

学术/专业图书馆信息服务和管理的新方向

兼论开源软件的应用

New Directions of Information Services and Management for Academic Libraries

& How Open Source Software and Application Can Help

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值得思考的问题

1. 学术图书馆服务的价值
2. 学术图书馆员的素质和专业背景
3. 学术图书馆的地位 digital age



趋势：图书馆在研究，教学，和学习中的角色

Trend of Library Role in Research, Teaching, and Learning

- 当前的研究实践迫使图书馆建立新的研究支持方法
- 研究图书馆的馆藏及其发展被赋予新的意义
- 研究图书馆越来越多的提供Online 服务和资源
- 在教育方法上，积极和接触性学习的影响
- 非正规和成人教育的影响
- 预算减少和图书馆组织的变化

科研实践迫使图书馆构建新的方式对其支持
Research practice push libraries to construct new forms of
engagement and support

- 科研行为的改变 research behavior change
- 交叉学科的学习 interdisciplinary studies
- 数据图书馆的建立 data library
- 新型的合作与伙伴关系 innovative collaboration
and new partner



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研究图书馆的馆藏和收集有了新的意义

Research library collection and collecting have taken on new meanings

- 馆藏Web的内容 to collect 'Web' contents
- Google和作者的新协议的影响 Google/author settlement
- 馆藏资料外文 foreign collection (with budget constraint)
- 特别馆藏 special collection



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研究图书馆提供越来越多的网上服务和资源

Research libraries increasingly deploy services and resources into virtual environment

- Web 2.0
- 云计算 Cloud computing
- 移动连接 mobile connection
- 课程管理系统 Course management



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积极和接触性学习的影响

Shifts in pedagogy to ‘active and engagement learning’ are affecting how libraries partner with academic faculty to support students

- 在基础课程里，嵌入信息素养的内容embed information literacy in basic courses
- 开发Online 教材和学习模块online tutorial and learning object
- 本科生在实验学习和研究中，变得活跃和具有实践性 undergraduate become active and experimental learning and research

非正规和成人教育的影响

Library will discover opportunities to engage non-typical students and life-long learning style

- 加入远程教育的学生又一次开始增长The resurgence of distance education enrollment
- 专业教育的增长Professional programs are on the rise

预算减少和图书馆组织的变化

Budget cut and organization change

- 研究图书馆变为提高效率和学习的地方 Exceptional progress has been made to transform research libraries into popular destinations for productivity and learning
- 研究图书馆的分部 Branch libraries space issues
- 主图书馆的楼 Main library buildings may come under increased pressure to accept new tenants and services (“space wars”)
- 收集数据用来证明图书馆所需的空間

Data derived from user-needs assessments to present the strongest cases for retaining library real estate



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奔向未来的图书馆

Toward the FUTURE LIBRARY SERVICES

The future is now

- Cost-benefit and business sustainable model
- Keep improving library collection
- Services transformation to user self-sufficient model
- Training and re-training staff skill sets and service attitudes
- Continue to be the national leader.



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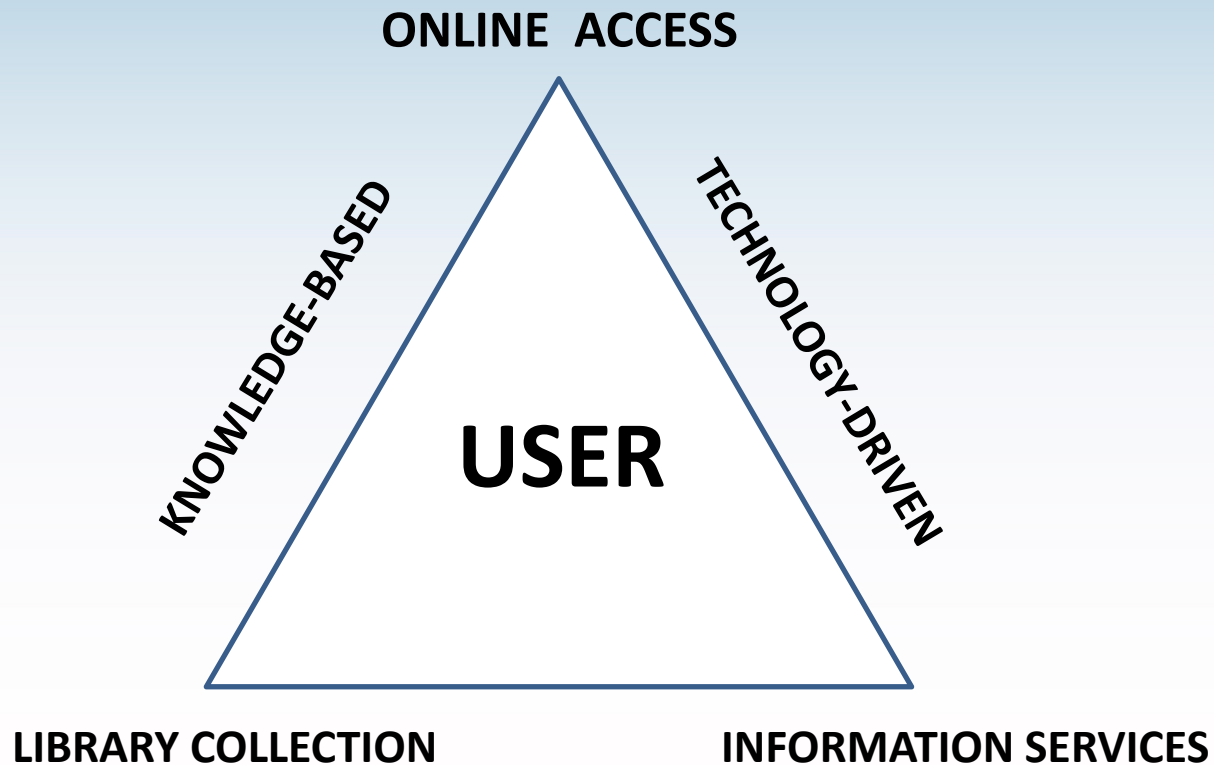
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Welch Library Plan in 21th century



