 1907-1937
   $a Lissauer, Grete
   $c Gift
   $d 1981/09/24

541 $3 Manuscript for “Glueck in Oesterreich”
   $a Glatzer, Nahum
   $c Purchase
   $d 1974
```

Field 506 “Restrictions on access” can be used as follows to denote that only parts of the collection are restricted:

```
506 $3 Diaries of Ernst Lissauer, 1907-1937
   $a Written permission from the donor required for access
   $d Family members do not need permission to access the diaries

506 $3 Manuscript for “Glueck in Oesterreich”
   $a No access until 2015
```

While it is important and useful to track this information in the bibliographic record with the appropriate USMARC fields, it is not possible to use this information in the accessioning process in ALEPH. The acquisitions module cannot distinguish between repeated fields or pick a specific instance of field 506 to print, for example, on a deed of gift.

Walters concluded that “using these raw AMC fields without any application software programming to simplify and provide support for collection management functions makes NOTIS quite cumbersome to use.” (Walters, 1994, p. 113). In terms of archival management functions there seemed to be no substantial differences between NOTIS in 1994 and ALEPH in 2003.
4.2.1 The Archival GUI

To accommodate archival accessioning workflows, Ex Libris staff created an “artificial” language called ARC, which “translates” the library driven acquisitions module into an archival setting. ARC has the same characteristics as any other language such as German or French. The user can change the interface language by right-clicking on the “Tower of Babel” icon in the bottom right-hand corner of the screen:

This new “archival” accessioning interface – the Archival GUI – allows for changes in labels, terminology, and drop-down menus, as well as for the association of distinct archival print forms such as acknowledgments and deeds of gift instead of order and claim letters. After Ex Libris had presented a first version of the Archival GUI, it underwent intensive testing at the CJH. Problems encountered included mapping the existing library forms to their archival counterparts and their functionality. While, for example, every archival donation is acknowledged right away, a deed of gift might only be sent out later. Thus, the acknowledgment letter is similar to the order letter sent to the vendor, while the deed is more closely related to a claim letter. However, in a library setting the order letter is sent out first, whereas an archival collection arrives first, and then, the acknowledgment is sent. The system had to be tweaked several times to accommodate for these differences in workflows. The following screenshots will highlight the changes from the regular interface.
ALEPH allows the user to create a brief bibliographic record to which the accession record will be attached. In ARC mode, MARC fields specific to archival collections are used, such as scope and content (520), biographical/historical note (545), and provenance (561). The book-related fields used by librarians, such as edition (250), publisher (260$b), and place of publication (260$a) do not make sense in an archival context.
Adding a new accession

ARC language

When the “Add” button is clicked in the Acquisitions module, the ARC language module asks for the “Accession Type,” whereas the regular module asks for the “Order type.” In ARC, only one radio button is used, the only accession type possible is “Gift.” Note how the window in the back displays an “Accession List” in ARC, while the regular display says “Orders List”.

Regular English language
Accession form – Accession information

ARC language

Next, in ARC an “Accession Form” appears, whereas the regular module shows an “Order Form.” Several field names have been changed to reflect archival workflows, such as “Date of Acknowledgment” instead of “Order Date.” The field “Order Number” was changed to “Date Received.” The type of field could not be changed from text to date, so that the default field is not empty, but contains a hint as to how the date needs to be entered to guarantee consistent retrieval: YYYYMMDD. The “Library Note” was changed to “Materials Descriptions” and is used to describe the materials included in the donation. Unfortunately, this field can only contain 200 characters, which is not enough for a detailed description of most archival accessions. Most of the drop-down menus have also been modified to reflect archival workflows. In the “Accession Status” field, for example, terms such as “Sent to Vendor” were changed to “Acknowledgment Sent.”

