EXECUTIVE SUMMARY

ALEPH Yissum LTD. and Ex-Libris LTD. have entered into an agreement to merge their activities to form EX-LIB effective 31/12/95. The two companies have succeeded jointly in developing and marketing ALEPH, the only modern, commercially available library automation system, developed within a university environment, to become one of the leading systems in Europe. The EX-LIB organization is committed to continue the remarkable growth of ALEPH in Europe, while leveraging on its European success to capture a significant segment of the US market. The company has established a new sales and marketing subsidiary in the US in 1995 to commence a substantial marketing and sales efforts in the US. The marketing efforts of EX-LIB will be concentrated in the US market in the forthcoming years and will be devoted to achieve a sales volume of about $15 million in the lucrative US library automation market.

ALEPH was developed by ALEPH Yissum, Ltd., which is owned by the Hebrew University of Jerusalem, in the early 1980s. The company planned, designed, programmed and implemented the second generation of ALEPH on VAX/VMS in 1986 and ported it to the UNIX platforms in 1992.

An automated library system is a fully integrated modular system that automates all library functions and provides access to information resources beyond the physical confines of a library. Some of the more important modules are described below. Cataloging and Authority control, allow the librarian to create, edit, read and write bibliographic information. Data research software allows the librarian to connect to databases that share cataloging information. Circulation handles all of the library's circulation including registering borrowers, checking books in and out, and more. On-Line public access catalog allows users to search and retrieve information about the material in the library and as well as other database. Acquisitions is designed to handle the purchase of books. Serials is a module for management of magazine and journal collections. Reports offers extensive reporting capabilities.

The annual world wide market for library automation systems is about $800 million with the annual US market estimated at over $500 million. The library automation systems market is segmented, by general industry practice, into 4 broad types: academic, public, school and special libraries. Academic, or higher education, libraries include university and research libraries, college libraries and community or junior college libraries. ALEPH is probably the best system for the academic market, while having the versatility to compete in the public and special market segments as well.. The school market segment is probably more suitable to companies specializing in PC based systems and is not a target market for EX-LIB.

The EX-LIB team of 40 employees includes an R&D department consisting of a development team of 13 highly qualified computer engineers and programmers located in Jerusalem . EX-LIB has a direct sales and marketing organization of 27 (located in addition to Israel in subsidiaries in Europe and the US, and a branch in S. America). In addition to its sales and customer support offices, the company has established distribution channels in different countries by appointing exclusive

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distributors who are either fully dedicated to the ALEPH system or established a profit center in a larger company, which is fully dedicated to the ALEPH system.

During the past six years EX-LIB has succeeded in establishing ALEPH in the European market place reaching a remarkable installed base of over 2000 terminals in 180 libraries. The ALEPH automated library system is being used by prestigious academic institutions in 22 countries.

1. INTRODUCTION

EX-LIB, a merger of ALEPH Yissum LTD. and Ex-Libris LTD. (effective 31/12/95) was established in order to capitalize on the success of the marketing and sales of ALEPH, a modern commercially available library automation system developed within a university environment.

Ex-Libris, with its sales and marketing organization and Aleph Yissum with its highly qualified development team, have succeeded in marketing ALEPH with its enhanced, academic rich functionality, in 22 countries, having installed over 2000 terminals in over 180 libraries.

The merger of the two companies will enable them to devote the required R&D and marketing attention and sources to enter the lucrative US market.

ALEPH was developed by ALEPH Yissum, Ltd., a private company owned by the Hebrew University of Jerusalem, in the early 1980s. The company gained initial valuable experience in installing its system in the Hebrew University of Jerusalem Libraries. Following the decision of the Israeli high education board, which supported a national library computer system, the company planned, designed, programmed and implemented the second generation of ALEPH on VAX/VMS. This newly developed system was introduced in 1986 and was based on a different system philosophy, allowing its users to configure their own system structure by using the provided parameters' tables approach. The system architecture was designed to support a national system in a transparent mode. In 1992, with the emergence of the important UNIX operating system, the ALEPH system has been ported to the UNIX platforms.

In 1986, ALEPH Yissum signed a world wide sales and marketing agreement with Ex Libris Ltd. The agreement determined that Ex Libris would be the exclusive sales and marketing organization of the ALEPH software (except for Israel). Ex Libris Ltd. established the ALEPH product world wide achieving sales in 22 countries. The company's revenues are comprised of sales of new licenses, upgrades and enhancements of installed base and maintenance and support, as well as project development of specific requirements.

