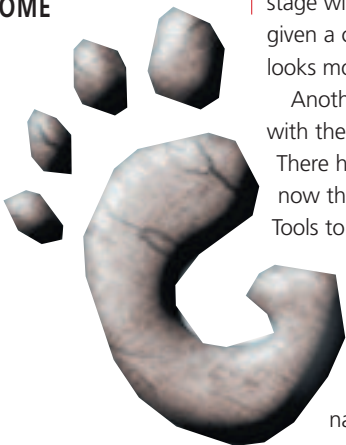


GNOMOGRAPH

A GLIMPSE OF THE FUTURE

Björn Gansladt looks at GNOME 2.0, Mono gleanings, Oregano, Fractal landscapes with Terraform and a Usability study of GNOME



GNOME 2.0

With GNOME 2.0 on the horizon, there is hard work going on everywhere at GNOME and, to some extent, the first fruits of this labour are ready to be admired. The control centre is set to become a standard part of Nautilus; systems not running Nautilus will still have a separate control centre window open. Anyone brave enough to compile this so-called shell at this early stage will be rewarded by an interface which has been given a complete facelift, and which, with its big icons, looks more like Windows than the old control centre.

Another new feature enables applets to be started with the respective settings in their own windows.

There have been a few changes under the bonnet, so now the control centre makes use of Ximian Setup Tools to archive settings and to allow a multi-step undo. This is also a very simple way to load specific local settings, such as those one might use on a laptop. The applets themselves have also been revised and some have been swapped into their own packet, named Control-Center-Plus.

One change that has been long overdue is



The GNOME Control Center

the overhaul of the screensaver applet, which hasn't run smoothly with the available screensavers for some time. To prevent this situation from repeating itself in a few months time, consideration is being given to combining the new applet with the official Xscreensaver demo. Even if the lovely gtkhtml-based interface is easily fooled by it the control centre is still highly unstable. In addition to a new version of libcaplet, it still needs some fairly exotic packages

Mono gleanings

Ximian's announcement that parts of Microsoft's .NET are to be implemented as freeware under the name of Mono has struck a nerve in the Linux community: there followed numerous articles by incensed, and sometimes badly-informed, authors.

The main bone of contention was Microsoft's Passport, a system to allow simpler authentication of users. Personal data is managed centrally and if necessary passed on to sites such as Hotmail without the user having to type it in.

It is understandable that not everyone wants their personal details to be controlled by Microsoft, but it was never Ximian's aim to completely clone .NET. In the first instance the programming environment contained in the .NET framework C# will be implemented. The report that Microsoft will be supporting Ximian in this implementation certainly does not mean that Mono will support Passport, and much less that programmers will be forced to implement this system in their future work.

When it comes to support by Microsoft, this report was followed by another in which it was rumoured that .NET (at least in the USA) was based on software patents which could make Ximian's efforts worthless.

In respect to Passport, DotGNU, the second project involved with .NET, is more interesting as this is where the possibility of decentralised authentication is being worked on. Since the cooperation with Pocket .NET the project has also included a C# environment. The fact that both projects have been blessed by the FSF is due among other things to bad timing and is not a one-off.

The FSF is also producing Harmony, a free replacement for the GUI library Qt. The Harmony project was launched to make it possible to include KDE (and any other free programs that were designed to use Qt) in wholly free operating systems such as GNU and Debian GNU/Linux. Harmony will be released under the GNU Library General Public License (LGPL).

Oregano

Oregano is a program for drafting and simulating circuits. To do so, Oregano offers a wide variety of circuit elements from resistors to transistor logic, which can, if required, be printed out for copying. What is most interesting for the hobbyist is the possibility of simulating the circuit and demonstrating voltage or frequency at specified points as graphs.

The actual simulation work is done, not by Oregano itself, but by Spice. Despite its 30 years, Spice is still one of the best programs for this task and offers analyses Oregano cannot yet visualise.

