

An up-to-date look at free software and its makers

PROJECTS ON THE MOVE

Conary promises a new approach to package management, and the Ecology howto provides tips on sustainable computing. We'll also look at Stopmotion, a tool for creating cartoons, and we'll tell you about the latest Debian controversy.

BY OLIVER FROMMEL AND MARTIN LOSCHWITZ

The more distributions, software packages and repositories there are, the worse the problems with package management become. Linux users must contend with unresolved dependencies, incorrect library versions, and overwritten patches. Rpath [1] have adopted a radical approach to simplifying package management. The company mainly comprises former Red Hat managers and developers. The fact that Erik Troan, the inventor of the RPM package management system, and Michael K. Johnson, who headed kernel development and later the Fedora project, are both on board lends credibility to the project. Add a smattering of former maintainers, and you get a team that is loaded with Linux skills.

Linux Toolbox

Rpath is currently working on their own Linux distribution, which will serve other projects or companies as a basis for special Linux variants. The Rpath team is developing the Conary system [2] to handle package management. And Conary looks set to resolve many of the issues that plague package management systems. Conary is not compatible with

other package formats, so it will only work on systems designed to use it out of the box, such as Rpath Linux or Foresight Linux [3] by Ken van Dine. Foresight, which is based on Rpath, comes with the latest versions of Gnome and related technologies, such as Hal and Beagle.

For one thing, Conary organizes the program and library version numbers, removing the confusion that makes these numbers impossible to interpret. For example, RPM and Debian packages start with the name, followed by the software version, followed by various version IDs provided by package builders.

Distributors often change the version number for each build, making it really difficult to tell which version you have. For another thing, Conary is designed to use distributed third-party repositories,

along with the distribution's own archive.

CVS for Distributions

Conary adopts a new approach to package handling by applying distributed source code management tools, such as Arch and Monotone, to package management. And Conary has a more granular approach to splitting up the software, featuring a complex system to allow it to honor version, branches, and individual modifications (Figure 1). If the sysop has assigned more restrictive privileges to various binaries belonging to a package,

```

root@localhost oliver)# conary query --components | grep ImageMagick
ImageMagick=6.2.3-3-0.1
ImageMagick\data=6.2.3-3-0.1
ImageMagick\dev=6.2.3-3-0.1
ImageMagick\dev\lib=6.2.3-3-0.1
ImageMagick\doc=6.2.3-3-0.1
ImageMagick\lib=6.2.3-3-0.1
ImageMagick\runtime=6.2.3-3-0.1
root@localhost oliver)# conary query --components --full-versions | grep ImageMagick
ImageMagick=conary.rpath.com@pl-devel//1/6.2.3-3-0.1
ImageMagick\data=conary.rpath.com@pl-devel//1/6.2.3-3-0.1
ImageMagick\dev=conary.rpath.com@pl-devel//1/6.2.3-3-0.1
ImageMagick\dev\lib=conary.rpath.com@pl-devel//1/6.2.3-3-0.1
ImageMagick\doc=conary.rpath.com@pl-devel//1/6.2.3-3-0.1
ImageMagick\lib=conary.rpath.com@pl-devel//1/6.2.3-3-0.1
ImageMagick\runtime=conary.rpath.com@pl-devel//1/6.2.3-3-0.1
root@localhost oliver)#

```

Figure 1: The innovative Conary package management system is modeled on distributed source code management designs. The figure shows the short and long forms of the ImageMagick package components.

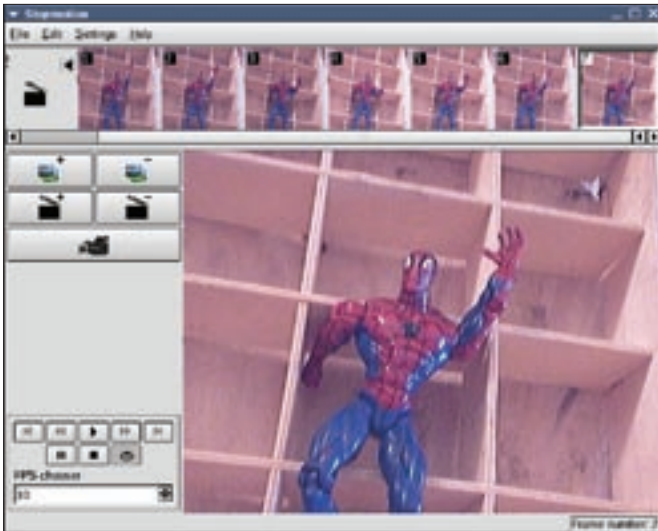


Figure 2: En route to Spiderman 3 - Stopmotion supports amateur movie makers with home-grown animations.

updating the package with Canary keeps the changes. Hierarchically organized namespaces allow admins to mix packages from multiple repositories.

