



# MUUGLines

The Manitoba UNIX User Group Newsletter

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Editor: Kevin McGregor

## Next Meeting: Sep 10, 2013

### Presentation and RTFM

Cross-platform GUI programming is a reality today, not the pipe dream many imagine it to still be. Doing so effectively requires using cross-platform tools, however, which programmers may not have even heard of. Adam will demonstrate the Lazarus programming environment for Windows and Linux, showing how easy it is to build, debug and run the same program under either or both operating systems.

For the RTFM Kevin McGregor will present a pseudo-randomly chosen item from CLIMagic's Twitter feed!



## Where to Find the Meeting

1L08 Lockhart Hall (marked "L" on the map), University of Winnipeg

## Important: MUUG Has Moved

Our new home is at the University of Winnipeg and, for the rest of this term, is in room 1L08 Lockhart Hall; it is indicated on the map with the L. Lockhart hall is on the south-east corner of Spence and Ellice. Parking is available on the surrounding streets. Look for signage once you're at the building, or ask a security guard.

## Erlang Programming

*By Francesco Gesarini and Simon Thompson O'Reilly, June 2009*

Reviewed by Rob Keizer

Erlang is a language born out of telephone systems. It is an interpreted language that runs inside the Erlang Virtual Machine. It is inherently parallelizable and allows for massively distributed systems. The language itself has grown in popularity in recent years. Some systems that are written in, or make use of Erlang include: Facebook chat, Goldman Sachs trading systems, Call of Duty game servers, RabbitMQ, Chef configuration management, CouchDB, as well as cell phone base stations by Ericsson.

Erlang code will look foreign to people not familiar with the language. It does not use standard curly brace block definitions found in C++ and Java. Erlang shines at message passing, recursion, and general conciseness.

For those not familiar with the Erlang programming language, such as myself, the book makes for easy reading. The chapters are straightforward and to the point. The authors have useful examples and provide relevant background information such that reading it in parts is a viable option. Indeed at over 440 pages the book is not meant to be read from beginning to end without pause.

At points the authors include more detailed descriptions of systems other than the Erlang core, such as the difference between lightweight processes versus traditional ones. These are displayed well on the page, and one can easily skim, skip, or read in detail.

This book can be (and was when I was reading it in preparation of writing this review) used as reference. There are sections that contain generic bodies of code which cover some basic use cases. There is also a very useful index that includes both functions, modules, and topics.

This book, while being an introduction to the language, also goes into a surprising amount of detail. Following the examples in the book is very helpful. The authors recommend this, and suggest that information should be processed in chunks, with some self experimentation.

If you are looking for an introduction to the Erlang language, I recommend this book. The authors do a good job balancing explanation of the underlying theory, as well as practical examples of when and how to use different aspects of the language.

## Another Membership Benefit

There is now an additional benefit to being a User Group member: A 30% discount when you order tech books from the No Starch Press website. Don't know No Starch? In their own words:

No Starch Press publishes the finest in geek entertainment — distinctive books on computing, such as bestsellers [Steal This Computer Book](#), [Hacking: The Art of Exploitation](#), [Practical Packet Analysis](#), and [The Manga Guides](#). We focus on open source/Linux, security, hacking, programming, alternative operating systems, and science and math. Our titles have personality and attitude, our authors are passionate about their subjects, and we read and edit every book that bears our name. Our goal is to make computing accessible to technophile and novice alike, and our readers appreciate our straightforward presentation and fearless approach to the complex world of technology.

What's the secret code to get the discount? Come to one of our meetings and we'll tell you!

Also note: No Starch gives you a free ebook edition with each print book purchased from [nostarch.com](http://nostarch.com)!

## Software Patents Banned

After five years of debates, New Zealand's Parliament has banned software patents in a new patents bill passed 117-4. The relevant clauses state:

- (1) A computer program is not an invention and not a manner of manufacture for the purposes of this Act.
- (2) Subsection (1) prevents anything from being an invention or a manner of manufacture for the purposes of this Act only to the extent that a claim in a patent or an application relates to a computer program as such.
- (3) A claim in a patent or an application relates to a computer program as such if the actual contribution made by the alleged invention lies solely in it being a computer program.

