Introduction to open source software

Sebastian Rahtz

OSS Watch

May 2005, Timor Leste
Welcome

I am Sebastian Rahtz:

- Information Manager for *Oxford University Computing Services*
- Manager of *OSS Watch*, the UK national Open Source Advisory Service

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OSS Watch provides unbiased advice and guidance about free and open source software for UK further and higher education.
Technically, what does ‘Open Source’ mean?

Software for which:

- the source code is available to the end-user;
- the source code can be modified by the end-user;
- there are no restrictions on redistribution or use;
- the licensing conditions are usually intended to facilitate continued re-use and wide availability of the software, in both commercial and non-commercial contexts;
- the cost of acquisition to the end-user is often minimal.
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Virtues of free and open source software

- It has no secrets: the innards are available for anyone to inspect
- It is not privately controlled: so likely to promote open rather than proprietary formats
- It is typically maintained by communities rather than single corporations: so bug fixes and enhancement are often frequent and free
- It is usually distributed free of charge (developers make their money from support, training, customisation and specialist add-ons; not marketing)
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Clearing up misunderstandings

- **Free software is not the same as free beer.** Open source software may or may not cost money.
- The cost of ownership often bears little relation to the cost of acquiring a piece of software.
- Open source software is strictly in the legal framework of copyright and licensing. It is not about pirating software, or giving things away.
- Open source software does not mandate exclusivity. You can use open source programs under Windows (eg The OpenCD).
- People do not choose software solely on the basis of open source. **Interoperability and open standards** for data are equally important.
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The well-known examples

- Linux operating system
- Apache web server
- Mozilla web browser and email client
- Perl, Python and PHP scripting languages
- MySQL database
- OpenOffice office suite
- uPortal portal framework
- Gimp picture editor
- Moodle Virtual Learning Environment
- Ubuntu desktop distribution

In the education sector, open source offerings exist in most areas of networked services and end-user applications. MIS applications are less mature.
Desktops?

Sebastian Rahtz (OSS Watch)  Introduction to open source software  May 2005, Timor Leste
SS Philip and James Primary School
Travel Plan 2004/2005

Contents

1. Introduction
2. School area
3. School travel
4. Travel to school in 2004
5. Recommendation to parents and carers
6. Travel in the curriculum
7. A contract between school, parents, and pupils
Games?
Subject: Re: Approaching notes in TEI
From: Syd Bauman <Syd_Bauman@BROWN.EDU>
Reply-To: Syd_Bauman@BROWN.EDU
Date: 01.01
To: TEI-QUIS@SERV.BROWN.EDU

I think there is nothing wrong with your suggested <noteSubj>. On the other hand, if you want any kind of interoperability with generic TEI tools (of which, I know, there are very few at the moment), you would do much better to stick with either in-line <note> elements or cut of line <note> elements that point to markup. Furthermore using <note>s makes your encoding clear to any reader even mildly familiar with the TEI Guidelines.

First, the descriptions of <note> in P4 pretty clearly identify it as something to be used to mark existing notes

As Lou has pointed out, this isn't really the intent, and I think you've thoroughly demonstrated that a new example of a modern editor's <note>s is called for in P5.
### Spreadsheet?

#### Introduction to open source software

#### May 2005, Timor Leste

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![Graph](image-url)
Virtual Learning Environment?

Moodle is a course management system (CMS) - a software package designed to help educators create quality online courses. Such e-learning systems are sometimes also called Learning Management Systems (LMS) or Virtual Learning Environments (VLE). One of the main advantages of Moodle over other systems is a strong grounding in social constructionist pedagogy.

Moodle is Open Source software, which means you are free to download it, use it, modify it and even distribute it (under the terms of the GNU General Public License). Moodle runs without modification on Unix, Linux, Windows, Mac OS X, Netware and any other system that supports...
### The current practical picture

<table>
<thead>
<tr>
<th>Service</th>
<th>Rating</th>
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<tbody>
<tr>
<td>Browser</td>
<td>Good</td>
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<tr>
<td>Desktop OS</td>
<td>Acceptable</td>
</tr>
<tr>
<td>Content Management Systems</td>
<td>Good</td>
</tr>
<tr>
<td>Digital library services</td>
<td>Good</td>
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<tr>
<td>Email</td>
<td>Good</td>
</tr>
<tr>
<td>Integrated groupware</td>
<td>Acceptable</td>
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<tr>
<td>Library catalogues</td>
<td>Weak</td>
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<tr>
<td>Network services</td>
<td>Good</td>
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<td>Office suite</td>
<td>Acceptable</td>
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<td>Payroll</td>
<td>Weak</td>
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<td>Scientific workstation</td>
<td>Good</td>
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<tr>
<td>Student administration</td>
<td>Weak</td>
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<tr>
<td>VLE &amp; portal</td>
<td>Good</td>
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</tbody>
</table>

*Being *possible* does not make it the *right choice*
Open source is a development methodology

- **Programmer commitment**, because the programmers work on the software they need
- **Rapid change**, because programmers want to see results
- **Unconstrained specifications**, because there is no external client
- **Collective responsibility** for the code
- **Response to change**, dictated by (perhaps unexpected) use
Open source is about community

Those who ‘merely’ deploy open source software are also part of the open source community
Why do people keep working on open source?

The desire to learn technical skills by joining an open project is strong. Typical reasons for staying in open source are:

- improving skills: 32%
- ideology: 31%
- seeking recognition: 12%
- improving software: 24%
Why do companies work in open source?

- implementation of open standards might as well be done in a shared way to save costs
- pyramidal consulting works: using open software means that your support team are spared the 80% of questions which are easy, leaving you the remaining 20%
- making ‘needed improvements’ only to open source is economically efficient. Work on the things you care about
- the revenue margin on licences is 85%, on support 54%; eg IBM and Novell are now depending more on services than licensing
Open source is about conflict and change

Our industry has an almost totally monopolistic provider:

<table>
<thead>
<tr>
<th></th>
<th>Good?</th>
<th>Bad?</th>
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<tbody>
<tr>
<td>.NET</td>
<td>Single framework</td>
<td>No room for choice</td>
</tr>
<tr>
<td>Office</td>
<td>It does everything</td>
<td>It has insufficient security barriers</td>
</tr>
<tr>
<td>Windows</td>
<td>A smooth upgrade path</td>
<td>No room for innovation</td>
</tr>
</tbody>
</table>

It is hard to decide whether this is good or bad
Why should Timor care about open source?

1. **Saving money.** You can build good systems without paying a lot of money. Everyone can have a copy.

2. **Training.** Timor needs good software engineers. Open source lowers the barrier to getting involved in real development.

3. **Localisation.** Timor has its own languages and culture, which should be reflected in the software used in schools and businesses. Microsoft will not write a spell checker for Fataluco.

4. **Control.** Use software you can influence the direction of, which does not leave you at the mercy of big companies.

5. **Community.** Timorese people can work as equals on projects around the world, and influence the future.
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