

Prince Mohammad Bin Fahd University
(Under Registration)

✦ **LRC INFORMATION** ✦
SYSTEM REQUIREMENTS

Final Report

15 February 2005

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 **PREFACE**

This Final report, *LRC Information System Requirements* is submitted in partial fulfillment of Item IV.L. of the Contract between the Texas International Education Consortium (TIEC) and the Prince Mohammad Bin Fahd University (PMU) Founding Committee to facilitate the establishment of the PMU. This report is one of three deliverables prepared by the Learning Resources Center (LRC) task team under the guidance of the PMU Project Management Team. The LRC task team consists of experts from several TIEC-affiliated universities who are experienced in the development, management and operation of university libraries and learning support services.

The *LRC Information System Requirements* report is both a project management document and an operational document. As a management document, it describes the specific requirements recommended for the LRC library information system in light of the services to be provided by the LRC. As an operational document, parts of this report are intended to be the basis of a Request for Proposal to be issued to vendors of library information systems.

A companion document to this report, *PMU Learning Resources Center Design*, describes the services to be provided by the LRC in support of the curricula, the students, and the faculty and staff. These two documents need to be viewed together to achieve a complete picture of the LRC environment of the PMU.

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15 February 2005

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LRC INFORMATION SYSTEM REQUIREMENTS

FINAL REPORT

I. EXECUTIVE SUMMARY

This report, *LRC Information System Requirements*, describes specifications and an acquisition process for an integrated electronic system to manage services and collections for the library functions of the Learning Resources Center (LRC) of the Prince Mohammad Bin Fahd University (PMU). Materials also are provided that set the specifications for the library information system (LIS) in the context of the goals, objectives, and program activities of the LRC.

The LRC will offer programs to accomplish two broad functions: a library of both print and electronic information resources, and a program of specialized learning enrichment services. The specified LIS will address the library operations. The instructional needs for learning enrichment services will be supported both by the LIS and by the overall PMU information technology infrastructure.

The LRC will occupy an attractive central space on the PMU campus that will be conducive to reflection, study, and group and individual learning activities. The LRC building will be divided, with one side for males and one side for females, with appropriate staff to provide professional services to all students and faculty. The two major service programs offered by the LRC will be Library Services and Learning Enrichment Services. This document focuses on the library information system (LIS) that will support Library Services.

The report is divided into sections that provide information for use by different audiences. Part II, for use by PMU administrators, describes a process and criteria for LIS selection. Part III describes technical specifications that are to be given to vendors. Appendices provide vendors with background of PMU and the LRC for, including the basic ideas on which the design of the LRC rests:

- Vision – a statement of the strategic considerations underlying planning for the LRC that is consistent with the university's defining characteristics.
- Mission – a statement of the role of the LRC in support of the overall mission of the PMU.
- Goals – a statement of the services and resources the LRC will provide to ensure that the LRC accomplishes its mission.
- Strategies – the methods the LRC will employ to implement the services and supply the resources to support the LRC goals.

II. PROCESS AND CRITERIA FOR SELECTING A LIBRARY INFORMATION SYSTEM

This section describes a process for selecting an LIS and criteria for PMU librarians, administrators, and IT professionals to consider in selecting a system and vendor.

In common practice in the library system marketplace, LIS vendors and manufacturers are one and the same entity. Where the vendor is not the manufacturer, the vendor usually is an exclusive sales representative or marketer for only one system. As a result, selecting a vendor and selecting a system are essentially the same step, and evaluation of a system and evaluation of a vendor are not separate processes.

On its opening day, the LRC must have an installed, tested, and reliably functioning LIS. From the perspective of the academic community, collections and services are the critical and most visible aspects of the library. Selecting and managing a collection, so that patrons will have access to collections and services, depend on the presence of an efficient and effective LIS.

The technical specifications for an LIS presented later in this report emphasize these necessary functions. It must be remembered, however, that while management objectives of the LRC are established, the technical standards and systems that carry them out change rapidly.

Given the rate of technological change in the field of library automation and networked information services, implementing a selection process for an LIS more than a year ahead of system installation potentially would foreclose some options for having a state-of-the art system.

The exact steps and the target date for each will depend on whether the decision is made to select a system more than a year in advance of opening (during the spring of 2005) or to delay the decision until the spring prior to opening (during the spring of 2006).