The total synergy between the two companies; the increase of the total market for Library Automation systems; streamlining the activities of the two companies and the opportunity for increasing sales and the need to expand marketing and R&D efforts, have resulted in a contract between the companies to merge their activities into one company to be called - Ex Libris (1995) Ltd. (EX-LIB). The merger will be effective on 31/12/95 in accordance with the Israeli law for merging companies (with no tax effect on the shareholders of both companies).

2. THE PRODUCT

In the last 25 years, due to the tremendous growth of information, its needs and its availability, and following the development of computers and their improved price/performance and availability, the need for library automation systems has grown and the world wide annual market for library automation systems is more than $800 million.

Most of the early commercial systems were derivatives of systems which were developed in universities for their own use. Several such systems, which were recognized as the leaders of technology were distributed to other universities. As the popularity of these systems was spreading and as the financial requirements for continuous investment, as well as support, grew, the systems were incorporated into commercial entities which continued the development, provided the support and licensed the system to new users.

At present most of the universities are replacing their "self made" systems and/or first generation systems with commercially developed ones. ALEPH, is one of the few modern UNIX based automated library systems which amalgamate the advantages of modern programming tools with the extensive functionality of a university bred system.

ALEPH is an integrated library automation system. This is a system which controls and manages all the functions of a modern library. The standard modules of ALEPH may be seen in the following block diagram.

ALEPH - SYSTEM ARCHITECTURE

BLOCK DIAGRAM --PAGE 15

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Cataloging   The method and programs to enter and store the information about a
              library material such as books, journals (serials), tapes, manuscripts,
              etc. Cataloging is available in USMARC format, UNIMARC format
              and a flexible non-MARC format as well.

OPAC   On-Line Public Access Catalog. This module allows users to search
              and retrieve information about the materials in a library. The user may
              request loans, extend his borrowing and order photo copies of material.

Circulation   Used for loaning and receiving loaned material. The module includes
              all the necessary programs and procedures associated with the rules of
              the library.

Serials control   Allows the library to manage its serials acquisition as well as distributing the serial copies throughout the institution.

Acquisitions   The administrative phase of ordering, purchasing and budgeting the different departments in an institution.

ILL   Inter Library Loan. Allows users in libraries to loan materials from other libraries.

Additional scopes of the system include handling of Images, Networking of libraries, accessing its own digital library, communications with information centers, very advanced multi lingual authority control and internet connections.

The ALEPH system is used in various applications of library automation. The applications include national and university libraries, municipal libraries, corporate libraries, special libraries such as museums and information centers. In different applications different modules play a major role but in almost all the applications, all the modules are used.

The ALEPH system supports the Z39.50 and World Wide Web gateways. This allows users to access ALEPH catalogs via the internet super highways.

The philosophy of utilizing automated library systems changes from one country to another, resulting in different requirements in different countries. The differences might consist in the interfacing language and character set; in availability of accumulated personal information; in the circulation policy for the loan periods and various loan limitations; in the standard of the record structure; in the country's public and national databases to which the system is connected; etc. The flexibility of the ALEPH system, based on parameter tables, which define the various aspects of the library's policy, allows the use of the same system in different applications and in different countries.
ALEPH is used in 22 countries around the world.

The ALEPH system is the only system of its size which was originally developed for bi-directional use. This inherent feature allows the system to serve with the same features and ease of use both left to right and right to left languages . Thus, the system serves its users in Latin and Cyrillic as well as in Hebrew and in Arabic, mixed with Latin environments.

ALEPH system source as well as its internal documentation are kept by the company and are not transferred to its customers. The source code and the documentation are deposited in escrow by a legal procedure under the control of the consortium of the Israeli National and universities' libraries. Whenever required, the same tapes and documents are deposited in designated escrow facilities in other countries as well.

3. THE DEVELOPMENT PROGRAM

There are basically four driving forces for software developments:

- Technology driven (Such as UNIX, Windows NT, Client Server, World Wide Web)

The EX-LIB policy is to follow the technological developments and adopt them, develop toward them and release the innovations in due course. ALEPH development has followed this route in all the newly accepted technologies while preserving the reliability of the system.

As the system was envisioned and developed by object oriented programming ahead of its time, it was ported to UNIX, and was able to distribute its power between servers in a client/server environment and in other technology driven developments, enhancing the sales of ALEPH. Moreover, as the system is widely used, all developments take into account distribution of all developments to all the users. This explains the ability to serve all the historically approved types of equipment used by all the users.

