



Full Circle

LE MAGAZINE INDÉPENDANT DE LA COMMUNAUTÉ UBUNTU LINUX

Numéro 127 - Novembre 2017



CRITIQUE



Photo : jProgr (Flickr.com)



PROGRAMMER EN GREAT COW BASIC POUR LES MICROCONTRÔLEURS MICROCHIP PIC OU ATMEL AVR

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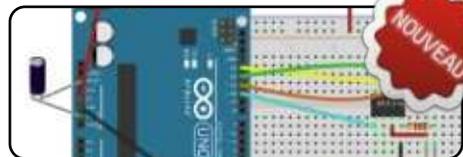
Tutoriels

```
root@localhost:~# mount -o r
root@localhost:~# apt clean
root@localhost:~# df -lh
Filesystem      Size  Used Av
udev            976M  0
```

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p.XX



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Graphismes

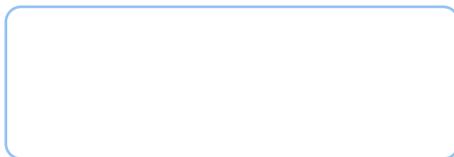


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```
#An alias to make the ls
command more detailed
alias ls = "ls -la --
color=always --classify"
```

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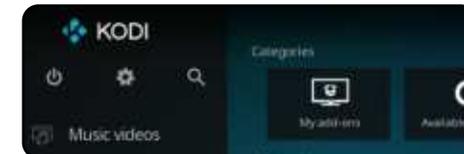
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BIENVENUE DANS CE NOUVEAU NUMÉRO DU FULL CIRCLE

Ce mois-ci, nous avons les tutoriels habituels, FreeCAD et Inkscape, mais, pour remplir l'espace du tutoriel manquant, il y a un article intéressant sur l'installation d'Ubuntu Base (dont je n'avais jamais entendu parler auparavant) et le début d'une nouvelle série - du moins je l'espère - sur la programmation en Great Cow Basic. Si l'article de ce numéro vous plaît, dites-le-nous et nous essayerons de vous en proposer davantage.

Alan Ward a composé un papier très intéressant sur comment faire en sorte que votre bureau Plasma 5 (KDE) ressemble de près au vieux Plasma 4. Lucas fait une critique du « FixMeStick » qui est essentiellement un scanner de virus pour Windows sur une clé USB. Je n'étais pas certain qu'il faille en inclure la critique ici (puisque notre revue est dédiée à Linux), mais nous l'avons fait puisque je sais que beaucoup de nos lecteurs utilisent des machines Windows d'une manière ou d'une autre.

Dans ce numéro, Oscar examine les Humble Bundles - ces ensembles de jeux bien aimés où vous payez ce que vous voulez et recevez des récompenses. L'article à peine soumis, nous avons appris que Humble Bundle a été racheté par IGN France. Ce que cela signifie pour l'avenir de Humble Bundle n'est pas clair, mais espérons qu'ils n'ignoreront pas que la générosité est dans ses racines. Beaucoup de gens achètent les bundles pour aider les associations caritatives. J'ai le pressentiment affreux qu'IGN voudra davantage d'argent pour la société, mais j'espère avoir tort.

Enfin, j'aimerais remercier tous ceux qui ont soumis un article après mon dernier mail vous priant de m'envoyer des propositions d'articles. Nous pouvons tenir encore quelques mois sans problèmes, mais n'arrêtez pas d'écrire ! Plus on en a en réserve, mieux c'est.

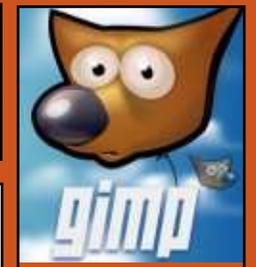
Amitiés et restons en contact !

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SUSE LINUX ENTERPRISE 15 DESKTOP TO USE WAYLAND BY DEFAULT, FIREWALLD AND GCC 7

SUSE recently kicked off the development of the SUSE Linux Enterprise (SLE) 15 operating system series and they just opened the closed beta program this week by releasing the first beta milestone.

SUSE Linux Enterprise 15 will be developed with a few key objectives in mind, including support for installing and using modules and extensions easier than before, use packages across the entire SUSE universe, support multiple scenarios and architectures on 64-bit, IBM System z (s390x), ARM64 (AArch64), and Power LE systems, as well as on cloud, virtual, physical, host and guest environments.

Source:

<http://news.softpedia.com/news/suse-linux-enterprise-15-desktop-to-use-wayland-by-default-firewalld-and-gcc-7-518250.shtml>

PLASMA MOBILE: INSIDE KDE'S PLAN TO CREATE A FULL-FEATURED LINUX SMARTPHONE SOFTWARE

The Linux smartphone scenario has never been so exciting. Recently, Purism's Librem 5 smartphone achieved its crowdfunding goal and scored partnerships from GNOME and KDE. On the other hand, postmarketOS is also showing some good promise.

When KDE partnered with Purism, it announced that Plasma Mobile will be ready for the real world and integrate with a commercial device for the first time. "Slowly, but surely, hardware vendors have discovered that Plasma Mobile is an entirely different software platform to build products on top of," KDE developer Sebastian Kügler wrote in a blog post.

Sebastian has shared a Plasma Mobile Roadmap for the interested users and companies.

Source:

<https://fossbytes.com/plasma-mobile-kde-linux-smartphone-roadmap/>

RAZOR LAUNCHES ITS FIRST "SMARTPHONE FOR GAMERS"

Razor Inc., the company known for the gaming computers, has now entered the smartphone market with a bang. Razor Phone is the new Android-powered smartphone from the company.

Probably, it has everything you might want, except the 3.5mm headphone jack which has started to lose its existence on premium smartphones. However, the company has tried to compensate for that by including the THX-certified 24-bit DAC audio adapter that they claim to deliver "audiophile quality" sound through the headphones.

Source:

<https://fossbytes.com/razor-launches-razor-phone-for-gamers/>

WHAT'S NEW IN FEDORA LINUX 27

Fedora 26 introduced the concept of modularity to Fedora. To paraphrase Fedora's own description, the modularity project is an attempt to separate the life cycles of the applications in a distribution from both each other and the distribution itself. Users need to be able to upgrade to the most recent version of both an application stack, but also retain earlier versions of individual pieces of that stack for backward compatibility (such as Python 3.x versus Python 2.x).

Previous versions of Fedora had each software component—this database, that language runtime—as a discrete package. Modularity groups those packages into modules—this database with this core database application and that library—and lets each module be installed and run separately. Modules also have their own versioning and life cycles, so users can deploy both cutting-edge and more conservative editions of app stacks side by side. It

takes some manual work to convert packages into modules, but one of the goals of Fedora going forward will be to automate as much of the process as possible.

Source:

<https://www.infoworld.com/article/3235332/linux/whats-new-in-fedora-linux-27.html>

ARCH LINUX 2017.11.01 IS NOW AVAILABLE FOR DOWNLOAD WITH LINUX KERNEL 4.13.9

Every month, the Arch Linux developers bake an up-to-date installation image (a.k.a. ISO) that includes all the security patches and package updates that they've pushed through the stable software repositories of the GNU/Linux distribution during the month that just ended.

Arch Linux 2017.11.01 is the ISO snapshot for the month of November 2017, powered by the Linux 4.13.9 kernel and incorporating all the updates released during October 2017. Weighing around 523 MB in size, the Arch Linux 2017.11.01

installation image is supported only on 64-bit platforms as 32-bit installations aren't possible anymore.

Source:

<http://news.softpedia.com/news/arch-linux-2017-11-01-is-now-available-for-download-with-linux-kernel-4-13-9-518338.shtml>

ZORIN OS 12 PASSES ONE MILLION DOWNLOADS MARK, 60% ARE WINDOWS AND MAC USERS

Zorin OS is an Ubuntu-based distribution targeted at those who want to migrate from Microsoft's Windows and Apple's macOS computer operating system to an Open Source alternative that offers them a more secure, stable, and reliable computing environment. Zorin OS 12 is the latest stable version of the Linux OS, and it got its second point release in September 2017.

