The battle for open source navigation

The growth in mobile and location-based services has thrust geographical data into the forefront of both proprietary and open source software development. At one end of the spectrum, Google, Microsoft, Nokia and, reportedly, Apple are adding previously expensive navigation tools to their map projects for free, while at the other, navigation companies are beginning to see the advantages of crowd sourcing, open development and user generated geocentricity in an area where commercial software has no chance of competing.

One of the consequences of the race to the bottom, in terms of price, is that previously proprietary software becomes almost impossible to support. One such project was Wayfinder, which was designed to be a part of Vodafone’s mobile offer but has since found itself a victim of the introduction of Google Maps navigation on Android phones and Ovi Maps on Nokia’s handsets.

Nicholas Herriot, Betavine open source development lead, said that the project, which ceased development earlier this year, could not compete on a commercial footing, but the developers didn’t want to see the effort go to waste. “We were keen not to lose the intellectual capital behind the software so we put together a proposal to make the software open source,” he said. “We felt that, although there was no longer capacity for it within our business, there was no reason that others could not use it to build a new service.”

The limits of ‘open’

Of course, much of the mapping data used in proprietary software is commercially licensed, and so using this data in an open source product isn’t possible. Herriot said that there were plans afoot to work with OpenStreetMap data, but that the real flowering of the software would come from crowd sourced data that would give users access to genuine local knowledge. “Information that can be supplied by ordinary users will be far richer than anything that’s achievable from a commercial point of view,” he said. “Each person carrying with them a smartphone that’s GPS-capable can also augment that positional data with photographs, video, events and so on. To collect this via a commercial route on a planetary scale is inconceivable!”

This kind of effort, though, isn’t going to solve all of the challenges that open source mapping will face. “The challenge is to get the ‘mapping detail’ at a level that’s equivalent to what can be provided by people like Tele Atlas – and to provide an easy way for people to augment this information while allowing proper peer review. Satellite data is also going to be a hard thing for the community to deliver. Though having watched open source grow for the past 15 years, nothing surprises me about what open innovation can do!”

Open mapping efforts

Wayfinder

Vodafone’s decision to open source Wayfinder includes everything except map data that was commercially licensed. The project is hosting sample applications using data from the Open Streetmap project.

Mapquest

AOL’s Mapquest is also beginning to use data from the Open Streetmap project to augment its licensed content. Its open map initiative has been launched in the UK but will be rolled out across the US later this year. Randy Meech, AOL’s head of engineering, local and mapping, said the reason the project was launching in the UK first was simply because the existing open data was better.

Skobbler

One project not cowed by Google’s now ubiquitous free mapping on the Android platform is Skobbler, which also uses data from OpenStreetMap. The project includes turn-by-turn navigation, voice commands and pedestrian mode. The company behind it hopes to monetise the local information users will need as they travel to their destination.
Android upgrade for high-end phones

New features point to better desktop integration.

Google continues its aggressive assault on the mobile phone market with the release of Android 2.2 – aka Froyo – which features a long list of performance and feature improvements and is also a vision of how the company sees desktops and mobiles integrating in the future.

Froyo – which was rolled out to Nexus One users first and will be sent as an over-the-air upgrade to users of other devices at the discretion of handset manufacturers – includes a selection of usability tweaks designed to make navigating the system and, crucially, accessing search functions easier. Other new features include a tethering mode that allows users to create a mobile Wi-Fi hotspot and use the phone as a cell modem, and native support for Adobe’s Flash player as well.

One of the key features of the 2.2 update is the increasingly close ties to Google’s Chrome as both a browser and an OS, and would suggest that the company is developing an ‘end-to-end’ strategy that, in scope at least, echoes Apple’s attempts to cover both the traditional and mobile platforms.

For example, a new Chrome extension is able to take the contents of your browser window and send it to your phone over the air. The extension also recognises context, so if you sent a link from Google Maps to your phone, it would automatically appear in the navigation app.

In common with previous releases, the company has also released source code to accompany the binary update, including the new just-in-time compiler, which is said to speed up general usage by two to five times and a new version of the V8 JavaScript rendering engine, which boosts the embedded browser performance by three times.

HTC’s Incredible is set to be one of the first ‘non-Google’ phones to get a 2.2 upgrade.

Android app development

While Apple appears to be drawing its iOS development kit ever-inward, Google has released a development environment it says will enable almost anyone to begin creating Android apps with little experience of programming.

