

The changing face of library automation and open source solutions and trends

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Part 1

The Library Systems Market

the library *function* is big
business

*'..organize the world's
information and make it
universally accessible and
useful..'*

Google's mission statement

'Google generation' 'a shorthand way of referring to a generation whose first port of call for knowledge is the internet and a search engine, Google being the most popular one. This is in distinction to previous generations whose source of knowledge **was** through books and conventional **libraries**.

Wikipedia

conventional libraries have competition

Google: c£5,000,000,000 revenues, over 1m digitised books

Amazon: 'we seek to be the earth's most customer centric company where customers can find and discover anything they want to buy online'

AbeBooks: > 100 million titles, over 13,500 'branches'.

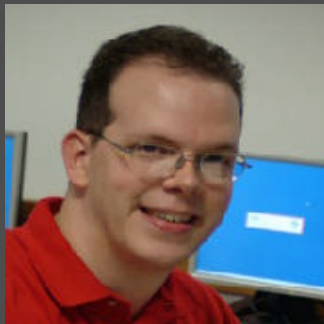
LibraryThing: over 300,000 members. Over 20m books catalogued. Over 150K works reviewed

The current LMS market (with a UK bias)



After 25 years the market has matured

'Choosing a new ILS is a lot like choosing a rental car. . any ILS is going to get you where you need to go ...' Andrew K. Pace.
2004 ...



Dismantling Integrated Library Systems. By Andrew K. Pace — Library Journal February 1, 2004.

What are the LMS vendors doing?

What are the LMS vendors doing?

Changing their ownership

(everyone –almost- has changed in the last two years)

changing ownership 2005

- **June 2005:** Sirsi and Dynix merge and become SirsiDynix
- **November 05:** Geac (now Infor) announces its acquisition by Golden Gate Capital, a private equity company.
- **November 2005** OCLC Pica acquires Fretwell Downing (OLIB etc)

changing ownership 2006

- **February 06:** Talis is “reconstructed”: the owners (BLCMP Ltd and an Employee Benefit Trust) vote to transfer ownership to a new company called Talis Group
- **July 06:** ExLibris acquired by Francisco Partners, a private equity company
- **December 06:** Endeavor acquired from Elsevier by ExLibris and Francisco Partners

changing ownership 2007

- **January 07:** SirsiDynix acquired by Vista Equity partners, a private equity company
- **June 2007** Bowker (ClG) acquires MediaLabs (AquaBrowser)
- **July 2007** OCLC acquires remaining shares in OCLC PICA

