

The Open Pitt



What's cooking in Linux and Open Source in Western Pennsylvania

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Three Days in Cambridge: The Boston GNOME Summit by Patrick Wagstrom

Your Linux desktop environment is a large and complicated suite of software. While most people think of the desktop as just the applications that we interact with—mail clients, web browsers, text editors, and the like—there is a lot more to it. Underneath the major Free Software desktops are massive stacks of libraries that handle everything from network connections to abstracting filesystems to making your iPod just work when you plug it in. Creating all these libraries and making them work together with the desktop applications takes a lot of time and coordination, and Internet relay chat and mailing lists aren't always up to the task.

The solution to this coordination conundrum? Bring the hackers responsible for the desktop together in a single shared location and have them plan the future of the Linux desktop. That's exactly what happened in late September with aKademy in Dublin, Ireland and in early October at the Boston GNOME Summit in Cambridge, Massachusetts. As a participant in GNOME and a researcher, I traveled to Boston to take part in this yearly gathering. Around 100 people came from as far away as Eastern Europe

and Australia to converge on the MIT Media Lab for three days of hacking and three nights of socializing.

Unlike GUADEC, the major GNOME users conference, there are no project-based presentations here. You won't find someone talking about the new features of Inkscape or how to use GStreamer. Instead, each morning and afternoon the group broke up into several smaller groups to focus on specific issues such as accessibility, font rendering, keyboard issues, the task-focused desktop, making GNOME pretty, and testing. Each session usually had a single person who was intimately familiar with the subject in charge to direct discussion and bring newcomers up to speed.

With such broad topics, you have to wonder if anything major could possibly be accomplished in such a short time frame. Surprisingly, the answer is yes—I'll describe some of the progress that was made on particular sessions that I was involved with and some of the other interesting things that are coming soon to a desktop near you.

Anyone who has ever tried to build the bleeding-edge version of a desktop environment like GNOME or KDE is

familiar with what sort of a nightmare it can be. Dependencies break randomly, documentation is never up to date, and in general things just don't work well. Now, imagine if you had to merge the bug fixes from newer versions of the software back into an older version—that's exactly what vendors who provide long-term support for GNOME have to do—and it's a bona fide disaster. One major issue is that there is no common build and test system. While the GNOME desktop has JHBuild and JHAutoBuild to automatically build the latest versions of the software, there isn't a tool to test older or specific versions.

Furthermore, there's no way to ensure that key components, such as the accessibility framework, haven't been broken. The testing session focused on strategies to fix this. One very useful tool that will most likely take hold is DogTail, a Python scripting library that allows users to script GUI actions. Using a set of DogTail scripts, developers can automatically execute unit tests that would otherwise take direct user intervention. Improvements in the build and tracking process were also planned, with a focus on an option to keep track of the stable versions of the software as well, forcing changes in the application programming interface to become explicit rather than relying on the current "watch the mailing list for changes" method that is employed.

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October Roundup

Oct. 19 Special Event: A screening was held of *Elephants Dream*, a short animated film produced entirely using Open Source software and released under a Creative Commons license. Some of the tools and techniques used in making the film were discussed.

Oct. 21 General User Meeting: In addition to the election and other business (see last month's issue), several brief lightning talks were given on various topics. **Mark Dalrymple**

demonstrated some of the capabilities of Google Earth. A tutorial on using quickmasks in The GIMP was given by **Vance Kochenderfer**. Also on the graphical front, **Patrick Wagstrom** showed off the 3-D desktop effects now becoming available through Compiz and AIGLX. **Mike Hansell** detailed the challenges of running Linux on the PlayStation Portable. Rounding out the set, **Robert Blackwell** described how he automates unit testing of his Perl code.

Elephants Dream - <<http://www.elephantsdream.org/>>

Coming Events

Dec. 16: General User Meeting.
(Time and location TBA, see web site for details)

The public is welcome at all events

Have Your Say

The Open Pitt relies on contributed articles from people just like you. If you've got something in the world of Linux and Open Source to talk about, let us know and we'll work on getting it published.