Both the Zorin OS 12.1 and 12.2 maintenance updates helped the Zorin OS 12 series to pass the one million downloads mark since the distro's initial release on November

18, 2016, and the best part is that over 60 percent of these downloads are from users using either Windows or macOS, which means that Zorin OS' mission was successfully achieved.

Source:

<http://news.softpedia.com/news/zorin-os-12-passes-one-million-downloads-mark-60-are-windows-and-mac-users-518337.shtml>

VMWARE ADVANCES ITS PHOTON OS LINUX OPERATING SYSTEM FOR CONTAINERS

VMware announced the release of Project Photon OS 2.0 on Nov. 1, providing users with improved security and management capabilities.

Photon OS is an open-source Linux operating system that has been purpose-built and optimized for container deployments. The Photon container operating system was first announced in April 2015. The Photon OS project reached its 1.0 milestone the following year in June 2016.

The Photon OS became a cornerstone of the larger Photon Platform in August 2016, which aimed to provide a more complete cloud-native platform for container application deployment and management. VMware however decided to discontinue the Photon Platform, and as of October 6th, 2017, the Photon Platform reached its End of Life.

Though the Photon Platform is dead, Photon OS remains, and VMware is advancing it further with the 2.0 update.

Source:

<https://www.serverwatch.com/server-news/vmware-advances-its-photon-os-linux-operating-system-for-containers.html>

DEBIAN-BASED PARDUS 17.1 LINUX DISTRO RELEASED WITH DEEPIN DESKTOP MEDIA SUPPORT

Released in early July 2017, Pardus 17 is based on Debian GNU/Linux 9 "Stretch" operating system and it's powered by the long-term supported Linux 4.9 kernel

series. Now, the first point release, Pardus 17.1, is available to download bringing all the latest technologies from the Debian GNU/Linux 9.2 "Stretch" release.

On top of that, Pardus 17.1 makes various user-visible changes, such as to rename the Downloads folder to Downloaded, enhance the System Settings Menu, redesign the default printer test page, remove the password for the live "pardus" user, update the Symbol system theme, as well as to add a bunch of new desktop wallpapers.

Source:

<http://news.softpedia.com/news/debian-based-pardus-17-1-linux-distro-released-with-deepin-desktop-media-support-518409.shtml>

DON'T WORRY ABOUT THOSE 40 LINUX USB SECURITY HOLES. THAT'S NOT A TYPO

The Linux kernel USB subsystem has more holes than a donut shop. On Monday, Google security researcher Andrey Konovalov disclosed 14 Linux USB flaws found using syzkaller, a kernel fuzzing tool developed by another Google

software engineer, Dmitry Vyukov.

That's just the tip of the iceberg. In an email to The Register, Konovalov said he asked for CVEs for another seven vulnerabilities on Tuesday, and noted there are something like 40 that have not been fixed or triaged.

Konovalov downplayed the risk posed by the flaws, based on the fact that physical access is a prerequisite to an attack. In other words, to exploit these vulnerabilities and potentially hijack a machine or infect it with spyware, you have to be able to actually insert a malicious USB gadget into a Linux-powered system.

Source:

https://www.theregister.co.uk/2017/11/07/linux_usb_security_bugs/

LATEST IPFIRE 2.19 LINUX FIREWALL UPDATE PATCHES OPENSLL, WGET VULNERABILITIES

The development team behind the IPFire professional and hardened Linux firewall distribution announced the release of the IPFire 2.19 Core Update 116 software patch, which

addresses several security issues.

Coming only a few days after the Core Update 115 release, which introduced a new IPFire Captive Portal allowing for easy access control of wireless and wired networks, along with updated OpenVPN configuration options, the IPFire 2.19 Core Update 116 release patches important security vulnerabilities.

For starters, the update bumps the OpenSSL version to 1.0.2m, a release that addresses two security flaws affecting modern AMD Ryzen and Intel Broadwell processors, as well as certificate data. More details about the two vulnerabilities are available at CVE-2017-3736 and CVE-2017-3735.

Source:

<http://news.softpedia.com/news/latest-ipfire-2-19-linux-firewall-update-patches-openssl-wget-vulnerabilities-518430.shtml>

UBUNTU LINUX-MAKER CANONICAL JOINS GNOME FOUNDATION ADVISORY BOARD

Ubuntu is a great operating system, and this year it has gotten even better. Why? The maker of the distribution, Canonical, ditched the much-maligned Unity desktop environment. Instead, the latest version of the distro uses the far-better GNOME.

Not only does Ubuntu get better by using GNOME, but GNOME should improve thanks to Canonical's contributions. Today, the GNOME Foundation Advisory board announces that Canonical has joined. This makes a lot of sense, as the company's popular operating system should bring a renewed interest in the desktop environment. In other words, it is win/win for both.

Source:

<https://betanews.com/2017/11/01/ubuntu-linux-maker-canonical-joins-gnome-foundation-advisory-board/>

KUBUNTU 17.10 USERS CAN NOW UPDATE TO KDE PLASMA 5.11.3 DESKTOP ENVIRONMENT

Kubuntu 17.10 was released on October 19, 2017, with the KDE

Plasma 5.10.5 desktop environment by default. If you're running Kubuntu 17.10 on your personal computer, you can now update it to the KDE Plasma 5.11.3 desktop environment, a bugfix release that addresses multiple issues and annoyances.

The KDE Plasma 5.11.3 packages landed today in the Kubuntu Backports PPA (Personal Package Archive), not Kubuntu 17.10's standard software repositories, along with several other recent KDE applications and core component, including the recently released Krita 3.3.2.1 digital painting software.

To update your Kubuntu 17.10 (Artful Aardvark) installation to the KDE Plasma 5.11.3 desktop environment and also install the Krita 3.3.2.1 release, you need to first install the Kubuntu Backports PPA, and then attempt a full upgrade in a terminal emulator app, such as Konsole.

Source:

<http://news.softpedia.com/news/kubuntu-17-10-users-can-now-update-to-kde-plasma-5-11-3-desktop-environment-518475.shtml>

LINUX DISTROS ON SMARTPHONE: THE FIRST "LINUX ON GALAXY" DEMO IS HERE

Technology companies involved in desktop and mobile space have been trying hard to achieve a perfect sense of convergence. Microsoft has been doing it with the help of Continuum; Apple has its own approach to make the iPad workflow more PC-like. Along the same lines, Samsung launched the new DeX dock with its flagship Galaxy S8.

In October, we reported on the company's plans to create an application that would let the Linux enthusiasts run native Linux distributions on their mobile devices. To do so, they would need to connect their Galaxy smartphones to a bigger screen via DeX.

Now, offering a glimpse into the future, the company has released a video. Titled "[Concept Demo] Linux on Galaxy x Samsung DeX," the video shows a device being put on DeX and using an app named "Linux on Galaxy" to launch a Linux distro.

Source:

<https://fossbytes.com/linux-distros-galaxy-first-demo-samsung/>

LINUX MINT 18.3 "SYLVIA" BETA CINNAMON & MATE EDITIONS NOW AVAILABLE TO DOWNLOAD

The Linux Mint development team has uploaded today the Linux Mint 18.3 Beta release to the official download mirror, with 64-bit and 32-bit live ISO images of both Cinnamon and MATE editions of the operating system, though no official announcement was published at the moment of writing.