the role of private equity

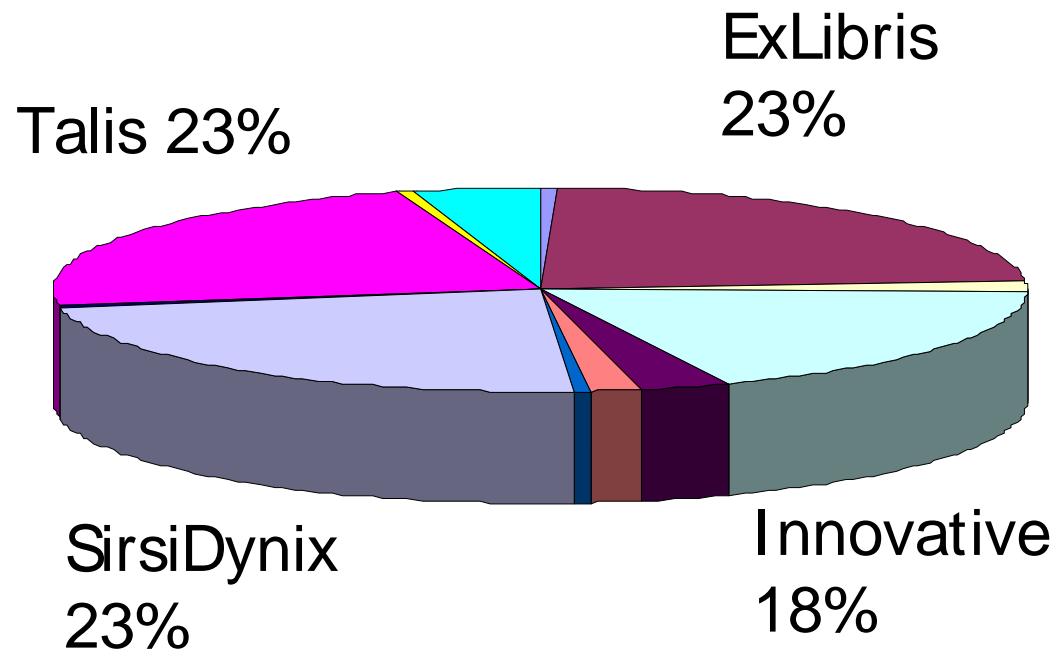
- 'The discipline of private equity **makes companies fitter**, leaner and better able to compete.' Ian Armitage, partner at HgCapital Quoted in Sunday Times on 18th February
- 'Private equity buys an entire company... **improves the company** and owns it typically for three to seven years. It **then sells it** or takes dividends by refinancing it'. Stephen Schwarzman Blackstones. Quoted in Sunday Times on 18th February
- 'As a rule of thumb, unless a business can offer the prospect of **significant turnover growth within five years**, it is unlikely to be of interest to a private equity firm'. An introduction to private equity. The British Private Equity and Venture Capital Association

What are the LMS vendors doing?

consolidating

For example....in UK HE
four vendors have nearly 90% of the market

UK HE Market Share



- Axiel
- ExLibris (inc Endeavor)
- Infor (formerly Geac)
- Innovative Interface
- ISOxford
- OCLC (Fretwell Downing)
- Payne Automation
- SirsiDynix
- Softlink
- Talis
- VTLS
- Unknown

What are the LMS vendors doing with their products?

renewing legacy products

e.g. Symphony

introducing new products

e.g. Encore, Primo, WorldCat Local

looking for ways to interoperate to increase their value

e.g. Keystone

What are the LMS vendors doing?

new markets



the vendors speak...

(part of a JISC/SCONUL commissioned study to report in 2008)



What's influencing the LMS vendors' strategies

- Factors outside the library domain-e.g. Web 2.0, Semantic (m2m) Web, Google, Facebook
- New user behaviours
- Global web-based standards. W3C. SOA, web services which enable interoperability & 'decoupling' of products
- Need for increased productivity and reduced cost of ownership

so they are changing their market offerings

- 'Vertical search'-Encore, Primo, AquaBrowser
 - Competing with Google et al in the library (vertical) market. Claim to provide better access and delivery of resources in an library/scholarly context
- Aggregation-a move to SaaS and 'Platforms'
 - Using Google/Amazon type techniques-Talis, OCLC
- Value in 'context'-'intentional data' clickstreams etc. esp.relevant in HE
 - A user's context is an increasingly important attribute, It can enable more personalised services. Its value is not fully appreciated in libraries
- Universal (Uniform) Resource Management
 - One system for print & electronic resources

But is the market itself failing?

In 2006 a study was launched to test the following propositions for the HE market:

- There is a sizable community of users who are deeply dissatisfied with the cost and performance of currently available options, and this is a subject of concern at the leadership level of academic institutions.
- Open source software is a viable solution to this problem, and college and university leaders are receptive to it.
- There is significant demand for certain software products that is not being met, suggesting that there is a market failure and perhaps a need for some concerted action to address that failure.

But is the market failing?