How is Open Source used in your business or organization? Is there some new project that's caught your eye? Have you recently tried out a new piece of software, and how well did it work? All these topics, and more, are fair game. If there's a recent

book on a topic you're interested in from publishers like O'Reilly and Prentice Hall, we can often obtain review copies.

Don't worry if you're inexperienced or unsure about your writing ability. We can help you get your article into shape—you supply the ideas, we'll do the editing.

To discuss your article ideas, or even if you just have a question, you can always reach the editors by e-mail at top@wplug.org.

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The task-focused desktop was another hot topic of discussion. While many people use virtual desktops as a method to keep their tasks organized, this is still suboptimal. Alex Gravely has been working on a new tool, Gimmie, that takes some steps toward a task-focused desktop. One of the major hurdles toward reaching that goal is the inability to open particular elements within a file as applications increasingly store their data in SQLite databases. David Trowbridge took the time to start hacking on a library called *libwhatup* that will provide a common interface for applications to register methods to open individual elements of a file. For example, you could tell F-Spot to open to a particular photo, or Banshee to go to a particular song. One day this may allow you to completely log out from a system and log back in to your desktop environment later with all of your applications in basically the same state. Truly a neat idea.

Another frequently raised issue is that the graphical design of GNOME is too spartan and doesn't have the "sex appeal" of other desktops such as KDE and Mac OS X. You've probably never even seen the default GNOME desktop icons and branding because no distributor actually uses them—they almost all change the graphics and alter the menus slightly. It was with this in mind that the many artists who came to the summit undertook a massive task: make GNOME

pretty. And they succeeded wonderfully—without resorting to making it blue like every other desktop. GNOME is now green! The quality of the designs and the speed at which they were produced was truly amazing. Be sure to look for some nice graphical improvements in GNOME 2.18 coming to a desktop near you in March of 2007.

Of course, I'd be missing a major component of the weekend if I didn't mention the opportunity to socialize. Cambridge is home to both MIT and Harvard and has no shortage of excellent eating establishments. Each night we'd divide up into groups and find whatever food we could in Cambridge, usually with about 20 or 30 people all ending up at the same location. The impressive thing is that the work continued at the restaurants. It wasn't always coding, although I overheard people shout "don't spill beer on my laptop!" on more than a few occasions. Usually the work focused on larger vision issues: Where should the desktop be in five years? Wouldn't it be cool if monitors just worked? How do we deal with the issues of proprietary drivers? While most of the issues were not ones that would get resolved sitting around pints in the Cambridge Brewing Company, it's refreshing to know that the community is aware of them and is planning for the future.

By now you might be wondering "that's fine, but what about me? I'm not a coder!" While it's true that the Boston GNOME Summit is primarily directed toward the design of the

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What is Linux?

Linux is a *kernel*, the core of a computer operating system, created by Linus Torvalds. It is typically packaged as a *distribution*, which includes the extra programs necessary to make a computer functional and useful. Since 1991, it has grown from a one-man project which ran on one computer to one with thousands of contributors running on everything from personal organizers to million-dollar supercomputers.

What are Open Source and Free Software?

Open Source and Free Software provide you, the user, with the opportunity to see the source code of the programs you use. You are free to use it, share it with others, and even make changes to it if you wish. While the Free Software and Open Source communities differ in their philosophical approach, in practical terms they share nearly identical goals. Learn more at <http://www.opensource.org/> and <http://www.gnu.org/>.

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desktop, that doesn't mean you need to be a coder to attend. Anyone can attend, and for the last few years the event has been free. Boston locals even put up their couches for other folks to crash on during the weekend. If you're really new to the desktop, events such as the Boston GNOME Summit might be a bit like jumping into the deep end of the pool without knowing how to swim, but there are plenty of people to teach you. If you're already a user of the desktop and looking for ways you can contribute, I highly recommend attending in the future and learning about your role in making Linux a competitive player in the desktop market.

Patrick Wagstrom is a Ph.D. candidate at Carnegie Mellon University researching communication and collaboration in Open Source development. He has been using Linux since 1994.