TECHNOLOGY-Driven USER SELF-SUFFICIENT MODEL



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Library Priority 图书馆的重点

ONLINE ACCESS

- Reliable access to library resource **virtually** and **physically**, any where and anytime;
- Reliable access to library online services **virtually**, any where and anytime;
- An array of online applications that provide users with the **self-sufficient** service, through **smart** search interfaces, “just-in-time” online training, step-by-step self-learning tutorial, real-time virtual help, and **knowledge-enhanced** management services.

Library Priority 图书馆的重点 (Continue)

LIBRARY COLLECTION

- Build business sustainable collection model that meets **diversified** users needs (both online and printed resources);
- Closely keep the communication with faculty members on the **resources needs**;
- Monitor and analyze the **usage** of resource accurately in order to **optimize** the budgetary spending;
- Adopt **different strategies** to meet users' requests for resources while coping with the budget shortfall.

Library Priority 图书馆的重点 (Continue)

INFORMATION SERVICES

- **Outreach** user community to promote the resources and online services;
- Facilitate **new learning styles** (group learning, online learning and social learning);
- Coordinate and support **multi/inter disciplinary** scholarly communication and departmental or cross campus collaboration;
- Introduce and demonstrate **information management software** and application to user community;
- Provide user with help on information searching and management **virtually and in person**;
- Preserve research data sets and develop metadata services;
- Participate in research and CTSA projects to provide in-depth information service **generally on fee-based**.

RESEARCH FOCUS 图书馆的研究(1):

KNOWLEDGE CREATION AND MANAGEMENT

- Knowledge development on user information **behavior** and research **habits** for developing better service delivery mechanism through **personalization**;
- **Ontology**-based knowledge extraction and integration for better search terms selection and search strategy building;
- Biomedical literature resource integration with clinical systems (EMR) to provide knowledge-based supporting interfaces;
- Building the mechanism for knowledge extraction in **Evidence-based** practice and **systematic review** process;
- Building the mechanism for taxonomy-based metadata assignment for **research dataset** cross-reference and computation.

RESEARCH FOCUS 图书馆的研究(2):

LIBRARY AND INFORMATION SERVICES

- Monitor the trend on **e-learning** and **e-training** and **evaluate** their impacts and improve the quality of **medical** education and **clinical** training;
- Monitor and participate in **open-access** movement to improve **scholarly communication**;
- Study information search **behavior** and **habits** among individual discipline and how library can help;
- Use the techniques from information retrieval, artificial intelligence and cognitive study to enhance information **search interfaces**;
- Apply new technologies such as **mobile**, **voice-activate** and **ontology** to extend and expand the power of search tools;
- Improve **usability** and **user experience** of information seeking process by utilizing the techniques of human-computer interaction and communication.

图书馆的需要和开源软件

Library's Needs and How Open Source Can Help

- 通讯和交互 Ability of communicating and interacting with users;
- 提供内容控制和用户定制环境 Ability of controlling the contents updating and provide customization environment;
- 用户需求的分析 Ability to analyze user's needs and requirements;
- 知识发掘和连接 Ability to extract the knowledge and link them.

开源软件的基础 The Foundation of OSS

- **L**inux: 操作系统 Operating system
- **A**pache: Web 服务器 Web server
- **M**ySQL: 数据库 系统 Relational database management system
- **P**HP: 程序语言 Scripting language

