

University of Michigan

Digital Library eXtension Service

Prospectus

OVERVIEW

The University of Michigan Digital Library eXtension Service (UM DLXS) offers a suite of resources designed to aid educational and non-profit institutions mount a variety of types of digital library collections. The University of Michigan conceived the SGML Server Program (SSP) in 1996 to serve a growing need for institutions like Michigan to put encoded text collections online. Since that time, a number of changes have taken place in the search engine marketplace, and the University of Michigan has strengthened its digital library production operations. The newly reconfigured UM DLXS replaces the SSP and offers both a search engine and a set of tools for mounting digital library resources. The search engine, XPAT, is specially designed to handle metadata and large and highly structured documents such as those found in digital library efforts. The tools that UM DLXS makes available are designed to tap the power of the XPAT engine for broad classes of digital library resources. Fees charged by the UM DLXS for XPAT cover ongoing development, maintenance, and support activities directly associated with the search engine, while the other software developed is available through free Open Source licensing.

SEARCH ENGINE

The XPAT engine is an XML/SGML-aware search engine that the University of Michigan has deployed with an extremely diverse set of digital library resources. XPAT is based on the search engine previously marketed by Open Text as OT5(TM), and sometimes referred to as "Pat" and "Pat5.0." The University of Michigan has licensed the code in order to undertake distribution and support, as well as to add functionality. Because of XPAT's origins and the extent to which it has been employed in University of Michigan digital library projects, we are confident about the search engine's reliability, its core functionality, and many aspects of its scalability. XPAT provides excellent support for word and phrase searching, indexing of XML and SGML elements and attributes, extremely fast retrieval, and open systems integration. For example, among the many collections that use XPAT is the 3 million page, 7Gb, 1.5 billion word Making of America collection. As part of the UM DLXS, the University of Michigan Digital Library Production Service has launched a continuous development process in which we have added a number of features to XPAT. We have introduced support for valid and well-formed XML, Linux binaries, better error handling, and improved indexing performance for XML/SGML elements, attributes, and tags. We are also undertaking the introduction of Unicode indexing support. XPAT is licensed by the University of Michigan on a per-server basis, with an initial one-time fee of \$15,000 for the first instance of the search engine. Support for XPAT is available on an annual basis for \$5,000.

SUPPORT

The XPAT engine is extremely versatile, and while documentation for a wide range of applications is provided as part of the licensing, the University of Michigan is only able to support those digital library applications undertaken as part of DLXS. Support and pricing for support for XPAT is designed around this core set of applications. (Support for the XPAT engine is offered on an annual basis.) The mechanisms for support are discussed further below.

Class Middleware

The UM DLXS distributes and supports several modules, each based on the evolving DLPS “classes” and “behaviors.” The UM DLXS seeks to enable digital library activities. To this end, significant resources are devoted to developing and supporting access mechanisms for many types of collections found in the digital library (e.g., page image based books with associated OCR, and SGML/XML encoded books and journals). Significant classes include a class for monograph length books and journals (both modern and historical), a class for images and image metadata, a class for finding aids, and a class for bibliographic information. A large and growing set of behaviors (such as types of searches and browses) is applied to these classes. Both the classes and behaviors are being documented at <http://www.dlxs.org/docs/>. Middleware to support these classes and behaviors is distributed through the UM DLXS, and support for this middleware is provided as part of XPAT annual support. DLPS is committed to a continuous process of developing this middleware, adding functionality as needs are identified and as the WWW matures as a delivery mechanism. We also hope that through Open Source distribution, other individuals and institutions will contribute to the development process.

On-call Support

On-call support is provided primarily through e-mail, though telephone and postal contacts are provided for member institutions as well. A table of UM DLXS contacts is provided below. We will provide an e-mail acknowledgement of all e-mail received at dlxs-help@umich.edu within 24-hours of receipt. We are not able to provide a timetable for resolution of problems, but we are sensitive to the fact that the tools and services made possible by the UM DLXS are used in production services, and that prompt resolution of problems is critical to the viability of these services. E-mail queries are received by a group of staff members to ensure that problems are widely communicated, and that the most appropriate DLPS staff member receives the question. Office staff, who are more readily available, receive telephone queries and subsequently relay queries by e-mail to groups of staff to ensure a prompt and appropriate response.