'...we're seeing the seeds of a new revolution being sewn [sic]. As the goal of some companies becomes once more attuned to trimming costs... libraries and their users suffer. In some cases, cost savings are being generated for the company by consolidating products... When this happens, it is short-term profit that is the objective rather than serving the long-term mission of libraries. These companies have become unresponsive to the collective goals of our profession and, like so much of our society these days, are no longer focused on the "we" but the "me". It is a sad state of affairs and one that will not be tolerated'

'A symphony out of tune: when companies go deaf'. Carl Grant. Care Affiliates blog. 4 July 2007.
www.care-affiliates.com/thoughts/archives/6

Is the market failing?

'We feel that software companies have not designed Integrated Library Systems that meet the needs of academic libraries, and we don't think those companies are likely to meet libraries' needs in the future by making incremental changes to their products. Consequently, academic libraries are devoting significant time and resources to try to overcome the inadequacies of the expensive ILS products they have purchased. Frustrated with current systems, library users are abandoning the ILS and thereby giving up access to the high quality scholarly resources libraries make available'

Duke University Openlib project

Breakout discussion

Part 2

The wider context

It's a confusing world.....

Web 2.0 Semantic web Library 2.0 RSS

Institutional Repositories Digitisation

LOCKSS Metadata Discovery 2 Delivery

Vertical Search ERM Aggregation

Network Effect **Open source** Long tail

Freedom Copyright Facebook Privacy

Click Streams Culture Convergence

Second Life Authority Tagging Identity

Barriers Open data Mashups Business
models

aaaaggggghhhh!!



let's try to see the wood before
we look any more at the trees

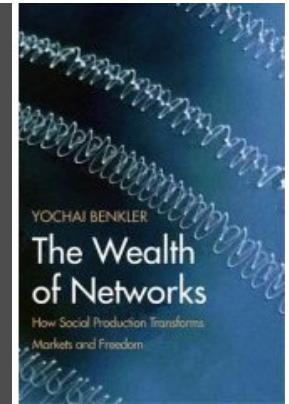


economy and society

(as in so many times in the past)
**technology is a major driving force
for change.....**

'For more than 150 years, modern complex democracies have depended in large measure on an industrial information economy.....In the past decade and a half we have begun to see a radical change in the organisation of information production. **Enabled by technological change**, we are beginning to see a series of economic, social and cultural adaptations that make possible a **radical transformation** of how we make the information environment....'

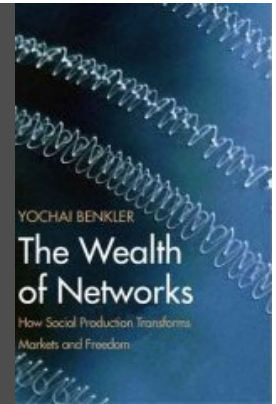
Yochai Benkler a Professor of Law at Yale Law School



The Networked Information Economy

One of the aspects of this new economy is the rise of a new 'mode of production' -- 'social production'.

Enabled by cheap computing and fast pervasive networks people are giving their time individually or in collaboration with others to produce goods for free.



removing the barriers

'.. technology is unleashing a capacity for speaking that before was suppressed by **economic constraint**. Now people can speak in lots of ways they never before could have, because the economic opportunity was denied to them'

Mother Jones Magazine (website)

Interview with Lawrence Lessig: Stanford Law School Professor, Creative Commons Chair
June 29, 2007

http://www.motherjones.com/interview/2007/07/lawrence_lessig.html

culture

the rise of the 'Pro-Am'

Charles Leadbeater

Think tank Demos

Passionate amateurs, using new tools, are creating new products and paradigms.

<http://www.ted.com/index.php/talks/view/id/63>

The rise of the 'Pro-Am'

Creativity is not about '**special people**'

Most creativity is **collaborative**

Create a platform for people to **share**

Big new ideas don't generally come from big organisations. Their culture has an inbuilt tendency to try to re-inforce past success

Intelligent closed organisations will move toward being open

Complete corruption of the ideas of patent and copyright

<http://www.ted.com/index.php/talks/view/id/63>

(copy) rights

digital content and pervasive
and easy access present new
challenges for copyright and
intellectual property

creativity is being strangled by the law

Technology offers the opportunity to revive the old read/write culture. It is amateur but not amateurish culture.