The steps outlined in this report could be taken in Spring 2005 or deferred until Spring 2006. The selection among steps outlined here also will depend on whether it is decided to pursue a competitive bid process or a sole source process. Should the sole source process be selected, some of the steps specified in this report may be omitted from the process.

In Section II.A "Steps in the Process," the timing of steps is described in terms of "months prior to opening." Should the decision be made to select a system in Spring 2005, the time between steps may be lengthened.

The critical fact is that a system must be operational 2-3 months before the PMU opens to students.

A. STEPS IN THE PROCESS

As described in the memo “Revised PMU Critical Path” submitted to the PMU on November 8, 2004 and the final report *PMU Implementation Plan*, the university will issue Request for Proposals for all its technology equipment (hardware as well as the Library Information System) in late March 2005 and receive proposals in late April 2005. Vendor recommendations will be provided to the PMU in late May 2005 and contracts will be signed during the university’s Year 0 (2005-2006).

Because the Director of the LRC is not scheduled to begin work until January 2006 (see the reports *PMU Learning Resources Center Design* and *PMU Implementation Plan*) the university should appoint an administrator of the LIS selection process to serve the university’s interests during vendor selection in 2005. This administrator will work closely with consultants engaged by the university to assist with the process..

In the spring of Year 0 and in preparation for full operation in Year 1, the library information system will be delivered, installed and tested. Installation and testing will require collaboration of the Director of the LRC, the Librarian for Information Systems, the Library Technician for Information Systems, and the university’s IT staff.

During the summer before Year 1, the LIS vendor will provide onsite training for LRC staff and related IT staff on the operation of the LIS.

1. **Establish communication with the LIS vendor community, February 2005**

In order to encourage the LIS vendor community to respond quickly to the steps required for acquisition of an appropriate system the PMU administration should initiate contacts with the LIS vendor community so that the vendors will be ready to follow the selection and implementation calendar established by the university.

The February 2, 2005 memo “Information Technology Vendors” provided the PMU with the following list of products and vendors:

- **Endeavor Voyager**
 Endeavor Information Systems, Inc.
www.endinfosys.com/index.htm
 1350 E. Touhy Ave. Suite 200 East
 Des Plaines, IL 60018-4505
 USA
 1-800-762-6300 (within the U.S.)
 1-847-296-2200 (outside the U.S.)
 1-847-296-5636 (fax)
 E-Mail: info@endinfosys.com

 Europe, Middle-East and Africa Office
 Endeavor Information Systems, Inc.
 Radarweg 29
 1043 NX Amsterdam
 The Netherlands
 E-Mail: info.europe@endinfosys.com
- **Horizon Dynix Inc.**
www.dynix.com/
 400 Dynix Drive
 Provo, UT 84604
 1-800-288-8020 x5380 (within the U.S.)
 1-801-223-5898 (fax)
 Jeanne Foreman, Manager, Proposals
- **Innovative Interfaces, Inc. (Includes the Millennium System)**
www.iii.com/mill/
 Innovative Interfaces, Inc.
 5850 Shellmound Way
 Emeryville, CA 94608
 1-510-655-6200 (tel)
 1-510-450-6350 (fax)
- **VTLS (Includes the Virtua System)**
www.vtls.com
 Jack Bazuzi, Managing Director
 VTLS Europe
 S.L.Pau Claris 162-164, 8/2
 08037 Barcelona, Espana
 34-93-487-2394 (tel)
 E-mail: "Jack Bazuzi" bazuzij@vtlseurope.com

In contacting these and other companies, it is recommended that the university identify representatives of each company who will serve as contacts through the ongoing months.

2. Issue a Request for Information (RFI) to LIS vendors, February 2005

A Request for Information (RFI) is a brief document that serves two purposes:

- It introduces the university LRC and its needs to the LIS vendors.
- It invites vendors to provide basic information about their company and their LIS product

The RFI should be sent to the major LIS vendors who have established themselves as successful participants in the university LIS marketplace. Potential vendors will want to know an outline of the selection process, information about the size and nature of the university, information about the operations of the LRC, and information about the technological environment of the campus.

