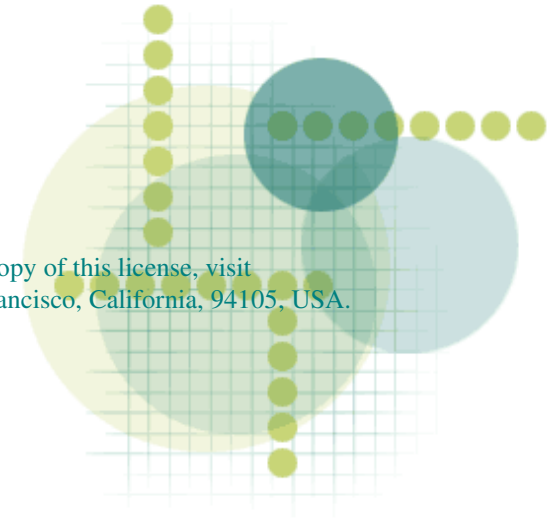


FREE AND OPEN SOURCE SOFTWARE IN EDUCATION

Benefits of Adoption for UK Schools and Colleges

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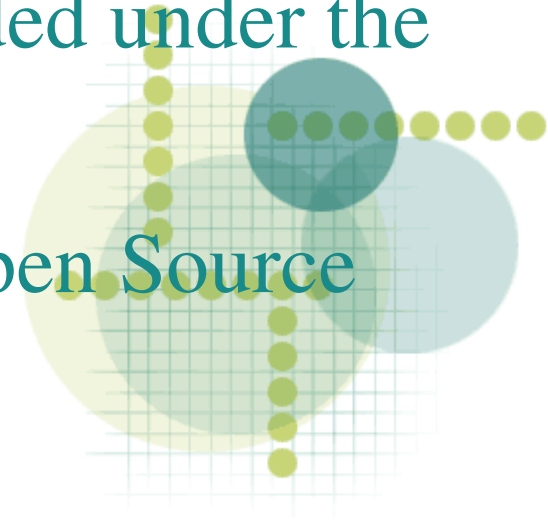
DEFINITION

- The free and open source software development methodology provides programs in which the source code is available to the general public for use and/or modification.
- Open source code is typically created as a collaborative effort in which programmers improve upon the code and share the changes within the community.



DEFINITION

- There are many licences. Some of the most common are:
 - GNU General Public License (GPL) .
 - Berkeley Software Distribution (BSD).
- They all have one thing in common; they grant additional rights (Freedoms), not provided under the normal definition of Copyright.
- Sometimes known as Free/Libre and Open Source Software (FLOSS).



EXPLANATION

- Programmers share code and ideas, so software is developed by 'Standing on the Shoulders of Giants'.
- The methodology improves functionality, reliability and security, and promotes:
 - Learning and sharing in an inclusive environment.
 - Best of Breed developers.
 - Innovation.
 - The creation of Open Standards.



EXPLANATION

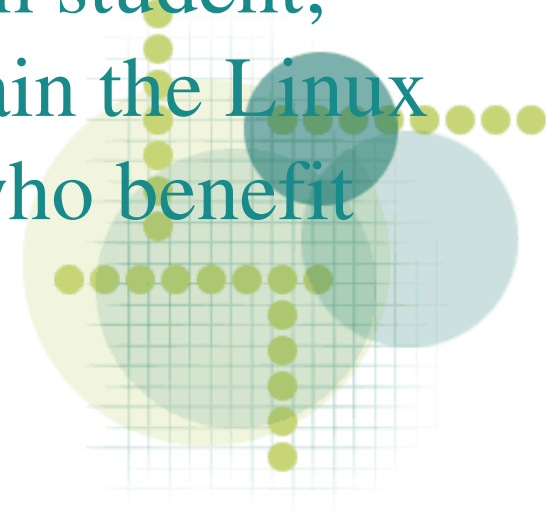
- In closed source environments, the vendor keeps the code a secret so that he can sell the software to users.
- Revenue has to be artificially sustained by frequent releases of programs with new features, often at the expense of performance and reliability.
- Free and open source software does not rely on this business model. Revenue is raised by offering Training and Support; a sustainable business model.