We downloaded both Cinnamon and MATE editions of Linux Mint 18.3 "Sylvia" Beta and took a quick look inside to see what's new. We can confirm that the OS is based on Ubuntu 16.04.3 LTS (Xenial Xerus) and runs the Linux 4.10 HWE (Hardware Enablement) kernel from Ubuntu 17.04 (Zesty Zapus).

Source:

<http://news.softpedia.com/news/linu>

<https://fossbytes.com/linux-distros-galaxy-first-demo-samsung/>

FIREFOX QUANTUM 57 IS HERE TO KILL GOOGLE CHROME

The first ever Quantum-fueled Firefox version, Firefox 57, is about to land on your Windows, Linux, and macOS machines. A lot of work has been done, such as implementing the new CSS engine written in Rust programming language, adding parallel processing capabilities to leverage multi-core CPUs which are a common sight nowadays.

Mozilla says they have doubled Firefox's speed since last year. Also, Firefox Quantum (Firefox 57) consumes around 30% less RAM than Google Chrome. A new feature called Tracking Protection blocks extensive requests for online user tracking. It works by default in the Private browsing window and reduces the page loading time by around 44 percent.

Source:

<https://fossbytes.com/firefox->

[quantum-57-is-here-to-kill-google-chrome-download-for-windows-mac-linux/](#)

LINUX 4.14 ARRIVES AND LINUS SAYS IT SHOULD HAVE FEWER 0-DAYS

Linus Torvalds has given the world version 4.14 of the Linux Kernel. Torvalds announced the new release with his usual lack of fanfare, but with a couple of interesting nuggets of news.

He opened by saying “it is probably worth pointing out how the 0 day robot has been getting even better (it was very useful before, but Fengguang has been working on making it even better, and reporting the problems it has found).” Said robot is an automated vulnerability-checker that scours kernel code for issues. With version 4.14 slated to be the next kernel version to receive Long Term Support, and that support now running for six years instead of two, a more secure release will be widely welcome.

Source:

https://www.theregister.co.uk/2017/11/12/linux_4_14_released/

SAMSUNG DEMOS UBUNTU RUNNING ON DEX

Samsung Electronics is entertaining the idea of bringing a full-fledged Linux operating system to the Samsung DeX platform, and these efforts were highlighted in a recent concept demo video published on YouTube by Samsung Newsroom, showcasing Samsung DeX running Ubuntu. Assuming that this feature will be implemented, it may place the DeX docking station on the radars of more potential customers as the product could grow in popularity amongst Linux users.

The Samsung DeX docking station was introduced earlier this year with the Samsung Galaxy S8 flagship series. It's an accessory that creates a bridge between the smartphone and desktop experiences and promotes the idea that a handset can provide a desktop replacement.

Source:

<https://www.androidheadlines.com/2017/11/samsung-demonstrates-ubuntu-16-running-natively-dex.html>

FEDORA 27 LINUX DISTRIBUTION NOW AVAILABLE FOR DOWNLOAD

If you want a pure, no-nonsense, Linux-based operating system, look no further than Fedora. It is stable as all heck, while also being fairly bleeding edge with up-to-date packages. Best of all, the distribution focuses heavily on open source ideology, using only truly free software. It is a great way to experience Linux as it should be. Heck, the father of the kernel, Linus Torvalds, uses Fedora -- that's saying something.

Today, version 27 of the operating system finally becomes available. Desktop users should love the GNOME 3.26 desktop environment, which offers many improvements, including color emoji support. Yes, emojis do matter -- Linux users can have fun too. Also included is LibreOffice 5.4 -- a worthy alternative to Microsoft's office suite. From a more technical aspect, some users will appreciate the addition of TRIM support for newly encrypted solid state drives.

Source:

<https://betanews.com/2017/11/14/fe>

[dora-27-linux/](#)

LINUX TOTALLY DOMINATES SUPERCOMPUTERS

Linux rules supercomputing. This day has been coming since 1998, when Linux first appeared on the TOP500 Supercomputer list. Today, it finally happened: All 500 of the world's fastest supercomputers are running Linux.

The last two non-Linux systems, a pair of Chinese IBM POWER computers running AIX, dropped off the November 2017 TOP500 Supercomputer list.

Overall, China now leads the supercomputing race with 202 computers to the US' 144. China also leads the US in aggregate performance. China's supercomputers represent 35.4 percent of the Top500's flops, while the US trails with 29.6 percent. With an anti-science regime in charge of the government, America will only continue to see its technological lead decline.

Source:

<http://www.zdnet.com/article/linux->

[totally-dominates-supercomputers/](#)

KDEVELOP 5.2 OPEN-SOURCE IDE RELEASED WITH IMPROVED C++, PHP AND PYTHON SUPPORT

Almost half a year in the making, KDevelop 5.2 is a major release that introduces more analyzer plugins to the Analyzer menu entry implemented in the previous release, KDevelop 5.1. These include Heaptrack, a heap memory profiler for Linux apps written in C/C++ and Cppcheck, a popular static analyzer for the C++ programming language, which can be used from inside KDevelop by default.

Apart from the new analyzer plugins, KDevelop 5.2 comes with a bunch of improvements for the C++, Python, and PHP programming languages. For PHP support, this release introduces the callable type, process member properties and calls for unsure types, null and spaceship coalesce operators, support for non-scalar constants, support for variadic functions, and PHP7 IIFE syntax parsing.

Source:

<http://news.softpedia.com/news/kdevelop-5-2-open-source-ide-released-with-improved-c-plus-plus-and-php-support-more-518565.shtml>

GOOGLE HOME AND AMAZON ECHO HIT BY BIG BAD BLUETOOTH FLAWS

Google and Amazon have rolled out patches for their respective smart home speakers, Home and Echo, to plug the widespread Bluetooth flaws known as BlueBorne.

BlueBorne, a set of eight Bluetooth flaws, was already known to affect billions of phones and computers running iOS, Android, Windows, and Linux. The flaws were discovered by security vendor Armis, which now warns that the flaws in Home and Echo could be used as an entry point to attacking other devices with malware.

An attacker would need to be in Bluetooth range but can use the flaws to attack any device with Bluetooth enabled without pairing with it.

According to Armis, Amazon has

provided an update to around 15 million Echo devices and Google has patched five million Google Home devices.

Source:

<http://www.zdnet.com/article/google-home-and-amazon-echo-hit-by-big-bad-bluetooth-flaws/>

RED HAT OPENSTACK PLATFORM 12 IMMINENT, PAVES WAY FOR KUBERNETES IN PLATFORM 13

Red Hat released Fedora 27 last week offering containers and the latest GNOME, but for big business, it's the next OpenStack release to watch out for.

Red Hat announced OpenStack Platform 12 at the OpenStack Summit in Sydney earlier this month, with the release expected within weeks.

This will be a significant release for Red Hat's version of the collaborative open-source public- and private-cloud platform OpenStack, being the first version to deliver all its

services containerised. "It's the first step in a longer journey. Our vision is to deliver OpenStack deployed by Kubernetes in the long run," Nick Barcet, senior director of OpenStack Product Management, Red Hat, told iTWire. Red Hat's strategy over the last three years, Barcet explained, is to provide a stable solution. "Stable when you install it, stable when you run it, stable when you upgrade it," Barcet said.