## Learn More About BSDs

### New 2013 Edition BSDCG MultiBSD DVD Released

With summertime in full swing, the BSD Certification Group found time to release the newest edition of the BSD Certification Group Study DVD.

This edition features the latest releases of the four BSDs:

[DragonFly BSD 3.4.2](#)  
[FreeBSD 9.1](#)  
[NetBSD 6.1](#)  
[OpenBSD 5.3](#)

As before, all four projects are loaded on the same DVD with a customized El Torito boot installer. This edition features both QEMU and VirtualBox software to enable you to set up virtual machines to run any of the included systems.

The DVD comes packaged in its own hardcover case with an informative insert.

All proceeds from the sale of the DVD go towards the BSD Certification Group certification program including the BSD Associate exam (available now), and the BSD Professional exam (in development).

You can order the DVD online at <http://www.bsdcertification.org/store>

The order page also contains a complete list of all materials on the DVD including the four projects software and documentation, the latest pkgsrc sources, BSDA and BSDP exam objectives, and a customized study planner to help you study for your exam.

## 22 Years of Linux

Linus Torvalds released the latest build (3.11-rc7) on August 25<sup>th</sup>, 22 years to the day of his first release, and described it with his usual sense of humour:

Hello everybody out there using Linux -

I'm doing a (free) operating system (just a hobby, even if it's big and professional) for 486+ AT clones and just about anything else out there under the sun. This has been brewing since april 1991, and is still not ready. I'd like any feedback on things people like/dislike in Linux 3.11-rc7.

I originally ported bash(1.08) and gcc(1.40), but others have taken over user space and things still seem to work. This implies that I'll get the final 3.11 release within a week, and I'd like to know what features most people would want. Any suggestions are welcome, but I won't promise I'll implement them :-)

## Not Ready For Prime Time?

Nick Mathewson, in describing his release of libottery ("a drop-in replacement for the horrible random number generator you are using today") writes:

YOU WOULD HAVE TO BE SOME KIND OF LUNATIC TO USE THIS IN PRODUCTION CODE RIGHT NOW. It is so alpha that it begins the Greek alphabet. It is so alpha that Jean-Luc Godard is filming there. It is so alpha that it's 64-bit RISC from the 1990s. It's so alpha that it'll try to tell you that you belong to everyone else. It's so alpha that when you turn it sideways, it looks like an ox. It's so alpha that the Planck constant wobbles a little bit whenever I run the unit tests.

I *will* break backward compatibility more than once. (Probably.)

I *will* change something you were depending on. (Or at least, I won't promise not to.)

There *might* be horrible security bugs left in it. If there are, I won't be very embarrassed: I told you not to use it yet!

If it breaks, you *don't* get to keep both pieces! I will come over and break the pieces into even smaller pieces, then break something else that you actually liked, then point at them and laugh and laugh and laugh.

## FreeNAS 9.1.1

FreeNAS is a tiny FreeBSD-based operating system which provides free Network-Attached Storage (NAS) services (CIFS, FTP and NFS).

The FreeNAS development team is delighted to announce the general release of FreeNAS 9.1.1. This release offers small, but significant, improvements to FreeNAS 9.1.0!

A number of cosmetic issues, UI tracebacks and outright bugs (such as 32-bit plugins not working) have been addressed since 9.1 was released.

A few features that were known to be broken, such as AIO in Samba3 or IPv6 in plugin jails, were also disabled to avoid people shooting their feet off.

Finally, a number of important ZFS stability fixes were also picked up from the TrueOS repo during the creation of 9.1.1-RELEASE.

## Conference Videos

Have you ever heard about a fascinating computer/tech conference and wanted to go, but either couldn't afford the entry fees or the time? Some conferences post videos for free online!

## LibrePlanet 2013

The first round of videos from [LibrePlanet 2013](#) is now available for streaming and downloading. LibrePlanet is an annual conference sponsored and organized by the Free Software Foundation, with LibrePlanet 2013 being [the best one yet](#). All current associate members of the FSF enjoy the perk of being able

to attend LibrePlanet without paying an entry fee. This year we set out to make sure LibrePlanet featured fully functioning live video streaming using only free software, and it was a great success. The videos are now available for viewing in VP8/Vorbis, both free media formats, and are hosted on an instance of [GNU MediaGoblin](#), the social media sharing platform which many of you helped support.