Regular English language
*Accession Form – Donor*

**ARC language**

In the second tab, the term “vendor” was replaced with the term “donor”. Donor information is recorded similar to vendor information, and a code is assigned. The "Claim Date" was changed to “Date Deed Printed,” and, instead of “Batch Claiming,” the user can select to print deeds of gift in batch.

**Regular English language**

In the second tab, the term “vendor” was replaced with the term “donor”. Donor information is recorded similar to vendor information, and a code is assigned. The "Claim Date" was changed to “Date Deed Printed,” and, instead of “Batch Claiming,” the user can select to print deeds of gift in batch.
The last tab of the accession form allows for recording of quantity and price information. On this tab, the “Price Note” label was changed to “Price/Appraisal Note.” Since the “Number of Units” field is linked to the number of items records to be created, it cannot be used to record information about the extent of the collection to be accessioned. Some of this information can be recorded in the “Quantity Note,” but like every other note field in this module, it is limited to 200 characters, which limits the archivist’s ability to properly describe the donation.
Finally, some of the labels on the buttons on the right have also been changed to reflect archival procedures. Worksheets, acknowledgments, and deeds can be printed via these buttons; the “Order Log” is now an “Accession Log.”
4.2.2 Forms and letters

One of the biggest obstacles to implementing the Archival GUI was the required change in the format of the forms and letters that archivists need to print and send in the course of the accession process. It is one thing to change the label of a button; changing the format of forms and letters proved to be impossible for the CJH and partner staff and, eventually, for Ex Libris.

ALEPH provides several different types of forms and letters by default in the acquisitions system. These include, among others, an order letter, which contains all the necessary order information that is sent to the vendor, and a claim letter, which is sent when the order does not arrive on time. The system uses both bibliographic and acquisitions data to compile these letters.

In DB/TextWorks, the LBI created forms for an acknowledgment, which prints the name and address of the donor on an envelope and adds the collection title and call number, as well as a brief (but not limited to 200 characters) description of the materials donated, to a pre-printed acknowledgment card.

The following is an example of an LBI acknowledgment card:

![Acknowlegement Card Example]

The text on the left side is pre-printed. The circled text on the right side is supplied from fields in the database; the remaining text is fixed information provided for every acknowledgment.

The deed of gift, which documents the legal transfer of the archival donation from the owner to the archives, is printed based on a template in Word. It should be automated as well,
because all the relevant information that is not included in the acknowledgment, such as special restrictions, should also be recorded in the integrated management system.

All forms and letters in the acquisition module in ALEPH are based on XML (eXtensible Markup Language) and XSL (eXtensible Style Language) and are output in HTML. According to Ex Libris, it is not possible to define a page and print set-up for these forms. Printing on envelopes or other special formats is, thus, impossible. In addition, the XML and XSL set-up is so complicated that the addition of specific fields to be printed on the acknowledgment, such as the “Materials Description” from the first tab of the accession form, results in changes of fonts, font styles, and font sizes, which seemed impossible to fix.

The following is an example of an acknowledgment that LBI staff created and sent to Ex Libris for help with formatting issues:

ALEPH’s vendor records are based on companies and do not include fields to distinguish between titles and first and last names. It is, thus, not possible to create a proper salutation. In this example, “Ms. Edelman” was saved in one of the note fields of the donor record, not an ideal solution. CJH and partner staff was still unable to remove the colon and the space between the salutation and the name and to change the font style from bold to regular. Note also how the fonts differ in the bottom section, which describes the donation. Again, it was impossible to remove the colon between the label “Accession Number” and the actual number. The different fonts and font styles were also not changeable.
Ex Libris answered repeatedly that fonts are “complicated” and that it is not their responsibility to configure forms for their customers. The CJH insisted that this should be part of the set-up of the Archival GUI, because the forms and letters used in archival accessioning workflows are so fundamentally different from the standard order and claim letters used in libraries. The RFP had requested:

Provide a means of generating letters of acknowledgement, and other accession source documentation and communications (e.g. deed of gift). These communications should be easy and readily created by template by Partners’ staff.