Red Hat also announced Ceph Storage 3.0 which Barcet describes as "a very important milestone in our storage strategy because it delivers a new way to access storage held in a Ceph cluster – not only storage as a block and an object as before but also as a shared filesystem".

Red Hat further announced large Australian insurance firm IAG is being added to the array of Red Hat OpenStack reference customers, along with the French-originating multi-national telco Origin, and the Singapore-based MyRepublic.

Source:

<https://www.itwire.com/the-linux-distillery/80865-red-hat-openstack-platform-12-imminent-paves-way-for-kubernetes-in-platform-13.html>

BLACKARCH LINUX DISTRO FOR ETHICAL HACKING DROPS 32-BIT SUPPORT

BlackArch, one of the most popular Linux distros for ethical hacking and penetration testing, has dropped the support for systems based on 32-bit architecture. The announcement of this change was made on project's Twitter handle and official website, as reported by Softpedia.

The announcement says: "Following 9 months of deprecation period, support for the i686 architecture effectively ends today."

As a result of this change, by November end, the i686 packages will be removed from BlackArch mirrors. At a later stage, they'll also be removed from packages archive. In case you visit their website, you won't find any 32-bit download images.

If you're running a 32-bit installation of Arch Linux, now, you won't be able to upgrade to a newer version or get updates/patches for your machine. So, you're advised to either install 64-bit version of the OS

on 64-bit hardware, or choose a different ethical hacking distro that supports 32-bit architecture.

This step shouldn't be surprising as increasing number of Linux distros are phasing out 32-bit support. Following the footsteps of Arch Linux, popular Manjaro Linux had already dropped the support. Just recently, Ubuntu too took a similar decision.

Source:

<https://fosbytes.com/blackarch-linux-distro-ethical-hacking-drops-32-bit-support/>

SPARKYLINUX 4.7 "TYCHE" OUT NOW WITH LATEST DEBIAN GNU/LINUX 9 "STRETCH" UPDATES

Powered by a recent kernel from the long-term supported Linux 4.9 series, version 4.9.51, SparkyLinux 4.7 is now available for download (see link below) with all the updates pushed upstream in the software repositories of the Debian GNU/Linux

9 "Stretch" operating system series as of November 17, 2017.

This version comes with the Xfce 4.12.3, LXDE 0.99.2, and Openbox 3.6.1 graphical environments, the latest Calamares 3.1.8 graphical installer, as well as Mozilla Firefox 52.5.0 ESR, Mozilla Thunderbird 52.4.0, LibreOffice 5.2.7, VLC Media Player 2.2.6, Pidgin 2.12.0, Transmission 2.92, HexChat 2.12.4, and DeaDBeeF 0.7.2.

The SparkyLinux 4.7 release comes with live ISO images with the Xfce, LXDE, and Openbox (MinimalGUI) desktop environments/window managers, as well as a text mode edition (MinimalCLI) for both 32-bit (i686) and 64-bit (x86_64/amd64) hardware. While the new ISO images are provided mostly for those who want to deploy SparkyLinux on new computer or reinstall, existing users using a release from the SparkyLinux 4.x "Tyche" series can upgrade to version 4.7 right now by running the commands below in a terminal emulator followed by a system restart.

Source:

<http://news.softpedia.com/news/sparkylinux-4-7-tyche-out-now-with->

[latest-debian-gnu-linux-9-stretch-updates-518625.shtml](https://www.debian.org/releases/stretch/updates-518625.shtml)

LINUX CREATOR SLAMS SECURITY BODS

Linus Torvalds, the creator of open-source computer operating system Linux, has slammed current approaches to cyber security during a recent discussion.

The Finnish-American software developer, who took part in a talk about new whitelisting features destined for Linux, disapproved of the approaches of many security bods

In particular, he criticized the work of Kees Cook, who's a member of Google Pixel's security team. Torvalds has previously branded him as idiotic.

As The Register reports, Cook recently wrote a request to pull hardened user copy changes for v4.15-rc1. He said: "Please pull these hardened usercopy changes for v4.15-rc1."

"This significantly narrows the areas of memory that can be copied to/from userspace in the face of

usercopy bugs by adding explicit whitelisting for slab cache regions," he said in the posting.

Torvalds appeared to be displeased with Kees' post. In fact, he doubts that the points he raised are actually useful. With the support of the likes of Paolo Bonzini, Cook attempted to explain his stance on the code and counter Torvald's concerns.

He continued: "This is why I introduced the fallback mode: with both kvm and sctp (ipv6) not noticed until late in the development cycle, I became much less satisfied it had gotten sufficient testing."

Torvalds was far from satisfied with what Cook had to say, saying: "So honestly, this is the kind of completely unacceptable 'security person' behavior that we had with the original user access hardening too, and made that much more painful than it ever should have been.

"It is not acceptable when security people set magical new rules, and then make the kernel panic when those new rules are violated."

His approach to security is completely different to Cook.

Instead, he believes that security problems are just bugs, and he doesn't believe in changing the kernel completely.

Source: <https://www.v3.co.uk/v3-uk/news/3021555/linux-creator-slams-security-bods>

KALI LINUX 2017.3 ETHICAL HACKING OS BRINGS INSPY, SUBLIST3R, AND SMB3.0 SUPPORT

Coming two months after the previous release, Kali Linux 2017.3 is here with a new kernel, namely Linux 4.13.10, which adds better support for the latest hardware components, as well as all the security patches pushed upstream in the Debian Testing repositories, as well as various new tools.

First off, the Linux 4.13.10 kernel adds SMB 3.0 support to CIFS by default, rises the EXT4 directories limit from 10 million entries to up to 2 billion, and enables TLS support. Second, Offensive Security updated

several of the included tools for this release, such as The Social Engineering Toolkit, Reaver, Burp Suite, PixieWPS, and Cuckoo.

On top of that, the Kali Linux 2017.3 release adds four new tools, namely InSpy for performing enumeration on LinkedIn to find people based on company, job title, or email address, the CherryTree note-taking app, Sublist3r for enumerating subdomains across multiple sources simultaneously, and OSRFramework for enumerating domains and users across more than 200 different services.

With the Kali Linux 2017.3 release, the ethical hacking and penetration testing distro is now shipping with the latest Maltego CaseFile bundle, which brings us both the incredible Maltego open-source information gathering tool and its little brother CaseFile. Users can still run the free Maltego Community Edition if they want, along with the Maltego CaseFile bundle, which is also free.

Source: <http://news.softpedia.com/news/kali-linux-2017-3-ethical-hacking-os-brings-inspy-sublist3r-and-smb3-0-support-518656.shtml>

'URGENT DATA CORRUPTION ISSUE' DESTROYS FILESYSTEMS IN LINUX 4.14

A filesystem-eating bug has been found in Linux 4.14.

First reported last week by developer Pavel Goran, the problem struck bcache, a tool that lets one use a solid state disk drive as a read/write cache for another drive. bcache is often used to store data from a slow disk on faster media.

