

The monthly GNU-Kolumne

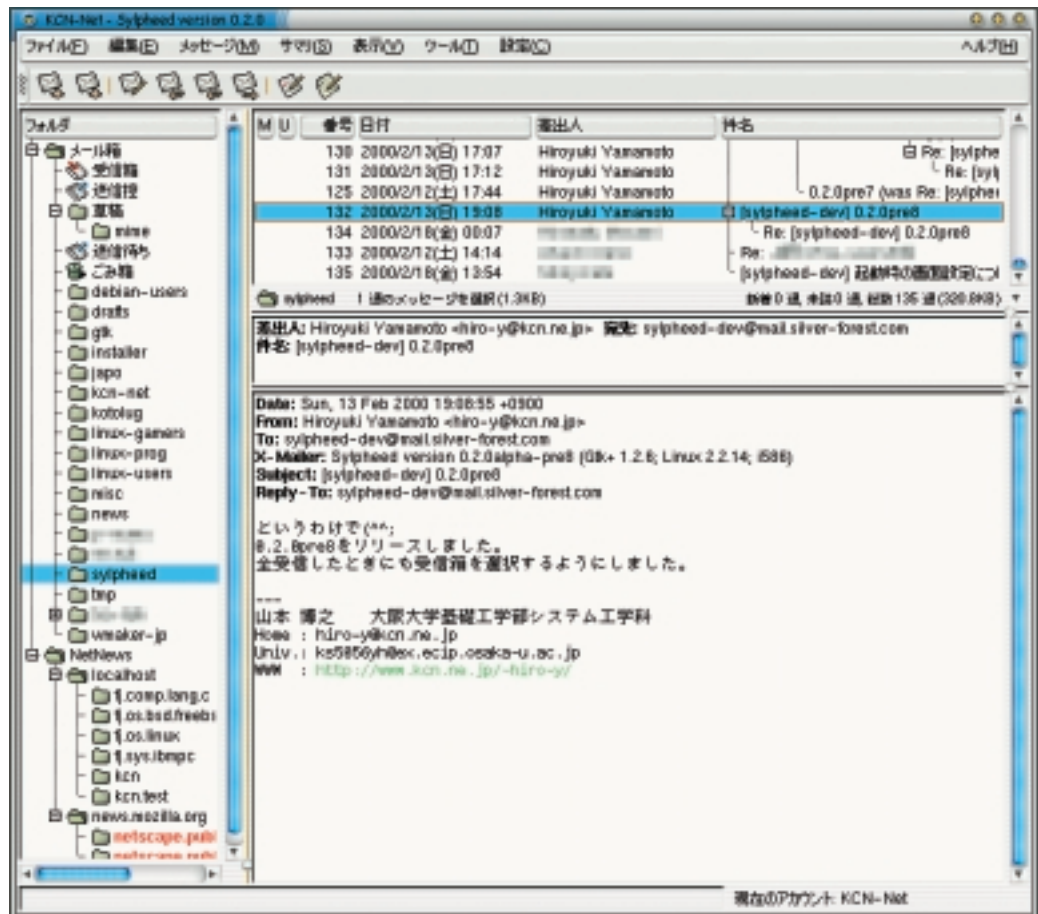
BRAVE GNU WORLD

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Welcome to Brave GNU World. This month we have got several small projects covering a wide spectrum of applications. Let's begin with a very interesting mail reader.

The mail reader
Sylpheed with Aqua-Look



Sylpheed is an extremely user friendly mail reader developed by Hiroyuki Yamamoto and others. Hiroyuki started the Sylpheed project because he was dissatisfied with existing mail reading programs. Emacs-based mail readers have problems handling attachments properly, are pretty heavyweight and require starting *emacs* in order to read mail. Graphical mail clients, on the other hand, have interfaces that the author felt were hard to get used to, sometimes they don't support threads, don't know about the existence of other mail readers or some features can't be controlled via the keyboard. If you have had similar thoughts in the past, why not give Sylpheed a try?

Sylpheed has some pretty impressive advantages. Based on the GTK+ toolkit it has a very intuitive interface. Its mail filtering capability and its support of message threading helps you keep your mail well-organised. Of course, it supports multipart MIME and has an integrated image viewer. X-Faces are supported, as are clickable URLs. But despite this heavy reliance on a GUI everything can be done from the keyboard as well.

One excellent feature is the XML-based address book - this is guaranteed to be portable and available for other applications. The mail folders are portable, as well. Since messages are saved in the MH format they can be used by other mail readers like *Mew*. On top of this Sylpheed can read (but not write) news and supports calling the external programs *fetchmail* and *procmail* to retrieve mail. Outgoing mail can be collected in a queue before sending.

