Open source software for library management and discovery:

Overview and Latin American Context

Software de código abierto para
gestión de bibliotecas y el descubrimiento de recursos

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5° Aniversario **Entre Pares 2016**

Description

Marshall Breeding, a specialist in the field of library technology, will discuss open source software in libraries, emphasizing trends relevant to Mexico and Latin America. Open source software has gained an increasing presence in the region, were libraries often collaborate to share expertise and development resources. Breeding will discuss concepts underlying open source software, such as the requirements for access to programming code, and the ability to use, modify, and share it. Open source software is conducive to services provided by commercial, governmental, and non-profit organizations for technical development, as well as assisting libraries with implementation and ongoing support. Open source projects discussed will include Koha, ABCD, and especially the new FOLIO project which has recently been launched with support from EBSCO Information Services.

Library Technology Guides

Documents, Databases, News, and Commentary

Library Technology Guides provides comprehensive and objective information surrounding the many different types of technology products and services used by libraries. It covers the organizations that develop and support library and their software and systems. The site offers extensive databases and document repositories to assist libraries as they consider new systems and is an essential resource for professionals in the field to stay current with new developments and trends. Relevant news items are posted daily on Twitter:

librarytechnology.org

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GuidePosts

Perspective and commentary by Marshall Breeding

Blog Archive 🔲 RSS

Library Systems Report 2016: Power plays

The 2016 edition of the **annual industry report** that I have produced since 2002 has been published by **American Libraries**. The online version is available now and the feature will appear in the May 2016 print issue. The 2002 through 2013 editions of this report were published by Library Journal.

e technology infrastructure libraries implement can affect their ability to manage internal operations efficiently and deliver high-quality services, in person and online. Weak or obsolete technology products impede success

Industry News

Saturday Sep 3, 2016   🔲 RSS

Full Automation News Report

20 most recent items:

September 2, 2016. **Wiley Online Library platform now accessible via OASIS**. ProQuest has joined forces with Wiley to make ebooks on the Wiley Online Library platform available for purchase via OASIS. ... <<more>>

September 1, 2016. **Number of Live Alma Institutions passes 500 as Ex Libris Alma goes into production at Switzerland's Renouvaud Network**. Ex Libris announced that it has passed the mark of 500 live Alma institutions with the implementation of Alma in the Renouvaud network in Switzerland. The dynamic Renouvaud library network serves the ... <<more>>

September 1, 2016. **The University of Texas Health Science Center in San Antonio goes live on ByWater Solutions Koha support**. ByWater Solutions

Library Technology Industry Reports

American Libraries

- 2014: Strategic Competition and Cooperation
- 2015: Operationalizing Innovation
- 2016: Power Plays

Library Journal

- 2013: Rush to Innovate
- 2012: Agents of Change
- 2011: New Frontier
- 2010: New Models, Core Systems
- 2009: Investing in the Future
- 2008: Opportunity out of turmoil
- 2007: An industry redefined
- 2006: Reshuffling the deck
- 2005: Gradual evolution
- 2004: Migration down, innovation up
- 2003: The competition heats up
- 2002: Capturing the migrating customer