- Supplier-defined new functions

Keeping with times and needs, ALEPH is developed to handle new material, interface to newly available networks and pure new ideas in serving the needs of the users.

- ICAU (International Consortium of ALEPH Users) developments requests

Expressed by a list of priorities in the users' meetings and as of this month by the request DB in the Ex Libris/ICAU aperture (as per above), Ex Libris is attentive to users' feedback and recommendation and develops, free of charge, new functions as long as they are in line with ALEPH policy. Experience shows that over 85% of requests (in one users' meeting the list contained 182 requests), are fulfilled.

- Customer-financed developments

In certain supply situations, needs of developments arise as part of the need of the customer, who is willing to participate in the cost of developments. The following rules apply:

Generality
The requirements have to be in line of the policy of the system and toward the general direction of development. Customer payments insure his influence on detailed design and the priority of development.

General distribution
Agreement as to the free distribution to all existing as well as future users, who do not have to participate in the cost of development.

Specifications
Detailed specifications are prepared by the customer. Sessions of feasibility are carried out in cooperation with all concerned parties until a final design specification is achieved. This is the basis of development and unless technological reasons or new innovations overtake the developers, during the development phase, the new programs are delivered.

The cost structure of the "Customers' financed developments" is based on per case estimate.

4. THE MARKET

4.1 Introduction

The world market for library automation systems is segmented by different parameters which are listed below. Geographically, one may segment the market into Europe, the USA, South America and the Far East (mainly, China, Japan and Korea). Since the major part of the market that EX-Lib intends to market to are Europe and the USA, our market analysis will deal with those two main markets. Based on the proliferation of other software products it may be assumed that these two markets comprise between 70%-85% of the total world market for library automation systems..

The segmentation of the market for library automation systems into different parameters may be seen below:

1.   Geographically
        continent, sub-continent, country

2.   Application of library
        national, university, college, municipal, corporate, special

3.   Size of system
        number of users, number of cataloged items

4.   Type of platform
        PC, minicomputer, mainframe (and operating system)

5.   Special features
        use of languages, character sets, images, digital library

6.   Networkability
        local, community, national, international

7.   Communication features
        central catalog, CD, library protocols

8.   Record structure
        MARC or non-MARC catalogs

9.   Technical requirements
        RDBMS, GUI, EDI

Geographic segmentation
We address only the markets which we serve or intend to serve under this business plan. These are:

> USA
> Western Europe (Including Israel)
> Eastern Europe

The market discussion will center on the US market since this market is more than 50% of the world market and is almost three times the size of the European market.

4.2 The US Market.

This is the largest homogenous market in the world. Homogeneous in language and standards. However, the market is very sensitive to positioning of product and should be divided into several markets with distinct demands. There is some overlapping of markets by the same software system product (or solution) but the market does not have a system which covers even most of its segments.

The market segments are (listed in the order of prestige):
> High academic and research
> Colleges and lower academic institutions
> Public libraries
> Schools
> Special libraries
> Corporate libraries

According to the annual market report by The Library Journal (April 1995, the "LJ report") the total US Library automation systems sold in the US in 1994 was $523 M comprised as follows:

Type	Percentage	Amount in Millions
Software	43%	$ 225
Hardware	15%	$ 79
Maintenance	24%	$ 125
Other (*)	18%	$ 94
Total	100 %	$ 523

(*) Other are "defined as training documentation, database conversion, consulting, and additional library related products not related to automation.

This market is comprised of four main library types:

1. Academic
2. Public
3. School
4. Special

Although there are no reports specifying the size of the library automation systems market for the Academic and Public libraries, the market size can be deduced from the unit sales figure for the different segments. The LJ report states that about 20,000 microcomputer systems were sold to schools in 1994. Assuming an average system price of $10,000 per system (some schools will buy the hardware separately while others might have more than one terminal), the annual Academic and Public library automation systems market is more than $300 million. This figure corresponds to the market received when utilizing LJ reports from 1992 and 1993 which show that this market was about $260 million with an annual growth of about 7%.

4.3 The American Market & the EX-LIB Opportunity

There is a window of opportunity for entering the US high academic market with the ALEPH system. This window, confirmed by discussions with persons holding positions, such as library automation managers, competitors, consultants, journalists and users of ALEPH in the US, is expected to last 2-3 years.