Designed initially as a learning tool for schools and university, the Android App Inventor for Windows, Linux and Mac OS X, exposes many facilities of the standard Android platform to aspiring developers, including GPS location information.

The software builds on Open Blocks for Java and the Scratch programming language, both of which have emerged from academic research into computer science education at the Massachusetts Institute of Technology.

App Inventor uses a ‘blocks’ metaphor to expose users to various programming methodologies.

Newsdesk

Jollow, which builds a cloud-centric netbook OS, has begun offering its ‘priority users’ an upgrade to version 1.0 of the software. The biggest change in this version is a new application launcher screen built entirely in HTML 5, which includes embedded video playback.

iRiver has partnered with WH Smith to launch a new Wi-Fi-enabled version of its Story e-book reader. As well as adding Wi-Fi to the previous Story specs, the new device has an e-ink screen capable of rendering 16 shades of grey (rather than eight) and a battery that’s claimed to be good for 9,000 page turns.

The OpenSUSE project, which feeds developments and innovations into Novell’s enterprise products, has released version 11.3 of its distribution in both standard and educational versions. The former core release provides one of the first chances to check out the future of Gnome through an early version of what will be develop into Gnome 3.0.

Bookseller Amazon has expanded its cloud computing offerings to include facilities more commonly seen in high-end supercomputers. The new service can be used to cluster up to 32 core machines linked together by 10Gbps ethernet connections.

Vizioncore has released a Linux version of its previously Windows-only vOptmizer Pro package which provides better storage management and optimisation on both kernel and VMware virtual appliances.

Zencafe is a Linux distribution aimed specifically at internet cafe proprietors. As the name suggests, it’s based on the Zenwalk distribution, and is available in a light Xfce version and an ultra-lite IceWM version which will run on a Pentium III with just 128MB of RAM.
Comment

Keep it simple, stupid

Alex Cox

I’m a multi-OS man. I can’t be tied down. Just counting what’s on my desk as I type this. I have four: a Windows XP machine, a testbed running the latest Linux Mint, a VMware install with Ubuntu 9.04, and iOS on my jailbroken iPod Touch. But forget my desk. The OS that fascinates me most is actually in my bag. It’s the flavour of embedded Linux that powers Amazon’s Kindle, and it’s just about the most impressive single-purpose operating system I’ve ever seen.

Book browsing, naturally, is faultless. Web browsing over 3G is slow but, crucially, provides totally free access to the internet. It even has a PDF reader, and a text-to-speech function that I’ve used far more than I ever expected, each function being teased gently out of a 532MHz processor and 32MB RAM. And that’s it. If it’s not about reading stuff, it’s not in there.

Practically perfect

Amazon’s resistance to feature creep in these times of glowing OLED screens and app stores is admirable. The company hasn’t even bothered to produce any decent file conversion software, because it doesn’t need to. It offers a sometimes flaky email-based service, and leaves third-party app Calibre to step in and do a magnificent job on the desktop.

The Kindle is most interesting because I can’t tinker with it, or at least I can’t bring myself to. Don’t get me wrong, I’m intrigued. There’s an SDK looming on the horizon, and I’m sure all sorts of fun stuff could come out of it; an interactive fiction interpreter would be an incredible addition. There are debug modes and nifty hacks to apply to the unit straight out of the box. Heck, one hacker has even managed to boot a text-mode version of Ubuntu on the thing. But I love what it does so much that this is the one unit I don’t want to break with my relentless tinkering. Buy one. You’ll love it.

DESKTOP

Mandriva’s spring

Vendors puts woes aside to deliver new release.

Despite fears about its future financial viability, Mandriva has released a new version of its core distribution. Mandriva Spring 2010.1 is available in both Free and Mandriva One versions and, for now at least, is also available as a supported product.

Mandriva’s chief technology officer, Arnaud Laprévote, said it was intended to give new users a smooth experience of open source software while retaining the power and accessibility of Linux. “Mandriva Linux 2010 Spring was conceived, produced and tested with our users. We are proud to present this new version of Mandriva Linux,” he said. “Everyone can install a friendly and efficient desktop either at work, at home or even at schools. Mandriva Corporate Server is designed for the professional market, to deploy Linux servers quickly and easily. Mandriva Linux 2010 Spring is built on the fundamentals that made the success of Mandriva namely: easier, safer, accessible to all and innovative.”