Eventually, Ex Libris agreed to pay a third party to develop these forms for the CJH; they were not willing and/or able to have their own staff work on these issues. It is disturbing to see that a vendor has invested considerable effort in setting up a system of forms based on a standard, which is supposed to separate content and design, without supplying appropriate documentation for their customers and themselves to make use of this functionality.

The result of the third-party work was not satisfactory at all. It required an additional piece of new software and many cumbersome steps to get to a print-out. In the end, the CJH's IT department developed a work-around without Ex Libris's input. They connected MS-ACCESS directly to the ALEPH Oracle tables, and created a number of customized reports, which allows the users to extract information from ALEPH based on pre-defined fields and print them according to the archives' requirements. This approach will be described in further detail in the following section on archival workflows in ALEPH.
5. Archival Workflows in ALEPH

At the time of writing, ALEPH has been used for cataloging and accessioning purposes for almost four months. Not all workflows have been finalized as of yet, but the following should serve as a good overview as to how ALEPH is utilized in the Leo Baeck Institute Archives.

5.1 Accessioning

In general, archival materials have to be accessioned either as a new collection or as an addition to an existing collection. For a new collection, the first step is to create a bibliographic record, to which the accession record will be attached. The bibliographic record can either be created in the cataloging module with the help of a template that includes the major MARC fields needed to describe an archival collection or directly in the acquisitions module in an abbreviated form with only a limited number of MARC fields available. If the materials are to be added to an existing collection, the administrative record is called up in the acquisitions module. In the next step, a new accessions record is added. The system automatically assigns a prefix to the accession number to distinguish materials for the LBI archives from records from the other institutions at the CJH.

In the first tab of the accession form, the archivist records the date when the materials were received, selects a material type from the drop-down menu (choices include archival mixed material, manuscript, photo, art and objects, microfilm, and memoir), assigns the materials to an administrative unit or sub-library, and briefly describes the materials in the note field within the 200 character limit. The system also automatically records the day when the record was created and when the status was changed. In the Archival GUI, the acquisition method is pre-selected as Gift – if the materials were obtained in another fashion, the archivist needs to select another method from the drop-down menu. The accession status is automatically set to “NEW”; it can be changed manually and will change automatically if a specific function is performed from within the accessioning module, such as sending an acknowledgment. Since it was not possible to modify the print forms such as the acknowledgment and deed of gift to create an acceptable format, all the form printing is done with a separate MS-ACCESS database, which is linked to the ALEPH tables. While this allows for the extraction of all the necessary accessioning data from ALEPH, the status field

26 It is not possible to create just an accession record, which can later be linked to several archival collections. A partner at the CJH would have preferred this option, since they do not always assign a new accession to a collection upon arrival of the material.
will not be updated automatically to reflect for example that an acknowledgment has been sent.

On the second tab, information about the donor is added. The donor code is selected from a list, and the full name is displayed. If the donor is not on the list, a new donor record needs to be created. The donor record contains not only address and contact information, but also specifies which acknowledgment letter will be sent if this function is used in the accessioning module. In theory, different acknowledgment letters are available for each partner institution. The donor information is carried over to the acquisitions module. The date when the deed of gift was printed is also recorded automatically in this tab, but again only if this action is performed with the module.

The final tab relates to quantity and price information and is of little use for most archival donations. The number of units should only be entered if the collection consists only of one physical item, such as one manuscript, one reel of microfilm or one folder of materials, because this is the basis for the creation of item records. Item records refer to the actual physical items that can be circulated within the system; they are identified by unique barcodes. For larger accessions, it is impossible to determine how many items are to be created at this point. The LBI archives holds numerous topical collections that are added to on a continuous basis, such as collections of materials related to particular communities or prominent individuals. These collections are in a constant state of growth and most of them do not have any formal arrangement. New accessions are added as numbered addenda. For these additions, which are directly transferred to archival folders and listed in the bibliographic record, it seems feasible to create item records at the time of accession.

