MUUGlines

The Manitoba UNIX User Group Newsletter

Next Meeting: December 13th, 2005: Tapes, use them or lose it.

Tape drives are strange extinct beasts, relics from computing's past.

Well not quite... Despite being in the age of dual layer DVDs and 500GB hard drives, tape drives have always been a viable and resilient medium of storage (especially for long term archival). As old as tape systems are, the information on how to use them and how they work in UNIX style operating systems can be either scarce or cryptic. In this presentation, Sean Cody will introduce not only the medium but also show basic usage and (time permitting) show you a strategy for data archival and retrieval.

Next Meeting: January 10th, 2005: Efficient Web Browsing

In this presentation, Sean Walberg will demonstrate several tools that are used to make better use of your time on the Internet. These tools include an RSS aggregator, mailing list archiver, del.icio.us, and Greasemonkey.

February Meeting Reminder

Just a reminder, As discussed at last month's meeting, February's meeting is being moved from the 14th to the 21st because of Valentine's Day.

Where to find the Meeting

Meetings are held at the IBM offices at 400 Ellice Ave. (between Edmonton and Kennedy). When you arrive, you will have to sign in at the reception desk, and then wait for someone to take you up (in groups) to the meeting room. Please try to arrive by about 7:15pm, so the meeting can start promptly at 7:30pm. Don't be late or you may not get in.

Limited parking is available for free on the street, or in a lot across Elice from IBM, for $1.00 for the evening. Indoor parking is also available nearby, at Portage Place, for $2.00 for the evening.

Book Review: Mapping Hacks

Tips & Tools for Electronic Cartography
By Schuyler Erle, Rich Gibson, Jo Walsh
ISBN: 0-596-00703-5
564 pages, $41.95 CDN
Reviewed By Shawn Wallbridge

Mapping Hacks explores using GPS, GIS and other geographical technologies in fun and interesting ways. Everything from mapping out WiFi access points in your neighborhood to exploring the surface of Mars from the comfort of your office chair can be found in Mapping Hacks.

I am definitely not a professional cartographer, but I do have quite an interest in mapping and GIS that started when I spent a summer making maps at work. Like many Slashdot readers, I have gone war-driving and mapped out the data afterwards. This probably renewed my interest in GPS and Mapping. When I saw this book on the shelf at Barnes & Noble I made a beeline right for it. Unfortunately I was on vacation at the time and spent an excessive portion of my vacation reading it. Thankfully I had my trusty Powerbook with me so I could actually start trying stuff out.

I have a bunch of the 'Hacks' series from O'Reilly and I really enjoy them [In the interest of full disclosure, I was a (paid) technical reviewer of another O'Reilly title many years ago]. I like being able to read them in tiny chunks. This book, like the rest of the series, has Hacks that range from a page and a half to nearly fifteen pages, but most are 3 to 4 pages. The one drawback is that you never really get into things in great detail. For instance, there are entire books on some of the Hacks in this book (ie. #91, Build Interactive Web-Based Map Applications).

The first chapter is titled "Mapping Your Life" and covers basic mapping with various websites like Mapquest, Yahoo Maps, Terraserver, and then moves on to using GPS data in Excel and Mappoint. There were some neat Hacks in this chapter, I love the name of Hack #7, "Will the Kids Barf?", which uses online maps and distance calculators to figure out how 'twisty' a road is and see if the author's children will get car sick. Hack #10 is also kind of neat; it's about geo-referencing your digital pictures. The author uses the tracklog from his GPS unit and the timestamps from his digital photos to figure out where he was when he took the photo. Tying this into Google Maps would be pretty neat.

Chapter 2 (entitled "Mapping Your Neighborhood"), starts off with fairly simple Hack on web-based mapping, but quickly gets technical with Hack #18, "Why can't you watch broadcast TV" which plots out a TV stations signal strength in an area. Hack #19 continues with creating a 3D model of an area in

PovRay based on a digital elevation model. I thought they were pretty cool, but far more advanced than chapter one. I found Hack #16 "Who are your Neighbors Voting For?" to be pretty neat, it shows how to map out your neighbors contributions to political parties with publicly available data.

Chapter three, "Mapping Your World" gets into the nitty gritty of geographic systems with explanations of different coordinate systems (Hack #27) and cartographic projections (Hack #28). This is pretty important once you get into more advanced mapping, so it's nice to see here. A really handy Hack is #33 "Georeferencing an Arbitrary Tourist Map". This shows how to take any image (say a scan of a map) and use a website to figure out that projection of the image so you can use it in traditional GIS applications. If you have ever wondered what Mars or the Moon looks like up close, Hack #34 "Map other Planets" shows how to bring models of Mars, Venus or the Moon into Quantum GIS or even render them in PovRay.

"Mapping (on) the Web" is the title of Chapter 4. It starts out with Hacks related to existing maps on the Internet, but then gets into creating your own maps on the Internet, and even generating a spatial model from Wikipedia (Hack #45). Before I had even finished reading Hack #46 "Map Global Weather Conditions" I had set it up on my website.

Chapter 5 opens with a great explanation of how the GPS system works. It then goes on to show how you can get data off your GPS receiver and convert it into the format you need. This chapter covers lots of things you can do with a GPS unit, including making images from your tracklogs, setting up a navigation system in your car with GPSdrive, and my favourite, mapping out GSM cell towers using a Bluetooth cell phone, a GPS receiver and some Perl code.

