

Digital Library Technologies

a unit of Information Technology Services

Annual Report January 2001- June 2002

Acknowledgments:

This report was produced by Digital Library Technologies
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A copy of this report is available at: <http://www.dlt.its.psu.edu/Report2002.pdf>

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Enhanced LIAS

Two years ago, Digital Library Technologies (DLT) and the University Libraries decided to move its Library Information Access System (LIAS) from the locally developed library system to a purchased library management system from the Sirsi corporation. Sirsi's system provides an advanced online access catalog for users, as well as full-function software suites for circulation, acquisitions, cataloging, authority control, report generation and other standard library operations and services. By shifting its focus from developing these library components locally to using commercially available software, DLT staff will be able to concentrate on new digital library initiatives.

"The new system enables us to move from primarily developing and maintaining the online access system to being able to focus on digital library initiatives such as incorporating multimedia into Web-based collections and developing a digital archive of multimedia objects for use in University research and instruction."

Equally important, continuing enhancements to LIAS and Sirsi will keep technology platforms competitive, and will provide state-of-the-art information services to students, faculty and staff.

The new, enhanced version of LIAS, using Sirsi's Unicorn software, was released in Spring 2001 culminating an eighteen-month long effort to migrate more than 2.1 million bibliographic records, 3.2 million item records, over 120,000 patron records, and more than 300,000 charges, holds and fees to the new environment. Summer 2001 was used as a shake-down period to complete necessary linkages, fix unanticipated problems, make adjustments based on user feedback, and stabilize the new system. Although development projects to complete the initial implementation continued well into 2002, and will continue during the coming year as well, DLT began to re-

allocate its development staff and assign programmers to new digital library projects which will provide expanded digital access to collections and services.

Hershey Medical Center Harrell Library. A particular highlight during the course of the year was the integration of the Hershey Medical Center Harrell Library into LIAS. Harrell Library's staff moved to the new enhanced LIAS for all library operations, and its holdings were added to The

Did You Know?

5.8 million records were transferred during the LIAS upgrade:

- # 2.2M bibliographic records
- # 3.2M item records
- # 120K user records
- # 304K circulation transaction records
- # 11K acquisitions records

CAT, Penn State Libraries' online catalog. Hershey's collection of over 22 thousand bibliographic titles considerably enriches The CAT by providing access to a number of medical books and journals not found at the other Penn State locations, while its use of LIAS for library staff functions enhances resource sharing across all Penn State libraries. During the coming year DLT will update its linedata server, Ezproxy and authentication programs to support Hershey's access to licensed databases and resources.

The Enhanced CAT. In addition to new software and workflows for Libraries staff, the integration of LIAS and Sirsi software brought about significant changes and new features in The CAT for all LIAS users. Highlights include:

- A separate index for journal titles to facilitate the retrieval of Penn State's forty thousand journals.
- The ability to restrict a search by date of publication, language, materials type, etc. *before* executing a search.
- Cross-references (authority control) to lead the searcher to more useful sources and references.
- More complete holdings information for journal titles, including the latest issues received.
- The ability to sort search result lists by author, title, subject or publication date, e.g., latest first or oldest first.
- Course reserve information in The CAT. A new module support searching by instructor or course name as well as by course number, and allow users to retrieve the full text of all electronic reserves.

New Services

Electronic Library Registration. In June, 2002, it became possible for Penn State faculty, staff, and students to electronically register for borrowing privileges with the University Libraries when they activate their Penn State Access Account at any of the University's ITS signature stations. This new service, the result of a collaborative effort between DLT, ASET's Account Services unit, and the University Libraries, streamlines the library registration process for both users and library staff. Penn State patrons who cannot visit a signature station, or patrons not affiliated with Penn State, can continue to register in person at any PSU library.