为什么很多人用开源软件

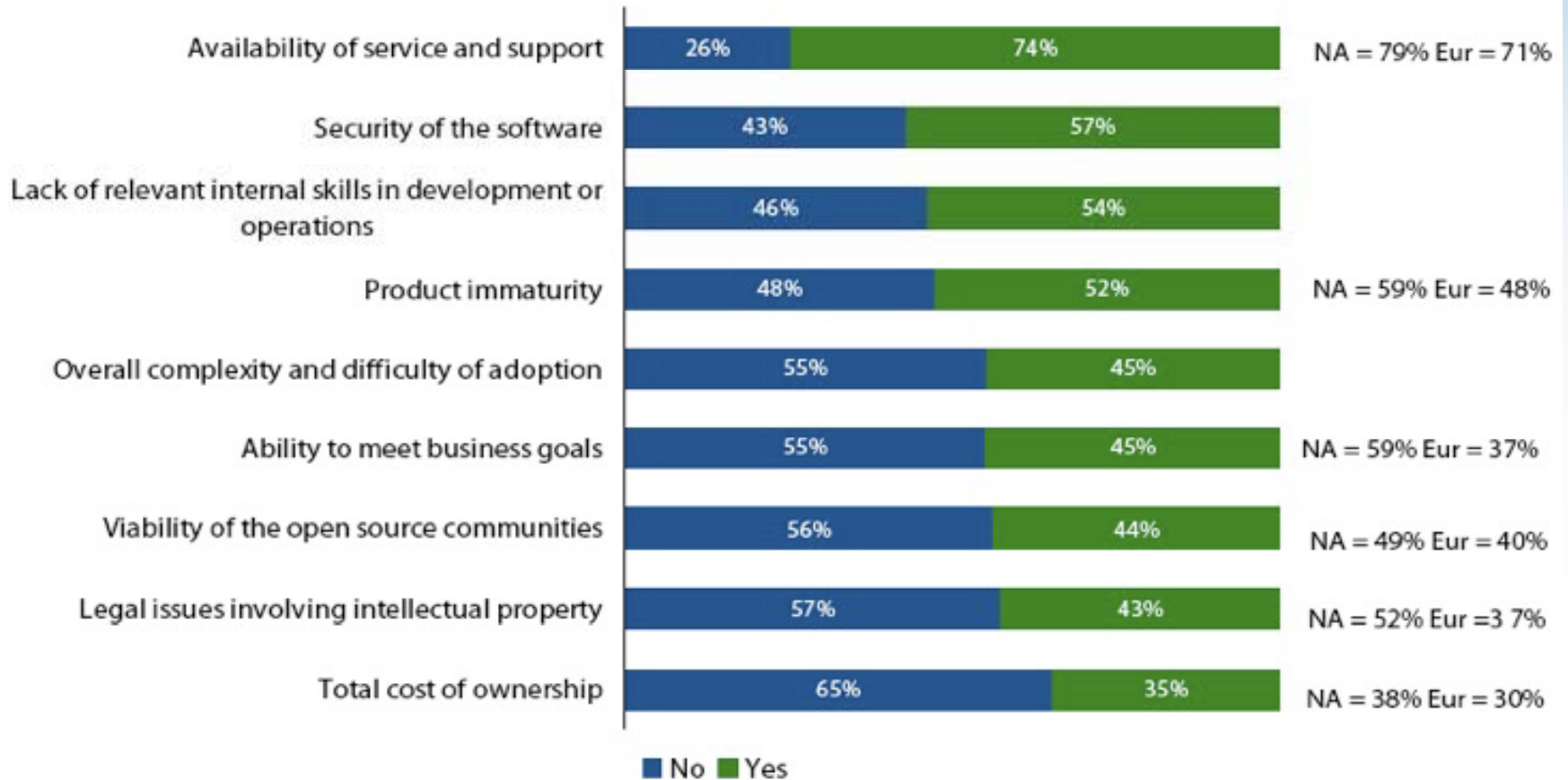
Why So Popular

- 通过同行检查达成可靠性 Reliability through Peer Review
- 有革新的自由 Freedom to Innovate
- 没有供应商的锁定 No Vendor Lock-in
- 用户为中心的开发 User-centric Development
- Zero License Fees



开源软件的担心 Open Source Concerns

**“What concerns do you continue to have about using open source?”
(asked to respondents currently using open source; N = 199)**



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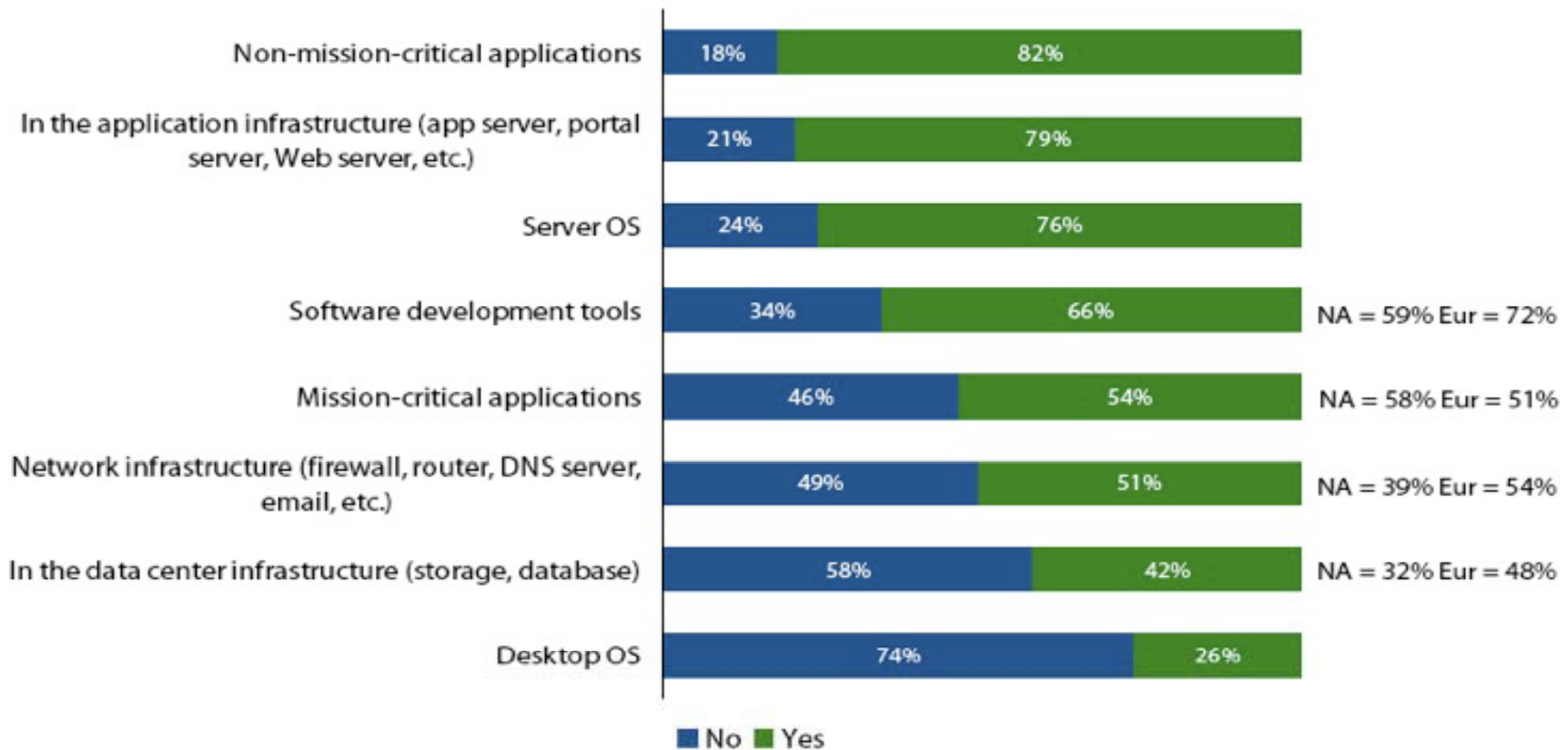
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开源软件在运用中 Open Source in Business