Sylpheed is rather young so there is still a pretty long to-do list that contains IMAP4, LDAP, PGP/GPG support, SSL, compression of mail folders and more.

It also needs some work on the English localisation - but since it is *gettext* based this shouldn't be too hard. Debian users can install Sylpheed directly from the given address; others aren't too seriously disadvantaged since it does support *autoconf/automake*.

If you are unhappy with your mail reader at the moment, you should definitely consider giving Sylpheed a try.

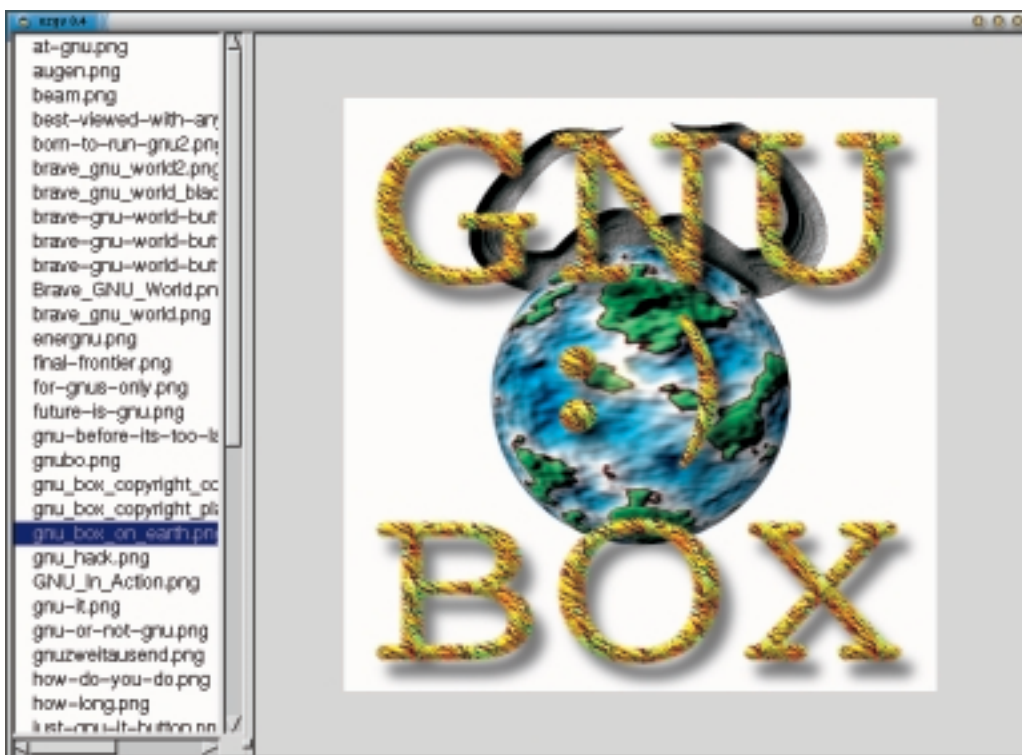
Xzgv

Xzgv is an image viewer for X11 that has been inspired by the console tool *zgv*. It was written by Russell Marks because he has a great affinity for the console and was unhappy with X11 image viewers. His original plan was just to write a *zgv* port for X11, but he soon realised that this wouldn't give the desired results.

Xzgv can be controlled completely using mouse or keyboard and uses a single window for selecting and displaying images: no more of the "window zoo" that some image viewers tend to create. Since it has been written using the GTK+ toolkit without any dependency on GNOME or KDE it can be used anywhere without a problem and is very responsive as well as highly usable.

The author emphasises that writing a good image viewer isn't as trivial a task as some people seem to think. Of course it isn't a highly complicated task to just display an image. But creating a general image viewer that "does things right" requires solving some non-obvious problems.

Xzgv is already very much finished. Plans for further development are limited to maybe getting away from the *Imlib 1.x* library and optimising



Xzgv: simple but efficient

viewing for really big pictures. As it is licensed under the GNU General Public License, Xzgv can be recommended without reservation.

Solfège

Solfège is a program to train your ears. Until now, this area has been almost completely dominated by proprietary programs running under Microsoft Windows or MacOS. Solfège has been written by Tom Cato Amundsen, a music teacher who began the project for his own lessons.

A remarkable feature is that it is extensible via "lesson files" in ASCII format, so that people with knowledge of music teaching can easily add their own lessons. Writing more of these files is one of the most urgent tasks at hand.

