

An up-to-date overview of free software and its makers

Projects on the Move



Ronald Raefle, visipix.com

Quality assurance is very important to the Debian project. As part of the QA process, Debian compiles all the packets in the mainstream distribution on all supported architectures. If you're wondering how they handle the compilation of these thousands of packages, the answer is that they use lots of hardware.

Debian developers took advantage of the KDE developer conference, aKademy, to set up a compiler network made up of a variety of laptops and Pentium 4 desktop systems. The cluster took just two days to compile the complete Sarge distribution. The test demonstrated that five percent of the packages in Sarge will not compile without modifications. And that means there is still plenty to do.

Linux in Your Hand

In previous issues, Projects on the Move has looked at a variety of devices that can run Linux, including Apple's I-Pod [1] and the D-Box 2 [2]. Linux often adds value in comparison to the proprietary system preinstalled on a handheld. However, with the exception of Palm devices, most PDAs come with Windows Mobile. The good news is you can

replace Windows Mobile just as you can replace a desktop Windows system. The Sharp Zaurus is the first Linux PDA worldwide to be officially developed for and sold with Linux as the factory default. The Zaurus has state-of-the-art hardware, but the high selling price puts many people off. This may explain why, in Europe, Sharp itself is not marketing the current versions of the Zaurus. The most popular Zaurus PDA dealer in Germany is Trisoft [3].

The latest Zaurus models have a 400 MHz Xscale CPU, 64MBytes of RAM, up to 128MBytes of flash ROM, Bluetooth, and WLAN. The display has a standard resolution of 480x640 pixels that allows users to run most PC-capable applications on the Zaurus.

If you can do without some of the convenience the Zaurus provides, there are a few low-budget alternatives that can also put Linux in your hand. For example, you could consider one of the older

Hewlett-Packard iPAQ models, which have a StrongARM CPU.

Complete Environment

There is a collection of programs for installing Linux on a 3xxx series iPAQ at [4]. Familiar Linux from [5] is the recommended distribution.

The installation requires a serial connection between your desktop computer and the iPAQ. There is an alternative approach that uses a Compact Flash card.

Familiar Linux includes an X server with render extension for quick graphics and font anti aliasing. Familiar is also compatible to the Debian GNU/Linux ARM Port, which means that you can install any of the many thousands of Debian packages. The Familiar iPKG package manager allows you to manage the installed software.

The GUIs GPE [6] and Opie [7] both run on Familiar. GPE (the GPE Palmtop



Figure 1: This HP/Compaq iPAQ runs Linux now instead of the preinstalled version of Windows Mobile.

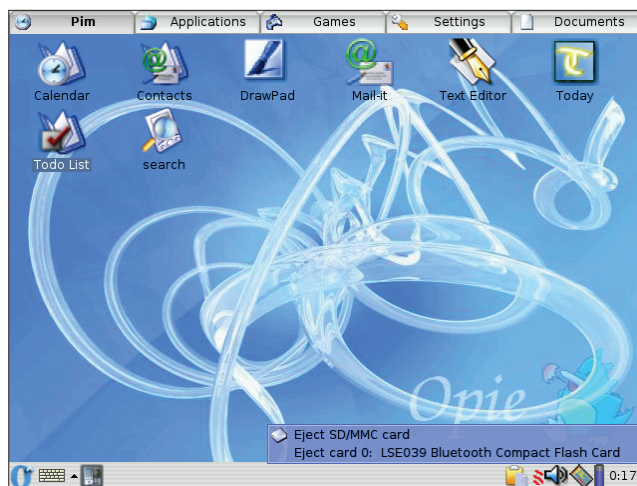


Figure 2: The Open Palmtop Integrated Environment, also known as Opie, is a PDA-optimized GUI based on Trolltech's QTopia.



Figure 3: The new Kalyxo project aims to improve Debian's integration of KDE. To achieve this aim, the members have decided to add their own extensions.

Environment) is based on XFree86 and GTK 2.2; Opie (Open Palmtop Integrated Environment) uses QTopia.

Getting There

If you do not happen to own an iPAQ model from the previously mentioned series but have a more modern handheld computer, such as a H19xx or H22xx series device, you may need to wait until support for your iPAQ has been completed. Projects for porting the Linux kernel to newer machines do exist, but they have not reached anything like the status of the H3xxx port.

Development for the H22xx series is a lot more advanced than for the H19xx. Sadly, the project for Linux on the H19xx is practically defunct. If you feel like giving the developers a helping hand, you can check out the project websites at [8] and [9] and join in with the discussions on the corresponding mailing lists.

