

The monthly GNU Column

BRAVE GNU WORLD

GEORG C. F. GREVE

Debian Jr.

The Debian Jr. project has been started by Ben Armstrong in order to create a special Debian distribution for kids from 1 to 99, with the goal of introducing children to using computers in general – and the Debian system in particular – as early as possible. Using a standard Debian GNU/Linux or GNU/HURD distribution should therefore hold no problems for this generation.

The current focus of development is the age group up to 8 years in order to approach the group up to 12 years with the next step. The initial target audience consists of parents, teachers, older friends and relatives who are using Debian already and wish to share it with the kids in their lives. Strictly speaking this gives the Debian Jr. project two target audiences. The aforementioned group will be setting up and administrating the systems, so making the installation of kid-friendly packets and prepared setups as easy as possible is the goal here. This will be done the Debian way by creating task packages for the different tasks that will have dependencies to the packages this task requires.

The second target audience are the kids of course. For them it is important that programs are easy to use and tailored to their needs (using the programs also needs to be fun as this is an important motivational factor). But there is a second aspect that is to be considered when modifying a system for children. As Ben Armstrong said, "If there is any way to break a system, a kid will find it very, very quickly". His own daughter almost drove him nuts by changing her password on a daily basis and promptly forgetting in the next day. And then there was the day when she decided to load every file she could get hold of – including MP3 files, tar archives, the kernel and /dev/dsp – into the buffer of her pico editor. For this reason some attention should be devoted to kidproofing the system. Steps like the liberal application of limits and quotas as well as limiting access to some tools and functions are a very good idea.

It is only a rumour that some system administrators already dream about using the

experience for setting up workstations in their companies. According to Ben Armstrong Debian has been chosen as the basis for this project because of its strong Free Software philosophy. It is an open system that has seen a lot of users become maintainers expanding and improving the system. To him this seems like the perfect basis on which to introduce children to computers.

One of the biggest strengths of the system, being maintained by a lot of volunteers, is also one of its greatest weaknesses as co-ordination of the participants is sometimes problematic. Of course Ben cannot manage such a project without help, but unfortunately the number of volunteers is much too large to be able to mention everyone here. At the moment there are about 160 subscribers on the mailing list. However, there is still a lot to be done and help is always welcome. Especially porting the packages to other languages, which seems like a good idea since a lot of children do not have English as their native language.

Additionally the project is currently looking for a suitable logo and it is planned to create special themes to give people the chance to identify a system as Debian Jr.

Personally I consider this project to be very important since it introduces children to computers early and at the same time shows them how systems can be built upon the spirit of freedom. This serves as a very good first experience with information technology.

That said I'll come to two projects of general interest.

GTKtalog

GTKtalog by Yves Mettier is a GTK+ based program to catalogue CDs. Owners of big CD collections should find this especially useful as it makes finding files on them easy.

This application is already very good as far as creating a catalogue of your favourite MP3-CDs goes, but GTKtalog has an additional feature that makes it even more useful. It supports virtual file



Welcome to another
issue of Georg's Brave
GNU World

COMMUNITY

BRAVE GNU WORLD



The Debian Jr. project is looking for a logo

systems like tgz or rpm, so files within these archives can be found without a problem.

One of the most pressing problems according to Yves is the lack of documentation and the absence of German and Italian versions of the menus. For several other languages the internationalisation is already complete. His other plans are to improve functionality - some parts contain solutions that he would not call bugs, but they could be solved in a more user-friendly and elegant way. One of the things emphasised by Yves was that he would prefer help from the outside with completing the documentation. His reasoning behind that is that he would automatically write it from an author's point of view, which is not necessarily the most useful perspective for the reader.

For further development there is a rather voluminous TODO file that the author wants to work his way through. But despite its being under development, GTKalog is definitely already usable and has found its way on the Mandrake distribution.

On top of these things Yves Mettier wanted to point out that one of the best aspects of developing for him are the e-mails he gets. Sometimes it is a little like Christmas when people send him another translation or a pretty big patch.

