A tour of some new
Gnome applications

FEEDING
THE GNOME

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As well as being a powerful desktop function, Gnome boasts an increasing number of high quality gtk+-based applications providing a good reason to use it as your graphical desktop environment. Andreas Huchler takes a tour through some of the most important applications included in the current Helixcode Gnome 2.

gtk+: *In order that every programmer doesn't have to reinvent the wheel, a variety of programming libraries have grown up over time containing code that can be used again and again. gtk+ is an extension of the gtk library used to create the image processing program Gimp (hence the name gtk: Gimp Toolkit). Libraries that produce graphical elements are often labelled Toolkit (e.g. gtk, FLTK, Tcl/TK).*

You can of course run Gnome or gtk+ based programs under KDE after installing the basic Gnome packages. A popular example, which we'll come back to later, is the image processing package Gimp.

There are two reasons to use gtk+ based applications exclusively under Gnome: the look & feel is more in harmony with the Gnome desktop, and several desktop functions are better supported. Of course, in the end it's a matter of taste. But many users believe that the widgets, buttons and icons of gtk+ based applications have their own charm and, aesthetically at least, can compete with the Qt-based graphics components used by KDE and its native applications.

A standardised look and feel can be achieved using Gnome. This only suffers if, due to the lack of a gtk alternative, an X11 application has to be relied upon, which, in turn, relies on a foreign graphical library. However, an important aspect of functionality provides another reason to use Gnome: important features of modern desktops such as drag and drop or cut and paste usually only function between applications created using the same libraries. For example, a normal text file in Gnome can be easily dragged and dropped from the Gnome file manager

(Midnight Commander *gmc*) to the word processing program Abiword, also gtk+ based, so that it can be opened there. However, attempts to drop the same file in the Qt based text editor KWrite will fail.

Another office package

The Open Source project *Abisuite* is to Gnome what the mammoth free project *KOffice* is to KDE. Managed by SourceGear Corporation, the intention is to create a gtk+ based cross-platform Open Source Office Suite in co-operation with the free software developers involved in the project. AbiWord, the word processing module, is now complete enough to be used to produce simple documents. It was therefore included in the current Gnome release of Helixcode.

In addition to the usual text editing and formatting functions Abiword even has a spellchecker. The proprietary file format is *.abw* (and *.zabw* when zipped.) *rtf* and Word 97 files can be opened too. The import filter has not yet been optimised, as is often the case with other word processing packages, and the usual conversion errors can sometimes occur when Word files are imported. If you are mainly concerned with importing smaller documents with fairly simple formatting into Abiword the import filter should meet most of your needs.

The documents produced by Abiword can currently be saved in its own file format or as *.txt-*, *.rtf-*, *.html-* or LaTeX files. The current version of AbiWord (0.7.9) is useful for viewing a wide range of text files and creating simple text documents. Although it offers the basic functions of a modern word processing system it cannot yet compete with professional rivals such as StarOffice or WordPerfect.
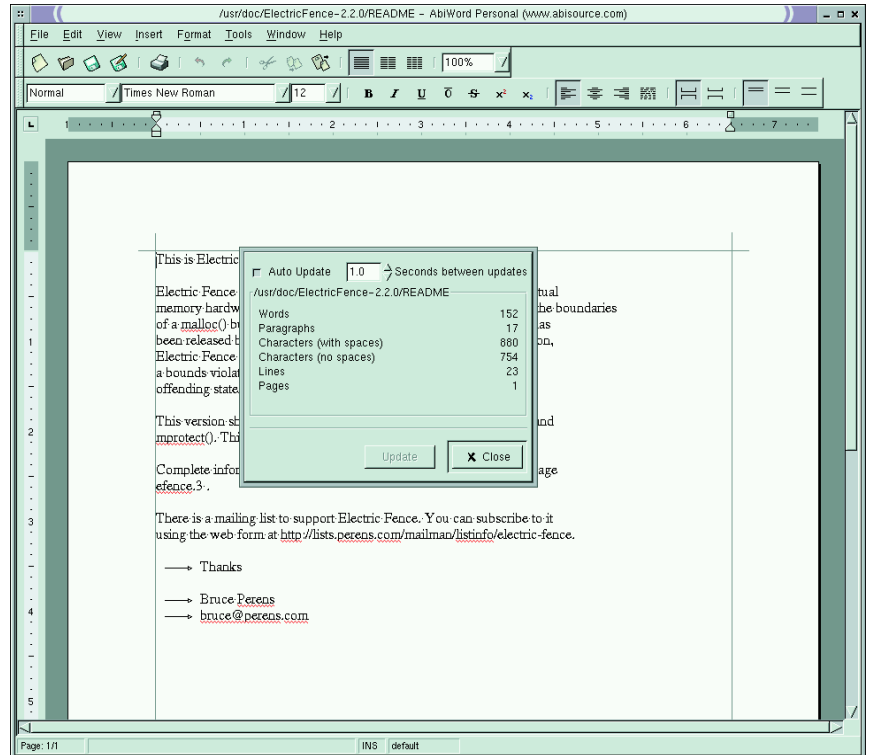
Gnumeric kills Excel