Goran noticed the problem after trying to upgrade Gentoo from version 4.13 of the Linux kernel to version 4.14. During that effort he noticed "reads from the bcache device produce different data in 4.14 and 4.13."

After plenty of analysis, he concluded that "this looks like a very serious bug that can corrupt or completely destroy the data on bcache devices.

Source: https://www.theregister.co.uk/2017/11/22/linux_4_14_bcache_bug_destroys_data/

EXTiX, THE ULTIMATE LINUX SYSTEM, NOW HAS A DEEPIN EDITION BASED ON UBUNTU 17.10

For those not familiar with Arne Exton's work, he regularly creates live ISO images based on the latest Ubuntu or Debian operating systems and shipping with the most recent GNU/Linux technologies and Open Source software. ExTiX is an Ubuntu-based distro that has no less than five editions, including the new Deepin one.

ExTiX is dubbed by the developer as "The Ultimate Linux System," and the new ExTiX Deepin released today lives up to the name as everything just works. The distribution is based on Canonical's latest Ubuntu 17.10 (Artful Aardvark) operating system and inherits all of its core components and applications.

However, the default desktop environment is Deepin Desktop as featured in the upcoming Deepin 15.5 release. We recommend studying the list of pre-installed packages if you're curious to know what exactly is included in ExTiX Deepin, and check out the screenshot

gallery below to see it in action.

Also included in the distro is Deepin Screen Recorder and Refracta Tools. The latter you can use to create your own live system based on Ubuntu or ExTiX Deepin, even without installing anything on your personal computer.

Source:

<http://news.softpedia.com/news/extix-the-ultimate-linux-system-now-has-a-deepin-edition-based-on-ubuntu-17-10-518696.shtml>



Earlier this month, I went to the AMP Roadshow as it arrived in my city. It took place at the local Google headquarters, and was dedicated to new features coming to AMP, as well as the newer features that had already dropped. It included keynotes (with examples) as well as a codelab segment with a variety of tutorials. As such, I wanted to use my article this month to cover some of the things I learned.

LEARNING BY EXAMPLE

There are a few websites that offer examples and guides for getting started with AMP. The two best ones I've used are:

- <https://ampbyexample.com/> - A collection of individual element examples (eg. a navbar example).
- <https://ampstart.com/> - This site offers complete templates that you can download and use as a starting point. According to a keynote at the AMP Roadshow, the website should be updated with a customization option soon.

The best way to approach this

would be to find a template you like from AMP Start, and then add elements from AMP By Example (or AMP Start) until you reach the layout you want. Ideally, having a goal in mind before you start will make the process go faster (such as converting an existing site).

DO I HAVE TO MANUALLY WRITE ALL THE HTML?

No. If you want to use a static site generator (such as Grow), you can embed the CSS directly into the page (required by AMP), and can set up predefined HTML structures to drop content into. If you're instead looking for a plugin for a CMS, there are apparently plugins for Wordpress or Drupal. There's also a project on GitHub called amp-library, which is intended to convert normal HTML to AMP HTML. The project can be found here:

<https://github.com/Lullabot/amp-library>

SHOULD I MANUALLY WRITE ALL THE HTML AND EMBED

THE CSS?

Yes. As with any programming exercises, you learn more by doing it all by hand at first, before relying on tools to automate tasks. The more you have to write the HTML for an element, after all, the better you'll remember it later. Naturally, if time is of the essence, do whatever you can to speed up the process. If you end up with some free time later, you can always return to manually writing it.

WHAT ABOUT INTERACTIVITY?

A relatively recent addition to AMP is amp-bind. It allows you to store state and interconnect elements within a page. A nice example of that is on AMP By Example:

https://ampbyexample.com/introduction/amp_for_e-commerce_getting_started/

MY WEBSITE IS A PROGRESSIVE WEB APP - CAN I USE AMP?

This was actually covered a lot at the AMP Roadshow. The ability to install a service worker was added to AMP recently, which enables the ability to install the service worker in the background. This means you can set up your entry points to load the service worker, and then upgrade to the PWA as users interact with your site.

Furthermore, it's possible to create a PWA frame, which then loads content from AMP pages using a shadow DOM.

A codelab to teach you this can be found here: <https://codelabs.developers.google.com/codelabs/amp-pwa-workbox/#0>

CONCLUSION

AMP is a wonderful library to have access to. It offers a good balance between ease of use, and performance. While there are some limitations placed on you when using it, in my experience, the limitations really just make life easier for you by preventing a lot of the hacks common

on the web. Naturally, you'll always have to balance the pros and cons with what it is you need to build. That being said, AMP is definitely worth your consideration. The main exception is if you need to include custom JS - as AMP does not allow this (except in iframes).

I hope this article was interesting to at least a few readers. And perhaps a few of you will be trying AMP in the future - will maybe even contribute to the project. If you have any questions about AMP, you're welcome to contact the AMP team on GitHub or Twitter, or email me at lswest34+fc@gmail.com. If you have requests for other articles, please send them to me as well.



Lucas a appris tout ce qu'il sait en endommageant régulièrement son système et en n'ayant alors plus d'autre choix que de trouver un moyen de le réparer. Vous pouvez lui écrire à : lswest34@gmail.com.



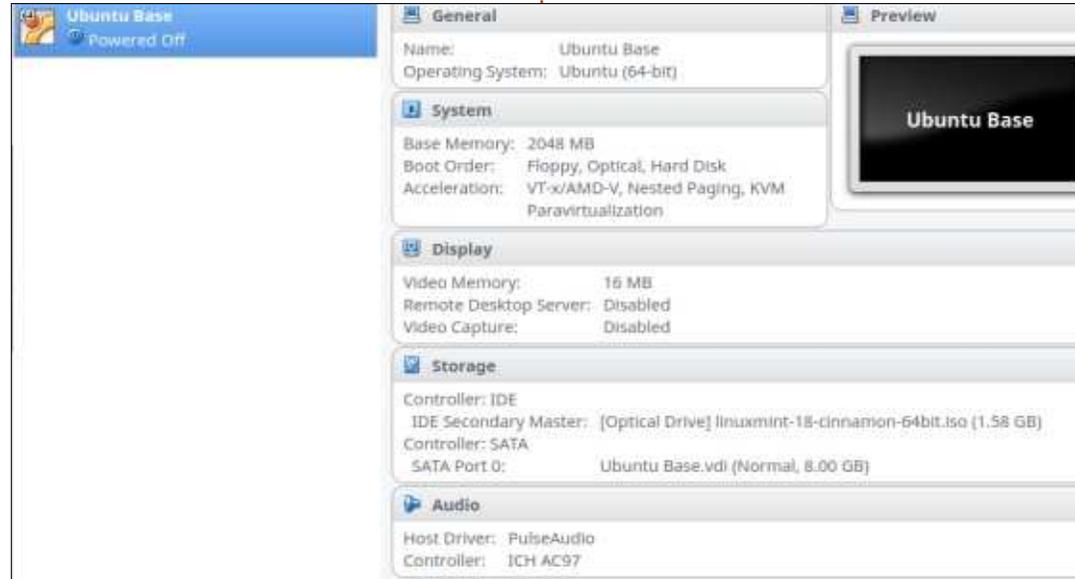
Most users of Ubuntu and its derivative distributions are fairly happy with the LiveCD or USB approach to installing the distribution. However, other rather more exotic ways of creating a working operating system are also available. In this piece, I would like to show how Ubuntu Base can be installed, and then tweaked to get a working system with a minimum of software.

Ubuntu Base is described in the appropriate entry in the Ubuntu Wiki: <https://wiki.ubuntu.com/Base>. We are, in essence, starting with a very minimal disk image of an Ubuntu System, with the bare minimum to handle the apt package manager. It is, in fact, so barebones that we do not even have a kernel or initial ramdisk image. Nor is GRUB installed by default, so we will have to download and install these pieces by hand

during the setup process.

Let us begin by downloading Ubuntu Base. I chose the 64-bit "amd64" of Ubuntu version 17.10 from the download page: <http://cdimage.ubuntu.com/ubuntu-base/releases/17.10/release/>. I will be performing tests in a virtual machine under VirtualBox 5.130, running on a host with Ubuntu Budgie 17.10. It may be interesting to note my processor, an Intel Core i7, has the vmx flag activated, which means I can run a 64-bit virtual machine inside VirtualBox. I also had to activate VT-x (virtualization technology) in my computer's BIOS settings. If this is unavailable, VirtualBox client operating systems would be limited to 32-bit versions, and we would need to choose the corresponding 32-bit "i386" file to download. Both files are currently at about 36-37 MBytes in size, and so quite lightweight.