Library Channels on the Penn State Portal. In a prime example of a collaborative effort, staff from DLT and the University Libraries worked with the ITS Portal Team to develop library

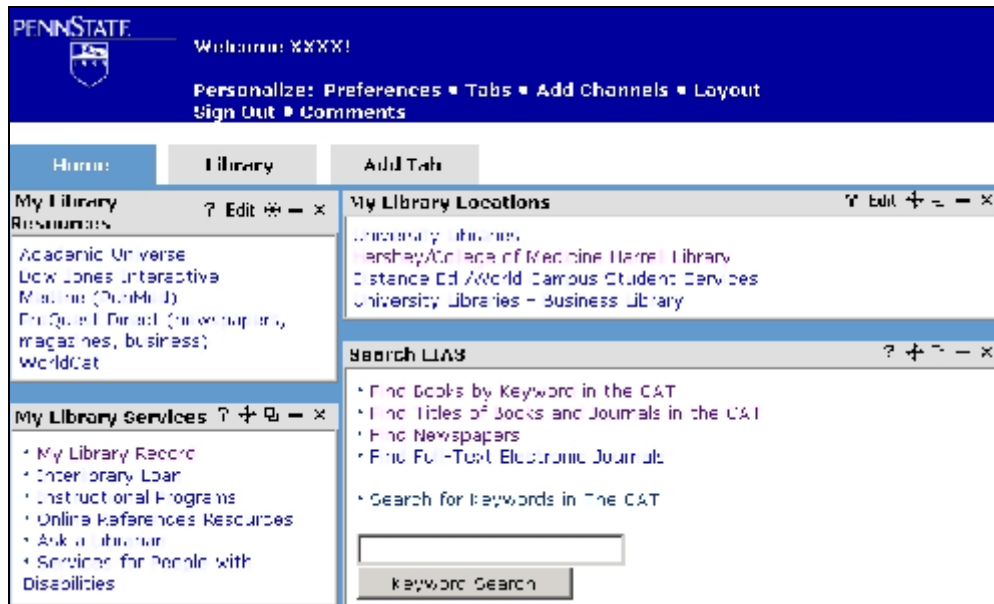


Figure 1. Library Channels on the Penn State Portal

channels for the PSU Portal. At the end of the reporting period there were five active library channels:

- My Library Locations for linking to specific subject or campus library home pages
- My Library Resources for linking to any of the databases or other resources available on the LIAS Fast Track
- My Library Services for linking to library account information, online reference resources, library instructional programs and other services
- My Library Spotlight for linking to library hours, events, industry information, etc.
- Search LIAS for executing quick searches in The CAT, linking to specific search pages, etc.

Single LIAS / Libraries Web Site. For the past ten years, DLT and University Libraries staff have maintained two web sites, one for LIAS, the other for other library services and resources. A joint DLT/Libraries SWAT team spent the a good part of the reporting period redesigning and integrating the two sites to provide one entrance point to all library resources for users. Since the Libraries are one of the 14 “major” links on the University home page, the new design conforms to the University template for upper level homepages. The new site will be implemented in August 2002.

Payroll Deduction of Library Fees. On June 1 the University Libraries adopted a new plan for automatic payroll deduction of outstanding library fees for all Penn State faculty and staff(excluding those at Hershey or Dickinson). DLT development staff worked with programming staff from the Penn State Payroll Office to implement this new feature for the University Libraries. By July 31, 3290 of 6964 faculty and staff had accepted the revised policy and agreed to payroll deductions for payment of outstanding library fees.

Digital Initiatives

Two years ago, the University Libraries Digital Initiatives Group, in collaboration with DLT, developed a *Digital Library Vision* for providing access to and delivery of digital information for the Penn State community in an environment of rapid technological development and information production. DLT has made a commitment to provide the digital library infrastructure as well as technical support for the digital projects, and to work with Libraries faculty on adding services and content to the Penn State Digital Library. Using re-allocated staff, a Digital Library Services group was established within DLT during the past year to support the digital library and to develop the architecture and tools necessary for the various projects. A number of digital library projects were undertaken during the reporting period; one is described in more detail below.

Visual Image User Study (VIUS). An Andrew W. Mellon Foundation grant provided support for an initial Digital Library Project in the area of usual material usage. The University Libraries partnered with DLT, the Center for Education Technology Services, the Center for Quality and Planning, and the School of Information Sciences and Technology to assess the needs for digital image delivery and usage in the arts, environmental studies, and the humanities. The project included the development and testing of a prototype system for image delivery.