Of course GTKalog is released under the GNU General Public License.

Jam

Jam is also a project for creating and maintaining CD catalogues but unlike the previous project, Jam concentrates on music CDs. It can archive not just MP3 CDs but also regular music CDs, so it allows storage of all music in a MySQL database.

Especially interesting is the possibility to import and export CD lists as XML files. Since the database possesses an owner field, a user can import the lists of a friend and can so browse his music collection as well.

Jam has been written by Fabian Mrchen and Thomas Schwarzpaul under the GNU General Public License. Unfortunately there is still a drawback to it as Jam uses some proprietary (although gratis) libraries. This pretty much raises the same complex

of problems that KDE had. As a perspective it would probably be better to replace the proprietary components with Free Software, or work on making them free.

The problematic area at the moment is the installation, the authors say. It doesn't work automatically on some systems although installation by hand is relatively easy. Jam is completely console and command line driven, so a GUI is on top of the list of tasks to be done. Furthermore the authors would like to create output backends for HTML and TeX.

As far as the core functionality is concerned, it is planned to have Jam administrate playlists and to use these to create CDs or tapes. Additionally they would like to interface with a MP3 player and encoder as well as supporting the creation of CD covers. But there is still a lot to be done to reach that point and help is explicitly welcome.

The background of this project is a work the authors had to create for their university. Once they were done they liked it so much that they released it as Free Software. These roots pose the advantage that the source code has a clean structure and should be relatively understandable for beginners.

GNU Font Editor

The GNU Font Editor (GFE) is a relatively young GNU Project by Anuradha Ratnaweera. It is a GTK+ based graphical WYSIWYG editor for fonts that will support raster and vector fonts once it has been completed. The target audience are professional designers as well as end users.

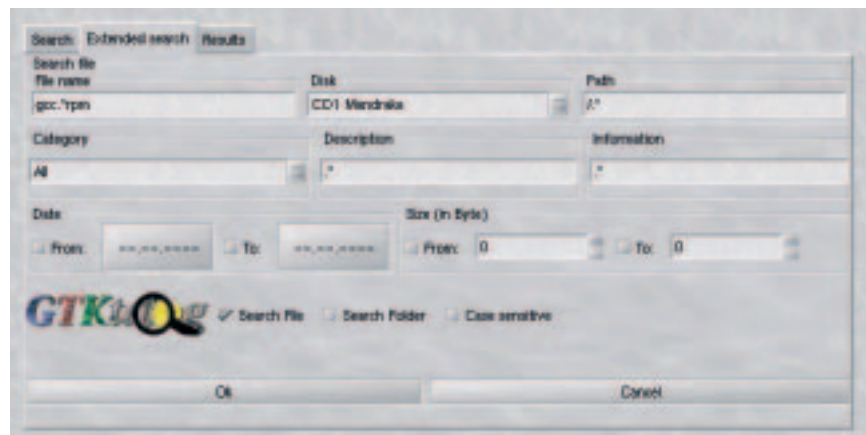
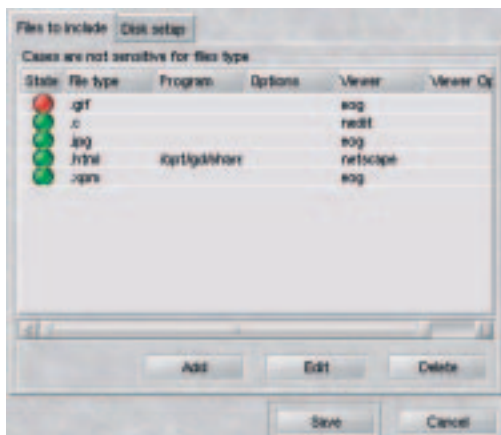
Since the programs in this area were mostly command line driven or based upon non-free toolkits like Motif, Anuradha saw a need in this area. He plans to use existing solutions like the GNU Fontutils for orientation, though.