Library Systems Report 2016
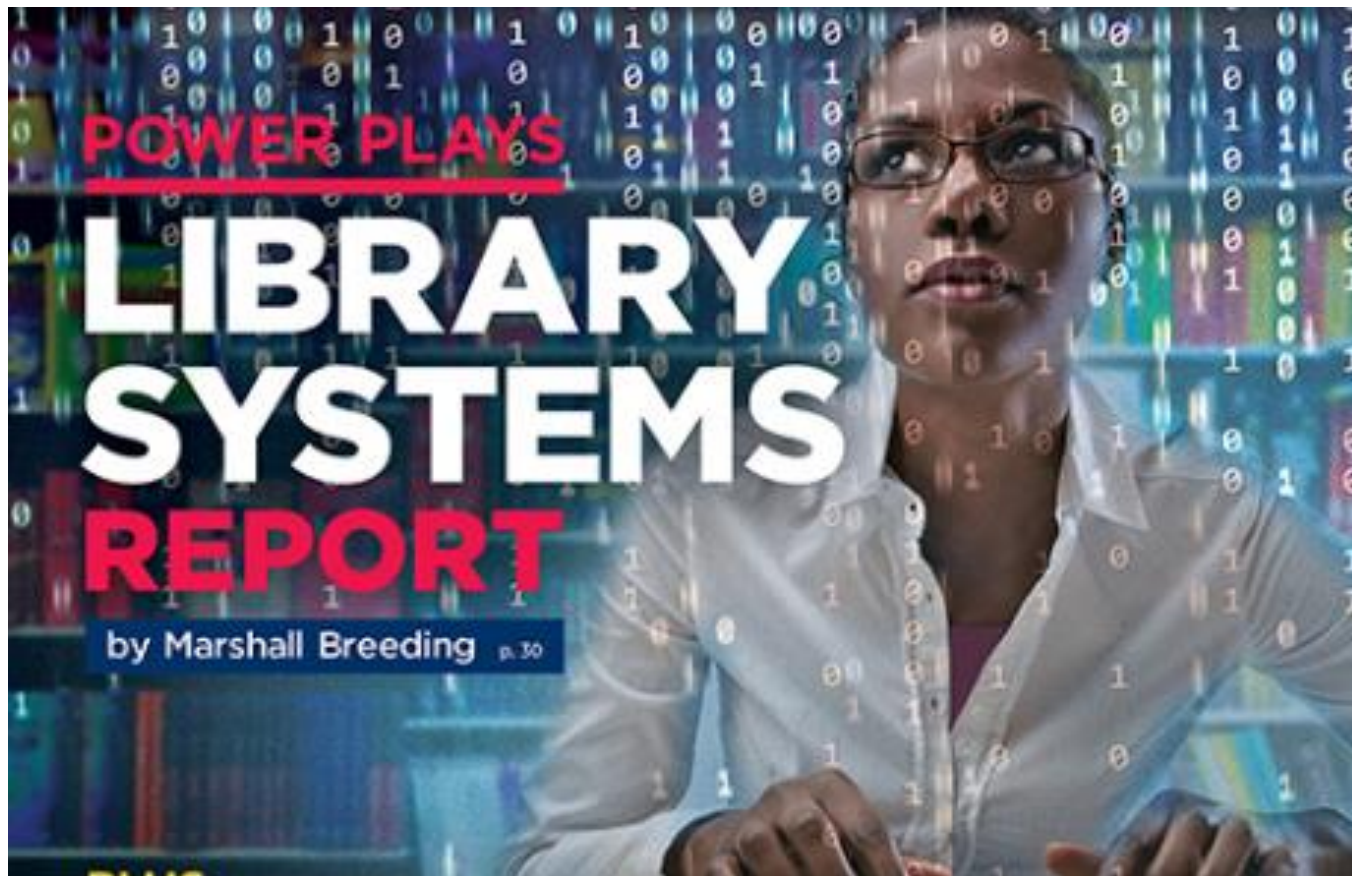
"Power Plays"

Power Plays

The transitions seen in 2015 were not lateral changes of ownership among investors but **strategic acquisitions that concentrated power among a smaller number of much larger companies and reassembled product portfolios.** Libraries may resist consolidation, but this could enable the development of technology products and services that are less fragmented and better able to support libraries as they provide access to increasingly complex collections.

International Perceptions Report

- http://librarytechnology.org/perceptions/2015/
- Based on a series of annual surveys addressed to libraries
- Probes levels of satisfaction with their automation systems
- 3,453 responses to 2015 survey
- 1,050 narrative comments
- Conducted since 2007: view trends over time
- Data collected Nov-Dec, published early the following year
- Linked to entries in libraries.org

Perspective

- Increasing divergence among library types regarding requirements for supporting technical infrastructure: Academic, Public, National, School, Special

- Approaches to library service vary according to international region

- Broad range of economic capacity or support across countries and regions and even within some countries. (especially United States)

Open Source Basics

Proprietary software business model

- Closed development
- Private ownership of the software
- Software License Fee
- Conversion, Installation, training
- Annual maintenance for upgrades, service, support (~15 percent)
- Hosting (optional)

Sharing Requirements

- Source code publicly available

- Anyone can:
  - Download
  - Use
  - Modify
  - Redistribute
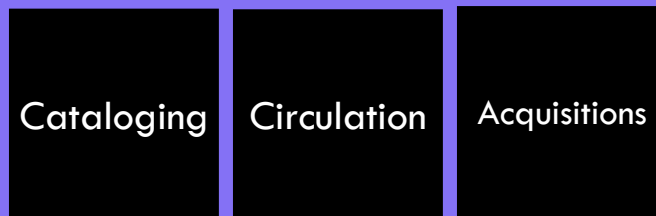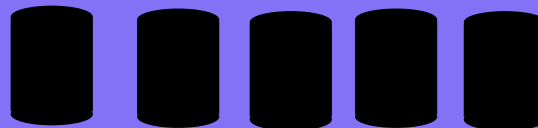
Models of Openness

Closed Systems

End User Interfaces:

Programmer access:

No programmable Access to the system.

