

# Open Source? No, Open Standards!

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Museums  
Archives  
and Libraries

Joint Information  
Systems Committee



# Why Open Source?

People who argue strongly for open source are:

- Anti-authoritarian
- Anti-success (everyone hates Manchester United)
- Anti-capitalist
- Foolish: they think all software firms except for Microsoft are trustworthy (Manchester City rather than United, anyone?)

Untrue clichés – or are they?

**Do we need such messages on professional mailing lists**

*When you think that some people believe such BS you lose a little faith in the human race.*

*zenith = bloat + security bugs I am guessing. We all understand that Windows in its current form is incapable of supporting a browser that conforms 100% to W3C spec in these conditions. Luckily we have Mac OS X to save the day - burn you windows box today!*

*Posting to web-support JISCmail list 21 Nov 03*



# Why Open Standards?

Open standards seek to provide:

- Application independence
- Device independence
- Wide accessibility
- Long term access
- Neutral ownership & avoidance of licensing conditions, patents
- Architectural integrity

These aims can help institutions to fulfill their core mission



# Scenarios

## **BBC Domesday project (1984):**

- Information collected in schools and made available on BBC micro and Philips Laserdisk

## **Late 1980s / early 1990s**

- Polys became Universities. Where are the records – in Wordstar files? What version? What platform? What storage medium?

## **PDA's, DTV's, desktop Linux, Windows on the fridge:**

- Device for the C21<sup>st</sup>. Are we about to lose information again? Are we in the digital dark age?

What are we doing today to avoid a repetition? Who cares about the software used – the data is critical!

Are we focussing attention on supporting small software houses against the big evil empire? Remember 1980!

# What Are Open Standards?

But what are open standards?

- Java
- PDF
- Flash
- MS Word
- MS PowerPoint
- ...

All proprietary formats, but also all popular



# Open Standards Characteristics

Open standards *characteristics*:

- Owned by acknowledged neutral body
- Specifications published openly (and freely?)
- Developments to specifications open to all
- Platform and application-neutral

Relevant open standards bodies:

- W3C
- ISO
- ECMA
- IETF

Be warned of phrases such as “*user driven standards*”, “*market-place standards*”, etc.

See <<http://www.ukoln.ac.uk/qa-focus/documents/briefings/briefing-11/>>

# The Answer To Life, The Universe and Everything?

Is use of open standards the answer to Life, the Universe and Everything?

Who remembers coloured books, ISO OSI Networking protocols, ...?

Warning:

- Open standards may not catch on
- Their can be competing open standards
- Open standards may be too immature for service deployment (RDF?)
- Open standards developers are human too! They can make mistakes, be driven by ego, ...



# RSS – A Great Open Standard!

RSS:

- Lightweight standard for news syndication
- Component of JISC's Information Environment

But:

- RSS 0.92, 1.0 or 2.0
- RSS as RDF or RSS as XML
- Simplicity or extensibility?
- Rich Site Summary, RDF Site Summary or Real Simple Syndication?





# ROADS – A Case Study

## ROADS:

- eLib-funded project to develop software used by JISC subject gateways (e.g. SOSIG)
- *Open source* philosophy
- Pioneered whois++ distributed searching *standard*

## Current status:

- Software still used in part by subject gateways
  - whois++ standard never took off
  - Ideas taken on board by others
- An OSS application may be superseded by other OSS or commercial applications
  - A standard may fail to take off
  - This can be a success for the project – the deliverable need **not** necessarily be implemented as a service

# A Matrix For Selection

QA Focus has developed a matrix for the selection of standards for JISC digital library programmes

QA Focus's aims:

- Develop open standards culture across projects
- Raise awareness of importance of open standards & provide case studies illustrating examples of best practices

whilst recognising the challenges projects can face:

- Lack of knowledge of relevant standards
- Lack of knowledge of appropriate implementation frameworks

See "*Ideology Or Pragmatism*" paper at  
<<http://www.ukoln.ac.uk/qa-focus/documents/papers/ichim03/>>

# A Matrix For Selection (2)

## Formats:

- **Openness of file formats:** Ownership; proprietary spec. but openly published (e.g. PDF)
- **Maturity:** How mature is the standard?
- **Functionality:** Is the standard designed to provide the required functionality ?