Currently GFE only supports BDF fonts, so the next important steps are the support of PCF (X) fonts and afterwards PS fonts. Later he also wants to approach TTF and other formats. He expects problems once the support of vector based fonts are to be included, as the mixed representation has not yet been completely thought through.

As soon as GFE is ready, it will become an

[left] GTKalog brings order: You can select file formats and categorise programs

[right] There are two applications for searching within GTKalog - here you can see the more detailed one



extraordinarily useful tool as it allows converting all kinds of fonts into each other and it will fit in with the GNOME/GTK GUI very well.

But to that point there is still a lot of work to be done and one of the things most needed by Anuradha is more people on the mailing list for stronger peer review in order to make the development process faster.

GNU Typist

GNU Typist is a fresh GNU Project, as well. It is originally a program by Simon Baldwin who still maintains a Java version of it. The derived GNU Project is done by Igor Tmara and Vladimir Tmara.

Typist is a program to train correct and efficient typing. It does support different keyboard layouts and is internationalised with NLS. So far it has reportedly been used on x86-GNU/Linux, x86-WinNT, x86-DOS, Aix and Sparc/SunOS. This makes it rather portable.

The program itself follows the concept of an interpreter for lesson files that can be expanded indefinitely. As the program is already relatively complete, the creation of these files for more languages and keyboard layouts is the major task at hand.

Although the next project may not have immediate importance to most people, it could be of great interest to people with a shopping site on the Internet.

ISoSy

The International Shopping System (ISoSy) by Stefan Zapf is a PHP and MySQL based online shopping system under the GNU General Public License.

The advantages are stability, easy customisation and a logical separation between general design, content and source code. The project supports multiple languages and currencies but is capable of saving all customer information in a single database. This makes it possible to have a single page or ordering interface for all customers.

The project is already usable – small and medium sized companies in particular can use it to improve their customer contact. Incidentally, the HTML design used was been written by Robert Koetter aka Athelas.

Stefan's plans for future developments are increasing ease of customisation and moving some options from the source code into configuration files and automations like automatic switching of currency upon selecting a different language.

The long-term plans contain a GTK/C++ based program for initialising and managing the database as well as automatic FTP transfer to the server. So there are still some things to be done. For this he seeks contact to PHP hackers as well as people with C and GTK+ experience.

The author would like to emphasise that the special value of this project is in offering a way to make money with Free Software without

Info

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

Homepage 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>

Debian Jr. project home page <http://www.debian.org/devel/debian-jr>

GTKtalog home page <http://gtkatalog.sourceforge.net/>

Jam home page <http://www.mybytes.deljam/>

GNU Font Editor home page <http://www.gnu.org/software/gfe/gfe.html>

GNU Typist <http://www.gnu.org/software/gtypist>

Typist (Java Version) <http://www.ocston.org/~simonb/typist/>

International Shopping System home page <http://isosy.sourceforge.net/>

MIX Development Kit home page <http://mdk.sourceforge.net/>

Donald Knuth, *The Art of Computer Programming*, Addison Wesley <http://Sunburn.Stanford.EDU/~knuth/taocp.html>

Mixal project description <http://www-cs-faculty.stanford.edu/~knuth/mmix.html>

compromising the ideals and philosophy of the Free Software community.

MDK

The MIX Development Kit (MDK) by Jose Antonio Ortega Ruiz is a project which allows the development and running of MIXAL programs in a MIX virtual machine. It should probably be said that MIX is the mythical computer described by Donald Knuth in his book, *The Art of Computer Programming* and that it is being programmed in MIXAL – the MIX Assembly Language.

The MDK contains a MIXAL Assembler Interface and the already mentioned MIX Virtual Machine with a command line interface. Other than the Mixal project, MDK does offer debugging capabilities and supports block devices. MDK also contains a rather comprehensive documentation.

The only drawback according to Jose is that MDK does not contain a GUI at the moment. So developing a ncurses and/or GTK+/GNOME front end is the next step. Afterwards he plans to support MMIX. The RISC based version of MIX planned by Donald Knuth.



Information about Compact Disks can also be presented very clear on a plain old terminal, thanks to Jam.