Functional modules:

Cataloging Circulation Acquisitions

Captive to the user Interfaces supplied by the developer

Data Stores:

Staff Interfaces:

Open Source Model

End User
Interfaces:

Programmer
access:

Functional
modules:
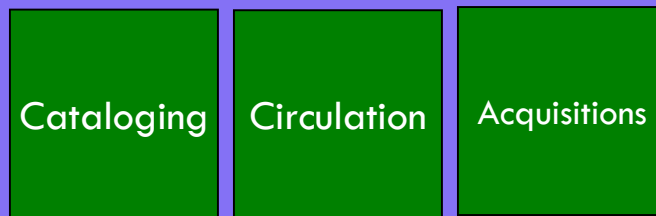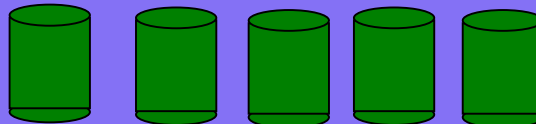
| Cataloging | Circulation | Acquisitions |

All aspects of the
system available
to inspection and
modification.
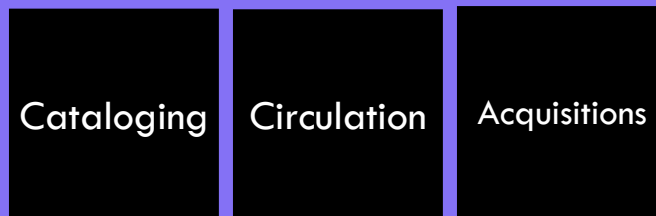
Data Stores:

Staff Interfaces:

Open API Model

End User
Interfaces:

Programmer
access:

Core application
closed.

Functional
modules:

Cataloging Circulation Acquisitions

Third party
developers code
against the
published APIs or
RDBMS tables.

Published APIs

Data Stores:

Staff Interfaces:

Open Source / Open API Model

End User Interfaces:
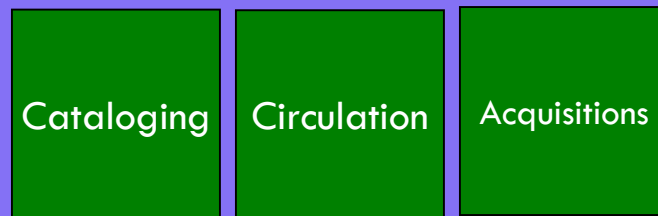
Programmer access:

Core application closed.

Functional modules:

Cataloging Circulation Acquisitions

Published APIs

Data Stores:

Third party developers code against the published APIs or RDBMS tables.

Staff Interfaces:

Application API exposed to External Applications

Delivered Interfaces — Public Interface, Staff Interface, Reports Module, External applications

API abstraction layer — Application Programming Interfaces

Core Software — Core Functionality / Business Logic

RDMS API

Data stores

Application API exposed to External Applications

Delivered Interfaces use proprietary programming

Core Software

Data stores

Public Interface

Staff Interface

Reports Module

External applications

Core Functionality / Business Logic

Application Programming Interfaces

RDMS API

License variants

- Differing details on use

- Apache

- GNU Public License

- Affero General Public License

Pros & Cons

- ☐ No license fees for use of software

- ☐ Can be modified to accommodate local needs

- ☐ Self-support (depends on local tech expertise)

- ☐ Community support (depends on developers and other users)

- ☐ Commercial Support (Fee for services)

Open source Community

- Viable open source projects have broad-based communities
  - Resources (financial, personnel)
  - Development (contribute to programming, quality control, documentation)
  - Governance (decision making, intellectual property)
  - Support (help for individuals and organizations using the software)
  - Education (promotion, training)