DLT staff wrote code which allowed the project team to analyze data from various logs from digital databases, and supplied a list of student ids and demographic data (college, major, semester standing, etc.) from Arts & Architecture, Agriculture, Earth & Mineral Sciences, and Liberal Arts for use in the student survey conducted by the team. DLT also analyzed various software products and recommended solutions to the team. After the team selected a software product (ContentDM) to use for the project, DLT loaded and maintained the software.

LIAS Maintenance Activities

New Databases/Resources. Sixty new databases and resources in a wide variety of subject areas were made available via LIAS during 2001 while twenty-five databases and resources were made available during the first six months of 2002. Database usage statistics for 2001 are summarized in *Appendix B. LIAS Database Usage*; complete database statistics are at http://www.lias.psu.edu/stats/fasttrack_annual.htm.

Bibliographic Data Loads. During the past year, DLT continued batch loading a variety of small- to medium-sized files into The CAT. These files provide access to a variety of microforms, government documents, and electronic resources for which no bibliographic information had previously been available in The CAT. Files loaded include records from: CIC Preservation (TechPro), Digital Library Federation, Sex and Sexuality and MARCIVE Full GPO (ongoing load). In the near future, DLT will load Congressional Information Service, Early English Books Online, Three Centuries of English and American Drama, Early American Imprint Series I (American Antiquarian Society) and II (OCLC Major Microforms) for a total of approximately 130,00 new records in The CAT.

Resource Sharing - Export. Export of Penn State Libraries holdings data to OCLC Online College Library Center, RLG (Research Libraries Group), Access PA, ACLCP (Associated College Libraries of Central Pennsylvania) for resource sharing was suspended during the migration to Sirsi Unicorn software. Scripts and reports necessary to resume the exporting of

this data were completed during June 2002, with Export scheduled to begin shortly thereafter.

Automatic Creation of Order Records. Since 1999, DLT and the University Libraries have streamlined the cataloging process by developing the means to load cataloging copy directly into The CAT for many materials, including titles on the library's approval plan. This eliminates the need for staff to manually enter the data. During 2001/2002, DLT staff wrote code to take this process one step further. The new process generates not only bibliographic records, but also the corresponding order record for each item in the file. At the end of the reporting period this service was in test and anticipated for release in release date of Fall 2002.

Pinyin Conversion. Chinese language records in The CAT are currently undergoing conversion from the Wade-Giles to the Pinyin transliteration scheme. Pinyin romanization of Chinese will make it easier for users to locate Chinese language materials. To make this conversion possible, copies of LIAS records have been sent to OCLC Online Computer Library Center, Inc. for processing, and changed records will be reloaded back into The CAT. This is being done without any interruption to cataloging or patron access.

Data Warehouse. In Fall, 2001 the Libraries and DLT commenced work on a data warehouse for the purpose of reporting historical data. Work on this project will continue next year.

Help Desk. 3,782 trouble calls were reported to the joint DLT and University Libraries Help Desk between January and December, 2001. Of these, 1,553 involved DLT hardware and software, and were resolved by DLT staff.

Coming Attractions

Access to Library Resources in ANGEL. DLT and the University Libraries are collaborating with ITS' ANGEL Team to provide access to library resources directly through ANGEL. Two development efforts are underway:

Access to Course Reserve Materials. DLT has designed a program that will automatically log the user on to The CAT and then issue a search for the reserve associated with the class the student is actively working on in ANGEL. The search is executed using the class number and the instructor's id. On successful completion of the search, The CAT "Course Reserve" page is displayed.

Access to Subject Guides. The DLT/Libraries team is working with ANGEL developers to design a means to create subject guides for each ANGEL course. ANGEL software will provide an easy way for the Library Selector to create or modify subject guides at the course level. The guides can be exported for inclusion on other web sites. ANGEL developers were provided with a list of all FastTrack resources which have been incorporated into the creation of the subject guides.