In the past, anyone who needed a decent replacement for Excel under Linux had, almost inevitably, to rely on the spreadsheets integrated into the office packages of commercial software manufacturers (such as StarCalc in StarOffice). But for some time now, Gnumeric has provided a GPL spreadsheet package that aims to beat Excel. It already offers almost everything you could want from an up-to-date spreadsheet package, such as simple mathematical functions and statistical analysis processes (ANOVA, regression analysis etc.) There are also practical filter and sorting algorithms.

One of the few weak points at the moment is the lack of a charting wizard. In addition to the proprietary Gnumeric XML file format there is a wide variety of import and export filters for common and exotic file formats (*diff*, comma separated, HTML, Excel 95/97 and so on.) An easily extendable plug-in ensures that future formats, including those from commercial manufacturers, can be integrated easily. The development group under Gnome co-founder Miguel de Icaza is both dedicated and competent making many people keen to see what they come-up with next.

Dia: diagram editor

Dia is an ideal tool for software engineers. If you are familiar with Visio for Windows you probably already know there is no Linux alternative. However, you should take a closer look at the diagramming program Dia. The current version (0.85) provides several interesting features which allow you to

produce diagrams for various contexts quite easily. Special objects for the following types of application have been implemented to date:
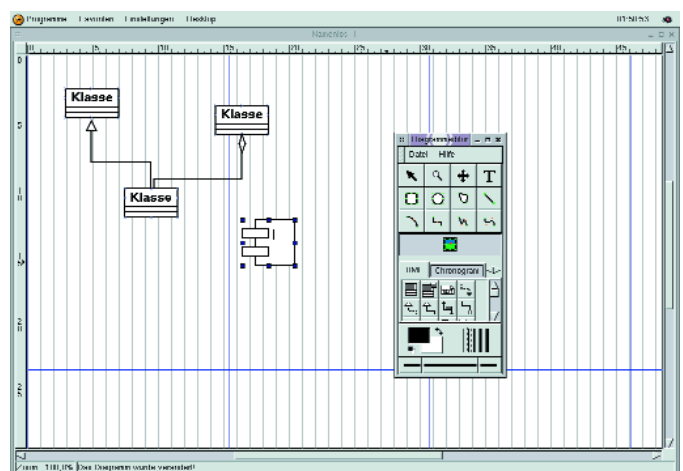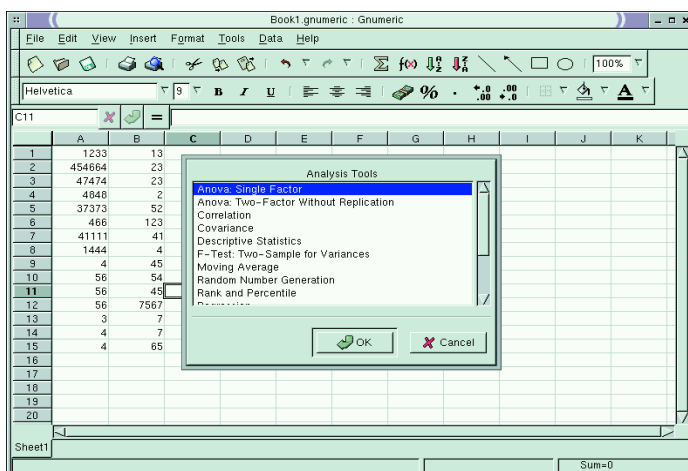
- Circuit
- Ladder
- ER (Entity-Relationship)
- Electric
- Flowchart
- GRAFCET
- Pneumatic/Hydraulic
- UML (Unified Modelling Language)
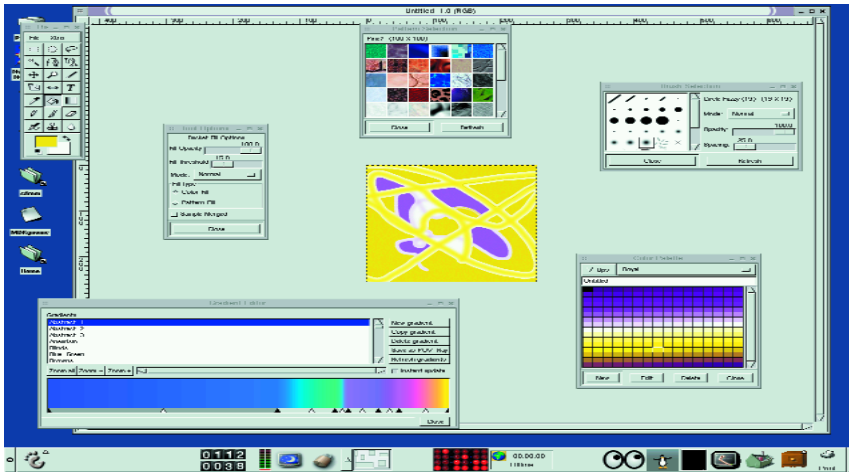- Chronogram
- Civil
- Network
- Sybase