The RFI should include:

- A cover letter, to be written by the Director of the LRC or the administrator of the LIS selection process
- The appendices to this report in order to introduce the PMU and the LRC
- A list of questions to be answered in a return letter

The cover letter for the RFI should include the following:

- Self-introduction of Director of the LRC or the administrator of the LIS selection process
- Brief introduction of PMU and LRC
- Brief description of the LIS selection process
- Due date for written response

The RFI should ask the potential vendors to provide the following information:

- A description of the ownership, corporate structure, and recent financial performance of the company
- A description of the company's business activities in the Middle East, including regional offices and names of universities in the region who are current clients, with lists of contacts
- A description of the basic LIS architecture, including information about programming language, standards compliance, hardware, network compatibility, operating systems, and workstation requirements

- An account of the history of the system including such facts as the date the system was designed, a descriptions of the systems that preceded it, and the dates of recent systems releases
- A description of licensing arrangements and general cost estimate for a library of 75,000 volumes, serving 5,500 students
- Screen shots and descriptions of each module of the LIS

3. Review RFI written responses and select suitable vendors, March 2005

Responsible vendors will respond quickly to a simple RFI. The PMU will review the written responses in collaboration with consulting professionals. After review, the PMU may choose to extend an invitation to selected vendors to demonstrate their products.

4. Distribute Request for Proposal (RFP) to selected vendors, March 31, 2005

After reviewing responses to the RFI and the results of product demonstrations, the PMU will issue a Request for Proposal (RFP) to the vendors whose LIS products are the selected candidates for further consideration. The RFP will include a call for more detailed information about the vendor, and about contracts and technical specifications for the system to be selected.

The RFP should be issued to vendors as an electronic document they can edit and should include the following:

- A cover letter, to be written by the administrator of the LIS selection process
- A copy of the report, *PMU Learning Resources Center Design* and Appendix A of this report, *LRC Information System Requirements*, containing discussions of the strategies for library and learning resources services and the specifications for a Library Information System
- Section IV Technical Specifications for a Library Information System of this report *LRC Information System Requirements*
- A copy of the report *Information Technology Strategy*
- A copy of the report, *PMU Infrastructure Specifications*

The cover letter for the RFP should include the following:

- Self-introduction of director or administrator of the LIS selection process
- Brief introduction of the PMU and the LRC

- Brief description of the LIS selection process
- Due date for written response
- Instructions for format of proposals

It is recommended that an outline of the RFP be provided to vendors and that they be requested to structure their information in the same manner. This will provide a consistency of responses that will assist PMU personnel in evaluating the responses and in managing the selection process. A suggested outline is included in this report as Section III Recommended Outline for Request for Proposal (RFP)

To expedite responses, the RFP should be distributed to vendors in an electronic format that they can edit to draft their responses.

6. Review proposals and select a system, May 2005

The administrator of the selection process and other decision makers as identified by the PMU will review proposals and select a system.

7. Appoint an LRC Director, January 2006

The report *PMU Learning Resources Center Design* recommends that a Director of the LRC be appointed nine months before opening day and that he should immediately be involved in the process of acquiring an LIS so that it can be installed prior to the beginning of acquisition of a collection.

8. Appoint LRC technical staff, January 2006

The report *PMU Learning Resources Center Design* recommends that a Librarian for Information Systems and a Library Technician for Information Services be appointed at the same time as the director. The Librarian for Information Systems will be the LRC staff member who is directly responsible for the design, implementation, integration, and daily operations of the library's automation and communication systems. This will include the LIS, LANs, Web server, Internet access, telecommunications and related evolving systems. The technician will assist the librarian.

The Librarian for Information Systems should work closely with the Director of the LRC in the acquisition of the LIS system.

9. Negotiate contract, Fall-Winter 2005-06

Negotiation of a contract for an LIS will be the responsibility of PMU officers and will follow PMU procedures.

If the LIS system is to be acquired prior to the appointment of a Director of the LRC, then another administrator should be designated to manage the process.

10. Deliver and install LIS system, Spring 2006

With no legacy collection and no legacy database to convert, the LIS vendor should be able to work with the university's IT staff and LRC administration to install hardware and software promptly. The LIS will then be in place and ready to manage the subsequent acquisition of the library collection and the associated database building that will occur as data records are created for materials as they are ordered and received. [See the Gantt Chart "PMU Learning Resources Center: Materials and Services" provided in Appendix E, LRC Implementation Timeline in the report *PMU Learning Resources Center Design*.]

Installation of an LIS will require collaboration of Director of the LRC and the university's IT staff. The installation of the LIS cannot precede installation of the IT infrastructure.