"For which of the following software applications are you using open source software?"
(N=269)



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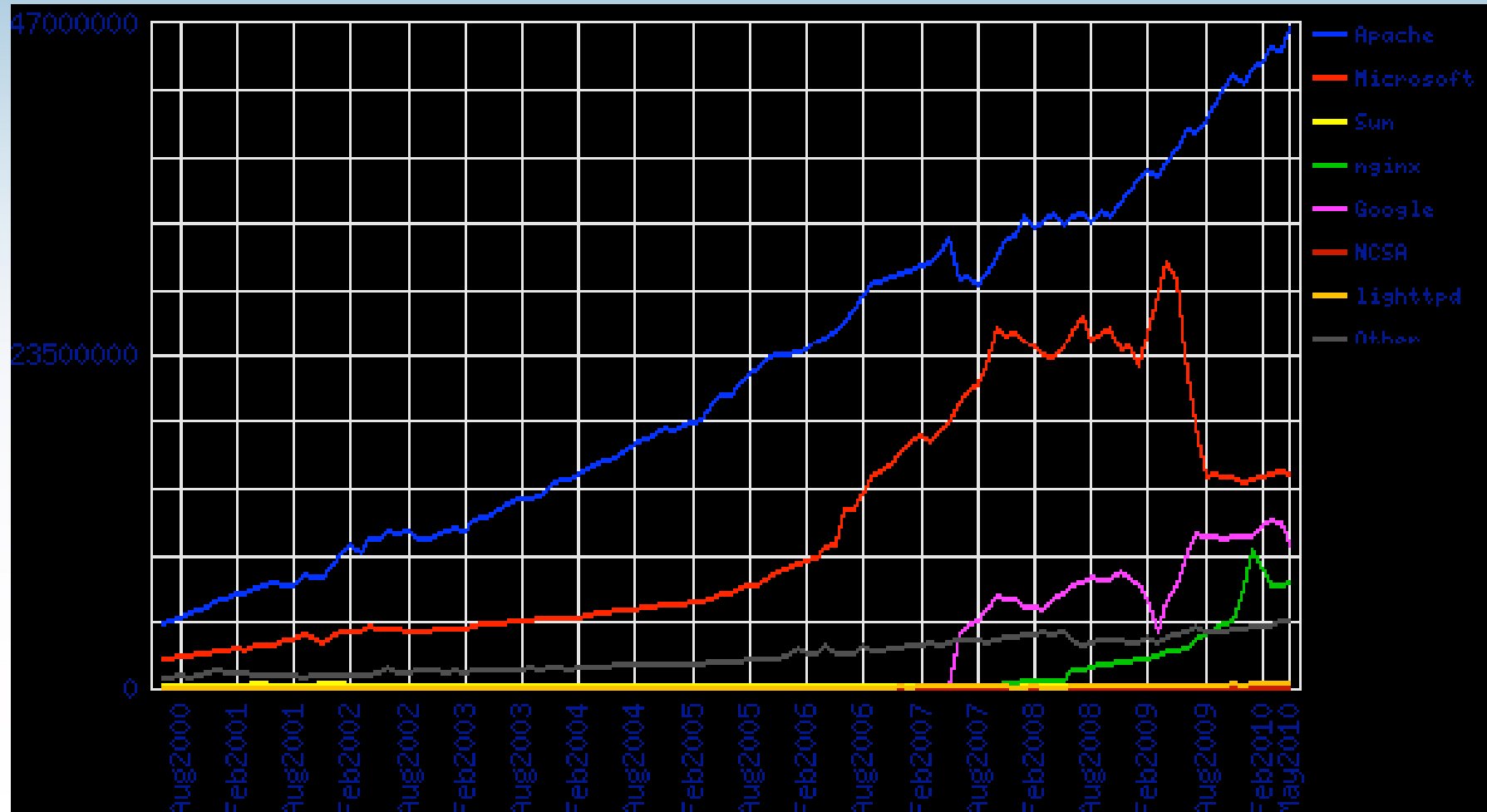
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Total Active Servers: 6/2000 to 5/2010 (47,000,000)