The next chapter (the longest in the book due to all the screenshots) is on "Mapping on your Desktop" and covers various open and closed source applications for Windows, Linux and OS X. Quantum GIS, Manifold, OpenMap (which is Java based) are

briefly covered, but GRASS is used for most of the chapter. This was the first introduction to GRASS that actually clicked with me. I had read about it and even installed it before, but after reading this chapter I got right into GRASS and have spent quite a bit of time using it since.

Chapter 7, "Names and Places" covers various ways of finding out something is based on it's name (called geocoding) and things you can do once you have figured it out (ie. where the closest coffee shop with WiFi is). Another interesting Hack is #78 "What to do if your Government is Hoarding Geographical Data". The US is rather free with its' geo-data, but Canada isn't. Thankfully it is getting better up here.

Whereas most of the Hacks so far in the book have concentrated on using other people's data, Chapter 8 "Building the Geospatial Web" is about using and sharing your own data with the world. This chapter has nice short guides to setting up and using PostGIS (a spatial extension to PostgreSQL), GeoServer (Web Map Service/Web Feature Service) and MapServer (makes pretty maps, among other things). I appreciate that the author didn't spend a lot of time on the actual installation of the software (ie, repeating "configure, make, and make install") and instead concentrated on actually using it. This chapter actually segues well into "Web Mapping Illustrated" by Tyler Mitchell, which covers Mapserver in more detail.

"Mapping with Other People" is the title of the last chapter. Various interesting things are covered in this chapter, such as creating locative games (photo scavenger hunt with GPS), mapping out historical stories and generating maps of game systems and imaginary places.

I really enjoyed this book. The writing is easy to follow, with enough humour to keep me entertained. The majority of the Hacks in the book were interesting and useful to me. A lot of them had me back in front of the computer before I had finished reading them to try them out. I found the cross-platform coverage to be excellent as most of the

software covered is available on multiple platforms so no one gets left out.

My one criticism would be that the "technical difficulty" of the Hacks varies a lot within each chapter rather than gradually increasing in difficulty. This might discourage beginners from continuing.

If you are interested in mapping in general, I recommend you pick up this book. The index, table of contents and 5 sample Hacks available on the website (**http://www.oreilly.com/catalog/mappinghks/**) so you can take a look for yourself. The authors also have a website (**http://www.mappinghacks.com**).

FreeBSD 6.0-RELEASE Announcement

Date: Fri, 04 Nov 2005 08:40:04 -0700
From: Scott Long <scottl@FreeBSD.org>
To: freebsd-announce@FreeBSD.org
Subject: [FreeBSD-Announce] FreeBSD 6.0 Released

It is my great pleasure and privilege to announce the availability of FreeBSD 6.0-RELEASE. This release is the next step in delivering the high performance and enterprise features that have been under development in the FreeBSD 5.x series for that last several years. Some of the many changes since 5.4 include:

Significant performance improvements to the filesystem and direct disk access layers of the OS. The filesystem is now multithreaded and can take full advantage of multiple CPU systems.

Expanded support for wireless networking adapters and new support for the WPA wireless security protocol.

Experimental support for the PowerPC platform.

For a complete list of new features and known problems, please see the release notes and errata list, available at:

http://www.FreeBSD.org/releases/6.0R/relnotes.html

http://www.FreeBSD.org/releases/6.0R/errata.html

For more information about FreeBSD release engineering activities, please see:

http://www.FreeBSD.org/releng

$100 Laptop to run RedHat

The $100 laptop designed by the MIT and the One Laptop Per Child association, previewed at the World Summit on the Information Society conference in Tunisia in late November, will be using a Redhat Linux variant as its operating system.

The lime-green laptop, which uses a 500Mhz AMD processor and has 1GB Flash RAM instead of a hard drive, will only use open source software, despite an offer from Apple for it to use Apple's OS-X operating system for free.

The laptop is still in development, and it is estimated that the screen alone (currently an eight-inch dual colour/black and white SVGA) needs three months more development. The software, as it currently stands, includes Red Hat Linux, a web browser, a word processor, and email application and a programming system (the details of which are still to be announced).

According to MIT, the target price of $100 should come down after the initial launch. Integrated prototypes of the Gen-1 laptop are expected in the third quarter of 2006, and manufacturing should start in the fourth quarter, with 10 to 15 million laptops expected to be shipped by the first quarter of 2007.

Recipients of the laptops will most likely include Brazil, Thailand, Egypt, the State of Massachusetts, Cambodia, Costa Rica and hosts of the last WSIS forum, Tunisia.

Hardware specs:

- 500Mhz AMD processor
- 1GB flash memory (no hard drive)
- SVGA 8" diagonal dual LCD (Color/Black & White mode for power conservation and outdoor reading)
- 128MB of DRAM
- AC Cord that doubles as carrying strap as the power source and a hand-crank (one minute of cranking gives enough power for 10 minutes of operation).

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Share Your Thoughts

E-mail us with your comments on the newsletter, whether it's criticisms or commendations, and continue to send in articles or ideas for the same. Specifically, what sort of material you would rather see: Announcements, technical articles, new products, or…?

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