The opportunity is a result of several factors, some of which will be listed below:

- The Ameritech system, Notice, the market leader for the Academic market is old, expensive to run and is unacceptable to Universities. Development of a new system was scrapped following the acquisition of Dynix, and a new development effort was announced, delaying the availability of a suitable system by 3-4 years.
- The market is looking for a proven acceptable solution, and is open to internationally proven automatic library systems.
- There is no ready made solution in the US market.
- The EX-LIB ALEPH system is superior to systems based on RDBMS. The Ameritech Horizon and the Endeavor Voyager (see Competition) are RDBMS dependent systems
- The performance and reliability of a library automation system is of prime importance since the failure of a system reflects on the academic stature of a the academic institution. Newly developed systems will require checking and testing procedures, in order to prove the aspects of performance and reliability. The ALEPH system has a proven record of reliability and performance.
- The ALEPH system is a high performance system and can serve large databases and high load of transactions.

4.4 The European Market

According to an analysis of the library systems in Europe conducted by KPMG management consulting the European market for the academic and public library automation systems is about $130 million. Calculating the market size as 30% of the US market, gives a $150 million figure for this market. Although the European market is not homogeneous but rather fragmented, due to different languages and modes of operation, it is expected that the market will become more homogeneous in the future. The Western European market can be characterized as a market of first round installations and is not as mature as the US market. Thus, it can be expected to grow at a higher rate than the 7% growth which the US market exhibits. KPMG forecasts a strong market growth with the annual European market reaching a $300 million market size at saturation.

The European market includes libraries in Academic and Public institutions which have never been automated and libraries institutions which have installed their first round of automation and are now upgrading, modifying and changing their library automated systems to more user friendly and modern systems. It is expected that the $300 million level will be attained as more libraries become automated and as those libraries which are already automated update and enhance their systems.

Most of the large educational institutes' libraries and municipal libraries, in the Scandinavian, the UK and Holland have already installed an automated library system and are ready for the next round of automation. Most libraries in Eastern Europe as well as the other Western European countries are looking to purchase their first automated library system.

5. THE EX-LIB SALES & MARKETING

5.1 The Sales Organization

The EX-LIB sales organization, consists of an Israeli headquarters with a staff of 13 (out of 24 employees in Israel) which includes a customer support center, a European head quarters and customer support organization, consisting of 5 employees, located in Luxembourg and an Eastern Europe sales and customer support office consisting of 5 employees located in Prague. In 1995, the company opened its sales and marketing office in the US in Syracuse, NY and appointed Robert Baum, who has been involved in the marketing of software in general and automated library systems in particular for the past decade, as the president of the US subsidiary. Prior to opening the subsidiary in Syracuse, the company had a customer support center in Ohio. EX-LIB also has a one man office in Buenos Aires, which covers the Brazil and Argentina markets.

In addition to its sales and customer support offices, the company has established distribution channels in several countries by appointing exclusive distributors which are listed below:

Denmark	- ICL
Hungary	- Ex-Lh Kft.
Italy	- Atlantis S.R.L.
Poland	- TCH

Portugal   - IBM (non exclusive)
Romania   - S.C.Romdidac S.A.
Sweden   - ICL (Denmark)
Turkey   - TES LTD.
S. Africa   -Under Negotiation

These exclusive distributors market and support the ALEPH system. In most of the countries the distributor is either fully dedicated to the ALEPH system or opened a profit center in a larger company, which is fully dedicated to the ALEPH system and covers the complete range of the required sales and support activities.

The EX-LIB European headquarters in Luxembourg and the EX-LIB Central & Eastern Europe office in Prague serve as the contractor, sales and support office for Europe and Eastern Europe respectively. The Luxembourg subsidiary participates in the main European exhibitions and its employees travel throughout western Europe to cover sales and marketing in the Benelux and Germany. The Prague subsidiary is also responsible for the sales and support of the exclusive distributors in Hungary and in Poland.

5.2 The Installed Base.
During the past 6 years, the main effort of the sales organization of EX-LIB was to establish a large installed base in Israel and in Europe. No effort was made to penetrate the US market. The main reason for choosing this marketing strategy was due to the high cost of entering the market and the need to establish an installed base which will assure the academic institutions of the performance and reliability of the system. This strategy has been successful resulting in 187 library installations (with 5200 terminals installed) mostly in Europe. The revenues of the company have had an annual growth rate of 40% for the last three years. The increase of new sites may be seen in the following graph

NEW SITES

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The segmentation of the installed base may be seen below.