The program has so far been aimed mainly at engineers and IT professionals. However, because it also provides several elementary diagram symbols (circle, polygon, curve, straight line, …), it can also be useful in other fields.

Work in Progress: AbiWord Personal still lacks many important features

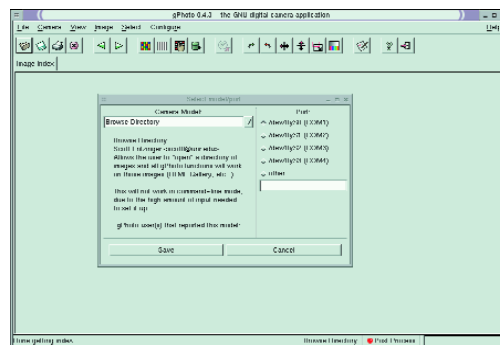**[left] Gnumeric has all the frills you'd expect of a good spreadsheet**

[right] UML diagrams made easy

[above]
GIMP has improved quite considerably in terms of ease of use and user-friendliness

[right]
GPhoto already supports more than a hundred digital cameras

Ripper: A ripper reads digital music information from audio CDs and uses it to create wav files. **MP3 encoder:** *An MP3 encoder converts sound files into the highly compressed MP3 format. MP3 files are usually only about 10% of the uncompressed size but with virtually no loss in quality. MP3 encoders vary quite considerably in terms of encoding quality and speed.*

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Making MP3s at home with Grip

All of this makes GIMP a more than adequate alternative to commercial image processing programs running under Windows.

Graphics assistant for Gnome

In addition to the new version of the classic GIMP, Gnome 1.2 provides two other graphics tools that were designed for use under Gnome. Eye of Gnome is a simple image viewing and cataloguing program. However, its functions have so far (Version 0.3.0) been limited to displaying images with various zoom settings.

As the name suggests, Icon Edit allows users to create and edit icons for Gnome. Unfortunately, in version 1.0.6 there are still some problems with the window size settings which occur regardless of the window manager used.

Photo digital camera software

Are you the proud owner of a new digital camera or are you going to buy one soon? Well, beware – you've more chance of finding Lord Lucan in the box than a Linux software disk. If you would like a camera-PC connection under Linux, however, take a look at the latest version of *gPhoto* – preferably before you buy the camera! The program supports more than a hundred different digital cameras and provides an interface for managing the downloaded pictures on your PC.

