NEWSANALYSIS

The Linux Voice view on what's going on in the world of Free Software.

Four years of community progress

Founded by a community split, LibreOffice is innovating in a way that we need to emulate.

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The last weekend in September was the 4th anniversary of the founding of the *LibreOffice* project. Since its founding, the project has grown in leaps and bounds, becoming the default in most Linux distributions for handling office documents and presentations. What lessons can be learned from its first four years?

The project is hosted in a new (for open source) form of organisation. Having watched other projects become over-influenced by business politics, the *LibreOffice* project decided to create a legal entity around the code that provided a level playing field for all involved. It uses a German non-profit structure called a "Stiftung", a very stable and essentially immutable trust designed for the long term. It's the sort of structure one generation creates to carry care of a building or a monument for future generations. The project created The Document Foundation (TDF) to protect itself, a move regarded by the authorities in Germany as radical and unusual but ultimately endorsed by the regional government of Berlin.

TDF is run by Members, who are the legal trustees of the organisation and who are active contributors admitted by an elected Membership Committee (where I volunteered for a while). The Members elect a board of directors each year, who are them empowered to run the formal affairs of the community. There's no overall "boss" -- the membership committee runs the board elections and the board runs the membership committee elections. This stable structure with strict rules is fairly actively overseen by Berlin to ensure the rules are followed, ensuring even the best game-playing corporations can't take over.

Foundations of success

LibreOffice is well-funded in what seems a safe and sustainable way. Some of the funding comes from an Advisory Board mechanism similar to those used by many other open source communities like Gnome. Advisory Board members are essentially sponsors; they gain no governance role and donate either funds or expertise because they want to see the project succeed. Wise projects make sure they are neither dependent on a single sponsor nor fully dependent on corporate sponsors. So *LibreOffice* also gets substantial funding from donations. With 80 million active users, it only takes a small donation from each person visiting the web page and *LibreOffice* has received enough cash this way to be able to hire a full-time executive director.

As well as innovative governance and funding, the project has also been focussing the work of hundreds onto the code. Talk about "quality" and "buggy code" is cheap and flows freely both as insult and plaudit, but there's a more concrete measure available. A research project into automatic detection of the most common software defects became a company called Coverity, and today they offer open source projects free access to their commercial tools to both evaluate code quality and to detect defects. Today well over 2500 projects make use of this "Coverity Scan" and provide a convenient way to track code improvement in each of them. The tool calculates a "defect density" score of defects detected per 1000 lines of code. A project this size has an average defect density of 0.65. When TDF inherited the code from OpenOffice.org, the defect density was 1.11, but they have had a team focussed on the Coverity Scan and over the four years they have achieved a more than ten-fold improvement, getting it down to 0.08. That's an impressive achievement, reflecting the broader dull-but-essential work of robust rest-and-fix. Today the code is slimmer, has an order of magnitude fewer defects, includes asserts and unit tests to prevent regressions and as a consequence loads faster and fails less.

So four years in, what are the lessons? First, focus on the code. Make it great, make it accessible to newcomers, make it easy to build and test, make quality a priority. Second, create equality. TDF has created a level playing field with its governance where many companies are able to collaborate alongside a cornucopia of volunteers. Third, spend wisely. Money is not always a blessing to an open source project and spending it without creating divisions is hard to do.

Starting a new open source project is hard; forking an existing one is painful; creating a new large non-profit Foundation is much harder still. But four years on, *LibreOffice* is setting the standard for how it should be done.

> "Four years on, LibreOffice is setting the standard for how an open source project should be run."

CATCHUP

Summarised: the biggest news stories from the last month

1 Debian to switch (back) to Gnome as default desktop

The last release of Debian featured Xfce as its standard desktop, largely due to its compact size – it meant that a whole Debian system could fit on a CD. But now it looks like the distro will switch back to using Gnome as the default, primarily because that desktop has better accessibility support and *systemd* integration. It could mean that the single-CD version of Debian gets canned, but the distro team doesn't seem particularly worried about that.

2 Netflix finally comes to Linux! Well, sort of…

We Linux users haven't had the best time with Netflix, the world's most popular streaming video service. Sure, it's possible to use it via the *Pipelight* plugin and plenty of fiddling, but now things have gotten a lot easier with development builds of Google Chrome. By tweaking your user agent string and using the HTML 5 video mode of Netflix, you can now stream videos without add-on software. It's still a bit of a hack, and we'd like official support from Netflix, but it's a start.

3 TrueCrypt project is reborn as CipherShed

Back in May, the popular *TrueCrypt* encryption software was discontinued under mysterious circumstances. But now a fork has brought the codebase back to life, and development snapshots are here: **www.ciphershed.org**

4 NHS ditches Oracle DB in favour of NoSQL

Bye bye *Oracle*! Yes, the UK's National Health Service, the country's largest employer, is ditching its Oracle-based backbone and is moving to a *NoSQL* solution called *Spine2*. This will use an open source stack on top of Linux, all running on commodity hardware. Some NHS IT projects have failed spectacularly in the past, but this switch has been in the planning stages for three years, so it should go more smoothly. A good time for Larry Ellison to step down as Oracle CEO…

5 Microsoft buys Minecraft creator for huge sum

This isn't directly Linux related, but we know that plenty of people enjoy *Minecraft*, the vastly popular sandbox construction engine, on their Linux machines. Microsoft has snapped up Mojang, the company behind the game, for an impressive $2.5bn – and its founder is leaving to concentrate on other things. So what happens now? Will Microsoft work on *Minecraft 2*, which just so happens to only work on Windows? Will the Java version be discontinued? Time will tell.

6 Gnome 3.14 to further integration with systemd

This is related to the first news story this month, and hasn't been well received by everyone. The next release of Gnome will make deeper use of *systemd*, especially its user sessions management. This means the desktop can drop support for the (unmaintained) *ConsoleKit*, but questions have arisen about future Gnome releases working on other operating systems, such as FreeBSD. There's a good explanation about the reasoning here: **http://tinyurl.com/p8e24h4**

7 Adobe Photoshop comes to Linux! Well, sort of…

Whether you love the company or hate it, there's no doubt that Adobe has a lot of clout when it comes to media and productivity software. Google has announced that *Photoshop* and other Creative Cloud programs will be coming to Chrome OS – which, of course, is based on the Linux kernel. So it doesn't mean we'll be 'shopping images on our regular GNU/Linux boxes any time soon, and it's still proprietary software, but at least it's a step in the right direction.

8 "Shellshock" vulnerability in Bash shakes the web

We've got more about this on page 90, but in brief: a decades-old security hole in *Bash* has been discovered, making potentially millions of web servers open to exploitation. Most distros have rushed out patches to mitigate the problem, but it's a reminder that despite the benefits of free and open source software, if very few people are looking at crusty old code, bugs can remain unspotted for a long, long time. If you haven't upgraded yet, we recommend doing it now.