Free to Share

By Bill **Thompson**

"Across the developing world, people are discovering FLOSS, software that rivals Microsoft's performance but is completely free."

In a school classroom at A. Shipena secondary school in Windhoek, Namibia, students learn how to surf the World Wide Web, send e-mails and write essays. The computers they are using would not look out of place in a European school, and the skills they are developing will help Namibia take its place in the digital economy.

However, look a little closer and there is a significant difference. While the majority of systems in the developed world use Microsoft Windows, these computers are running the GNU/ Linux operating system, and the students are not writing documents in Microsoft Word but instead use the OpenOffice word processor.

The computers and the software have been supplied by SchoolNet Namibia, a non-profit organisation which has helped over 200 schools since it was founded in 2000. As well as providing refurbished computers and software for teaching, SchoolNet also offers low-cost networking, Internet connectivity and programmes to support school administration.

It is one of a growing number of organisations in the developing world using FLOSS, computer software written by groups of enthusiastic programmers and made widely available without the need for payment. In addition the programmers also give away the source code, the text of the programme written in a human-readable programming language, so that recipients can understand how the programme works and can modify it to meet new needs.

GNU/ Linux and OpenOffice are important examples of FLOSS, a rather clumsy acronym derived from "Free/ Libre/ Open Source Software" and sometimes shortened to FOSS. They are among thousands of different programmes, including well-known tools like the Firefox Web browser, all widely distributed over the Internet or on CD compilations. Their use makes the Namibian schools part of a worldwide movement which favours this freely available software over the proprietary products of companies like Microsoft and Oracle.

The impetus behind FLOSS is not new. Until relatively recently, it was largely only of interest to experienced computer users and programmers, rather than ordinary users. Easy to use programmes like Firefox, and new and more accessible versions of GNU/ Linux have changed that.

While the early work on FLOSS was largely done in developed Western countries, especially the USA, the focus has been shifting for some time and it is now a worldwide phenomenon. In September, Linux users in the Limpopo province in the north of South Africa launched the Mogalakwena Linux user group, Molug, while across the world in Malaysia the Kuching User Group meets every month to talk about FLOSS and its importance. At schools in Rio Grande do Sul in Brazil, the Free Education Network uses free software to teach young people how to use computers and support their learning, while the Indian low-cost handheld "Simputer" is based on Linux.

Although there is a great deal of activity, the importance of FLOSS to development is hard to assess. In September 2004 UNCTAD, the United Nations Conference on Trade and Development, held an expert meeting on the trade and development implications of FLOSS, concluding that it offered "a new model that provided new opportunities and empowered communities to be less technologically dependent, while at the same time offering a wealth of business opportunities", but it failed to provide a definitive analysis of the benefits that could ensue.

Mark Shuttleworth, a South African entrepreneur whose charitable foundation focuses on social innovation and educational projects, and who is one of the people behind the Ubuntu version of GNU/ Linux, believes that these opportunities are already being realised. "Five years ago it was a leap of faith to argue that FLOSS would bring substantial benefits", he says, "but now there seems clear evidence that countries that took that bold step five years ago are reaping rewards."

Some commercial software companies, including Microsoft, see FLOSS as a potential threat to their markets, partly because the initial cost of acquiring a license is zero, and partly because the ability to read the source code and adapt the programs to local needs is not possible with the closed-source, closed-development, proprietary programs they write and license.

Microsoft, EDS and Intel all fund the Initiative for Software Choice (ISC), a US-based lobbying organisation that seeks to counter attempts by governments, local authorities and other public bodies to favour FLOSS in their purchasing. When Brazil's President Luiz Inácio Lula da Silva instructed government min-

istries and state-run companies to start switching from proprietary operating systems to GNU/ Linux, the ISC objected strongly and called instead for a "level playing field" in software procurement.

Although there have been many studies carried out to compare the total cost of ownership of commercially-produced software and FLOSS, none has been conclusive. But for some FLOSS advocates the issue is as much political as economic. SchoolNet's director Joris Komen believes in providing an alternative to commercially-produced software, but he is also critical of the way that large software companies support developing countries. "Conventional international ICT development support has traditionally focused on quick project returns based on capital expense, numbers of computers delivered, and shining 'best practices' reports filled with 'kodak moments,'" he says. "Such misguided 'trick or treat' generosity does more harm than good in an otherwise well-defined framework of ICT development in education in Namibia."

For Mark Shuttleworth, reduced reliance on expensive software is key. "If you have strong vested interests in proprietary software industries, your economy can probably afford to buy proprietary and you will also generate substantial licensing revenue", he says. "The majority of countries with development challenges have no established software industry and no hope of creating one, so it makes nosense to commoditise software." However he also values self-reliance, because users of FLOSS can look at the source code and learn how it works or even change it to meet their own needs. This implies significant spending on skills development, but this should be seen as an investment, not a cost. It is also something that needs governmental support.

Pointing to SchoolNet's success, he says: "Namibia has been smart, but it's a small country and the initiatives have not been government-led. Brazil and Spain are key, because both made strong decisions at a very high level and said 'we will develop the skills.' In many cases, countries have spent their IT budgets buying intellectual property in the form of software licenses and not developing the skills. They will therefore need to spend more on skills in the short term, but they will in doing so acquire globally competitive skills. They must, however, do this prudently and step by step."

Shuttleworth also points out that a skilled workforce is itself an asset. "In Brazil and Spain they have deployed FLOSS as a platform in schools, so as other countries start to need Linux engineers their people do well in the global marketplace."

The arguments continue, but most consider it unlikely that FLOSS will replace proprietary software in all areas or all applications. As ICT continues to grow in importance in the developing world, we are likely to see a mix and match approach continue – with some commercial, licensed software and some free and Open Source systems in place, often running on the same computers.

I would also argue that this model fits the "ethos" of the voluntary sector. Organisations working for social justice struggle to build diverse coalitions based on shared resources and a commitment to subordinate individual interests within broad movements. Similarly, Open Source software is shared among a community of users who commit to improving the product for the benefit of all with no expectation of financial profit. These user communities also collaborate on providing support to other users, answering questions and creating tutorials online. All other things being equal, the philosophical underpinnings of Open Source software – community based development, volunteer effort, collaborative working – are such that implementing it in a voluntary sector organisation would add more mission-based value.

Switch Me Over!

Putting Open Source software to work in your organisation can be very simple. Word processing, spreadsheets, email and web browsing are the main software programmes that NGO staff use, and all have well-developed Open Source alternatives.

Open Office is an office suite that can read and write Microsoft Office files: www.openoffice.org. Mozilla Firefox is a web browser much like Internet Explorer (but better!): www.mozilla.org/products/firefox. Mozilla Thunderbird is an email client, like Microsoft Outlook: www.mozilla.org/products/thunderbird, Or try Scribus for desktop publishing and The Gimp for graphics:
www.scribus.org.uk or www.gimp.org.

For more ideas and further reading, check out the Nonprofit Open Source Initiative, in particular their "Primer for Nonprofits" at www.nosi.net

More information

www.bond.org.uk/networker/dec05/opensource.htm
www.ubuntulinex.org
www.schoolnet.na
www.theopencd.org
www.gnu.org
www.opensource.org
www.developments.org.uk/data/issue31/free-to-share.htm