If the materials were purchased, detailed information about the price can be entered in the final tab as well. It is also possible to record the appraised value instead.

As noted in the previous section, one of the major limitations of the archival accessioning module in ALEPH is that it is entirely based on existing library functionality. No fields were added; the basic layout of the tabs stayed the same; and there are restrictive size limitations for necessary note fields. Consequently, important accessioning information is dispersed over the three available tabs and not grouped logically. Information about the date when the deed of gift was printed should be found right next to the date when the acknowledgment was sent. The name of the appraiser and the appraised value should be on the same tab. Also, abbreviations used in drop-down menus could not be changed. The status “Acknowledgment Sent” for example is abbreviated as “SV” for “Sent to Vendor,” which relates to the library process on which this functionality is based.
When all three tabs of the accession form have been filled in, an accession record is created and additional functions become available in the accession list. If the forms were printed from the accessioning module, the first step would be to print the acknowledgment. Once the “Send Acknowledgment” button has been clicked, the accession status would change to “Acknowledgement Sent.” Next, the deed of gift could be printed if necessary. Not all donations require a deed of gift. Photocopies or other non-original materials are usually just acknowledged; a legal transfer of ownership is not necessary. When the deed of gift is printed from the accession module, the date is recorded in the second tab of the accession form.

Since the forms in the accession module could not be modified to create satisfying print-outs, the LBI archives uses the aforementioned MS-ACCESS database to print acknowledgments, deeds of gifts and other forms and reports related to the accessioning process.

The following screenshots demonstrate the workflow:

The first field contains the list of reports to choose from. For all reports for the LBI archives the sublibrary LBIAR is pre-selected. The additional fields allow for filtering the data to only include those records to be printed. In this case, only the order status "NEW" is selected, since all pending acknowledgments are supposed to be printed. The result of this report is prefaced with a page summarizing the specifications of this report:
Following this summary are the individual letters of acknowledgement, which have been formatted to print on the LBI’s letterhead:

These forms can either be printed straight from MS-ACCESS or exported to MS-WORD if further formatting is necessary. The functionality of this set-up is not limited to form used in the accessioning process. Among the other forms created in this environment for the LBI archives at this point are box labels, worksheets, and statistical reports and lists. Since all ALEPH tables are directly accessible this way, the reporting and printing possibilities are
unlimited. The fact that Ex Libris is marketing a separate module called the ALEPH 500 Reporting Center (ARC)\(^{27}\) points to deficiencies in ALEPH’s reporting capabilities. On Ex Libris’s Website, ARC is described as follows: “With ARC, staff will have ad-hoc statistics regarding virtually any aspect of your library at their fingertips.” Pace comments on this development of providing optional reporting software at extra cost: “Leave it to vendors to come up with a way to charge libraries for extracting the libraries’ own data from their own systems – for which the libraries already pay the vendor a great deal of money.” (2004b, p. 68) In 1994, archival reports in NOTIS had to be programmed by IT staff, as reported by Walters (1994, p. 113). These issues are not much more straightforward in 2006.

As mentioned above, when using MS-AACCESS instead of the specific buttons in the accessioning module to print forms, certain convenient functionalities, such as the automatic update of the status field, do not work and have to be performed in a separate step. The fact that the print forms in ALEPH acquisition module are not sufficiently customizable is a major obstacle to fully implementing the Archival GUI.\(^{28}\)

### 5.2 Cataloging

Since the migration populated ALEPH with several thousand child records linked to collection level descriptions of archival collections, the LBI archives continues to catalog in this fashion. Each archival collection is represented with at least one bibliographic record in the online catalog, as soon as the materials are considered available for the public. Smaller collections and individual manuscripts and memoirs consist of only one record. Larger collections, consisting of several boxes or several reels of microfilm, have child records. These records are either based on their containers, such as boxes or microfilms, as implemented during the conversion, or on logical entities such as series and sub-series. An electronic finding aid encoded according to EAD will be linked via field 856.\(^{29}\) At this point, EAD finding aids exist only for a tiny fraction of the collections housed at the LBI. To maintain search capabilities across all collections in one catalog, it seems necessary at this point to also include detailed container listings in the bibliographic records on the level of child records.