Remix --it's not piracy --its **re** creating to make something different. This is a literacy for this generation

Copyright law has not responded with common sense as it had to do in the past when technology changes challenged established law—e.g. over the issue of the 'trespass' of airplanes over land

Artists can choose the kind of re-use their work enables. That is what Creative Commons is about

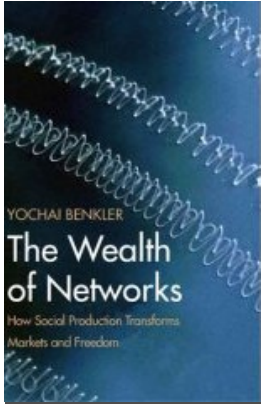
We live life against the law in a new age of prohibitions --this is dangerous.



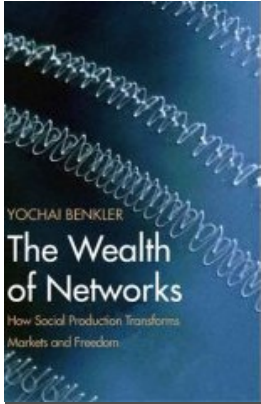
Larry Lessig: How creativity is being strangled by the law.
<http://www.ted.com/talks/view/id/187>

Wednesday June 29, 2005

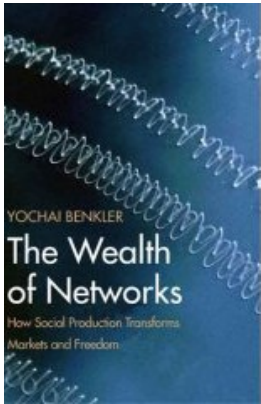
“Patents and copyrights, have always been aimed at **finding a balance** - as the Harvard professor Lawrence Lessig puts it - "between rewarding creativity and allowing the borrowing from which new creativity springs". That's why terms of copyright eventually elapse; in the original US Constitution, they elapsed after just 17 years. Under Thomas Jefferson's original standard, it would no longer be illegal to download, for example, Madonna's 1986 album True Blue.”



'Copyright blocks access to the inputs into information production that are copyrighted'



'the primary role of law has been reactive and reactionary. It has functioned as a point of resistance to the emergence of the networked information environment'.



‘The institutions of higher education, which have found themselves under attack for not policing their students’ use of peer-to-peer networks have been entirely ineffective at presenting their cultural and economic value and the importance of open Internet access to higher education, as compared to the **hypothetical losses** of Hollywood and the recording industry’.

changing business models

'Open access is a practical, efficient and sustainable model to unlock the potential of the web for disseminating the results of publicly funded research'



'Convinced that changes in the industry and the spread of digital piracy have made it ever more difficult to make money from selling records, the Crimea plan to **turn the economics on their head** by giving away downloads of their self-financed second album,

Secret of the Witching Hour'.

Owen Gibson, media correspondent
Monday April 30, 2007



Davey MacManus of the Crimea. Photograph: Gareth Davies/Getty

high street bookshops could soon be killed off ?



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From **The Sunday Times**
October 15, 2006

A novel use of technology

High-street bookshops could soon be killed off by the greatest revolution in publishing since Gutenberg. They had it coming

BRYAN APPELEYARD

Walk down an average high street and you could reasonably conclude that, of all the products on offer, books are the most stupid. The windows of the big chain bookshops are littered with junk that nobody with a reading age in double figures would want to read. Inside, the stock of anything other than chick lit, celeb pap and footballers' lives will be interrupted only by the odd history book until you get deep into the inner recesses, where you might find a yard-long poetry section and a random and desultory classics list. I, along with almost everybody I know, stopped buying in bookshops years ago. Why bother? Online, Amazon and AbeBooks have everything I need; in fact, they have everything anybody could ever need, and AbeBooks, especially, is absurdly cheap.