Since back in 1971 neither GNU nor Open Source yet existed, it's not surprising that the Spice program has no free licence by today's criteria. There are a few projects based on Spice, such as Al's Circuit Simulator and Ng-spice. These are either not fully compatible with the original software or not readily available, thus no genuine alternatives exist.

such as bonobo-conf and pkgconfig, most of which can be found on the GNOME-FTP server.

Another very nice, but alone still completely useless, feature is the new GNOME file selector, which is of course based on Bonobo. This also uses a few widgets from Evolution, which can be found in libgal, and enables the directory view to be grouped according to file types. All users of Ximian GNOME or Windows should find the shortcuts to important directories familiar. The intuitive file name completion is practical for new users and the dialog also notes when a file was last accessed or saved. By using GNOME-vfs it is possible to access distant files such as those on a digital camera just as one would access a hard disk with Nautilus.

Usability study of GNOME

Sun has been asking users without any GNOME experience to perform certain tasks with the GNOME system and has published the results at <http://developer.gnome.org>. The value of such a study is revealed by the fact that many of the suggested improvements are simple to implement but make a massive difference to the user. In order to clarify any questions of usability before they are wrongly answered, there is also the GNOME Usability Project, which is working on interface guidelines.

One problem when creating such guidelines is the large diversity of GNOME users: On the one hand, a few users felt baffled by the numerous options in the control centre, yet on the other hand these options are what makes the desktop so flexible. Based upon classification by experience, the configuring options of Nautilus and Sawfish now appear correct.

Info

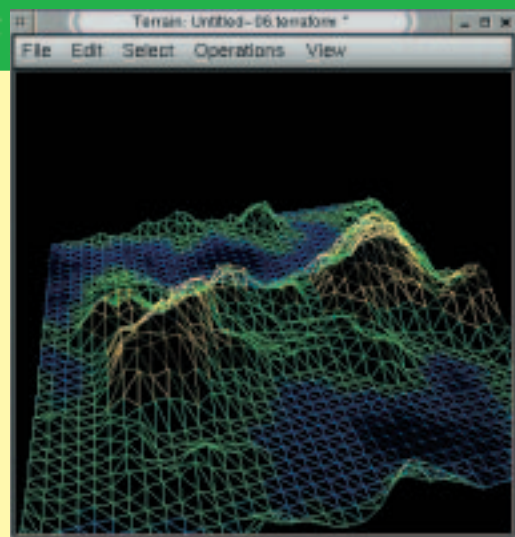
Sun report	http://developer.gnome.org/projects/gup/ut1_report/report_main.html
Gnome useability	http://developer.gnome.org/projects/gup/
Mono project	http://www.go-mono.com
Mono news	http://www.softwareuncovered.com/news/cgram-20010716.html#1
.NET patent news	http://www.zdnet.com/zdnn/stories/news/0,4586,2801560,00.html
DotGNU project	http://www.dotgnu.org
Gnome Control Center	http://ftp.gnome.org/pub/GNOME/unstable/sources/control-center/
Pkg-Config libraries	http://www.freedesktop.org/software/pkgconfig/
Oregano	http://oregano.codefactory.se/
Circuit Simulator	http://metalab.unc.edu/pub/Linux/apps/circuits/
Ng-spice	http://www.geda.seul.org/tools/ng-spice/
Terraform	http://terraform.sourceforge.net/
Ray tracing	http://www.povray.org

Fractal landscapes with Terraform

As in so many programs, Terraform's stated objective is to become the GIMP of its field – in this case editing fractal landscapes. Fractal landscapes, also known as heightfields, owe their name to the fact that certain characteristics can be found in a landscape if they are hugely enlarged. To this extent they are similar to fractals, which makes it possible to write algorithms that generate such a landscape.

Terraform offers several algorithms at the same time which each deliver somewhat different results. A few filters can be used on the generated landscapes, which depending on what you want, can smooth out the landscape, provide it with craters or raise the water level.

In addition to the normal preview Terraform provides several three-dimensional views, some of which can be moved around in space. To calculate a completed image, the program makes use of the raytracer Povray. The heightfield can also be exported in various formats and thus be inserted into other programs. Those who want to printout the heightfield, can do so with GNOME-Print through Terraform.



A fractal landscape in the wireframe view