\(^{27}\) The ALEPH Reporting Center (ARC) is not to be confused with the archival interface language ARC created for the acquisitions module.

\(^{28}\) During the Ex Libris Users North America (ELUNA) conference in Knoxville, TN in June 2006 the participants were asked for areas in ALEPH that are in need of major enhancements. One librarian suggested an enhancement called “Printing – Just fix it!”, which was met with loud applause.

\(^{29}\) This field will also be used to link to digital images of items from the photograph collection.
The following graphic shows the interrelation of the different types of records:

Archivists do not agree on the ability of USMARC to support the hierarchical structure of finding aids. Pitti stated in 1998:

The use of multiple records, though, introduces extremely difficult inter- and intra-system control problems that have never been adequately addressed in the format or by MARC-based software developers. Even if the control issues were adequately addressed in the format, the control required to make multiple record expression of hierarchy succeed would entail prohibitive human maintenance. (Pitti, 1998, p. 14).

Case studies by Fitzgerald (1995) and Watry & Watry (1996), however, have shown that archival hierarchies can be successfully established using linking fields available in USMARC and integrated library systems.30

At the LBI archives, individual records for boxes and microfilms were created in a separate database to print labels and container lists. A simplified data entry interface allowed interns and volunteers without extensive cataloging experience to enter the data. Creating these types of records and to establish the appropriate hierarchies in ALEPH is feasible as well, even though the data entry is not as straightforward and not as easy to customize. This also allows for printing of box labels and container lists, because all the required information is already in the system. Eventually the CJH hopes to be able to covert data from USMARC records to EAD and vice versa, but at this point Ex Libris seems to concentrate on DigiTool in terms of implementing EAD.

The following is a sample record from the CJH OPAC for an archival collection.31 It shows the electronic link to the EAD finding aid (via field 856) as well as links to child

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30 Both studies are based on British institutions, which chose USMARC as their cataloging standard.
records, in this case the records for three boxes, which can be requested individually. The container list for each individual box is also available in the content field of the child record.

| Record Number | 000200321 |
| LBI Local Call # | AR 25079 |
| MF 709 Reels 1-4 |
| Title | Judith Helfer Collection 1891-2002 |
| Description | 3 linear feet. |
| Arrangement | Series I: Correspondence, 1915-2001 |
| | Series II: Personal Documents, 1915-1938 and 1992 |
| | Series V: Family Records, 1891-1975 |
| Subseries 1: | Arthur and Ludwig Rosenthal, 1891-1951 |
| Subseries 2: | Ilma Rosenthal, 1891-1975 |
| Subseries 3: | Max Rosenthal, 1910-1914 |
| Subseries 4: | Simon Helfer, 1924-1968 |
| Subseries 5: | Photographs |
| Subseries 6: | Miscellaneous, 1924-1966 |
| Summary | The Judith Helfer Family Collection covers the years 1891-2001 and consists of correspondence, personal records, printed materials, and photographs that document the life and journalistic activities of Judith Helfer and her immediate family. Series I consists of Judith Helfer's personal and professional correspondence and includes postcards and letters between Judith Helfer and friends, colleagues, artists and publishers. The postcard albums (1915-1930) were removed from their housing, yet maintained in original order. In general, the collection contains only a few of Judith Helfer's personal items. These include her birth certificate, educational records, medical records, and files pertaining to her marriage to Simon Helfer. Of particular note is Series III, Creative