Training

As a part of UM DLXS, the University of Michigan offers inexpensive summer workshops for participants, guiding programmers and digital collection managers in the application of the UM DLXS code base in putting collections online. Current plans (based on previous demand) are to offer these workshops at no charge, with transportation, food, and lodging being handled by the participants. We are able to accommodate one representative from each member institution for each workshop, but will consider special requests for more than one representative on a space-available basis. We will initially offer two workshops each year, both tentatively scheduled in summer. One workshop is geared to the needs of programmers; one workshop is geared to the needs of managers of digital collections. Each requires a high level of technical skills. More workshops will be offered based on demand. For more information, see <http://www.dlxs.org/training/workshops.html>.

RELEASE SCHEDULE

We will continue to detail products and release schedules online at: <http://www.dlxs.org/products/products.html>. XPAT is currently available. All three major class search modules—Text class, Image class, the Bibliographic Class, and pre-class version of Finding Aid middleware—are also currently available.

FEES

Costs to subscriber organizations will consist of one-time fees for the XPAT software license, and an ongoing cost for support and updates to XPAT. **A one-time cost of \$15,000 is charged for licensing XPAT.** This entitles the subscribing institution to install XPAT on a single server (as well as an instance of XPAT on a development or backup server). Additional

copies of the search engine are available to the licensing institution at a reduced rate. **Support for the search engine will be charged at a rate of \$5,000 per year**, regardless of the number of installations of the search engine. Support is made available to a single designated representative of the institution. The rate of \$5,000 per year is applied to the first representative/membership within an institution; additional memberships within a single institution are charged at a lesser rate. (For example, if a large institution wishes to install additional search engines in other parts of the organization at the lower rate, it must either use a single designated representative for all support, or it may pay fees for additional representatives and thus secure support for each of these representatives.) Should an institution choose to discontinue its support agreement for XPAT, it may continue to use XPAT and is still bound by the terms of the license for the XPAT engine. The middleware is available as a free, Open Source product at the DLXS web site; support is provided to XPAT maintenance customers.

XPAT	first instance, per single computer	\$15,000
XPAT	subsequent instances, per single computer	\$12,000
XPAT maintenance/updates	first representative, per year	\$5,000
XPAT maintenance/updates	Each additional representatives within an institution, per year	\$3,000

ELIGIBLE SUBSCRIBERS FOR UM DLXS

The University of Michigan is permitted to sell the XPAT engine to other institutions or organizations in the “vertical market represented by other academic institutions and non-profit/not-for-profit organizations.” As part of the process of purchasing the XPAT engine, an institution or organization may be required to provide evidence of its non-profit status (e.g., 501 (3c) certification). While the XPAT engine is extremely versatile, the primary focus of the Digital Library Production Service is in creating and sustaining digital library applications, and thus the service will be focused on those applications.

SUPPORTED ENVIRONMENTS

The UM DLXS and XPAT are currently available for a number of UNIX environments. Participants must acquire and install server hardware and Web server, as well as Perl. XPAT has been compiled for and is distributed for Solaris (Sparc only), Linux (Intel only), and AIX (PPC only). More information about supported environments is available online at <http://docs.umdl.umich.edu/dlxs/tech/dlxs-sysreq.xml>. Please contact dlxs-help@umich.edu to inquire about the availability of XPAT binaries for other operating systems, support for new platforms.

CONTACTS, CONTRACTS, AND FURTHER INFORMATION

Subject	Contact name	Phone	E-mail address
Contact for <u>XPAT</u>	Pat Hodges	734 764.8016	phodges@umich.edu
Contracts & agreements also online:	http://www.dlxs.org/forms/		
General information regarding UM DLXS and XPAT	John Price Wilkin	734 647.8000	jjwilkin@umich.edu
Assistance with UM DLXS resources, including XPAT	(Various staff)	734 647.8000	dlxs-help@umich.edu