Gnome sound studio

The *Gnome-media* package contains a variety of sound tools for Gnome. *gtcd* is a simple CD player with CDDB support. *grecord* allows you to record and play back your own sounds. *gmix* incorporates a user-friendly sound mixer with which you can control the features on your sound card.
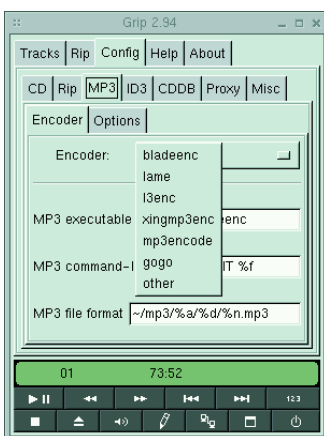
Grip ripper and MP3 encoder

grip is a graphical front-end for various **CD rippers** and **MP3 encoders**. The program also contains the fairly adequate CD player *gcd*, which you can also choose to install separately without ripper/encoding functions. Grip is actually a front-end for the *cdparanoia* and *cdda2ways* console rippers. However, there is the option to integrate other rippers. You have a choice between the six MP3 encoders included or others.

If you have Internet access, *Grip* can automatically find out the ID3 tag of your newly created MP3 files from a CDDB server. With the help of this information, the program can determine the song and album titles of the new MP3s and thus set up an appropriate directory structure for your MP3 store.
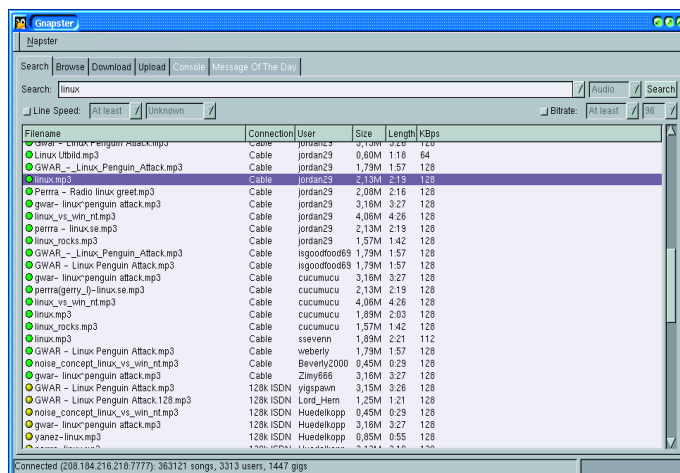
XMMS MP3 player

xmms is a fairly good Winamp clone under Linux. Like its Windows counterpart, it offers an equalizer, a playlist editor and support for skins and plugins as

Application development made easy

Have you written a console-based program and would like to add graphics in Gnome's look and feel without having to learn the details of gtk? No problem! Just use GLADE, a RAD (Rapid Application Development) tool for gtk-based applications. GLADE allows you to put together an attractive GUI with just a few clicks of the mouse. The finished product can then be stored as an XML file. From this, GLADE can produce source code for either the C, C++, Ada 95, Perl or Eiffel programming languages.

The classics of image processing

The GIMP (GNU Image Manipulation Program) is one of the Open Source community's projects that provides a model for others. It is a universal image processing program that, like Photoshop, is particularly suitable for retouching photos or creating and managing image files. GIMP's 1.2 pre-release 1.1.22 has much to be proud of – it is also proof that its developers are attaching more importance to usability than they have in the past.

As soon as the installation program has started, users will be pleasantly surprised that developers have implemented attractive user dialogs. GIMP is also substantially easier to use. Although many new features have been added since the earlier versions, you can still usually find the function you want straight away. Detailed and context-sensitive help is provided, helping users to understand the package.

well as the ability to play MP3s. You can visit *http://www.xmms.org* for a variety of skins that allow you to change the appearance of your MP3 player (you can also use the original Winamp skins as the format is identical). Plugins from XMMS's site can be downloaded, allowing you to greatly extend the functions of the player. For example, you can control the behaviour of your MP3 players using an infrared remote control or IBM's ViaVoice. Finally, there is a range of popular plugins that allow MP3s to be visualised as graphics.