If you are interested in trying out Canary, the preferred approach is to install the Rpath distribution and Foresight. Rpath is still in beta at version 0.99. Both distributions are simple to install, and both are similar to the popular Red Hat or Fedora distributions, apart from package management.

Saving Power

The Linux Ecology Computing Howto at [4], which recently went to version 0.13, is full of useful information on computer ecology. The original author of the document was Wade W. Hampton, but now Werner Heuser from Tuxmobil has taken over the reins; you may remember that Tuxmobil was known as Mobilix until the publishers of Asterix objected. The howto starts with an introduction to saving power by purchasing the right hardware and installing the operating system in an intelligent way. It then moves on to insulating overly loud computers, introducing the reader to methods of recycling and saving consumables, such as paper and ink.

A whole chapter is dedicated to extending the service life of your hardware. The Ecology howto provides tips on installing Linux on older hardware, and you'll even learn how to map faulty RAMs with the Bad-RAM patch. The guide is rounded off with a colorful collection of references to computer games

with ecology themes.

Shooting Movies

The Stopmotion [5] program comes from the group surrounding the Norwegian school distribution, Skolelinux. It supports prospective cartoon movie makers wanting to try their hand at so-called stop motion animations. Stop motion movies are shot one

frame at a time, with the figures and scene changing between the frames. Some more recent popular examples of this technique are Wallace and Gromit or Tim Burton's Corpse Bride. And Brickfilms [6], short cartoons using Lego figures and scenes, have a cult following.

To use Stopmotion, you need a video camera or webcam with drivers for the V4L interface. The program shows you the video image and grabs a frame at the press of a button, storing the frame in the timeline. It then overlays the frame with the current video image.

Project Burlesque

It is an open secret that not all Debian developers are thrilled with Ubuntu. Some fear that work on Ubuntu is costing valuable Debian development time. Events in January show that the conflict is coming to the boil.

It all started with a seemingly harmless mail from French developer Raphael Hertzog, in which he explained how developers keep track of package status in Ubuntu [7]. After all, Ubuntu is a Debian derivative and many packages are identical, apart from their version numbers. The message was intended "For Those Who Care about their Packages in Ubuntu."

Hertzog would probably have gotten into trouble if he had sent his message to any Debian mailing list, but this message went to the Debian-Devel-Announce list, to which only Debian developers have write access, and which is reserved for important development matters.

Although the posting at this critical point offended many developers, Debian Maintainer Andrew Suffield really went too far. He wrote back satirizing the subject line of Hertzog's message: "For Those Who Care about Lesbians" [8]. The message contained a link to a photo that some observers found offensive.

Needless to say, the discussions really escalated at this point. Some developers accused Suffield of damaging Debian's image. Some were even in favor of expelling Andrew Suffield from the Debian project. Others took this as an opportunity to lash into Raphael Hertzog.

The debate took days to quiet down, and in the end, everybody lost out on what might have been a good opportunity to explore the relationship between Debian and Ubuntu. Raphael Hertzog's well-meant advice was shot down in the exchange of fire. And Suffield's message just seems to have damaged the project.

The gulf between Debian and Ubuntu continues to grow. Whereas Ubuntu is working at full speed on a new version, Debian is still trying to drive with the hand-brake on, and continues to wonder why it is hard to make progress. More cooperation between the two distributions would be a good thing – and it might remind Ubuntu of their responsibilities. Linux is a game of give and take, not the one-track road that Ubuntu has gone down thus far. ■

INFO

- [1] Rpath: <http://www.rpath.com>
- [2] Canary: <http://wiki.conary.com/FrontPage>
- [3] Foresight Linux: <http://www.foresightlinux.com>
- [4] Linux Ecology Howto: <http://www.tldp.org/HOWTO/Ecology-HOWTO>
- [5] Stopmotion: <http://developer.skolelinux.no/info/studentgrupper/2005-hig-stopmotion>
- [6] Brickfilms: <http://www.brickfilms.com>
- [7] Mail by Raphael Hertzog: <http://lists.debian.org/debian-devel-announce/2006/01/msg00008.html>
- [8] Mail by Andrew Suffield: <http://lists.debian.org/debian-devel-announce/2006/01/msg00009.html>
- [9] Mail on disciplinary measures against Andrew Suffield: <http://lists.debian.org/debian-devel-announce/2006/01/msg00012.html>