Geographic segmentation

	W. Europe	E. Europe	Israel	USA	South America
Num. of installations.	86	37	58	4	2

Segmentation by application of library

	National	Univ./Rsrch	College/Theo	Municipal	Corporate	Special
Num. of inst.	5	51	31	27	4	10

Segmentation by size of system:
Number of users (terminals):

	1-10	11-25	26-50	50-100	over 100
Num. of inst.					

The success of the sales organization has laid the foundation for continued growth of product revenues capitalizing on the following achievements:

- ALEPH systems are installed in 22 countries
- ALEPH systems are being used in 17 different conversation languages
- ALEPH systems are operating with five different character sets
- Range of applications: National, University, Municipal, Corporate, Special.
- Range of sizes
- Several local, national and international networks
- Implementing the CASLIN network
- Multi national and multi lingual support organization
- Total range of communication facilities
- Outstanding achievement of swift and successful implementations

5.3 The Sales Strategy, Europe.

EX-LIB's sales and marketing strategy in Europe is aimed at continuing the company's annual growth of 33% of the past three years, utilizing its distributors and direct sales organization in Europe. The company's European sales target for 1996 & 1997 is to reach total revenues of $2.95 million and $4.3 million respectively. The product revenues for 1996 are forecasted to be $2.43 million while the maintenance/support revenues are $.52 million. The product revenues for 1997 are forecasted to be $3.36 million while the maintenance/support revenues are $.94 million. It should be noted that a growing portion of product sales ($200,000 in 1996 and $500,000 in 1997) are a result of upgrades and enhancements of EX-LIB installed systems.

These European and Israeli sales organization employ a variety of sales and marketing tools and strategy to achieve their sales targets. Some of these are listed below:

Trade Exhibitions. The company participates in both national and international trade exhibitions on a regular basis. These are annual exhibitions and librarians conferences which attract the relevant prospects. EX-LIB has participated in local exhibitions in Denmark, Czech, Slovak, Germany, Holland and other national exhibitions. On the global scene, EX-LIB has participated in the IFLA (International Foundation of Library Associations) conference whenever it took place in Europe. In 1995, the company will participate in the IFLA/Istanbul conference.

Advertising and Direct Mail. EX-LIB participates in some countries in journal advertising, usually in cooperation with the local distributor and sends out direct mailings to selected libraries in targeted markets.

Professional Articles. The company promotes the writing of professional articles on its systems and installations, and utilizes professional contacts to obtain exposure in professional journals to ALEPH.

Tenders. The company subscribes to several tender information services and is alerted to tenders which include requirements for automated library systems. Participation in tenders is one of the key sources of new leads and contracts.

Demonstrations and Loaners. On many occasions, EX-LIB will install a system at a customer's site for a limited time for hand-on tests. The customer is required to pay for one week of training. It is the experience of EX-LIB that these systems are very seldom returned by the customer.

The existing installed base is crucial to EX-LIB's success. It provides good references for future customers and is an important part of the revenue stream of the company EX-LIB has established in Europe an extensive network of users. Some of the activities of the network are listed below.

Users' Group
ICAU - International Consortium of ALEPH Users

ICAU is a users' initiated, controlled and operated independent body which is managed by a secretary and a managing committee and governed by the users. The ICAU users meet once a year in a chosen country, usually at the institute of the new secretary. Meetings were held each year from 1990 in a different European city. The 1995 meeting is will be in the Czech National Library in Prague, and the 1996 meeting will be held in JTS, New York.

The meetings are well attended by the majority of the ALEPH users and, in two days of discussions and presentations, various aspects of supply, support and plans of developments in the forthcoming versions are covered.

As of January 1995 the Users access three remote databases, which reside in DTB in Denmark. By Internet connection the user may access the following:
Request dB
User may evaluate requests for developments, listed by other users,
and may add remarks, suggestions and new requests.
Error dB
Users report encountered bugs and Ex Libris maintains the list with
correction remarks and answers. A user with a problem or a possible
bug may search for errors or remarks of similar phenomenon.

Users List

A complete list of ALEPH users, including all communication information and access control. Users list their willingness to share information in the areas of the users' interest.

National Users Groups

In various countries the users establish a national users' group. Such groups exists now in:
Denmark, municipal
Denmark, universities
Hungary
Israel, universities
Italian theological
Italian universities
The national users groups meet several times during the year and usually bring a national report to the ICAU meeting.