Works, which best reflects the breadth of her artistic and literary interests. The series consists of over thirty typewritten manuscripts (1966 and 1985-1987) that are generally short narratives as well as several drafts of articles about Jewish artists and intellectuals, among them Israel Bernbaum, Zvi Lothane, Immanuël Olsvanger, and Rachel Wischnitzler. Subseries B, Art on Paper, provides a few examples of Judith Helfer's artistic abilities. Of note are several Ex Libris plates that Judith designed for her father's library. Published articles are located in Series IV (1971-2001). Newspaper and journal articles in Aufbau, Kunstblatt, The New York Jewish Review, New Yorker Staats-Zeitung und Herald, and the West Side Institutional Review, among others, document Judith Helfer's life as a prolific cultural journalist. Her literary impact is further substantiated by the articles about her life and work in other prominent German and American papers, for instance Aufbau, Berliner Morgenpost, and The New York Times. Series V (1891-1975) contains various records from Judith's immediate family: her father, Arthur Rosenthal; her mother, Ilma Rosenthal; her uncle, Max Rosenthal; and her husband, Simon Helfer. In addition to these individuals, there are also files from Judith's grandfather, Ludwig A. Rosenthal. These records, which consist primarily of correspondence and personal documents, illuminate the life of her family. Her father's letters, papers and a diary/scrapbook (1915) that he made for Judith are particularly interesting, as is a small collection of articles on Jewish topics by Simon Helfer that appeared in Das Jüdische Volk. The photographs in Subseries 5 provide additional visual documentation of the lives and history of the Rosenthal and Helfer families. The collection is primarily in German and English, although there are a few letters in French, some Hebrew, and a Yiddish manuscript by Immanuël Olsvanger related to his translation of Dante's Divine Comedy into Hebrew. |
| Biography/History | Judith Helfer (née Rosenthal) was a prolific art critic for the renowned Jewish-German newspaper, Aufbau, as well as a respected artist. She was born on February 15, 1915, to Rabbi Dr. Arthur Rosenthal and his wife, Ilma Rosenthal (née Planter). Growing up in Berlin, she was exposed to a thriving arts scene, including many artists and musicians in her mother's family. |

31 At this point, the CJH OPAC is still under construction, and the display has not been finalized. Especially issues like field labels and field order are still being worked on.
This had an obvious impact on Judith who exhibited both an interest and a talent in sketching. She was sent first to the Georg-Hausdorf-Malschule for private art lessons and later attended the Pestalozzi-Oberlyzeum zu Berlin-Lichtenberg. Judith came from a prominent family of Rabbis. Her grandfather, Rabbi Dr. Ludwig A. Rosenthal, was born on May 18, 1855 in Putzig. He was the spiritual leader of Jewish communities in Berlin, Coethen (Anhalt) and Rogasen (Posen). In addition to his rabbinical work, Ludwig Rosenthal wrote several books including Bibel trotz Babel!, Die Mischna; Aufbau und Quellenscheidung, Babel und Bibel, oder Babel gegen Bibel? Ein Wort zur Klaerung. He died in Berlin on August 28, 1928. Arthur Rosenthal was born on October 5, 1885 in Anhalt. He studied in Berlin and Heidelberg, completing the Doctorate of Philosophy in November of 1912 and was ordained in Berlin in August, 1915. After working as a Rabbi for Jewish communities in Rybnik, Berlin-Gesundbrunnen and Beuthen, Rosenthal became the spiritual leader of the Israelitische Gemeinde Lichtenberg from 1925 until Kristallnacht. In 1938, he was abducted from his home by the Sturmabteilung (SA men) and forced to watch as they incinerated the inside of his synagogue. Since the building was located in a dense area, it could not be burned down; however, the furniture, important papers, and perhaps most salient, the Torah Scrolls were completely destroyed.