Spring 2010.1 is the first Mandriva distribution to include KDE 4.x and Gnome 2.30, and introduces the Ginko semantic desktop which enables users to label and grade files with metadata.

The distribution is available in the Powerpack edition, the One edition, which can be installed or tested via USB, and the Free edition which doesn’t include any proprietary software.

TECHNOLOGY

Truly worldwide access

$20 machine aims to revolutionise access to information in developing countries.

Hardware hacker Braddock Gaskill has created an Arduino-based open source platform he says could transform access to information in the developing world by reducing the cost of a creating a computer to $20 (approx £12) per unit.

Braddock’s devices, to be marketed under the Humane PC and Humane Reader brands, use 8-bit processors and SD cards to enable access to books, newspapers and, initially, a full snapshot of Wikipedia. They will work with the most popular display medium in the developing world: televisions.

“I have working prototype hardware, and am really seeking the right person to actually take a few dozen into the field to a developing country to prove the concept,” said Gaskill. And while he has so far done all the hardware work himself, having an open source platform on which to build was vital. “I want to deploy not just a Wikipedia reader, but a hackable microcontroller platform that kids can extend in every way with their own imagination.

“Open sourcing will also encourage others to contribute and enrich the platform. I would love the Humane platform to become an outgrowth of the Arduino community.”

www.linuxformat.com
This month, among other delights, I got to spend a lot of time using various VNC software. To test the clients, I set up a server on a machine connected to my LAN, and since it had nothing on it bar a pristine copy of OpenSUSE, I eschewed the usual security mechanisms such as RSA keys and passwords.

I knew it wasn’t secure, but I wasn’t really expecting to have three different connections to the client in the first five minutes. It was actually pretty amusing to watch. Two of the connections seemed to be from robot scripts that were accessing any open window and typing the same Windows-like commands in. Maybe they thought they had opened a terminal, because there was a lot of ineffective clicking around in the bottom-left corner.

Incredibly, the third connection seemed to be an actual real person. This chap (I assume) immediately started opening folders from the desktop and rooting around in them. He seemed a little confused that there was nothing there, and maybe a bit alarmed as I opened up a terminal and started portscanning his box – he disconnected. I can only assume that this is some social media fad that, like so many others, I have missed out on.

Haw-hawww

My next experiment was to create a screenshot of an enticing desktop and display it full screen before reopening my box to the wider world. Sure, it was a bit childish, and ultimately unsatisfactory because I missed out on the grunts of frustration as various would-be intruders tried to open my “Master Passwords” file – perhaps VNC should add audio?

The lesson, I guess, is to make sure your box is secure – use passwords, check your firewall, and if you really really want to hack into someone else’s box, make sure it isn’t mine.
The world of free – or at least reasonably priced – music is just a few commands away from your Linux desktop.

After a long wait, and apparently as part of an internal ‘itch-scratching’ exercise, revolutionary music streaming application Spotify has been released for Linux. The software, which was previously available on Windows, OS X and various mobile devices, enables users to stream over six million songs to their computers. It is available in various flavours, ranging from a free version supported by advertising, an ‘Unlimited’ package and a £10 per-month Premium service that allows you to download tracks to your media player for offline playback. Only Unlimited and Premium users currently have access to the Linux version.

Spotify spokesman Andres Sehr said that the Linux version came about because many of the developers working on other packages ran Linux machines and wanted to use the software themselves. “A lot of our developers use Linux so it was in their own interest to support the platform, but the main driver to add support was the hundreds of Spotify users who requested native Linux support,” he said.

Of course, the company also has its eye on the future, with Android becoming more prevalent and Google gearing up for the release of its Linux-based Chrome OS. Sehr said it was important to get Spotify out on to as many platforms as possible, though there were still some caveats about using the Linux version. “The version is still a preview and not officially supported, however we will try to keep it as up to date as possible with the same feature set as our Mac and Windows versions,” he said.

For users who don’t have an Unlimited or Premium account, the Windows version of Spotify works well with both Wine and CrossOver Pro.

Kick out the jams

21st century music streaming comes to Linux with the release of Spotify.

While Apple was first to market with a mainstream tablet computer and Microsoft is throwing much of its research and design money at the sector, figures from ABI Research suggests that Linux will come to dominate the market through a combination of Android, Chrome OS, MeeGo and a WebOS revitalised by new owner Hewlett Packard.