If you are forced to use Windows on your PDA for any reason, at least you can sync to a Linux machine. ActiveSync gives you PDA-to-Windows synchronization. The program uses a proprietary format and it does not come with an official Linux client.

The Sync project [10] sets the balance right. The developers have implemented a Linux version of the ActiveSync protocol. Although the program is quite tricky to set up (you need a kernel patch),

Sync performs as expected. Once you have Sync talking to your PDA, you can add a Multisync [11] plug-in to provide a GUI-based synchronization front-end.

Kalyxo

A few years ago, the Debian project announced that it would be cooperating with the KDE developers and Corel. Unfortunately, this cooperation did not bear fruit. On the contrary, the complete KDE environment was missing from Debian GNU/Linux 2.2 (also known as Potato), forcing users to resort to workarounds. Potato may be history by now, but KDE integration is still not one of Debian's more prominent features.

Enter the Kalyxo project [12], which made its first public appearance at the KDE Akademy conference. The people behind Kalyxo are developers who contribute to the KDE project and use Debian on their private machines. They were concerned about the low level of KDE integration in Debian, and they set up the Kalyxo project to strengthen the link between KDE and Debian.

Kalyxo is actually designed to interact with user systems at a lower level. The developers aim to bridge the gap between the operating system and the user – that is, between what the user sees and what is hiding under the hood. This involves running Qt and GTK applications simultaneously on the desktop without the user noticing the difference. Kalyxo is half way there, but many aspects still do not perform reliably.

It is important for the Kalyxo project to stay true to its KDE roots and to achieve its future goals in cooperation with KDE. So-called KDE I/O slaves are a big help, giving Konqueror-based access to a variety of filesystems and device types. But I/O slaves are due to be replaced by a transparent network protocol layer in the near future. The protocol layer will allow programs such as GIMP to edit files across a network. This said, developers will need to modify the underlying libraries and not just KDE.

Public Work

Kalyxo is not a Debian sub-project in the traditional sense, although there is no denying that the developers will contribute to the general goal of improving Debian with their programs and patches. In the long term, the developers want users to recognize Kalyxo as an independent project. Of course, the Debian statutes may be to blame for this; after all, they do make it difficult for people to join a project.

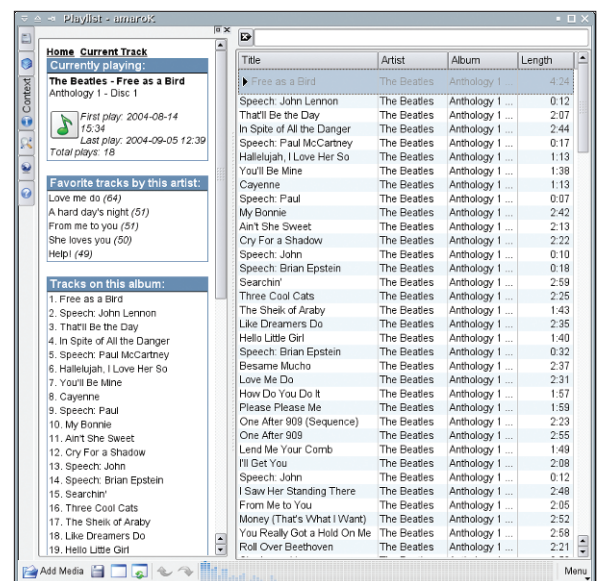


Figure 4: The Amarok audio player is one of the more prominent entries in the Kalyxo software directory.

Kalyxo is a competitor to Userlinux, which is also based on Debian GNU/Linux. UserLinux is targeted at providing a desktop for the enterprise sector, among other things. In contrast to Kalyxo, Userlinux is based on Gnome. And this is exactly what made the distribution unattractive to the current Kalyxo members. Also, Bruce Peren's decision to found Userlinux was quite controversial at the time.

In contrast to the KDE/Corel/Debian cooperation, there is more behind Kalyxo than a statement of intent. Users can check out the Kalyxo website for a collection of software that has been modified to run with the Debian distribution.

What Kalyxo really needs most is more developers. Anyone interested in supporting the project can check out the website at [12] for more details. What seems certain at present is that Kalyxo is poised to go through major changes that will culminate in a separate Debian-based distribution shortly.

The Debian Women Project

It is taking time to get more women involved with the Open Source community. One typical example is the Debian project, which has fewer than five women among its officially registered developers. Way back in 1991, Ellen Spertus published a white paper at the renowned Massachusetts Institute of Technology discussing the reasons for low female participation figures in Computer Science courses at Universities.