Devastated by the loss and fearful of the impending war, the Rosenthal family fled to London, England where Judith continued her artistic studies at the Couraudt-Institute. In 1936, she married writer Simon Helfer. Both the Rosenthals and the Helfers immigrated to New York City in 1951. Judith's father Arthur Rosenthal passed away shortly after the transatlantic move. Tragedy struck again in 1967 when her husband, Simon, died unexpectedly. It was during the late 1960s that Judith took a temporary position at Aufbau. The quality of her writing was such that she was offered permanent employment several weeks later. Her articles covered both Jewish and non-Jewish cultural and artistic life. Judith enjoyed a long career at Aufbau and wrote for them up until several months before she died on April 15, 2002.
Including the inventory of each box in the Web OPAC this way allows for full keyword-searching of the container lists, which would otherwise only be available in the finding aid.

5.3 *Barcodes*

The physical items that are supposed to circulate via ALEPH need to be furnished with barcode labels, which has yet to be done in the LBI Archives. In ALEPH, the barcode is stored on the level of the item record and is initially assigned by the system, until the actual barcode is scanned in. For larger collections, which consist of one or more boxes, this will be done on the box level. Barcodes for smaller collections, which share a box, will have to be
attached on the folder level. Since the LBI archives does not have a shelf list for its collection, this will be done on-the-fly when the collection is first requested via the online catalog, which is a common practice in libraries in the process of implementing barcodes. To maximize physical control, however, it would be ideal to barcode each folder. If a collection consists of four folders, the patron needs to be able to distinguish between the four items that show up as available for request for this collection. This requires more time and effort and might not be feasible on-the-fly.

A recent posting to ALEPH-NA, the listserv of the North American Aleph User Group (NAAUG), asking for experiences with bar-coding archival collections resulted in only two responses from institutions that use barcodes in their archives. More testing and analysis are required before procedures can be established.

5.4 Circulation

As is common with archives and special collections, all materials at the CJH circulate only in the reading room and patrons are not allowed to take any items out of the building. ALEPH’s circulation module has a specialized reading room and closed stacks management functionality, which allows archivists to track the current location of the materials. The set-up is as follows:

Thus, the archivist can see whether the item is currently on hold in the reading room or whether it is with the researcher. At the end of the day, all items need to be either checked back into the reading room or the stacks.

This set-up is expected to work very well for the LBI archives. The current online catalog only allows users to see the records; no other functionality such as placing hold requests is available online. Patrons are asked to send an email in advance outlining which collections they would like to see so that they can be prepared prior to the researcher’s arrival.

In ALEPH, patrons will be able to place a hold request directly from the online catalog, once they have identified which specific items they are interested in. This procedure will work properly only for those records that have correct item records, such as all the child records for boxes and microfilms, as well as individual items such as memoirs and microfilms. Most other records will require manual clean up to assign the correct number of items. Eventually, detailed circulation statistics should be available via ALEPH, which will allow for the prioritization of collections for microfilming or for off-site storage.
6. Conclusion

Can ALEPH 500 function as an integrated collection management system for the LBI archives? The description of the implementation process has shown several highly problematic areas, which overlap with the issues noted by Walters over a decade earlier. CJH and partner staff encountered ignorance and little understanding on Ex Libris’s side in terms of functionality and capabilities archivists expect from an integrated system. While the Ex Libris project librarian in charge of data conversion and systems set-up was very helpful and creative in trying to solve the issues at hand, it became obvious that the company’s management was only willing to put a limited amount of effort and cost into providing the CJH with a fully integrated system to manage all its collections. The Archival GUI is a major improvement to hitherto-existing accessioning functionality, but it is still entirely based on the library acquisitions workflow and the resulting limitations have been presented in detail. Ex Libris is willing to provide support and upgrades for the Archival GUI and to make it available to other customers; however, a separate accessioning module for archival materials, which would provide all the required functionality, seems to be out of the question.32

To some extent, the archival profession is responsible for this unsatisfactory situation. Even though many archives are part of larger institutions that use integrated library systems, the archivists are not able to make their voices heard when it comes to choosing and enhancing systems. They also feel that their accessioning and collection management procedures are too different from library workflows and, thus, have no place in the library system.