11. Train LRC and IT staff, Summer 2006

The LIS vendor will provide onsite training for LRC staff and related IT staff on the operations of the LIS.

12. Allow for small variations in schedule, Fall 2006

During Year 1 (2006-2007), the PMU will enroll only students in the Preparation Year Program. These students will require minimal use of the library, as they will work mostly from their own books and materials on their personal laptop computers. The light needs on the LRC during this period will allow some flexibility in the date by which the LIS system must be fully operational.

However, Year 1 will be a busy year for the LRC staff, as this will be the period in which databases are built and books and other resource materials are acquired. The LIS therefore must be in operation as soon as possible during Year 1. The center's librarians will require full use of the system in order to prepare the LRC for the heavier demands that will occur in the following year as students advance into degree studies at the university.

B. CRITERIA FOR SELECTION OF LIBRARY INFORMATION SYSTEM

The team of administrators and consultants who review the responses to the RFP will select the system that best meets the needs of the PMU.

The selection team should consider all of the following criteria in determining which vendor system has the best combination of features and qualities appropriate to the needs of the PMU.

These criteria are presented in a recommended order of importance.

1. Adaptability to PMU defining characteristics, policies, and LRC goals

The LIS must support the goals and strategies by which the fundamental vision of the university is realized, as discussed in Appendix A of this report. In particular, the LIS must have adequate dual language features and other Arabic functions as specified in Section III.

2. Compatibility with IT infrastructure

The LIS hardware and software must be compatible with the university's IT infrastructure. The LRC will rely on the university IT department for software, hardware, and network support.

3. Vendor support services

Even the best systems require technical support and ongoing maintenance. Evidence of timely, effective support service is, therefore, an essential requirement. The geographic location of vendor support staff, the extent of Internet-based support services, the timeliness of responses to problems, and the frequency of software updates are critical factors.

4. Ease of use by patrons and staff

A system that is difficult to use is a system that patrons will bypass. It also is a system that will become expensive in staff time. The history of library use studies demonstrates that when patrons are intimidated or frustrated by a library system, whether it is manual or automated, they will stop using the library. If the staff finds a system difficult to use, those difficulties translate into expensive time spent on tasks.

5. System reliability and documentation

System reliability is essential. If the LIS is not operational, the library collections and many of the services of the LRC are essentially unavailable to faculty, students, and staff. Complete documentation, with timely updates, is necessary for staff reference so that staff may identify the sources of problems that arise and either find guidance to deal with problems or recognize when vendor support is required.

6. Training and staff development program

Education and training are major staff expenses in a technological environment. The LRC staff must be trained fully in using the system most effectively. Features of a system that are obscure or unknown are useless. Training and staff development involve a partnership between the university LRC and the vendor, where the vendor provides the expertise and materials for training of new staff and for continual development of existing staff.

Each year, a new class of students will enroll at the PMU, and each class will require training in how to use the LIS. An important consideration in reviewing systems is what kinds of materials and support the vendor provides to assist the LRC to meet its information literacy goals.

7. Functional compliance with performance specifications

Section III describes the functions the system should perform. Most systems available perform similar functions and follow professional standards. In reviewing LIS functions, the importance of standards and interoperability with other systems is critical. Functionality is important, but because LIS systems are functionally similar, it is not as important as a selection criterion as are the others listed above.

8. Cost

Considerations of cost should include not only the acquisitions cost of the LIS (the hardware, software, and maintenance contracts) but also elements of ongoing cost. Ongoing costs include: cost of time dedicated to operation of the system (such as the staff and supervisory daily time required in the IT department); cost of time to use the system (a seemingly minute difference in response time for a transaction, may, over years, add up to substantial cost); cost of time to learn the system (an important variable in a work environment that will include training of non-professional library support staff and ongoing training for new students.)

9. Acquisition and maintenance contracts

Proposed contracts should state clearly the responsibilities of each party. The contracts should detail which party is responsible for each step in the delivery, implementation, and ongoing maintenance of the LIS.

10. Vendor reputation and financial performance

The historical volatility in the LIS industry should be a concern. Vendors should be reviewed in terms of their histories in mergers and acquisitions, their financial stability, and their prospects. The reviewing team should pay careful attention to references from present customers and may wish to interview these customers in some detail to determine vendors' strengths and weaknesses.