Outreach and Collaboration

- # [Electronic Library Registration](#)
- # [Payroll Deduction of Library Fees](#)
- # [Visual Image User Study \(VIUS\)](#)
- # [Library Channels on Psu Portal](#)
- # [Single LIAS / Libraries Web Site](#)
- # [Library Resources in ANGEL](#)

Authentication at Public LIAS Workstations. In order to conform to Penn State security

policies, DLT is working with the University Libraries in moving to an authenticated environment for its public workstations. After authenticating with their PSU Access Account IDs, Penn State students, faculty and staff will continue to have access to unrestricted Internet resources. For other Libraries users, specialized LIAS Express workstations will permit access to The CAT, LIAS databases (as permitted by license agreements), and selected web sites designated as .gov, .mil, .state.pa.us and .psu.edu. Special one -day access to the restricted resources may be granted under special circumstances.

Selective Dissemination of Information (SDI). DLT will work with the PSU Portal developers to provide Selective Dissemination of Information via the portal. This will provide a means for users to be automatically notified when new materials in their disciplines become available in at the libraries.

Journal Access Management. DLT will write scripts to provide access at the journal title level rather than at the database level as is done presently. This will facilitate access to products such as MUSE, JSTOR, Wiley and others.

Quick Search from the Portal. DLT will write scripts to provide both a quick Keyword and quick Browse Search option from the portal. When using this feature, the user will be automatically logged in to The CAT, and the search executed with the terms the user specified on the initial portal page.

Staff Development

Presentations, Publications

Michael Bender, Sylvia MacKinnon

Library Computing at The Pennsylvania State University, Compaq Higher Education Executive Forum, San Antonio, 11/29/01

Dace Freivalds

Is Your Unicorn Housebroken? Developing an In-House Training Program at The Pennsylvania State University Libraries, Unicorn Users Group International Conference, Huntsville, AL, 5/5/02

Sylvia MacKinnon

LIAS Gets "Enhanced". Article in *Academic Computing Newsletter*, Spring 2001.

J. Lance Wilkinson

Global Mailing Lists -- A Case Study of a Web-enabled Administration Tool, Compaq Enterprise Technical Symposium 2001, Anaheim, CA, 9/9-16/01

Education and Training

Dace Freivalds

WEB 2001, 6/8/01
ColdFusion Level 1, 10/30/01
ColdFusion Level 2, 11/30/01
Introduction to XML, 1/14/02

Sylvia MacKinnon

WEB 2001, 6/8/01
Photoshop The Basics, 10/18/01
ColdFusion Level 1, 10/30/01
Photoshop, Creating and Preparing Images for the Web, 11/1/01
ColdFusion Level 2, 11/30/01
Introduction to XML, 1/14/02

Jack Orlandi

SIRSI Training, Huntsville, AL, 11/4-10/01

Wayne Stump

SIRSI Training, Huntsville, AL, 11/4-10/01
Mastering Supervision, Spring 2002 semester

*Conferences, Meetings, Exhibits***Eric Ferrin**

NISO/ALA Midwinter, Washington, DC, 1/9-12/01
Novell BrainShare 2001, Salt Lake City, UT, 3/17-23/01
NISO SC AV, Dallas, TX, 3/31 – 4/3/01
UUGI (Unicorn User Group International), Huntsville, AL, 5/1-4/01
Berkeley Benchmark, San Francisco, CA 5/5-9/01
IBM, White Plains, NY 6/24-26/01
ALA/CIC, San Francisco, CA, 6/14-17/01
OCLC SiteSearch, Dublin, OH, 8/1-2/01
SAC (Seminar on Academic Computing), Snowmass Village, CO, 8/4-9/01
Compaq Annual Executive Briefing, Marlboro, MA, 8/28-29/01
CETS2001 (Compaq Enterprise Technical Symposium), Anaheim, CA, 9/8-13/01
Educause, Indianapolis, IN 10/28-31/01
CIC Library Technical Directors, Chicago, IL, 11/11-13/01
Comdex 2001, Las Vegas, NV, 11/14-16/01
CIC Technical Steering Committee, Indianapolis, IN, 11/26-27/01
CNI (Coalition for Networked Information), San Antonio, TX, 11/28-30/01
Brainshare, Salt Lake City, UT, 3/16-23/02
CIC IT Directors, Chicago, IL, 3/25-26/02
NISO SC AV & ZIG meetings, Dublin, OH, 4/2-5/02
CNI (Coalition for Networked Information), Washington, DC, 4/15-17/02
UUGI Conference (Unicorn Users Group International), Huntsville, AL, 4/29 – 5/5/02
DLF Forum (OCKHAM Meeting), Chicago, IL, 5/9-10/02
DELL Meeting, Austin, TX, 6/5-7/02
API Summit Meeting, Atlanta, GA, 6/13-14/02

