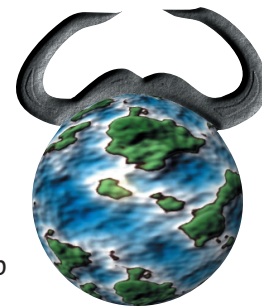### The monthly GNU column

Brave GNU World

Since coping with administration is certainly among the most common Linux needs, the following feature has been moved to the top.

Welcome to another issue of the Brave GNU World. This time with a with an eye on tools to help make your day easier. **BY GEORG C. F. GREVE**

Lire

It is tradition on Unix systems that all proceedings and activities in the system of services like web server, mail server, name server, databases and many more are written into logfiles. This protocol of activities allows system administrators to monitor their systems closely.

The logfiles can quickly become fairly large, which makes handling them hard. Although they are usually in ASCII format, a file size of several megabytes can not really be completely grasped by a human being.

On top of this, data only becomes information when approached with a certain question. A significant part of the data will be irrelevant to the question, so in practice this means that information is usually buried under irrelevant data and therefore almost inaccessible.

This problem has occurred in many places for several years now and has triggered the development of programs to aid people in the analysis of logfiles.

So on April 6th, 2000, several computer scientists from Dutch companies got together to discuss the tedious task of log analysis. It became apparent that each of their companies created solutions that were merely duplicating efforts already completed in other companies.

In order to end this multiplication of work, the LogReport team began writing a program as Free Software under the GNU General Public License (GPL), which should accomplish these tasks reliably in a professional environment. Two years later, Lire [1] was published.

Like Douglas Adam's "Electric Monks" of, which free humans from the boring task of believing, it is the goal of Lire to free people from the tedious task of logfile reading. Hence the name, because the French word "lire" means "reading."

The program is written in Perl and Bash, massively employing XML and it works in four steps. First, logfiles are normalized into a "Distilled Log Format" (DLF) in preparation of the second step, where they are analyzed by generic tools which can be used across services. The output format of those tools is XML, which in the fourth step can then be translated into one of the final formats.

Currently, Lire has input filters for 29 different services, still counting. A new service can simply be added by writing a converter into the DLF format.

A special advantage of Lire is that it does allow you to compare different implementations of the same service, like the MTAs exim and postfix.

The project has already proven itself to perform well in companies with logfiles of several gigabytes for tasks like performance measuring, system maintenance, problem solution and

Lire architecture

marketing, so with this in mind it can be considered stable.

Accordingly to Josh Koenig, who filled out the Brave GNU World questionnaire, the biggest weakness is currently the API, which is not easily understood or well-documented. Besides a user-friendly GUI, this is a major concern of further development.

Help on these areas as well as filters for new services are very welcome. Also the group seeks help making Lire popular especially in medium to large size companies.

The hard core of the LogReport development team consists of Joost van Baal, Francis Lacoste, Egon Willighagen, Josh Koenig and Wessel Dankers, although many developers from different countries around the world have contributed. The project is being maintained by the LogReport Foundation, a charitable association in the Netherlands.

Besides being technically useful, this project also offers a very nice example of one of the most important economic advantages of Free Software, the prevention of repetition of work.

GNU Source Highlight

GNU Source Highlight [2] by Lorenzo Bettini takes a source code and creates syntax-highlighted output in HTML or XHTML. It has evolved out of the tools java2html and cpp2html, which were introduced in issue #21 of the Brave GNU World and have dissolved into GNU Source Highlight.

Currently input filters exist for Java, C/C++, Prolog, Perl, PHP3, Python, Flex and ChangeLog. Filters for other languages can be added, however.

The project itself was written in C++ and is stable according to Lorenzo Bettini. He is now working on a new
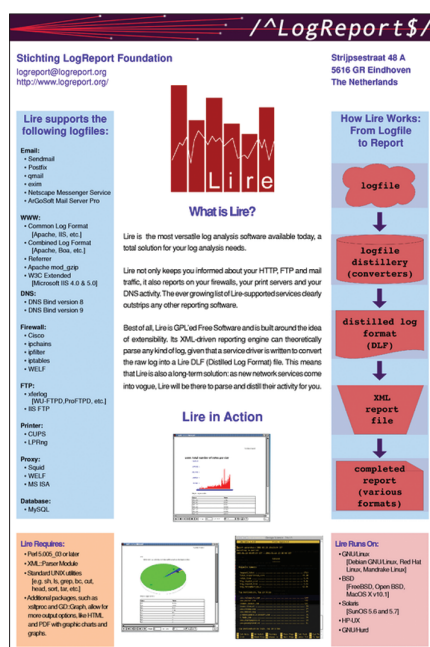
output format (LaTeX) and would like to write a better description language for programming languages in order to replace Flex, which is currently used for this purpose.