(http://news.netcraft.com/archives/2010/01/07/january_2010_web_server_survey.html)



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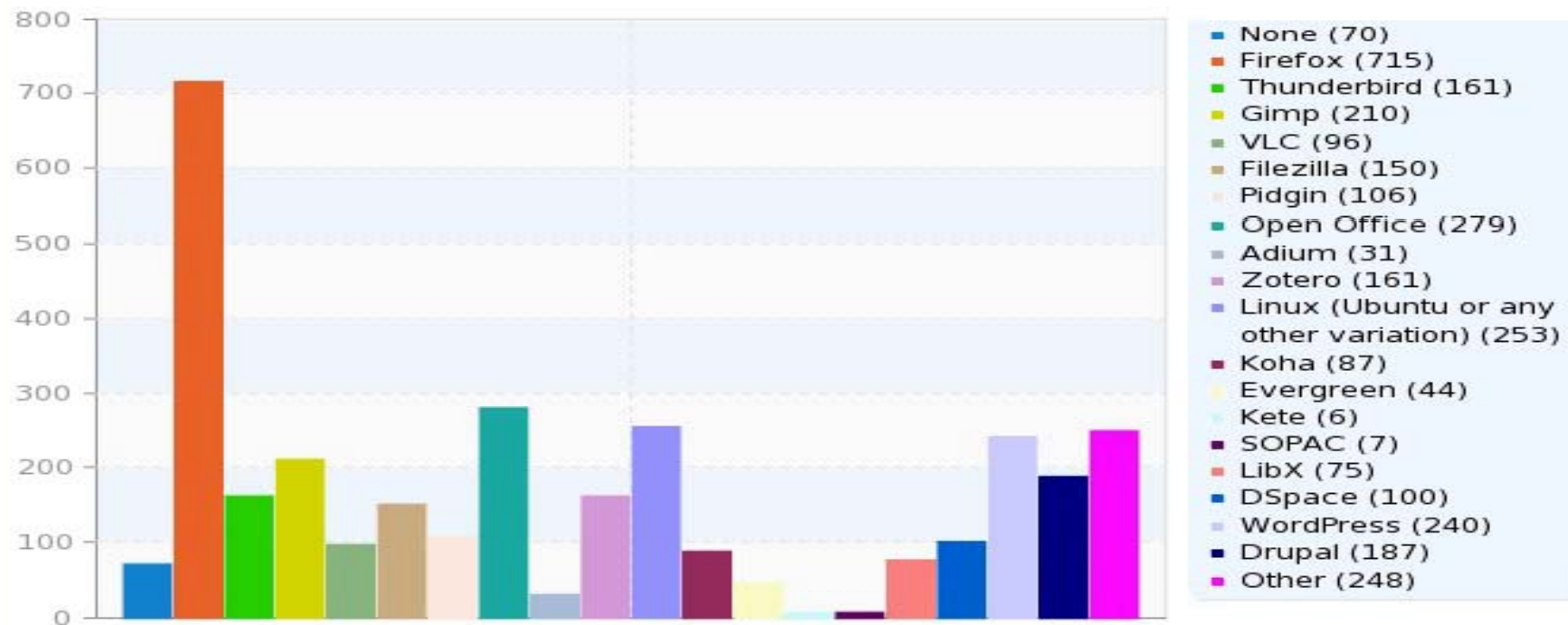
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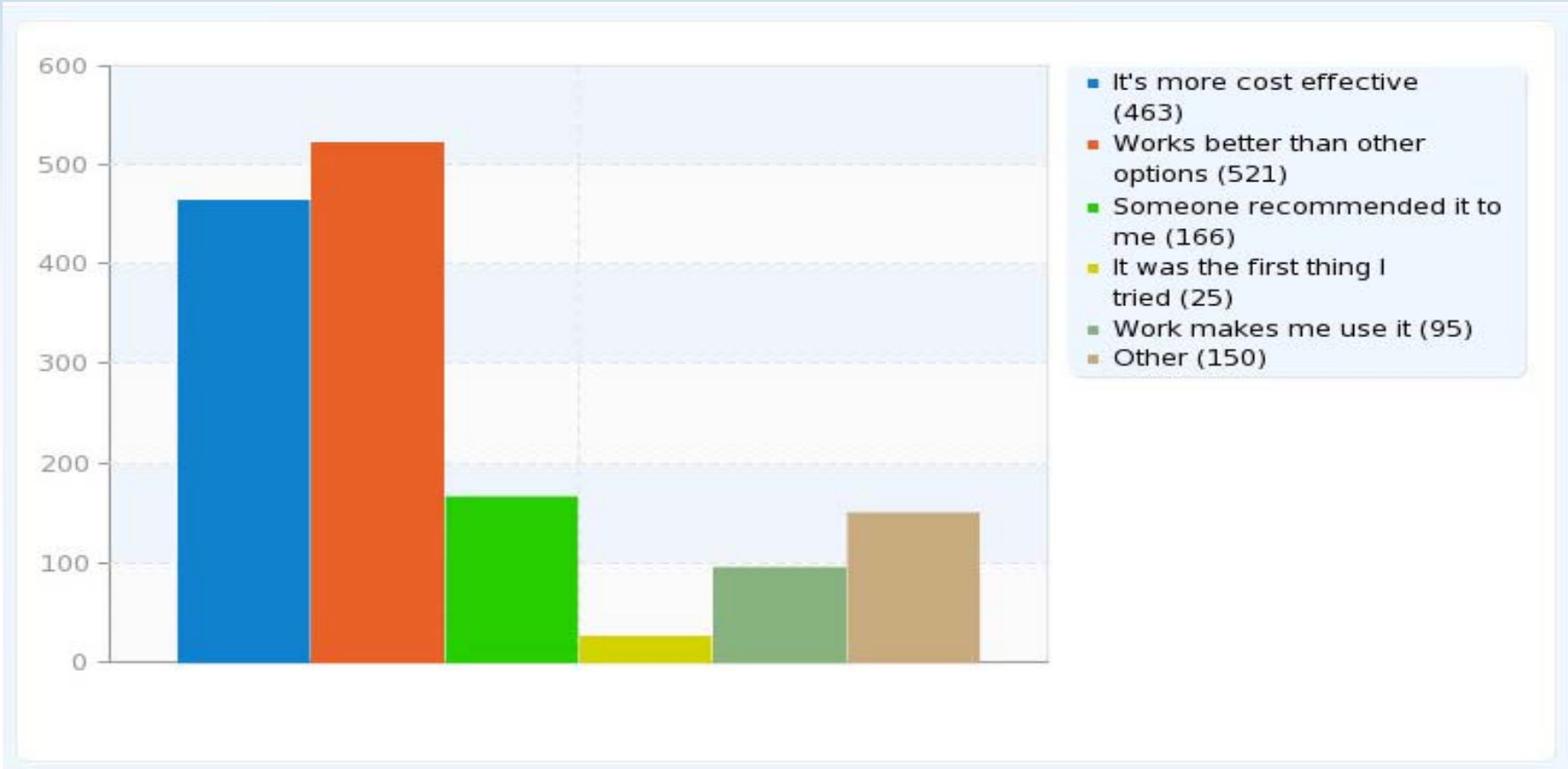
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977 图书馆的调查 When asked what Open Source apps they use at work, 977 librarians and library workers answered as follows