The ALEPH System Seminar

Ex Libris presents a bi-annual system seminar in Israel. The seminar is attended by ALEPH system librarians, experienced in the use of the system, who want to be trained and acquainted with a wider range of system services and possibilities. The gathering of the system librarians, who are the highly trained ALEPH users around the world, gives all the participants, including the personnel of the ALEPH Yissum and Ex Libris organizations, the occasion to get acquainted and exchange experiences, information and feedback the suppliers. The participants are exposed to the then forthcoming new version. Seminars were held in 1992, and in 1994 . The next seminar is planned for 1996 .

The sales forecast for Europe for 1996 & 1997 may be seen in the table below

	1996 (000' $)					1997 (000' $)				
	Q1	Q2	Q3	Q4	TOT.	Q1	Q2	Q3	Q4	TOT.
Sales										
Licenses	350.0	400.0	450.0	450.0	**1650.0**	500.0	550.0	600.0	700.0	**2350.0**
Projects	100.0	100.0	100.0	100.0	**400.0**	125.0	125.0	150.0	150.0	**550.0**
Devlpmnt	15.0	15.0	15.0	15.0	**60.0**	15.0	15.0	15.0	15.0	**60.0**
Hardware	80.0	80.0	80.0	80.0	**320.0**	100.0	100.0	100.0	100.0	**400.0**
Total Products	545.0	595.0	645.0	645.0	**2430.0**	740.0	790.0	865.0	965.0	**3360.0**
Service and Maintenance	100.0	120.0	140.0	160.0	**520.0**	190.0	220.0	250.0	280.0	**940.0**
Total Service	100.0	120.0	140.0	160.0	**520.0**	190.0	220.0	250.0	280.0	**940.0**
Grand Total Sales	645.0	715.0	785.0	805.0	**2950.0**	930.0	1010.0	1115.0	1245.0	**4300.0**

5.4 The Sales Strategy, the USA.

As was mentioned above, EX-LIB chose to first market and install its systems prior to entering the US market. The company is now ready to devote the resources required both to establish a marked presence in the US automated library market. . ALEPH may be marketed to the entire library market. The flexibility, the integration, and the wide range of its functionality are the major factors in ALEPH's ability to meet the needs of the various market segments. Furthermore, the development team's ability to respond to special developments and enhancements enable Ex-Libris to answer specific needs of each customer efficiently and with haste. EX-LIB plans to initially (1996) market its products to the Academic segment of the Library automation systems. This will enable the company to direct all of its attention to this prestigious market. The success in the high academic segment of the market will pave the way for entering the other market segments. EX-LIB intends to start its marketing effort in the Public Library market segment in 1998.

The sales cycle in a new territory can be from six to twelve months. The most efficient way to commence sales is to locate and team up with a development partner, preferably a prestigious university. This approach has been successful in entering other markets in Europe. Cooperation in structuring a system for a partner, benefits both parties. EX-LIB would like the partner to participate in the development both in the mandatory and in the broader vision of a library automation system. We also expect that our partner will act as a beta-site for the US related, developed parts of the system.

EX-LIB has established its subsidiary in Syracuse with Robert Baum as president. The subsidiary will have, in addition to the president, a sales manager, a programmer for US related development and liaison with the development team in Israel and a Librarian for demonstration and liaison functions.

The first task of the office will be to promote of the name of ALEPH and of EX-LIB in the US. The ALEPH system is known in very limited circles in the US. The US office will have to increase the awareness of this system. The company will participate in the Mid-Winter ALA conference. This will be the first show of ALEPH in the US and will be accompanied by a major PR effort.

The sales forecast for the US for 1996 & 1997 may be seen in the table below:

	Q1	Q2	1996 (000' $) Q3	Q4	TOT.	Q1	Q2	1997 (000' $) Q3	Q4	TOT.
Sales										
Licenses		50	100	100	**250**	150	250	350	400	**1,150**
Projects			10	10	**20**	30	50	70	100	**250**
Hardware										
Total Products		50	110	110	**270**	180	300	420	500	**1,400**
Service and Maintenance	15	15	15	15	**60**	15	15	20	25	**75**
Total Service	15	15	15	15	**60**	15	15	20	25	**75**
Grand Total Sales	15	65	125	125	**330**	195	315	440	525	**1,475**

5.4. Competition

Ameritech Library Services.
A subsidiary of Ameritech (one of the baby Bells), this company has been established following the takeover of two companies and the purchase of one system. Ameritech started by purchasing a system (OCLC local library system), went on to buy Dynix, the leading supplier of library automation systems in the world and Notis, the leading supplier of library automation systems to the high academic and research library market.