## Implementation Issues:

- **Authoring tools:** Are authoring tools which support the standard readily available?
- **Viewing tools :** Are viewers which support the standard readily available?

## Organisational Issues:

- **Resource implications:** Licensing & staff costs
- **Organisational culture:** Readiness to be innovative; preferences for particular environments

See <<http://www.ukoln.ac.uk/qa-focus/documents/briefings/briefing->



# The Bigger Picture

There is more to service development than just standards

**Standards:** concerned with protocols and file formats

Open standards vs. Proprietary  
HTML / XML vs. PDF  
CSS / XSL vs. HTML  
GIF vs PNG

**Applications:** software products used to implement systems

Apache / IIS  
FrontPage / Dreamweaver  
Oracle / SQLServer  
ColdFusion vs ASP

**Architectures:** models for implementing systems

Which standards are applicable  
NT / Unix  
File system / database application  
HTML tools / content management

**Resources:** financial and staff costs needed to implement systems

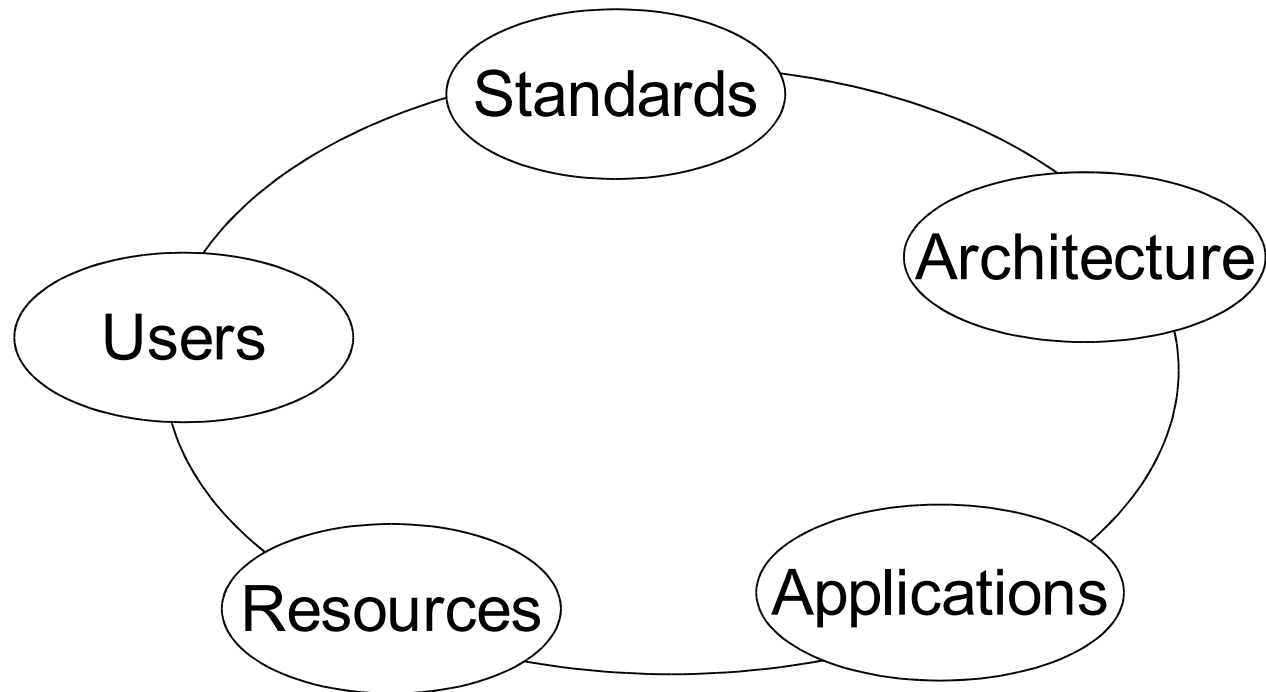
Development vs. Migration costs  
Use of in-house expertise  
In-house vs. out-sourced  
Licensed vs. open source

A centre of expertise in digital information management



# What About The Users?

What about our users?