Most of the support he received for this project was in terms of filters for different programming languages written by other developers. John Millaway for instance wrote the filters for Flex and ChangeLog, Christian W. Zuckschwedt and Josh Hiloni contributed the XHTML output and Martin Gebert wrote the Python filter. Alain Barbet wrote the filters for PHP3 and Perl.

The major weakness of the project at the moment is that references of functions can currently not be mapped to their definitions, as only lexical analysis is being performed. Fixing this and writing more filters would therefore be good ways of supporting the project.

Naturally, developers using GNU Source Highlight as commandline tool or interactive CGI in the web are the classical user group of the project, but there are also users who just appreciate a good graphical user interface.

Ksrc2html

Ksrc2html [3] by Martin Gebert is a graphical user interface for GNU Source Highlight; also available under the GNU General Public License (GPL), which makes it Free Software. As the name suggests, Ksrc2html is based upon C++, Qt and KDE 2, an update to KDE 3 is planned.

Ksrc2html allows a formatting preview in order to allow better control over the parameters. Also settings for colors and

Ksrc2html main window

font types can be made interactively and saved for later usage.

Thanks to Xavier Outhier, who took care of the French translation.

Martin considers the project to be stable, although he does plan to expand the dialog for colors and font types in a way that will allow adjustment for different programming languages.

He would like it to be known that help with the KDE 3 port would be welcome.

Free Software in Asia

As our Asian readers will probably be happy to read, on July 10th, 2002, the "Free Software Initiative Japan" (FSIJ) [4] was founded. It seeks to further Free Software in Japan and create the basis for a future FSF Japan or FSF Asia.

Chairman of the FSIJ is Prof. Masayuki Ida, who was acting as the "Vice President Japan" of the Free Software Foundation North America for a long time and with whom the members of the Free Software Foundation Europe led intensive discussions during his trip through Europe last year.

In order to provide an impulse for Free Software in Japan, the FSIJ organized the "Free Software Symposium 2002" in Tokyo on October 22nd and 23rd. Being the first event of its kind in Asia, speakers from China, Thailand, Japan, Singapore, Germany, Italy and the USA were invited to provide an interesting conference programme.

Besides the more technically oriented presentations about Debian, the HURD project or RedFlag Linux, the Chinese GNU/Linux distribution, there were also speeches about the larger issues of Free Software and the situations in both Asia and Europe.

The round table on the evening of October 22nd discussed the issues of better international co-operation for internationalization of programs and documentation as well as the possibility of a solution oriented database for Free Software. Even though these issues would certainly not be solved in two hours, some practical ideas were found that are now being pursued by mail.

All in all this was an important step forward for Free Software in Asia, which also intensified the dialog between the Asian countries. Building upon it, it is

FSIJ

considered to hold a followup-event sometime around February or March 2003 in Thailand.
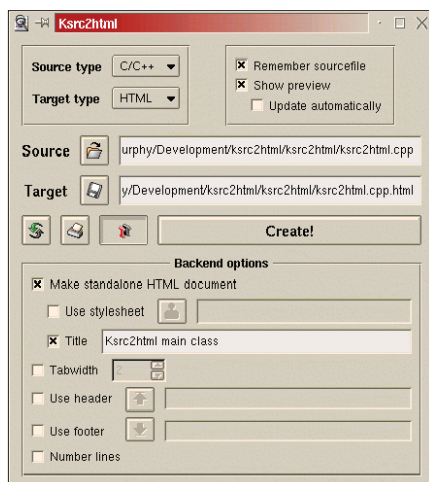
Maybe it will be possible to establish these events as a permanent institution wandering from country to country in Asia. It is very good to see that Free Software is also on the rise in Asia.

Asian readers of the Brave GNU World who would like to get involved should probably get in touch with the FSIJ or GNU China [5].

Until the next time

Enough Brave GNU World for this month. Although the repetition might cause some to skip over it, as every month I am asking for questions, ideas, comments and mails about interesting GNU projects.

Despite the danger of being buried under more mail, I'd like to ask you a concrete question. In reference to Douglas Adams, I'd like to hear what is the most important question to you that Free Software provides the answer to. Like everything else, please send your questions to the usual address. [6].

INFO

[1]   Lire home page *http://www.logreport.org*

[2]   Source Highlight home page *http://www.gnu.org/software/src-highlite/*

[3]   Ksrc2html home page *http://murphy.netsolution-net.de/Ksrc2.html*

[4]   Free Software Initiative of Japan *http://www.fsij.org*

[5]   GNU China *http://www.gnuchina.org*

[6]   Home page of Georg's Brave GNU World *http://brave-gnu-world.org* Send ideas, comments and questions to Brave GNU World *column@brave-gnu-world.org*