Dynix had basically two systems. Dynix "Classic", which was licensed by schools, colleges and public libraries and "Marquis" which was a new Client/Server system, intended for the same market as the Classic, being the new technology.

Notis had a very old system, which was developed by Northwestern University and became a commercial product following the demand for such a system, at that time. The Notis system works exclusively on IBM mainframes (and compatibles) and is old and expensive to run. Most of its users, the most prestigious universities in the US, were waiting for a new system to replace it. Notis, being aware of this market needs, started to develop a new system - "Horizon".

Following these acquisitions by Ameritech the development of the (Notis) Horizon system has been terminated; the (Dynix) Marquis was renamed Horizon; and Ameritech has announced (May 11, 1995) the establishment of a development team, with the University of Chicago and with Indiana University, to develop the new Horizon for the high academic and research library market.

Ex Libris' evaluation is that the prospects of Horizon becoming a leading supplier to this market are slim. This is due to Horizon's position in the markets and due to the technical construction of the Horizon system.
Endeavor
This is a new company which undertook and licensed the code of Voyager. Formerly distributed by Marcorp. This is a RDBMS system, which is being developed now for the US market by an old Notis team headed by the former Notis president, Ms. Jane Burke, who is the CEO of Endeavor.
Innopac
This is the most successful system in the low academic market, in law libraries and single campuses. Although the LJ report declares that Innopac is the "premier academic/research system in the market", we have not found any evidence yet of Innopac being licensed by the high academic market. Client server is not supported as yet.
GEAC
This is a famous system, handled by a strong company. GEAC was not successful in the high academic market in the last several years but has recently (April 95) announced a development contract with MIT.
Sirsi

Though regarded (by LJ report) as a "stable solution to medium size academic, public, schools, and special libraries", Sirsi is considered now by the high academic.

DRA

A very strong VMS system. DRA has claimed many times that it is going to have a UNIX system and that it was going into the high academic market. So far, both this promises have not been fulfilled.

VTLS

This system originates from Virginia Tech University. It is an outdated system although it has some new enhancements. The system has not been successful in the US but has been installed in various countries around the world. The system is not considered a modern, leading edge system.

DABIS (Europe Only)

A PC and UNIX system marketed only in the German speaking countries - Germany, Austria and Switzerland. ALEPH won the CASLIN contract competing against DABIS. They are not very popular outside their own environment.

SOFTWARE AG (Europe Only)

A German system based on ADABAS. The system was purchased by the National Library of Spain in Madrid. It is not considered a successful system by the library world. They enter the different tenders, but have not had significant success.

SLS (Europe Only)

A UK system which is available only on VMS and Open-VMS. It does not have UNIX and is not a strong competitive against UNIX based systems. It is a strong competitor in the UK, Spain and Sweden.

In addition to the above competitors, in every country, there are nationally local systems which compete in certain segments of the library automation market, namely in the PC based systems of school libraries, and small community libraries. These systems are considered a strong competitor.

EX-LIB is convinced that the ALEPH system is superior to existing systems in the US and that its success in Europe will enable the company to attain a significant 10%-20% market share of the Academic Library Automation systems. Its conviction is enhanced by discussions with representatives of the users and assesses the following:

⇒ The Notis users are actively looking for a solution. All of these users will port to another library automation systems within one to five years.
⇒ The users have formed "information consortiums" who share information about new systems and the experience of everyone in the consortium with the tests and discussions with the various suppliers.
⇒ These consortium will not necessarily license one particular system.
⇒ The supply of a non-US system will be openly considered. A US office, support and availability of personnel is mandatory.
⇒ Performance is in the highest priority.
⇒ RDBMS is not considered a must. The topic is evaluated based on cost/performance and not as a mandatory technological requirement.

$\Rightarrow$ Graphic User Interface (GUI) is not considered a must for all functions. On the contrary, these users are mature enough to understand and evaluate the needs of the GUI in relevant functions only.

$\Rightarrow$ The Client/Server needs are defined closer to Ex Libris' understanding rather than the GUI understanding.

$\Rightarrow$ Functionality as well as USMARC are mandatory.

There is an interest to collaborate in development. This is regarded as a possibility to save money but especially is of interest for the reason of sharing and influencing the development of a library automation systems.

7. ORGANIZATION

The company's personnel which numbers 36 employees will be increased to 40 with the opening of the US office.