Yet in spite of my best efforts, over the past decade, power in the book industry has drained away from publishers to the bookshops. The shops now charge for their window displays, and publishers

A novel use of technology

High-street bookshops could soon be killed off by the greatest revolution in publishing since Gutenberg. They had it coming

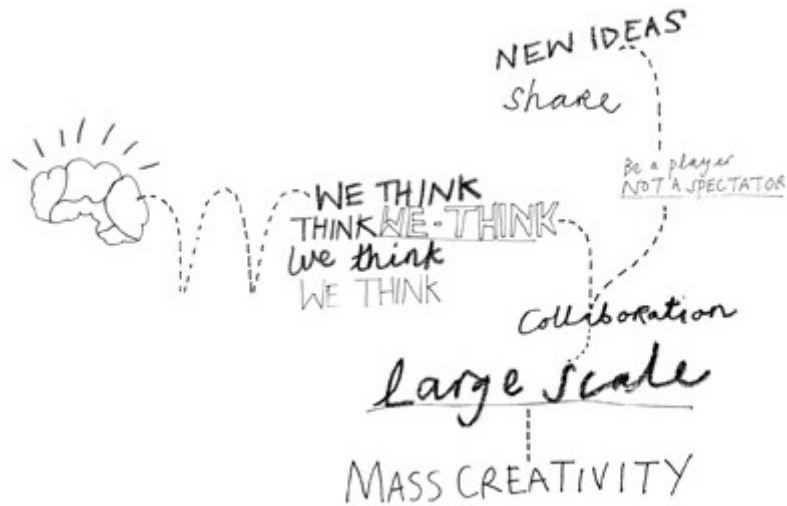
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'Open source software provides one example where openness is creating significant value, a portion of which is captured by the firm, via a business model built around open source'.

'Open Business Models. How to thrive in the new innovation landscape' By Henry Chesbrough. Harvard Business School Press. 2006



Disruption

- 'We-Think changes how we access and organise information and so is bound to disrupt libraries and librarians'
- 'The library of the future will be a platform for participation and collaboration with users increasingly sharing information amongst themselves as well as drawing on the library's resources'

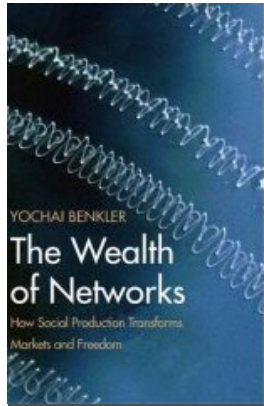
Charles Leadbeater. 'We Think. The future is us' Profile Books Ltd. 2008

Breakout discussion

Part 3

Open source **(FLOSS or OSS)**

Where does OSS fit into the wider context?



`...the quintessential instance of peer production

Characteristics of OSS

- Peer-to-peer—collaboration
- Anyone can change the source
- Modular, open standards
- A 'Maintenance Agency' --development & maintenance

'Itdepends upon copyright law just a Microsoft does'

for example by requiring (e.g. in the GPL) that the source code be made available by anyone who modifies and redistributes the software

Lawrence Lessig. 'Free Culture.' Penguin 2004

Open source licensing

The fundamental purpose of open source licensing is to deny anybody the right to exclusively exploit a work

Open source licensing stops this..