977 图书馆的调查 (2) When asked why they chose and open source app, 977 librarians and library workers answered as follows



Web Browsers 浏览器

Firefox

- Customizable with Plug-ins
- Offers more security than IE
- Phishing protection
- Built in pop up blocker
- Spyware protection
- Private Browsing
- Frequent updates
- Built in spell checking
- Built in RSS recognition



Alternative Browser

Chrome（替代浏览器）

- Google Chrome is a new open source option
- Available for many operating systems
- More security than IE
- Malware protection
- Spyware protection
- Anti-Phishing
- Private browsing
- Extend functionality with plug-ins



用开源软件的公共计算机 Open Source Public Workstations

- **Three models**
 - Linux/Ubuntu based terminals
 - Multi-user workstations
 - Thin Server using Linux Terminal Server Project (LTSP)
- **Advantages**
 - Cost savings
 - Security
 - Energy savings



浏览器 标签同步更新



Browser Sync (Weave)

- Sync all your Firefox installs
 - Encrypts and securely synchronize the Firefox experience across multiple browsers, so that your desktop, laptop, and mobile phone can all work together
 - Currently supports continuous synchronization of your bookmarks, browsing history, saved passwords and tabs
-
- <https://labs.mozilla.com/projects/weave/>
 - <http://arstechnica.com/open-source/reviews/2010/02/mozilla-weave-10-take-your-tabs-and-bookmarks-everywhere.ars>

办公室开源软件

Complete Office Suite



- Works on most operating systems

Includes full office suite:

word processor, spreadsheet, presentation manager,
drawing program, database application

- Similar menus to other office suites
- Save files in a variety of formats for interoperability with other office suites
- Mature/established applications
- <http://www.openoffice.org>

开源会议软件 (WebHuddle)

Web Conferencing

- Works on most operating systems
- Runs right in the web browser
- Secure (data encrypted by HTTPS)
- Meetings can be conducted either in conjunction with an enterprise's existing teleconferencing service, or utilizing WebHuddle's optional voice over IP
- <https://www.webhuddle.com/>



开源会议软件（2）

Web Conference (dimdim)



- Works on most operating systems
- Comes in open source and enterprise edition
- No software downloads for meeting hosts or attendees (runs in your browser)
- Share your desktop, slides, chat and voice
- Broadcast via webcam and voice over IP
- Open source version meant for developers, tech enthusiasts and for other non-critical environments
- <http://www.dimdim.com/>



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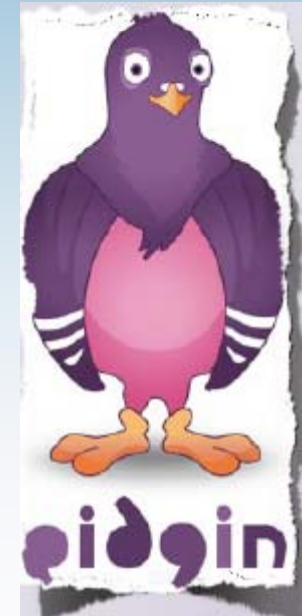
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即时传话软件 Instant Messenger (Pidgin)

- IM with multiple logins at once
 - Supports file transfers
 - Shows typing notifications
 - Allows for custom away messages
 - Windows only
-
- <http://www.pidgin.im/>
 - <http://www.adiumx.com/>