In the long run the author would like to re-implement large parts of the program as the solutions chosen have proven to be unsatisfactory to him. In doing so the help of people with experience of OSS programming would be very welcome. The obvious target audience – music students and others interested in training their hearing – shouldn't expect too much from this program at the moment because Solfège V1.0 is still some way off

Ggradebook

As the name suggests, Ggradebook by Eric Sandeen, Hilaire Fernandes and several volunteers is a program to manage grades. It uses the GTK+ toolkit and can optionally be compiled with GNOME support. Ggradebook can handle grades in percentages, abstract numerical or alphabetical

form. The last two can be automatically matched to percentages and their scales are customisable.

A current problem is that with percentages and alphabetical grades it is not yet possible to use a "+" or "-" to raise/lower the grades. This can only be done for numerical grades. Further plans involve an import/export filter for similar programs, internationalisation and more features. Additionally, although the interface does allow all functions to be accessed it could definitely be improved upon as far as user-friendliness goes.

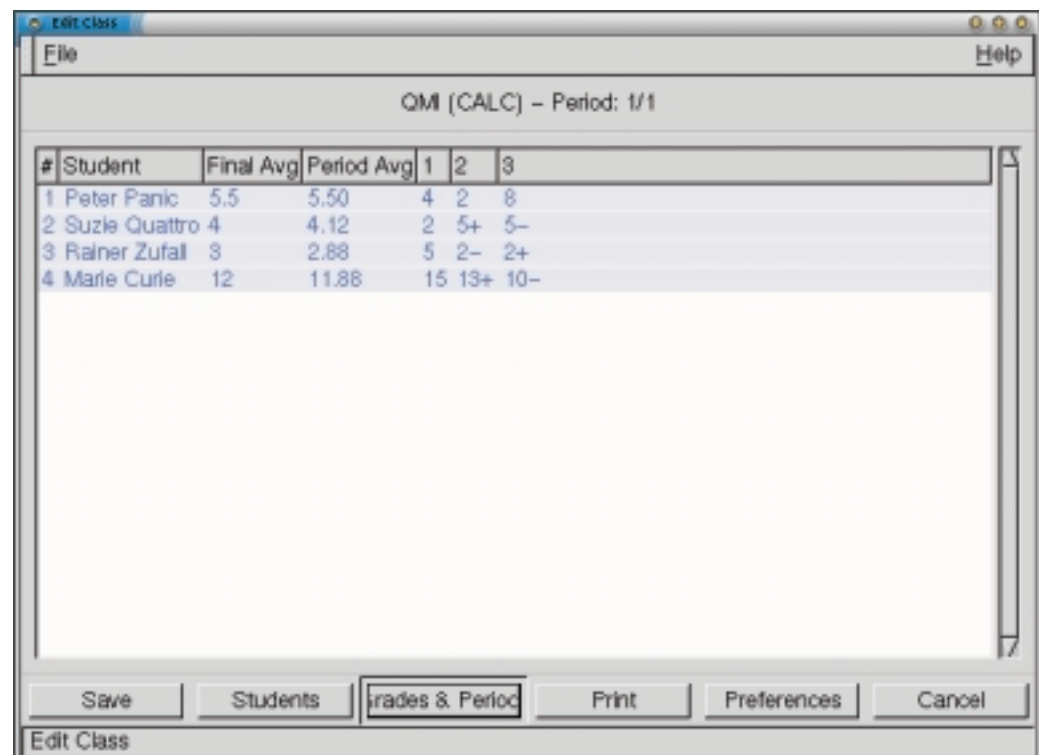
The biggest difficulty the authors face at the moment is the lack of feedback: they need more. So all readers who could use something like this are encouraged to give it a try and tell them what you think.

Common C++

The next three projects are really of interest to developers. Common C++ originally started out as the APE project written by David Sugar. In March 2000 it was merged with Common C++ by David Silverstone and since David Sugar preferred the name Common C++ the joint project kept that name.

Basically, the Common C++ project starts where the ANSI STD C++ library stops. The goal is to create a portable class library that provides functionality for tasks like abstract threading, sockets, serial I/O and a persistent class-serialisation on Posix and Win32 systems. Most of this functionality is already provided by single, unrelated libraries. For David Sugar, the advantage of Common C++ lies in the consistent structure for all these tasks. It is also very portable. Instead of including everything in one big

No luck for pupils:
teachers won't be wrong
with Ggradebook



library. Common C++ uses different libraries for the different systems. This makes it possible to custom fit the libraries to the machine and system, which reduces the overhead. At the same time Common C++ applications will work on both architectures.

As far as compilers are concerned, Common C++ is very tolerant and supports several of the C++ compilers that don't obey the standards. However, the developers believe that with increasing standardisation this is becoming less important.