Do users actually want open standards or open source?  
If not, what strategies do we adopt to get them on our side, as the producers?

# Remember Service Deployment

We need to ensure that our applications can be deployed in a service environment

## The Past

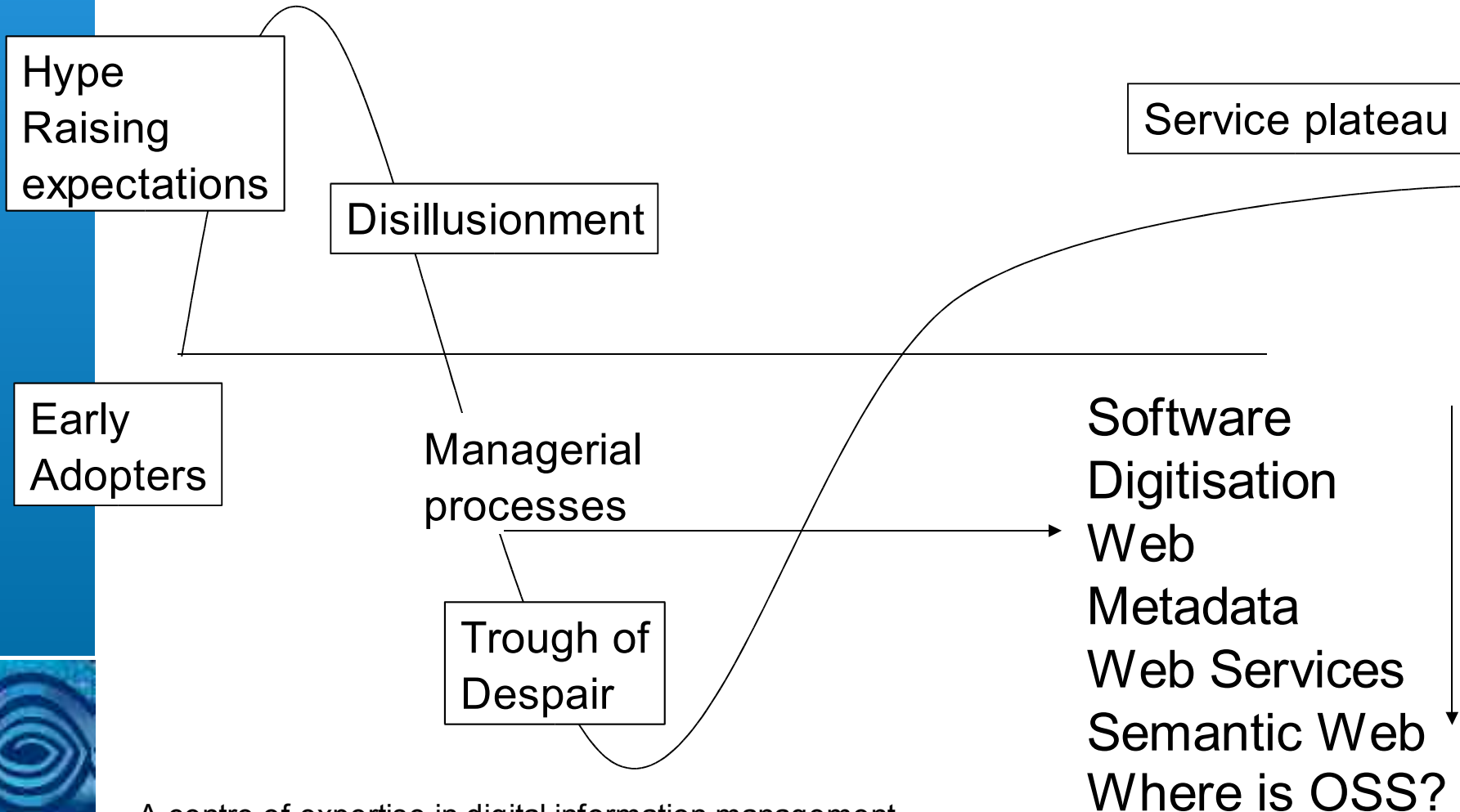
- CTI / TLTP, .... programmes – but could CBL applications be deployed on campus network?