PRODUCERS

ENTHUSIASTS

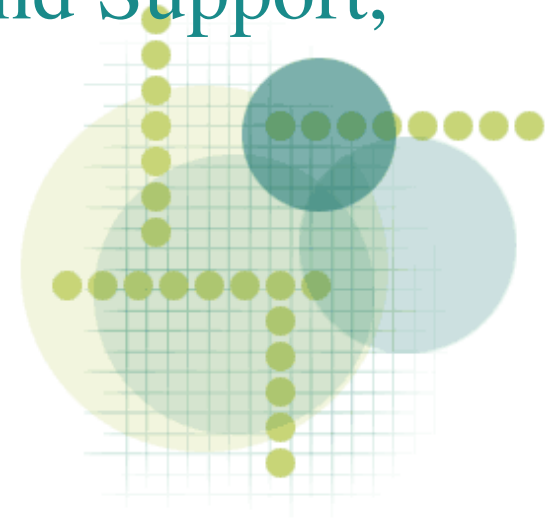
- Enthusiasts often start the ball rolling, by starting a project to solve a problem that interests them.
- Although these 'bedroom coders' are often amateurs, code quality is usually good, because the community is a meritocracy.
- The Linux project was started by a Finnish student; Linus Torvalds. He is now paid to maintain the Linux kernel by a consortium of organisations who benefit from Linux.



PRODUCERS

COMPANIES/CORPORATIONS

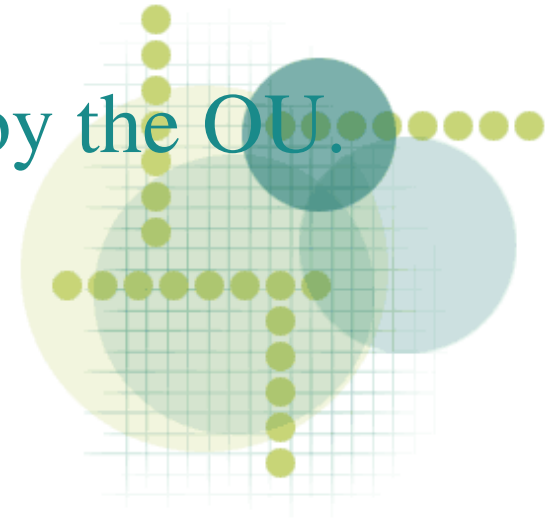
- Some very large companies help to develop the code by paying their own staff to work on free and open source projects, eg IBM, Sun, Redhat.
- Sometimes code is 'freed'. Examples include the Firefox web browser and OpenOffice.org, the Office suite.
- Many smaller companies offer Training and Support, including to educational establishments.



PRODUCERS

USERS

- Not all users can code, but many still offer help with bug reports, documentation, artwork and advocacy.
- In the educational community users have come forward and started and supported projects. For example:
 - The Edubuntu Linux Distribution, packed with great tools for schools.
 - The Moodle online learning tool used by the OU.



BENEFITS

THE STUDENT

- All students benefit from better quality tools at lower cost.
- Brighter students are given access to tools, (eg programming and scientific), that would cost hundreds of pounds if bought from proprietary vendors.
- The natural curiosity of students is therefore encouraged rather than being stifled and they are free to pursue their love of learning.



BENEFITS

THE SCHOOL OR COLLEGE

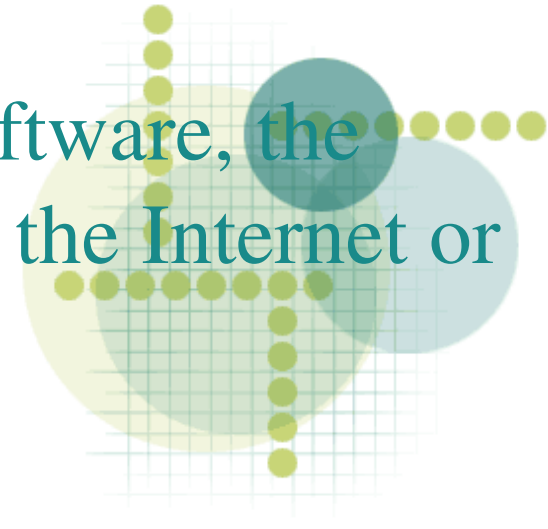
- IT costs are lowered because there is no need to pay costly licence fees. (Software isn't completely free because training, support and staff to administer it are still needed.)
- There are plenty of organisations whose business is to provide that support.
- Ongoing costs are much easier to predict and less 'peaky'.



BENEFITS

THE FAMILY

- Many families want their children to have computers at home to help them with homework etc.
- The costs of obtaining proprietary software can be higher than the cost of the computer itself.
- Even student licences can be very expensive and EULA conditions unacceptable
- If the schools use free and open source software, the families can obtain their own copies from the Internet or simply by getting CDs from the school.



OPEN STANDARDS

- Open Standards work against the business model of proprietary software vendors. They need lock-in to ensure that users have to stay on the upgrade cycle. The story of Open Document Format (ODF). is a good example of this.
- Some vendors have tried to hijack open standards by extending them and then patenting the extensions, forcing everyone else to comply.
- Patents exclude free and open source developers because of licencing requirements.