If you missed LibrePlanet this year or didn't have time to attend all the talks, there are lots of great sessions worth watching. In total, seven talks are included in this batch of videos. They include:

- “[Outreach Program for Women: Lessons in Collaboration](#)” by Marina Zhurakhinskaya
- “[When Free Software isn't \(Practically\) Better](#)” by Benjamin Mako Hill
- “[Replicant: Addressing Android Freedom Issues](#)” by Denis Carikli
- “[Free Software and 3D Printing](#)” by Aeva Palecek
- “[Expanding the Tent](#)” by Beth Lynn Eicher, Jonathan Nadeau, and Deb Nicholson
- “[Demystifying Blender: Quick Ways to Get into 3D Graphics with Free Software](#)” by Bas-sam Kurdali
- “[Debian & GNU](#)” by Stefano Zacchiroli

These videos are just from the first set of talks. In the coming weeks, we will be posting more of the dozens of hours of footage from talks, panels, and workshops at [media.libreplanet.org](http://media.libreplanet.org). Continuing in our theme of freedom and community production, these videos are all freely licensed for easy sharing and remixing.

### DebConf13

DebConf is the annual Debian developers meeting, an event filled with discussions, workshops and coding parties – all of them highly technical in nature. DebConf13, the 14th Debian Conference, was held near Vaumarcus (NE), Switzerland, from August 11 to 18, 2013 at Le Camp. Conference videos (in Ogg Vorbis format) are [now available](#).

### MUUG Crossword Answer

|    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|
| 1  | 2  |    | 3  | 4  | 5  | 6  | 7  | 7  |    |
| 1  | 6  |    | 1  | 0  | 4  | 8  | 5  | 7  | 6  |
| 8  | 7  |    | 9  |    | 9  | 5  | 3  | 3  | 7  |
| 10 | 6  | 11 | 0  | 12 | 1  |    | 13 | 14 | 6  |
| 8  | 6  | 3  | 0  | 4  | 1  |    | 3  | 3  | 6  |
| 0  |    | 15 | 4  | 8  | 5  | 9  | 6  | 1  |    |
| 17 | 18 |    |    |    | 19 |    |    |    | 20 |
| 7  | 7  | 4  | 4  |    | 6  | 9  | 1  | 6  | 9  |
|    | 21 | 1  |    | 22 | 7  | 2  | 9  | 23 | 7  |
|    | 9  |    |    |    |    |    |    | 9  |    |
| 24 |    |    | 25 |    |    |    | 26 |    |    |
| 2  | 2  | 5  | 6  | 2  | 5  |    | 3  | 6  |    |
| 27 |    |    |    |    |    | 28 |    |    | 29 |
| 4  | 0  | 9  | 5  |    |    | 2  | 1  | 9  | 7  |
|    |    | 30 |    |    | 31 |    |    |    |    |
| 2  |    | 2  | 0  | 5  | 3  | 7  | 9  |    | 0  |
| 32 | 33 |    |    |    | 34 |    |    | 35 |    |
| 7  | 7  | 6  | 2  |    | 4  | 0  | 3  | 2  | 0  |
| 36 |    |    |    |    |    |    |    |    |    |
| 3  | 1  | 5  | 5  | 6  | 7  | 3  | 6  | 0  | 0  |

As promised, here is the answer key for the “crossword” puzzle printed in the previous issue of this newsletter.

### CLI Magic

```
find */ -type f | cut -d/ -f1 | uniq -c
# List the number of files in each directory in the CWD
```

```
find . -maxdepth 1 -type d -empty #
Find directories directly below the current one that are empty
```

```
while sleep $((RANDOM % 10)); do eject
-T /dev/cdrom;sleep 0.1; done # Keep a
cat entertained for hours
```

```
t=$(date +%s);n=0;while [ $n -lt $
((86400*365*2)) ];do n=$((n+86400*7));date -d @$((t-$n)) +%Y-
%m-%d;done # Last 2 years of this week-
day
```