## The Present – A Case Study

- JISC programmes fund developments based on open standards
- Artworld project makes use of SVG, ... using Cocoon, open source framework
- ☹ JISC services flag potential problems (lack of expertise in Cocoon)
- ☺ Artworld project has liaised with intended service provider from start, and convinced service provider to evaluate Cocoon

# A Historical Context

## The Gartner curve for new technologies



A centre of expertise in digital information management



# Comments On Patents

But if granted patents should be RF and not RAND

Software patents can be dangerous:

- Low bar to their award (fortunately BT's claim to patenting hyperlinks was rejected)
- Be warned that formats which may be free may not always remain free:
  - GIF patent scare
- Eolas have been awarded patent claim against Microsoft for embedding objects:
  - Microsoft fined \$520,000,000
  - Microsoft are appealing against award
  - We should all support Microsoft!

Nightmare scenario: Microsoft pay fine and license technology. Other browser vendors can't afford to pay!

**Web Patents**  
Stylesheet  
s MS  
Linking  
Sun  
Embedding  
Eolas  
Privacy  
Intermind





# MS Office 2003 – Is It Open?

In Autumn 2003:

- Microsoft published spec for XML interchange format for MS Office products
- On 5 Dec 2003 XML schemas to be published
- A good thing?
- MS Office format on par with Adobe PDF, Macromedia Flash/SWF, Sun's Java, ...
- Patented – but as a defence?

Jury is still out.

The statements may be untrue, misleading  
OTOH public pressure could have helped MS to  
open up their formats

We need objective, rational evaluation



# Open Source Web Software

## Apache (Web server)

- Good, popular, safe choice

## Netscape (browser)

- Never open source; became owned by AOL/Time Warner; promoted proprietary standards (frames, J-CSS, ...) – but was initially great for users

## Mozilla (browser)

- Open source browser
- Version 1 was very flawed (and errors not spotted) – but chosen by some because OSS; current version seems OK

## ht://Dig (search engine)

- Popular open source search engine software – but limited in functionality (why?)

## Google (search engine)

- Embed Google in your Web site. Growing in popularity. Fast and proven functionality which users love, but proprietary & dependency on 3<sup>rd</sup> party. Are these reasons not to deploy it?

When selecting software we need the evaluation criteria to spot the appropriate solutions and avoid inappropriate ones



# Making The Institutional Case

Use of open source and open standards can be of great importance to institutions. But:

- There will inevitably be complexities, different stages of maturity, failures, etc.
- This should not surprise us
- There is therefore a need for institutions to develop selection criteria
- This approach has been taken by QA Focus to support JISC digital library programmes
- There is an opportunity for OSS Watch to be involved in similar work for OSS
- An important aspect will be sharing – of failures and problems as well as successes



## Conclusions

- Open standards are critical for the development of open, cross-platform, vendor neutral services
- Open source software *may* have a role to play in supporting open standards – but proprietary software can also be used with open standards
- There are other factors to be aware of (user requirements, maturity, ...)
- There is a need to develop a mature approach to selection of appropriate open source applications – OSS Watch has an important role to play
- Things change – IBM (the evil mainframe empire up to the 1980s) are now the service company supporting open source. You need to be flexible in responding to changing environment