Tun Chin

CIC – ETD (Electronic Thesis and Dissertation) Meeting, Chicago, IL, 2/20-21/01
ETD (Electronic Thesis and Dissertation), Provo, UT, 5/30 – 6/1/02
API Summit Meeting, Atlanta, GA, 6/13-14/02

Dace Freivalds

ALA (American Library Association), San Francisco, CA, 6/14-19/01
UUGI Conference (Unicorn Users Group International), Huntsville, AL, 4/29 – 5/5/02
ALA (American Library Association), Atlanta, GA, 6/14-18/02

Lynn Garrison

ARL meeting during ALA, Washington, DC, 1/12-13/01
IOUGA (International Oracle Users Group), Vancouver, Canada, 7/20-27/01
IOUG LIVE! 2002 (International Oracle Users Group), San Diego, CA, 4/13-18/02
WEB 2002 Conference, 5/14-15/02

Sylvia MacKinnon

ALA (American Library Association), San Francisco, CA, 6/9-19/01
ALA Midwinter Meeting, Washington, DC, 1/18-21/02
UUGI Conference (Unicorn Users Group International), Huntsville, AL, 4/29 – 5/5/02
ALA (American Library Association), Atlanta, GA, 6/14-18/02

Janis Mathewson

ETD (Electronic Theses and Dissertations) project, Quality Expo 2002, Penn Stater, 5/16/02
ETD (Electronic Thesis and Dissertations), Provo, UT, 5/30 – 6/1/02

Ellen Newman

OCLC SiteSearch, Dublin, OH, 5/5-10/01

J. Lance Wilkinson

Novell TTP (Technology Transfer Partners), Provo, UT, 7/7-14/01
CETS 2001 (Compaq Enterprise Technical Symposium), Anaheim, CA, 9/9-16/01
Brainshare, Salt Lake City, UT, 3/16-23/02

Appendix A. LIAS Statistics at a Glance

Did You Know That ...

- Library users can plug their laptops into 800 open ports throughout the University Libraries.
- 60 new databases and resources were added to LIAS on the Web Fast Track during 2001.
- There was a 16% increase in the total number of times the databases accessible through LIAS were used between 2000 and 2001.
- The CAT (PSU Libraries Online Catalog) accounted for almost 50% of LIAS on the Web database usage during 2001.
- 73% of all users receive their library notices via email.
- 5.8 million data records were migrated to the new Sirsi Unicorn system in 2001.

2001 in Numbers...

Data Migrated to Sirsi Unicorn

Bibliographic Records	2,168,198
Item Records	3,210,000
User Records	120,406
Acquisitions Records	11,148
Circulation Transaction Records	304,248

Databases and Other Resources

Number Available	300+
Added in 2001	60
Total Number of Sessions	2,454,469

The CAT

Bibliographic Records in Database	2,229,016
Bibliographic Records Added in 2001	111,016
Total Number of Sessions	1,016,243

Circulation

Items in Database	4,117,608
Users in Database	158,789
Charge Transactions (Charges and Renewals)	776,849

System

Open Ports in the University Libraries	800
Public Workstations in the University Libraries	750
Staff Workstations in the University Libraries	800
Availability (uptime)	99.3%