Multi-purpose Internet clients

Are you wondering where friends have suddenly got all their great sounds from? The answer is probably via a Napster client, which lets you retrieve new MP3s from the world-wide Napster network. Although this practice is on shaky legal ground, there is nevertheless a user-friendly Napster client for Gnome. It's called *gnapster* and offers a huge variety of functions to satisfy most needs. In addition to the standard MP3 search over the official Napster server, users can establish a connection to the OPENNAP servers where audio, video, image and other files can be found.

In contrast to its Windows counterpart, *gnapster* shows the files available not in a long list but in a clear tree structure. *gnapster* also allocates any incomplete download files to their own directory so that you can see at a glance whether the download was successful. A resume function is included of course! However, be careful when using *gnapster*. There are now programs such as Media Enforcer that register illegal Napster activities. There have also been reports of gaps in Napster clients' security which make it easy for attackers to spy on your system.

ICQ or AIM

The Internet services ICQ (pronounced: I Seek You) from Mirabilis along with AIM (AOL Instant Messenger) from AOL are just as insecure as the Napster service – but are also as useful. The name ICQ actually describes the program well. Users who register

with the ICQ server using a unique ID can be sought and found by other users, who can then ask for a live chat. If you are online and have started your ICQ client you can see whether friends – whose ICQ client must be active too of course – are also on the Internet. You can then chat or swap files and interesting URLs over GnomeICU.

In principle, the AIM service from AOL works in the same way as ICQ but offers several other features. As AOL itself doesn't yet provide an AIM client for Linux that can be downloaded, several developers have had to help themselves and write their own client. The result of their efforts is *gaim*, which now enables you to contact other AIM members under Linux.

These are two great programs if you know people who are often online. But be aware of the increased security risk of running them.

IRC with X-Chat

If an occasional chat with friends over ICQ or AIM isn.t enough for you, and you would like to make new friends on the Internet, try X-Chat. X-Chat is an IRC
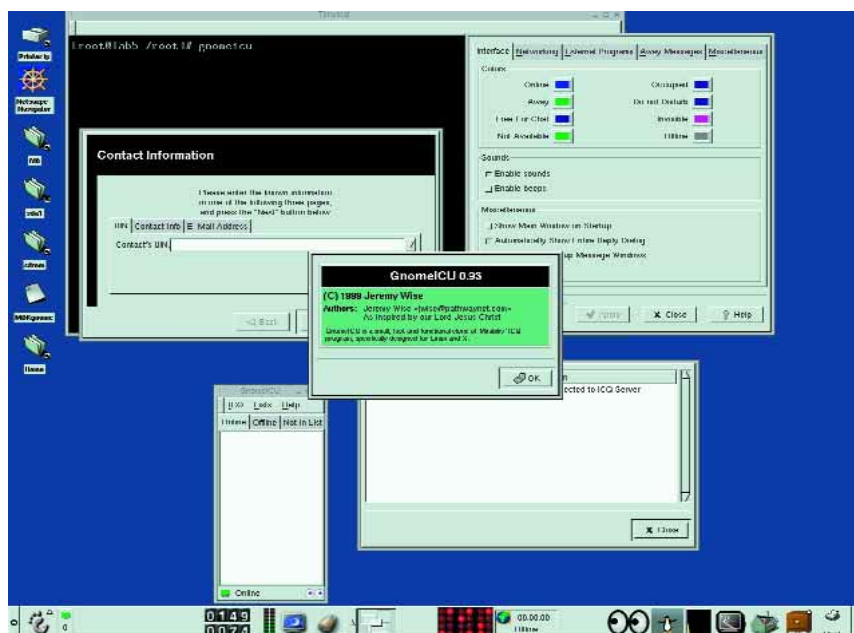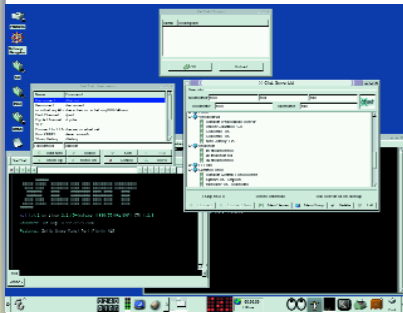
[left]
A must for all MP3 fans and Winamp admirers

[right]
File sharing on the Internet with the gnapster client

Web sites containing gtk+ programs:

http://www.Gnome.org/applist/
http://www.gtk.org/apps/
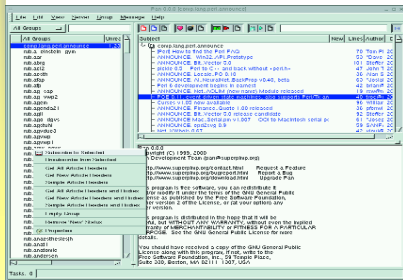*http://sunsite.unc.edu/gtk/*

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Find friends on the Internet with GnomeICU or Gaim.