However, even some librarians do not feel at home in integrated library systems. Just as most archives use separate software applications for their accessioning and other processes, some librarians have also decided that their supposedly integrated systems do not provide enough functionality. In an aptly named journal, Against the Grain, Taglienti and Srivastava review several articles outlining how libraries use MS-ACCESS for serials management and describe how the Long Island University Brooklyn Campus acquisitions staff utilizes MS-ACCESS for the complete acquisitions process instead of the integrated library system.

32 Ex Libris has an established market of large university and national libraries and focuses on developing additional tools such as reference linking (SFX), portal and metasearch interfaces (MetaLib), digital asset management (DigiTool), electronic resource management (Verde) and end-user discovery and delivery tools (Primo). Seventeen percent of Ex Libris’s revenue is derived from the sales of non-ILS applications, the highest portion among its competitors (Breeding, 2004b, p. 54). Within ALEPH, the recent focus has been on improving the interlibrary loan and course reserve modules, which are essential for its large university and national customers. It therefore seems unlikely that they will implement any major changes in their ILS for a small customer base like archives and special collections.
available at the library. They summarize: “The flexibility of Access was a relief from using rigid systems”. (2002, p. 24). Thus, it is not only new developments such as link resolvers, metasearch interfaces, electronic resource management and digital asset management software that cause “disintegration” in the area of library automation. Breeding’s assessment “. . . it seems like we have taken a step backward in terms of the integration and cohesiveness of our automation environment” rings also true for separate acquisitions and accessioning systems (Breeding, 2005, p. 28).

Even librarians are still only in the beginning stages of defining standards for non-bibliographic information. Unlike the MARC format, which defines in detail all the elements of a bibliographic record, acquisition records vary greatly from library to library and integrated system to integrated system. This situation is unsatisfactory for both librarians and system vendors, since it makes migration of acquisitions data disproportionately more difficult than migrating bibliographic data.

Farrell and Truitt first made “the case for acquisition standards in the integrated library system” in 2003 and a year later started by defining functional requirements for vendor metadata. Archivists should make use of the attention this issue currently receives from vendors of integrated library systems33 and define their own accessioning metadata and functional requirements. Just as EAD has established standards for description, it should be possible to develop standards for accessioning information and corresponding software functionality. Once clearly defined and widely accepted standards are in place, integrated systems vendors might feel more of an incentive to tailor their systems for use in libraries AND archives and create truly integrated collection management systems.

The current trend, however, seems to be toward “best-of-breed” applications (Breeding, 2006a, p. 28), which is exemplified by Ex Libris’s approach of creating separate products for library functions mainly related to electronic resources. These systems are designed to work with different external products – Ex Libris’s link resolver SFX, for example, is used by many libraries running an ILS other than ALEPH. This does empower libraries to choose products from different companies and enables them to pick the ones that best suit their needs. However, having to buy multiple products puts an additional financial strain on already tight budgets. Especially for archives, which are part of a larger institution, a

33 Michael Kaplan, Director of Product Management at Ex Libris, was part of a discussion on standards for acquisition data by the Association for Library Collections & Technical Services Automated Acquisitions Discussion Group Meeting at the American Library Association’s annual conference in 2003, which was reported by Lynne Branche Brown of Innovative Interfaces. Shelley Neville and Ed Riding of Dynix shared the perspectives of an integrated library systems vendor on standards in 2004.
separate system is often not an option. The system vendors, on the other side, profit from being able to create and sell separate systems, without having to develop a new generation of integrated collection management systems, which would support the wide variety of functions performed by libraries and archives today.\footnote{During the 2006 ELUNA conference Ex Libris staff was asked whether there were any plans to re-develop ALEPH’s underlying structure and release a new product instead of moving from version to version built on the same technology. Currently there are no concrete plans for this kind of development.}
Works Cited