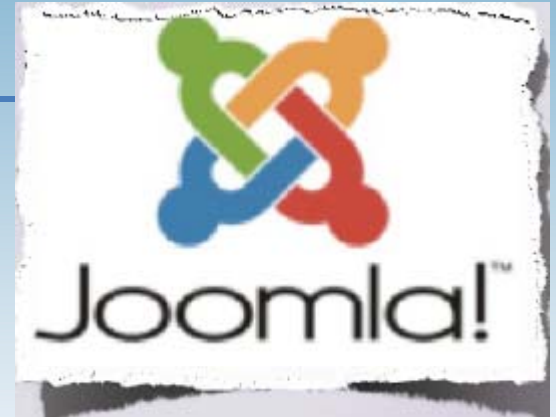


在线调查 Online Survey (LimeSurvey)



- Install on your own servers
- WYSIWYG HTML Editor
- User-Management
- Free with no limits on number of surveys or responses
- Multi-Lingual Surveys in more than 50 languages
- Integration of pictures and movies into a survey
- Creation of a printable survey version
- Anonymous and Not-Anonymous survey
- Open and closed group of participant surveys
- Optional public registration for surveys
- <http://limesurvey.org/>

内容管理系统 (Joomla) Content Management System



- Easy to install and customize
- Allows for user permissions
- Plugins for events calendar, blogs wikis, page history and much more
- Thousands of pre-made themes
- Built-in search engine
- Can run an entire library website or intranet
- <http://joomla.org>
- <http://www.joomlaonline.com>
- <http://www.makeuseof.com/tag/10-free-joomla-extensions-live/>



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内容管理系统Advanced Contents Management system



- More advanced interface and installation process
- Expandable with Modules
- The Drupal community has contributed many modules which provide functionality that extend Drupal core
- Extensive online help
- Both the content and the presentation can be individualized based on user-defined preferences.
- Role based permission system
- <http://drupal.org>
- <http://listserv.uic.edu/archives/drupal4lib.html>

部落格和内容管理系统 BLOG/CMS



- Easy to install and customize
- Allows for detailed user permissions
- Plugins for events calendar, widgets, photo galleries and more
- Thousands of pre-made themes
- Includes content management functionality
- Built-in search engine
- Support multiple authors and blogs
- Can run an entire library website or intranet
- <http://wordpress.org>
- <http://wp4lib.bluwiki.com>

会议管理系统 (MRBS)

Meeting room Booking



- Web/Intranet based (any browser)
- Flexible Repeating Bookings
- Authentication with your existing user database (eg Netware, NT Domain, NIS etc.)
- Ensures that conflicting entries cannot be entered
- Room administrators can be notified of bookings by email
- Multiple languages supported
- <http://mrbs.sourceforge.net/>



Research Assistant



- Open source Firefox extension
- Helps you collect, manage, and cite research resources
- Playlist-like organization
- Allows for note-taking
- Includes saved searches and tags
- Integration with MS Office & Open Office
- Data stored in your web browser
- New version (in beta) allows for storing of files and bibliography online as well
- Beta version allows for shared collections

<http://zotero.org>

<http://www.zotero.org/translators>

<http://research.library.gsu.edu/zotero>



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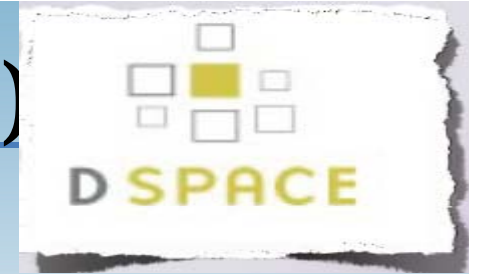
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Institution Repository (DSPACE)



- Store research papers and presentations for your organization
- Captures your data in any format: text, video, audio, data
- Customizable to your needs
- Searchable
- Provides access control
- Widely used in the academic world
- <http://www.dspace.org>

Reference Stats

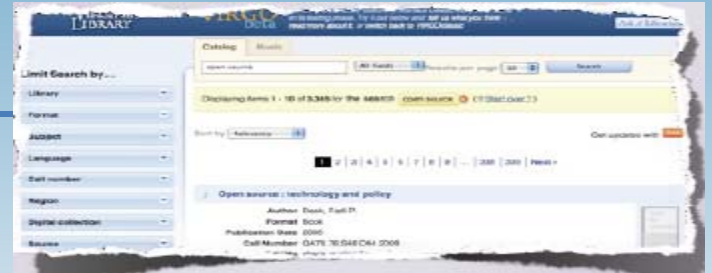


- Provides a simple way for library reference & service desks to track statistics on the number of questions asked
- Provides tools to build a simple knowledge base
- Web-based
- Runs on Linux or Windows Server

<http://code.google.com/p/libstats/>

OPAC (Blacklight)

- Blacklight OPAC
 - Allows for indexing multiple types of objects from the repository with separate metadata standards
 - Allows for searching of bib records alongside digital library items
 - Friendly interface
 - RSS Feeds for search results
 - Facetted Searching
 - Cover images
 - Speedy/Friendly search engine
-
- <http://rubyforge.org/projects/blacklight/>
 - <http://blacklight.betech.virginia.edu/>



OPAC (Vufind)