Commercial Support for Open Source

- Many Commercial companies with interest in open source library automation products
- Revenue sources
  - Conversion of data from incumbent system
  - Installation / configuration
  - Training
  - Support / Help desk
  - Hosting
  - Sponsored Development

Open source in Latin America

- Commercial software often not affordable
- More reliance on Open source software
- Support by Governmental or Educational organizations
- Local or regional support communities

Current Open Source ILS Products

Koha

- Originally developed in 1999 for small group of libraries in New Zealand, Horowhenua Library Trust by Katipo Communications, production use by Jan 2000

- Gained widespread use in the United States around 2004-05 and has seen steady growth in use

- Wide international adoption

- Used in many thousands of libraries. 1,573 represented in lib-web-cats, with many large groups not yet registered.

National Projects to deploy Koha

- Philippines: A systematic effort to install Koha in the public libraries sponsored by the state libraries
- Turkey: most public libraries supported by the Ministry of Culture and Tourism
- Spain: **Koha-Kobli**
  - http://kobli.bage.es/
- Argentina. CONABIP (Comisión Nacional de Bibliotecas Populares)
  - Customized version of Koha: **DigiBepe**
  - http://www.conabip.gob.ar/faq/digibepe

Koha Worldwide

Evergreen

- Originally developed by the Georgia Public Library System for the PINES consortium of public libraries in Georgia

- PINES includes most of the small and mid-sized public libraries in Georgia, but not the largest urban areas (Atlanta, Cobb County, etc)

- Equinox Software, Inc. launched as a separate company in Feb 2007, including most of the team that originally created Evergreen within GPLS.

- Evergreen now used in over 1,000 libraries, primarily in the United States and Canada. Some recent international deployments

Evergreen Worldwide

ABCD

- Automatización de Bibliotecas y Centros de Documentación

- CDS/ISIS used extensively in developing nations

- CDS/ISIS: freeware initially developed by UNESCO

- Development led by BIRME in Brazil

- ABCD: New application based on CDS/ISIS tools

- ABCD developed as an open source integrated library system.

Open Source Discovery

- VuFind
  - Originally developed at Villanova University
  - Widely used by public and academic libraries
  - Pika variant with e-book lending integration
  - SOLR indexing; PHP programming framework
- Blacklight
  - Aligned with Project Hydra
  - Used by large Academic libraries
  - SOLR indexing; Ruby on Rails framework

EBSCO Supports new Open Source Project

- FOLIO
  - the Future of the Library is Open
- https://www.folio.org/
- A community collaboration to develop an open source Library Services Platform designed for innovation.
- American Libraries feature:
  - https://americanlibrariesmagazine.org/2016/04/22/ebsco-kuali-open-source-project/

Presentando FOLIO

- Detailed press release in Spanish

- Una nueva colaboración que reúne a bibliotecas, proveedores de servicios y desarrolladores para acelerar la innovación y redefinir el futuro de la automatización de la biblioteca