As most developers know, pretty much every Unix implementation has its own thread implementation that usually doesn't conform to any standard. For these, Common C++ provides an extensive range of tests during configuration time to assure they can be abstracted in a clean way. Although it doesn't yet co-operate directly with GNU Pth (GNU Portable Threads) it should already be able to work with its *pthread* emulation. In the future it is planned to provide native GNU Pth support.

Currently a "rewrite" for version 2.0 is scheduled for this autumn in order to remove anachronisms for old C++ compilers. Additionally it is planned to support more platforms (BeOS). As far as functionality is concerned, a library for network protocols will be implemented. The lack of this network protocol library is the biggest weakness of Common C++ right now, as far as David Sugar is concerned. In the long term he expects to take a more administrative role as there is a very active community of developers for this project. He especially wants to see Henner Zeller and Gianni Marianni mentioned who put a lot of work into the latest release.

The license chosen for this project is the GNU General Public License with a few extra terms that are a bit like the Guile license. This places it between GPL and GNU Lesser General Public License as far as the granted rights & freedoms are concerned. Since this has led to some confusion in the past, version 2.0 will probably be distributed under the LGPL. As of April 2000, Common C++ is an official GNU Project which isn't surprising as it is already the basis for several Free Software projects like Bayonne.

GNU marst

GNU marst is a program by Andrew Makhorin to translate Algol to C. It is another recent addition to the GNU Project.

The project implements the complete Algol 60 programming language as specified in "Modified Report on the Algorithmic Language Algol 60" [1]. As this language doesn't really change all that much, the author's current task is to write a front-end shell that makes handling easier for the user. If you happen to have free Algol 60 programs the author would like to hear from you: he is looking for programs of any kind at the moment.

Gengetopt

Just like the others, Gengetopt is a new official GNU Project. It is a tool originally developed by Roberto Arturo Tena Sanchez but now maintained by Lorenzo Bettini. Its function is to create a C function that automatically checks and parses command line options for other programs. The results are then returned in a *struct*. This is a very useful tool for every C/C++ programmer, since it does the rather tedious but very important job of parsing the command line for the programmer. The programmer simply specifies the desired options, whether they are mandatory or optional and whether they require a parameter. The C source code generated by gengetopt is added to the program and a simple function call validates and evaluates the command line.

OpenTheory

We'll end on a topic not directly related to software. The OpenTheory project by Stefan Meretz tries to transfer the spirit and methods of Free Software development to the creation of Free Documentation License and it is meant to host anything from documentation and books to concepts or theoretical papers. The main site offers a coordinating hub driven by a web based tool that allows thoughts and ideas to be exchanged. Projects can be started online and documents can be made available for discussion. All text is transmitted in ASCII format and stored in a MySQL database. The pages are based on PHP3 which makes them very dynamic. Each of the projects has its own mailing list that can be posted to over the web interface. Additionally similar projects can be linked and share their mailing lists.

The only thing Stefan Meretz is missing right now is a mail interface to control the OpenTheory functions: at the moment documents cannot be submitted via mail. The project has already been applied to some rather interesting tasks. The Oekonux project sprang to life there, and people also used it to discuss and improve their talks for the LinuxTag in Stuttgart, Germany on it. The OpenTheory project itself - which refers to the software providing the functionality - is licensed under the GNU General Public License. Being at version 0.4 other developers are still very much invited to join.

See ya later...

That's it for this month. With a little luck I'll have something rather special next month - but no promises. However, as usual I would like to encourage you to contact me with new projects, ideas, question and suggestions.

Info

Send ideas, comments and questions to Brave GNU World
<column@brave-gnu-world.org>

Home page of the GNU Project
<http://www.gnu.org/>

Home page of Georg's Brave GNU World
<http://brave-gnu-world.org>

"We run GNU" initiative
<http://www.gnu.org/brave-gnu-world/rungnu/rungnu.en.html>

Sylpheed home page
<http://sylpheed.good-day.co.jp/index.cgi>

Xzgv home page
<http://rus.members.beeb.net/xzgv.html>

Solfège home page
<http://www.gnu.org/software/solfège/>

Ggradebook home page
<http://www.gnu.org/software/ggradebook/>

Common C++ home page
<http://www.commoncpp.cx/>

GNU marst home page
<http://www.gnu.org/software/marst/>

Modified Report on the Algorithmic Language Algol 60. *The Computer Journal*, Vol. 19, No. 4, Nov. 1976, pp. 364-79

Gengetopt home page
<http://www.gnu.org/software/gengetopt/>

OpenTheory home page (partially German)
<http://www.opentheory.org>