She is convinced that jokes about women, which many men consider harmless, cause many women distress. Also, technical documents typically use masculine terminology (such as "he" rather than "he or she"). One approach that Ellen Spertus suggested was for women to organize their activities and exchange experiences in groups.

In the open source world, some women have followed Ellen

Spertus' advice, one example being the "Committee on the Status of Women in Computing Research," or CRA for short. This committee continually investigates the status of women in the world of computing and tries to help wherever help is needed and possible. The committee's membership list includes staff from IBM, AT&T, and MIT.

Last month's issue of Projects on the Move[2] contained a note on the Debian Women project. The members of Debian Women aim to involve more women in Debian development. The project's initiator is Erinn Clark, who is not a Debian developer herself at present, although she has made a number of past contributions to the distribution. Amaya Rodrigo Sastre, who is an official Debian developer, is also actively involved with the group.

The project is still quite new, which explains why it currently has just a website and a mailing list to show for all the work the organizers have put in. The website is at [14] and includes an FAQ page where female developers can explain their motives for founding their own projects. The project founders are keen to point out that Debian Women is not a completely independent institution but a Debian sub-project.

Debian Women wants to make a big splash. Their major focus is getting women more involved in Debian by offering workshops and presentations on the Debian infrastructure (including the Debian Bug Tracking and Package Tracking systems). Debian Women intends to cooperate with other Debian sub-pro-

jects, and women's projects, to help wherever help is really needed.

Debian Women is open to anyone, even to men. Most activities are currently focused around the mailing list – and there are a few male contributors. There is always IRC chat. The website gives you more details on these options.

That's All Folks...

... for this month at least, but we do have one request before we go: If you can recommend a program that you would like to see featured in Projects on the Move, why not mail me with your suggestion [15]? I look forward to your comments! ■

INFO

- [1] Martin Loschwitz, "Projects on the Move": Linux Magazine #42, p. 86
- [2] Martin Loschwitz, "Projects on the Move": Linux Magazine #48, p. 88
- [3] Trisoft:
http://www.trisoft.de/en_index.html
- [4] Linux on handhelds:
<http://www.handhelds.org>
- [5] Familiar Linux:
<http://familiar.handhelds.org>
- [6] GPE for Ipaq Linux:
<http://gpe.handhelds.org>
- [7] Opie for Ipaq Linux:
<http://opie.handhelds.org>
- [8] Linux on H19xx I-Paqs:
<http://handhelds.org/projects/h1900/>
- [9] Linux on H22xx I-Paqs:
<http://www.handhelds.org/projects/h2200/>
- [10] SynCE for ActiveSync based synchronization: <http://synce.sf.net/>
- [11] MultiSync, a free synchronization tool:
<http://multisync.sourceforge.net/>
- [12] Kalyxo website:
<http://www.kalyxo.org>
- [13] NX:
<http://www.nomachine.com>
- [14] Debian Women project homepage:
<http://women.alioth.debian.org/>
- [15] Tips and suggestions:
projects@linux-magazine.com

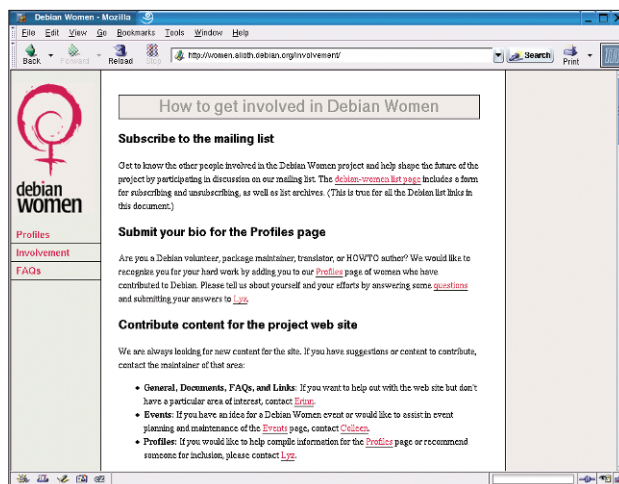


Figure 5: The Debian Women project aims to involve more women in Debian development and will be offering courses to further this aim.

THE AUTHOR

Martin Loschwitz is from a small German town called Niederkrüchten and a developer for Debian GNU/Linux. Martin's leisure time is mainly pre-occupied with activities in the Debian or GNU community.