The company’s examination of potential growth in ‘non-smartphone’ mobile devices between now and 2015 suggests that Linux will account for 63% of all operating system shipments. Android and Chrome are likely to lead the charge with MeeGo and WebOS coming up behind. Analyst Victoria Fodale explained that the industry was about to undergo a period of rapid change. She said: “The number of Linux-oriented initiatives recently seen in the mobile industry indicates that Linux will be a key technology in the next generation of netbooks, media tablets, and other mobile devices.”

ABI’s Jeff Orr said the tablet sector had seen slow growth since 2007, when the company began tracking the format, and probably wouldn’t earn the ‘mainstream’ tag until 2013. “The buzz around tablets has implications for other parts of the consumer electronics market,” he said. “In particular, the surge in interest in media tablets is impacting the Mobile Internet Device (MID) category. Most of the volume that we’ve projected for the MID category since 2007 is now being taken over by other device form factors such as media tablets and smartphones.”

WebOS has received a boost within the sector thanks to HP’s decision to buy Palm, specifically to get hold of the operating system, for $1.2 billion. It seems likely that the company’s rumoured Hurricane Tablet, which was being developed on the Android platform, will now become the first tablet to run on WebOS.

The world of free – or at least reasonably priced – music is just a few commands away from your Linux desktop.

Tablet computers are set to be niche products at for least the next few years.
Comment

Not me guvnor

David Cartwright

I have very limited willpower. Many people I know will vouch for this, particularly when I’m faced with the dilemma of “Would you like another pint?”, or “Hi, it’s [insert random account manager’s name], how are you fixed for lunch tomorrow?”.

Imagine the thought process when I was recently faced with the question: “Does anyone know Linux?” Easy answer: “Yes, I do”. However, the question was posed by one of our service managers at work, who was looking for a way to reduce his third-party support costs by considering an in-house alternative.

It’s situations like this where you have to bite your tongue and be practical about stuff. Yes, he could reduce his support costs by using in-house expertise. However, that expertise is presently limited to a couple of us, and neither of us has Linux support as our day job (I do networks and telecoms, the other guy is VMware and Windows). Neither do either of us have a current certification on a commercial Linux – and we’ve never even used Oracle’s Linux flavour, which is what the application will be migrating to before long.

Just because someone knows a fair amount about something doesn’t mean they’re going to be able to guarantee to dig up the required knowledge at any time of day to solve a system-down problem, or fit in the support requirement among the bits of the day job.

So while employing a third party is more expensive, it does have its economies. A third party will have several customers, and can therefore employ a 24x7 support team more economically. With a range of staff they get a range of skills and experience. And by defining an SLA you also get some element of a guarantee that you’ll get the service you need.

Man, I’m glad I conjured up some willpower from somewhere.

David is global communications and hosting manager for a Jersey-based legal services company.

Hitting the mirrors

What’s behind the free software sofa?

NETWORKING

Likewise, an open source package that enables Linux, Mac and Unix systems to join networks based on Microsoft’s Active Directory, has recently been updated to version six. The company said that significant performance improvements in the software meant that logon times had been slashed and new password change policies had been implemented to work with complex AD networks. In addition to the open source edition of Likewise, the company also has an enterprise version of the software, which includes a complete identity management suite. www.likewise.com

UBUNTU FONT

Meanwhile, Canonical has revealed a first look at the new font it has commissioned from foundry Dalton Maag for the next desktop Ubuntu release. The typeface, which has been specifically designed to be easily readable on modern LCD monitors is likely to be the default in the forthcoming 10.10 release.

www.canonical.com

GAMES CONSOLE

Gamepark has announced the launch of a new GP2X-based games console called the Caanoo. The device, which is built around an ARM processor, an integrated video processor and support for SD memory cards, is scheduled to be available as Linux Format hits the newsstands, but the company behind the product has a habit of announcing devices but never shipping them in great numbers.

www.likewise.com

LEARNING MANAGEMENT SYSTEM

ATutor, an open source learning content management system, has been upgraded to version 2.0. The update refocuses the software on the concept of creating dynamic online classrooms and is equipped to provide students and teachers with an opportunity to use Facebook-like social networking tools (via the Social plugin) to offer feedback and long-term support.

An integrated photo gallery is amongst the features new to 2.0.

www.atutor.ca

www.likewise.com

www.canonical.com

www.linuxformat.com