Appendix B. LIAS Database Usage Statistics

LIAS Database/Resource Usage Statistics, 1999 - 2001*			
	1999	2000	2001
Totals			
Total No. Of Sessions Across All Resources	2,080,468	2,299,067	2,542,038
The CAT			
CAT - PSU Libraries Web Catalog	952,372	892,588	1,016,243
CAT - Journals & More	84,890	192,941	86,771**
CAT - New Titles (recent additions to The CAT)	1,937	2,211	798**
Top Twenty (based on 2001 usage)			
<i>(Statistics for all resources are available at http://www.lias.psu.edu/stats/fasttrack_annual.htm)</i>			
CAT - PSU Libraries Web Catalog	952,372	892,588	1,016,243
ProQuest Direct (newspapers, magazines, business)	87,737	140,307	214,786
Periodical Abstracts	133,238	83,288	61,191
PsycINFO (psychology)	63,394	65,726	52,859
Electronic Reserves	17,213	28,129	50,908
Academic Universe	60,103	73,340	48,867
Web of Science	16,716	34,325	46,328
Education Databases [including ERIC]		34,938	45,347
LEXIS-NEXIS Academic Universe		39,948	45,081
MEDLINE (medicine)	44,450	41,461	43,013
JSTOR (full text journal articles)	23,276	31,116	42,724
Academic IDEAL (full text journal articles)		17,632	34,352
Elsevier ScienceDirect Web Editions (full text journal articles)		6,761	32,836
IEEE Electronic Library (IEEEXplore)	7,179	17,487	26,682
Education Complete (Proquest)		9,551	24,932
ABI/INFORM (business)	35,142	24,947	24,473
Dow Jones Interactive	15,232	19,337	22,876
TIPS - DIAL ACCESS	12,356	19,336	20,053
WorldCat	7,217	11,728	19,582
Sociological Abstracts	8,032	8,785	18,430

Note:

*Data for October - December 2001 were not available. Annual statistics for 2001 were calculated using the data from the first nine months.

**Data for CAT - Journals and More and CAT - New Titles for Jan - May 2001 only. After May 2001, Journals and More was replaced by a journal titles index in The CAT, and its usage reflected in The CAT statistics. New Titles was not replaced.

Appendix C. LIAS System Availability

System Availability Based on University Libraries Hours, January - December, 2001 ¹													
2001													Totals
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
DOWNTIME(In Hours)													
Air Conditioning	0	0	0	0	0	0	0	0	0	0	0	0	0
Electrical													
Scheduled Outages	0	0	0	0	0	0	0	0	0	0	0	0	0
Unexpected Outages	0	0	0	0	0	0	0	0	0	0	0	0	0
LIAS Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0
Hardware													
CPU Failure	0	0	0	0	0	0	0	0	0	0	0	0	0
MCU Failure	0	0	0	0	0	0	0	0	0	0	0	0	0
Disk Failure	0	0	0	0	0	0	0	0	0	0	6	0	6
HSC Failure	0	2	0	0	0	0	0	0	0	0	0	0	2
Cluster Interconnect	0	0	0	0	0	0	0	0	0	0	0	0	0
Maintenance													
Maintenance	0	0	0	0	0	0	0	0	0	0	0	0	0
Software													
LIAS System	0	0	0	0	0	0.5	0	0	0	0	0	0	0.5
Operating System	6	2.5	3	0	1	0	0	0	1	7	2	0.5	23.0
LIAS Recovery	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Downtime	6	4.5	3	0	1	0.5	0	0	1	7	8	0.5	31.5
TOTAL AVAILABLE HOURS													
Maximum Available	404.0	408.0	405.0	450.0	352.0	360.0	363.0	323.0	428.0	448.0	401.0	295.0	4637.0
Total Downtime	6.0	4.5	3.0	0.0	1.0	0.5	0.0	0.0	1.0	7.0	8.0	0.5	31.5
Uptime	398.0	403.5	402.0	450.0	351.0	359.5	363.0	323.0	427.0	441.0	393.0	294.5	4605.5
AVAILABILITY IN %	98.5	98.9	99.3	100.0	99.7	99.9	100.0	100.0	99.8	98.4	98.0	99.8	99.3

¹Availability percentages are based on the maximum available hours at University Park Libraries and may not be a true reflection of LIAS availability at the CES campus libraries. LIAS availability at the campuses can be impacted by network downtime and other regional factors. LIAS is available for searching twenty-four hours a day, seven days a week.