THE ORGANIZATION CHART

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The table below shows the activities in the different geographical locations:

ACTIVITY	LOCATION	PERSONNEL #
Headquarters, marketing and sales	Tel-Aviv, Israel	8
Development and support center	Jerusalem, Israel	16
European HQ, sales & 2nd line support	Luxembourg	5
Central and Eastern Europe HQ	Prague	5
US Sales & Technical support	Syracuse	4
South America sales and support	Buenos Aires	1
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Total		40

In addition to the fully employed persons, the company contracts, for short assignments, freelance persons (usually employees of ALEPH users), who train new users at their respective locations. Using these experienced persons allows the company to train new users in their own language at users' sites.

The Jerusalem division of the company is located on the grounds of the Hebrew university in Jerusalem in a self contained building of 400 sq. meters. The company also leases 200 sq. meters in Tel-Aviv in a modern commercial office building which houses mainly Hi-Tech companies

8. FINANCIAL PROJECTIONS

In the next five years, EX-LIB plans to deliver convincing financial results, attaining a sales volume of while retaining 28% profit after tax margins. The performance will be the result of implementing the company's strategy and of capitalizing on ALEPH and its success in the European market.

Assumptions:

1. The company will retain the status of an Approved Enterprise having a 25% corporate tax rate.

2. The company intends to obtain royalty bearing grants from the Chief Scientist of the Israeli Ministry of Industry and Trade. However, the financial forecast does not assumed any revenues from such grants.

3. The company has not capitalized any of its software R&D expenses.

4. Working capital requirements will be equal to two months of accounts receivable.

The financial results of the company are presented in the following tables:

Table 8.1 is a Consolidated Expense Budget by quarters for the years 1996 and 1997.

Table 8.2 is a Consolidated Profit & Loss and Cash Flow by quarters for the years 1996 and 1997.

Table 8.3 is a Consolidated Profit & Loss and Cash Flow by years from 1996 to 2000.

Table 8.4 is a Consolidated Manpower Report for the years 1996 & 1997.

9. KEY PERSONNEL

Ehud Arad who together with A. Morag founded Ex Libris in October 986, is the General Manager of EX-LIB. Ehud Arad who holds a B.Sc. in Mechanical Engineering from the Technion and an M.A. in Business Administration from the Hebrew University of Jerusalem started working as a "single man operation" and was involved in all aspects of obtaining sales including pre sales consulting, signing the sale's contracts and providing after sales consulting and support. In addition to his functions as General Management, Ehud is personally responsible for all sales and marketing activity. Prior to founding Ex Libris, Ehud Arad was managing the engineering of a production plant in the Israel Industries for military equipment, including automation processes and the implementation of new manufacturing equipment (CNC tools and machinery).

Azriel Morag who together with E. Arad founded Ex-Libris is the Vice Chairman of EX-LIB and was the President of Ex-Libris. A. Morag has over 25 years experience in marketing and selling software around the world and has both invested and held management positions in non software related business as well. Prior to founding Ex-Libris Azriel founded and managed Idan Computers LTD. a software developer and service bureau for road design and mapping. At Ex-Libris A. Morag was involved in sales and marketing as well as establishing new markets for the ALEPH system. At EX-LIB, A. Morag is responsible for developing new markets and will be heavily involved in the US operations.

Yohanan Spruch who has been the head of the develpment team in Aleph Yissum since its founding in 1987, is the VP R&D of EX-LIB. Y. Spruch was in charge of developing the ALEPH project which started as the Hebrew University of Jerusalem project in 1978. As head of development in Aleph Yissum, Y. Spruch developed together with his team of programmers and librarians the ALEPH system to run under CDC, VAX-VMS and UNIX platforms. Prior to his development of the ALEPH automated library system, Y. Spruch was responsible for the planning, development and implementation of the Hebrew University's student administration system.

Avner Navin who has been the Managing Director of Aleph Yissum since its foundation is VP Corporate in charge of Contract Negotiations, Administration, and Organization of EX-LIB. In addition to managing Aleph Yissum, A. Navin was also responsible for sales and support in the Israeli market. Prior to founding Aleph Yissum, A. Navin was the manager of the Information Systems department at the Hebrew University. Mr Navin was also a member of the Council of Higher Education's Steering Committee for automation of the university libraries.

Robert J. Baum, president of EX-LIB (USA) has accumulated years of experience and success in the library automation market, having served as IBM's manager of activities in the academic library segment for nearly half of his 20 year tenure there.

Following his years in IBM, R. Baum was the director of sales and marketing in Gaylord Brother's division of library information systems. R. Baum holds an MBA from the University of Phoenix, Arizona, and a BS in engineering from Cornell University, N.Y.