- http://librarytechnology.org/news/pr.pl?id=21847
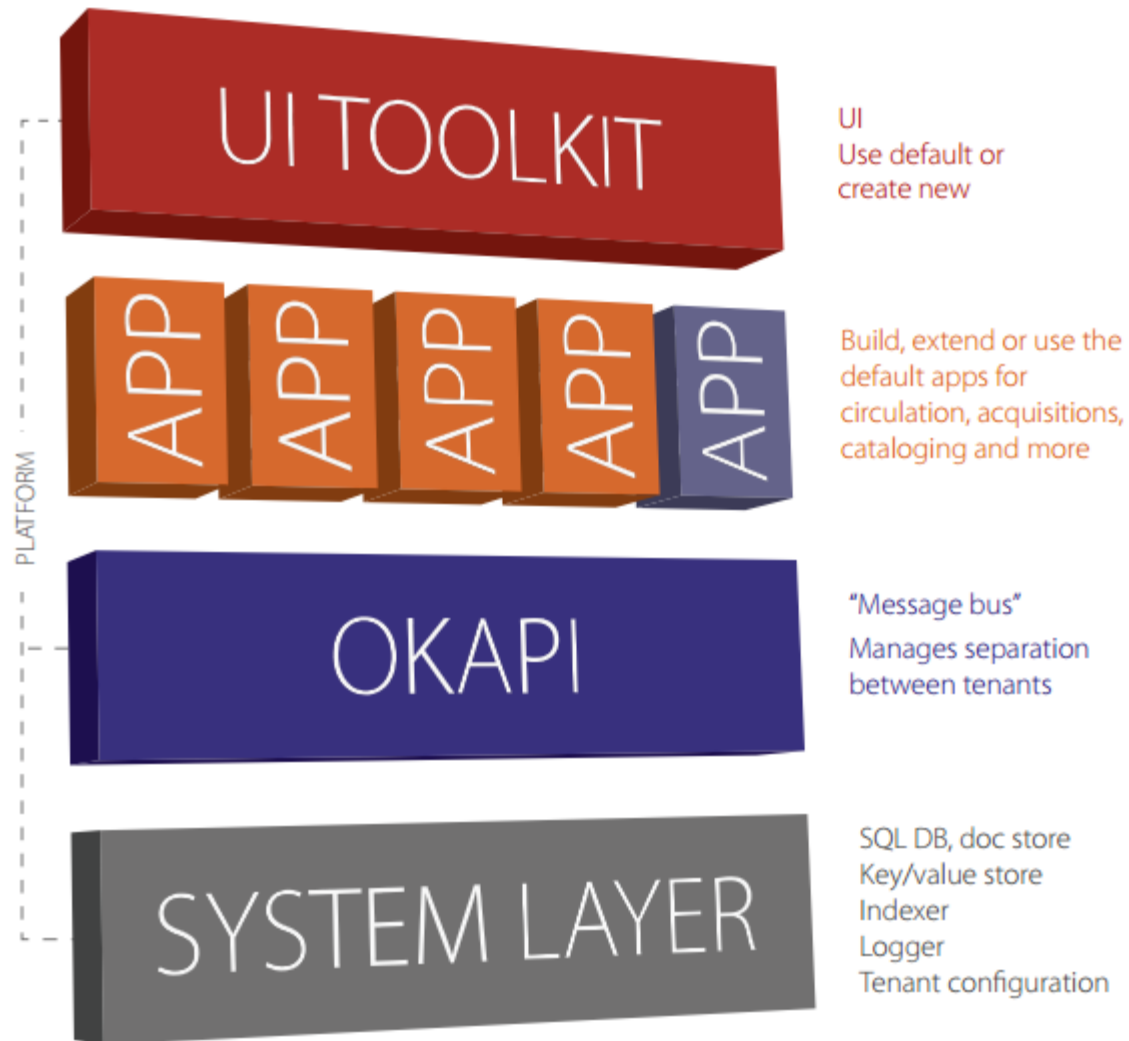
Motivating factors

- Initially oriented to academic libraries
- Academic libraries interested in Library Services Platform
- Narrow options (Ex Libris Alma, OCLC WorldShare Management Services)
- Unbundle Discovery from Resource Management
  - Choice for patron-facing services
- Alternative functional approach based on apps and modules

Technology

- Microservices architecture

- Modular

- Enables choice for discovery

- Pluggable modules

- Not monolithic

FOLIO Platform

UI TOOLKIT
UI
Use default or create new

APP APP APP APP APP
Build, extend or use the default apps for circulation, acquisitions, cataloging and more

PLATFORM

OKAPI
"Message bus"
Manages separation between tenants

SYSTEM LAYER
SQL DB, doc store
Key/value store
Indexer
Logger
Tenant configuration

Design concepts

- Flexibility
- Modularity
- Extensibility
- Modern
- Affordable

Organization

- Independent foundation
    - http://www.openlibraryfoundation.org/
- Financial support from EBSCO
- Index Data contracted for Initial development
- Community support from Open Library Environment (formerly Kuali OLE)
- Synergy with Global Open Knowledgebase (GOKb)

EBSCO Involvement

- Not owned by EBSCO
- EBSCO provides financial and in-kind resources
- Governed through independent non-profit
- Participation by Kuali OLE
- Engage with developers from libraries, consortia, and commercial entities
- EBSCO will provide hosting services
- Based on modules and pluggable apps

Open Source License

- Apache v2

- Friendly to commercial use

- Intellectual property to be held by Open Library Foundation

Timeline

- Aug 2016:   Initial release of base platform
- 2017: Initial version available for early adopters

Observations

- Open source now a routine part of the library automation landscape

- Proprietary and open source solutions will co-exist

- Open source software resonates with the library community

- Must prevail by virtue of its merits in functionality and flexibility

- Adoption varies by country and region

Questions and discussion