Want to chat on the Net? X-Chat makes it easy.

Pan takes care of your subscriptions to newsgroups

**[above]
gtop and logview provide you with first-hand information on the status of your system.**

**[below]
All sorts of useful things for the Gnome panel: mail monitor, clock, battery indicator, modem lights …**

client (IRC stands for Internet Relay Chat), which allows you to enter the wide world of IRC junkies by joining an IRC server. The program actually offers everything that programs like mirc provide for Windows users. Of course, you can add various plugins and perl scripts to make your IRC session even more fun.

Pan newsreader

Another way to chat on the Internet is through Usenet. Usenet provides newsgroups which are the notice boards of the Internet. There's a newsgroup for almost every subject imaginable and *pan* lets you get at them under Gnome. After logging on to a news server you can request a list of newsgroups from it. Once you have chosen a group you can then subscribe to it and read the individual postings. After this, *pan* takes care of almost all the administration relating to group subscription and article selection. For example, you can instruct *pan* to monitor particular groups for new postings and display anything it finds.

gtop and logview system monitors

Every now and then you might need detailed information on the status of your system. In days gone by, you needed to be familiar with console commands to obtain this kind of information under Linux. Graphical desktops mean this is no longer absolutely necessary.

For example, you could use *gtop* and *logview* system monitors which are typical examples of system tools under Gnome. *gtop* is the graphical gtk front-end for the *top* console tool. It presents up-to-date information about running processes, memory capacity and the space currently available on your

computer's file systems. The data can, of course, be updated almost in real time if required.

Unlike *gtop*, you are required to have administrator rights when you use the system log monitor *logview*. You can use it not only to view your system's various log files but also to monitor them for irregularities. If you would like to ensure that unusual activities at certain ports do not go undiscovered you can instruct *logview* to monitor particular log files for certain patterns, with the help of regular expressions, and, where necessary, to start particular actions (such as sending a warning message to the user of your system).

Applets for the panel

The programs we have seen so far are launched either via the Gnome main menu (the paw print) or directly from an X-Terminal. However, Gnome also offers what are known as applets. These are smaller utility programs that are integrated into the panel when activated so that they are always available. Typical applets include clocks, status indicators and monitor lights. Here's a brief introduction to three particularly useful examples from the collection of applets.

The *clock and mail monitor* or *mail monitor* applets monitor your mailbox for new mails. Although *clock and mail monitor* incorporates two functions, the current version can only register incoming mail on the local computer. If you would like to monitor a mailbox on a remote POP3 or IMAP mail server, you should use the *mail monitor* applet.

The *modem light* applet connects you to the Internet at the touch of a button and closes your session again just as quickly. During your time online, you can obtain information on connection time and throughput. In theory, ISDN users can also use this applet to monitor their ISDN card.

If you are the owner of a laptop, you may be interested in the *battery status display* applet. Provided that your current battery and laptop supports Advanced Power Management (APM), this applet will always show you your laptop's current battery status and warn you if it falls below a minimum level.

A rich assortment

We've looked at just a small selection of Gnome applications. Of course, there are hundreds of others, all of which can be used as an alternative to KDE. These programs are all contained in the current Helixcode Gnome version 1.2. On the web sites listed in the panel you will find many more gtk+ based programs. Even if there isn't always a gtk-based software solution – as is the case with modem and ISDN tools like *kppp* or *kISDN* – the selection introduced here shows that Gnome now boasts a sufficient number of "native" application programs to establish itself as a KDE alternative to be taken seriously. Projects such as Helixcode may, in future, help make Gnome more attractive. ∎