- Currently only works with Voyager
- More ILS support to come
- Faceted results
- Save lists
- Zotero integration
- Persistent URLs
- Author biographies
- Similar items searching
- Browsable
- <http://vufind.org>

CMS and OPAC in One (Scriblio)



- CMS and OPAC with faceted searching and browsing features
- Leverages WordPress to offer rich content management features for all a library's content
- Free and open source
- Represents library catalogs in an easily searchable, highly re-mixable web-based format
- <http://about.scriblio.net>



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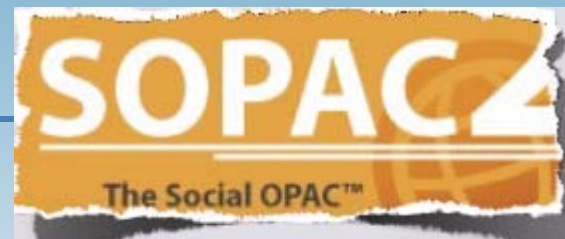
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CMS & OPAC in One



- SOPAC (Social Online Public Access Catalog) is a module for the Drupal CMS that provides true integration of your library catalog within
- Drupal while allowing users to tag, rate, and review your holdings.
- Faceted browsing
- 100% customizable interface via the Drupal template system
- Ability to remove search limiters
- Saved searches
- Integrated renewals, holds placement, and fine payment
- Ability to customize the user experience via the administrative control panel
- <http://thesocialopac.net>

Federated Search(LibraryFind)



- Metasearch application developed by librarians for libraries
- Built-in OpenURL resolver
- Ability to locally index collections
- Web-based administration
- Customizable user interface
- Relevance sorted results
- Refine searches
- <http://libraryfind.org>
- demo: <http://search2.library.oregonstate.edu/record/search>

Integrated Library Systems (EverGreen)



- Installs to your desktop
- Offers the following functions
 - Cataloging
 - Circulation
 - Patron Management
 - In development
 - Acquisitions
 - Serials
- Software available for free
- Support available at reasonable price
- <http://open-ils.org>

Web-Based ILS



- Fully web-based ILS
- Offers same features as the proprietary ILS
- Cataloging
- Circulation
- Patron Management
- Acquisitions
- Serials
- Software available for free
- Support available at reasonable prices
- <http://koha-community.org>



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Text Search Engine



- Popular, blazing fast open source enterprise search platform from the Apache Lucene project
- Major features include powerful full-text search, hit highlighting, faceted search, dynamic clustering, database integration, rich document (e.g., Word, PDF) handling, and geospatial search
- Highly scalable, providing distributed search and index replication, and it powers the search and navigation features of many of the world's largest internet sites.



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Web Crawler (Nutch)



- Open source Web search engine based on Lucene and Java for the search and index component
- Coded entirely in the Java programming language, but data is written in language-independent formats. It has a highly modular architecture, allowing developers to create plugins for media-type parsing, data retrieval, querying and clustering
- The fetcher ("robot" or "web crawler") has been written from scratch specifically for this project

Web Clustering (Mahout)



- Free implementations of distributed or otherwise scalable machine learning algorithms on the Hadoop platform. Mahout is a work in progress; the number of implemented algorithms has grown quickly, but there are still various algorithms missing
- While Mahout's core algorithms for clustering, classification and batch based collaborative filtering are implemented on top of Apache Hadoop using the map/reduce paradigm, it does not restrict contributions to Hadoop based implementations.
- Contributions that run on a single node or on a non-Hadoop cluster are also welcomed. For example, the 'Taste' collaborative-filtering recommender component of Mahout was originally a separate project, and can run stand-alone without Hadoop

MetaData Extracting



- The Apache Tika™ toolkit detects and extracts metadata and structured text content from various documents using existing parser libraries

Research Communication and Management



Cornell University

VIVO

Research & Expertise
Across Cornell

- VIVO is a research-focused discovery tool that enables collaboration among scientists across all disciplines.



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Social Network



An award-winning social networking engine, delivering the building blocks that enable businesses, schools, universities and associations to create their own fully-featured social networks and applications



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Portal Development Tool



- **Allow** users to set up features common to websites. It is fundamentally constructed of functional units called portlets
- Liferay is sometimes described as a content management framework or a web application framework.
- No programming skills are required for basic website installation and administration.
- Java based and runs on any computing platform capable of running the Java Runtime Environment and an application server

Addition Links

- OSS Watch, open source software advisory service:
<http://www.oss-watch.ac.uk>
- Open Source as Alternative <http://www.osalt.com>
- Open Source Living <http://osliving.com>
- Open Source Software and Libraries Bibliography
- www.zotero.org/groups/freelibre_and_open_source_software_and_libraries_bibliography
- Nicole's Delicious bookmarks:
<http://delicious.com/nengard/opensource>

Online Reading List

- Open Source: Narrowing the Divides between Education, Business, and Community
- <http://connect.educause.edu/display/47941>
- Open Source Software in Libraries
- <http://infomotions.com/musings/ossnlibraries/>
- The concepts of Free Software & Open Standards: Introduction to Free Software
- <http://ftacademy.org/materials/fsm/1#1>
- We Love Open Source Software. No, You Can't Have Our Code
- <http://journal.code4lib.org/articles/527>
- A Primer on Risk
- <http://www.libraryjournal.com/article/CA6611591.html>
- Nicole's Zotero Library
- <http://www.zotero.org/nengard/items/collection/1796131>



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Thanks!

Questions?



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