- I cannot copy the work (beyond single own use)
- I cannot make derivatives based on the work
- I cannot authorise anyone else to do either of the above two things

The elimination of the three main restrictions on most commercial 'shrinkwrap licensed' software is the foundation of open source licensing

Open source licensing

- MIT
- BSD
- Apache (Versions 1.0 and 2.0)
- Academic Free License (AFL)
- GNU General Public License (GPL)
- GNU Lesser General Public License (LGPL)
- Mozilla Public License
- Qt License
- Artistic License (Perl)
- Creative Commons Licenses
- Sun Community Source License and commercial Use Supplement
- Microsoft Shared Source Initiative

Taken from 'Understanding Open Source & Free Software Licensing' By Andrew M St Laurent. O'Reilly. 2004

Benefits of Open Source (1)

- **Bug fixing** 'given enough eyeballs, all bugs are shallow' [Eric Raymond, The Cathedral and the Bazaar].
- **Security** Access to source code makes it easier to detect security flaws in software, In practice, , the skills and time required to find security flaws, work out how they can be exploited, and then initiate an attack, are more specialized than the mundane debugging skills required to close exploits.
- **Customization:** Open source software can be readily adapted to meet specific user needs. If you would like something added or customized urgently, you can generally pay an appropriately skilled software developer to do it
- **Translation:** Large closed source commercial software vendors are usually unwilling to translate their products into less widely spoken languages, as the market for them would be too small to guarantee profit.

Benefits of Open Source (2)

- **Avoiding vendor lock-in:** As there is no incentive to use non-standard formats to inhibit compatibility, open source software tends to use open standard formats and there is little danger of being 'locked-in' by a vendor.
- **Mitigation of vendor/ product collapse:** the source code is not 'owned' in the same way that proprietary source code is, it may be picked up and developed by anyone with an interest in a product's survival. projects gather user
- **Being part of a community:** By adopting open source software you become part of a community of users and developers who have an interest in working together to support each other and improve the software

Impact of OSS

Use of open source software adds 263 billion Euros to the European economy and 'the number of employees among firms contributing code to Floss projects is at least 570,000.'

Open source software programmers, nearly half of which are based in Europe, volunteer least 800 million Euros worth of labour.

The Floss-related share of the economy could reach 4% of European GDP by 2010.

2007 EC study on the impact of FLOSS conducted by UNU-Merit, a research institute of the University of Maastricht in the Netherlands

Breakout discussion

Part 4

The impact of OSS on library systems market

Open Source

- 'We only use OSS as components' (to reduce costs)
 - 'OSS is not competitive for a complete LMS'
- Or.....
- '**Open Source** is about distributed innovation and **will become** the **dominant** way of producing software

Impact of OSS

- A variety of OSS LMSs is now available: for example:-
 - Koha
 - Evergreen
 - Emilda
 - Openbiblio
 - PMB

Impact of OSS

- Specific companies to support and develop OSS library systems. E.g
 - Index data
 - Liblime
 - Equinox
 - CARE Affiliates

Impact of OSS

Libraries are migrating from closed to open
source LMSs

Impact of OSS

Procurement process issues

Impact of OSS

'It's a very good business model for entering large, existing markets and taking significant share, and creating significant customer and investor value,'
.....If you're an incumbent competing with a new competitor that's an open source company, it's very difficult to adjust or change your business model to be competitive. Usually by the time they end up adjusting, it's too late.'

Richard Gorman, a venture partner at Bay Partners. 2007

Impact of OSS

- Some 'conventional' LMS vendors are delivering OSS for libraries
 - Supporting OSS products from others (e.g. VTLS)
 - Delivering their own OSS products (e.g. Talis)



so...a few concluding thoughts...

- Technology, cost and complexity barriers are coming down
 - enabling more participants (not everyone likes this!)
- More open source and open data – components and products
 - reducing costs and enabling better interoperability
- 'Pro-Ams' in the library sector
- An increasing contribution from non 'traditional'-LMS companies
- Copyright clashes will continue
- New biz models will emerge

so...a few concluding thoughts...

- Libraries at the heart of the wider culture and technology debate?

You may also find my short article in
CILIP Library+ Information Gazette
useful

www.kenchadconsulting.com/images/stories/lms_an_Open_or_shut_case_24_aug_07.pdf

The LMS: an open of shut case. By Ken Chad. CILIP Library+Information Gazette. August 2007

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