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Joint Information Systems Committee

Open Source *versus* Commercial Software

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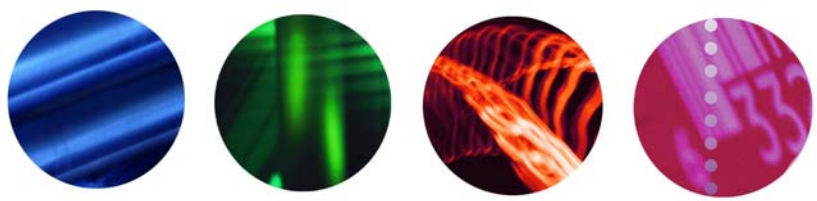

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Outline

- Some history
- Characteristics of open source software (OSS)
- What are the advantages of OSS?
- What are the drawbacks?
- OSS licensing issues
- Summary and conclusions

Some history

- OSS in the modern sense really began with the Free Software Foundation and the GNU Project (1983-1985)
  - Plus much of the Internet infrastructure
- Fuelled by the success of high profile projects in the 1990s
  - E.g. Linux, Apache
- Now quite a significant force even in the commercial sector
  - cf. involvement of IBM, Sun, HP …

What exactly is OSS?

- Software whose licence permits users the freedom to
  - Use the software for any purpose
  - Scrutinise and modify the source code
  - Redistribute freely the original or modified code
- Note also that
  - OSS is often free to obtain; but may be available also with commercial support
  - Some written by commercial companies

Some categories of OSS

- Operating systems
  - Linux, FreeBSD …
- Desktop products
  - OpenOffice, Mozilla …
- Server utilities, programming etc.
  - Apache, Sendmail, Perl, Python …
- Major applications
  - uPortal, Dspace, Bodington …
- Research and discipline-specific

Advantages of OSS

- Code quality
  - Independent scrutiny by substantial communities of skilled programmers
  - Particularly valuable where security issues are important
- Speed of development
  - And also bug-fixing, in the best cases
- Freedom from supplier dependence
  - The main attraction for many users
  - A big help for long term preservation

Cost issues

- OSS is sometimes referred to as "free" software
  - But: "free as in free speech, not free as in free beer"
  - No software has zero cost of ownership, and OSS may often cost more to maintain than commercial software
  - Serious studies of the economics of OSS are hard to come by and not that conclusive either way

Drawbacks of OSS

- Many OSS products suffer from
  - Lack of formal support mechanisms
  - Indifferent or poor documentation (may matter less for server-side products, which only expert support staff handle)
  - Unpredictable development cycles
- All factors implying a need for larger and more skilled IT support teams in user organisations

OSS licensing issues

- Two main styles of OSS licence
- 1. GNU Public Licence, *aka* GPL
  - Designed to preserve the source from commercial exploitation
  - Attractive to individual OSS enthusiasts
  - Particularly unattractive to commercial developers
- 2. BSD/MIT/X11 licence
  - Places essentially no restrictions on what can be done with the code

Which licence?

- Don’t invent your own licence!
  - Those already in existence have been proven in use and cover most needs
- The BSD/MIT licence is good where the aim is to get standards adopted
- The GPL is good where the aim is to involve the widest academic community

What is JISC doing?

- A pilot OSS Advisory Service will be launched shortly
  - Funded for two years initially, with an option to extend for a further year
  - Other long term service options will be considered in the light of the first two years' experience
  - Will provide information and stimulate debate on product availability, sources of support, community case studies, licensing, economics etc.

And coming soon after …

- Proposals being sought for a JISC Digital Curation Centre, whose key objectives include:
  - Develop a reliable sustained repository of tools, software etc. to support curation/preservation/use of data
  - Develop testbeds and certification for such tools, software & curation methods
  - Record and monitor file formats etc.
  - Provide advice on all of the above

Conclusions

- OSS is now a serious alternative to commercial software in many fields
  - With some particular advantages in the academic and research communities
- In today's context, availability of source code is crucial for the long term preservation of software environments

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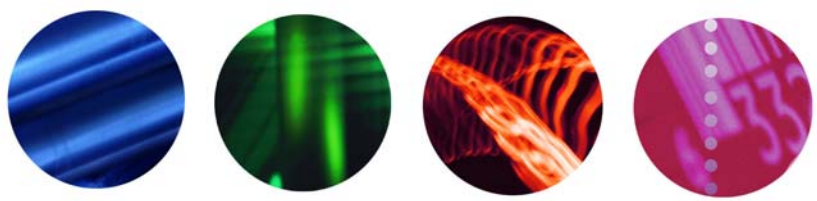
Questions?



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