```
alan-HP-Spectre-x360-Convertible ~ # cat /proc/cpuinfo | grep vmx
flags       : fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi
mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good
nopl xtopology nonstop_tsc cpuid aperfmperf tsc_known_freq pni pclmulqdq dtes64 monitor ds_cpl vmx est tm2
ssse3 sdbg fma cx16 xtpr pdcm pcid sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c
rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb intel_pt tpr_shadow vnmi flexpriority ept vpid fsgsbase t
sc_adjust bmi1 avx2 smep bmi2 erms invpcid mpx rdseed adx smap clflushopt xsaveopt xsavec xgetbv1 xsaves dt
herm ida arat pln pts hwp hwp_notify hwp_act_window hwp_epp
```



Another approach would be to install the system directly on an actual computer. In this case, a standard LiveCD or USB would be required to boot the system initially - or some other means of achieving a minimal working system. Networking would also be useful on the target computer, to download the Ubuntu Base image. However, we would be

able to install the 64-bit system directly, if our target hardware supports it (i.e. has a 64-bit CPU). This would be the case for most computers built over the last 6-7 years onward.

Once inside VirtualBox, I created a new virtual machine with the following specifications:

- Type Linux / Ubuntu (64-bit).
- 2048 MBytes of RAM (mostly for the LiveCD, this can be reduced significantly for the final system).
- Dynamically allocated VDI hard drive, 8.0 GBytes in size (also very much overkill).



I then connected the virtual CD drive to a Linux Mint 18 Cinnamon (64-bit) ISO image that was in my Downloads folder, to use for the initial booting of the target system.

I then booted the virtual machine from the Linux Mint CD image. Once running, I used gparted to create a new ms-dos partition table on the virtual hard drive, /dev/sda, and a single partition formatted with ext4. Any other partition management tool would have served this purpose, such as fdisk, parted or graphical equivalents.

I transferred the Ubuntu Base compressed file over from the host computer using SSH in a terminal window:

```
scp  
alan@10.0.2.2:/home/alan/Downloads/ubuntu-base*
```

Another easy-to-use option would have been to re-download the file directly from the Internet, using Firefox.

It was time to mount the virtual hard drive, decompress, and transfer the Ubuntu Base image. In a terminal:

```
sudo bash
```

```
mount /dev/sda1 /mnt
```

```
tar xzf ubuntu-base-17.10-  
base-amd64.tar.gz -C /mnt/
```

At this point, the virtual hard drive contains the base Ubuntu system. Now, we need to add a kernel, an initial ramdisk, an init script, and a bootloader such as GRUB. Also in the terminal:

```
mount -o bind /dev /mnt/dev
```

```
mount -o bind /dev/pts  
/mnt/dev/pts
```

```
mount -o bind /proc /mnt/proc
```

```
mount -o bind /run /mnt/run
```

```
mount -o bind /sys /mnt/sys
```

```
chroot /mnt/
```

Our prompt should now change to "root@mint:/#". All commands we issue within the chroot jail will affect only the virtual hard drive on which Ubuntu Base is to be installed, not the Mint LiveCD. Let us continue:

```
echo "nameserver 8.8.4.4" >  
/etc/resolv.conf
```

```
apt update
```

```
apt upgrade
```

```
apt install init
```

```
apt install linux-image-
```

generic

Let us review these commands. The first activates DNS within the chroot, pointing domain name resolution to Google's server at IP address 8.8.4.4. We then update apt's cache of available packages. Then, we upgrade all installed software to the latest versions; this is just to stay on the safe side, since very little should have changed and need to be updated in such a small system image. Then, we install the init script. The final command installs whatever version of the generic Linux kernel is current. This requires about 111 MBytes of bandwidth. The apt tool also creates a suitable initial ramdisk. Furthermore, the software installation hooks in the package configuration are smart enough to detect that GRUB has not yet been installed on the target system, and proposes to do so. Naturally, we accept this choice and indicate option 1 (for /dev/sda - notice no trailing "1") as our destination for GRUB.

At this point, I like to install basic networking tools, in order to access the ifconfig and route commands:

```
apt install net-tools
```

Finally, we need to create a root

password, and perhaps also create a new user profile that can be used for non-administrative tasks. Still within the chroot jail:

```
passwd
```

```
adduser alan
```

The first command prompts us for a new administration password, while the second creates a normal user named "alan". Adapt to your needs as appropriate. This normal user will not have administrative privileges, unlike the first normal user the standard Ubuntu installer application creates; i.e., the user will not have sudo. This can, naturally, be changed if we so wish.

This is basically all we need to have a bootable Ubuntu Base system. We get out of the chroot, unmount the Ubuntu Base virtual hard drive, and perform a system reboot of the virtual computer:

```
exit
```

```
umount /mnt/*/* ; umount  
/mnt/* ;  
umount /mnt
```

```
shutdown -r now
```

VirtualBox should now disconnect the Live CD image from the virtual

TUTORIEL - INSTALLER UBUNTU BASE

computer's CD drive. On reboot, the internal virtual hard drive should be booted from, and our new system should boot up in text mode. Log in using either root, or the new user profile created above.

For some reason, the root filesystem is mounted read-only on reboot. This can easily be fixed by remounting in read-write mode by hand, and then apt caches may be cleaned releasing yet more disk space. As root:

```
mount -o remount,rw /
```

```
apt clean
```

If required, we can also start networking. There are several ways of doing this, but a quick-n-dirty fix taking into account the quirks of VirtualBox's way of doing NAT networking would be:

```
ifconfig enp0s3 10.0.2.15/24
```

```
route add default gw 10.0.2.2
```

```
echo "nameserver 8.8.4.4" >  
/etc/resolv.conf
```

Once done, our new system consumes just 770 MBytes of disk space, and 30 MBytes of RAM. As a consequence, it is at about the fastest and leanest an Ubuntu-based system of this generation could ever be. However, since no programs have yet been installed, it is also just about useless for a real user. We can change this by installing precisely the amount of software we actually need for a particular task, or set of tasks. For instance, if we needed a file server, one could install sshd or samba, and that would be all. If we needed a database server, install one of the various sql servers available, or couchdb as a more exotic alternative, and nothing more. This could even be turned into a minimalistic Internet Kiosk by installing a simple web

browser, though in this case both X11 or Wayland, and a login manager such as lightdm (or even nodm) would also be needed. The possibilities are endless.

Such a lightweight system would be perfect for an older or less capable computer. That being said, in that particular perspective, installing a full desktop environment on top of the minimalistic Ubuntu Base would be something of a contradiction in terms. We would be, in essence, recreating what a normal Ubuntu distribution already offers us. For this reason, Ubuntu Base is perhaps best seen as a means to obtain a platform on which to create very specialized virtual computers, servers on older hardware, or even IoT devices. In that context, starting out from a base system lighter than even Ubuntu Server can make sense.

```
root@localhost:~# mount -o remount,rw /  
root@localhost:~# apt clean  
root@localhost:~# df -lh  
Filesystem      Size  Used Avail Use% Mounted on  
udev            976M   0  976M   0% /dev  
tmpfs           200M  3.1M  197M   2% /run  
/dev/sda1       7.8G  770M  6.6G  11% /  
tmpfs           999M   0  999M   0% /dev/shm  
tmpfs           5.0M   0   5.0M   0% /run/lock  
tmpfs           999M   0  999M   0% /sys/fs/cgroup  
tmpfs           200M   0  200M   0% /run/user/0  
root@localhost:~# free -m  
              total        used        free      shared  buff/cache   available  
Mem:           1996          30        1912          3          54        1864  
Swap:          0           0           0
```



Détenteur d'un doctorat au sujet de la société de l'information et du savoir, **Alan** enseigne l'informatique à l'Escola Andorrana de Batxillerat, un lycée. Il a donné des cours de GNU/Linux à l'Université d'Andorre et, auparavant, avait enseigné l'administration des systèmes GNU/Linux à l'Université ouverte de Catalogne (UOC).



Dans cette série, nous examinons le monde de FreeCAD, une application Open Source de modélisation par CAO qui est encore en bêta, mais qui a reçu un bon accueil ces dernières années. Naturellement, elle est facilement disponible dans les dépôts d'Ubuntu. Dans l'article précédent (le septième) sur l'utilisation de FreeCAD, nous nous sommes concentrés sur le maillage en tant qu'objet primitif complexe, qui nous permet de créer des formes et des volumes, soit à partir de données numérisées, soit par des techniques de programmation simples.

Dans cette partie, nous utiliserons cette technique en combinaison avec d'autres outils FreeCAD plus ordinaires pour construire une représentation 3D d'un immeuble moderne avec une structure de toit en treillis.

LES MAILLAGES ARCHITECTURAUX

Une partie de l'inspiration de cet article vient d'immeubles comme les Esplanade Theatres on the Bay à Singapour (DP Architects) et l'auditorium du Rihke Park à Tbilissi (Géorgie) (Studio Fuksas). Dans tous les cas, un

arrangement maillé a été utilisé pour l'extérieur de l'immeuble. D'un point de vue architectural, cette technique a au moins deux points forts :

- D'une part, le treillis peut supporter une proportion importante de son propre poids, ce qui permet à l'architecte de couvrir une grande surface sans utiliser de supports internes comme des colonnes. C'est parfait pour les larges espaces ouverts tels que des salles de concert ou de sport, ou même les grands halls des bâtiments d'aéroport, tels que l'aéroport international de Hong Kong à Chek Lap Kok.
- D'autre part, l'utilisation d'un treillis implique qu'une partie de la force structurelle vient de l'emploi des surfaces courbes qui partagent certaines de leurs propriétés avec l'arche. Le résultat final est un bâtiment qui évite les formes plates et régulières qui sont devenues si communes dans l'architecture urbaine du siècle dernier.

Certains treillis simples peuvent être dessinés « à la main », tant que les formes générales restent planes ou utilisent une courbure unique. Cependant, dès que la forme finale contient deux courbures - le long de deux axes d'intersection en même temps -

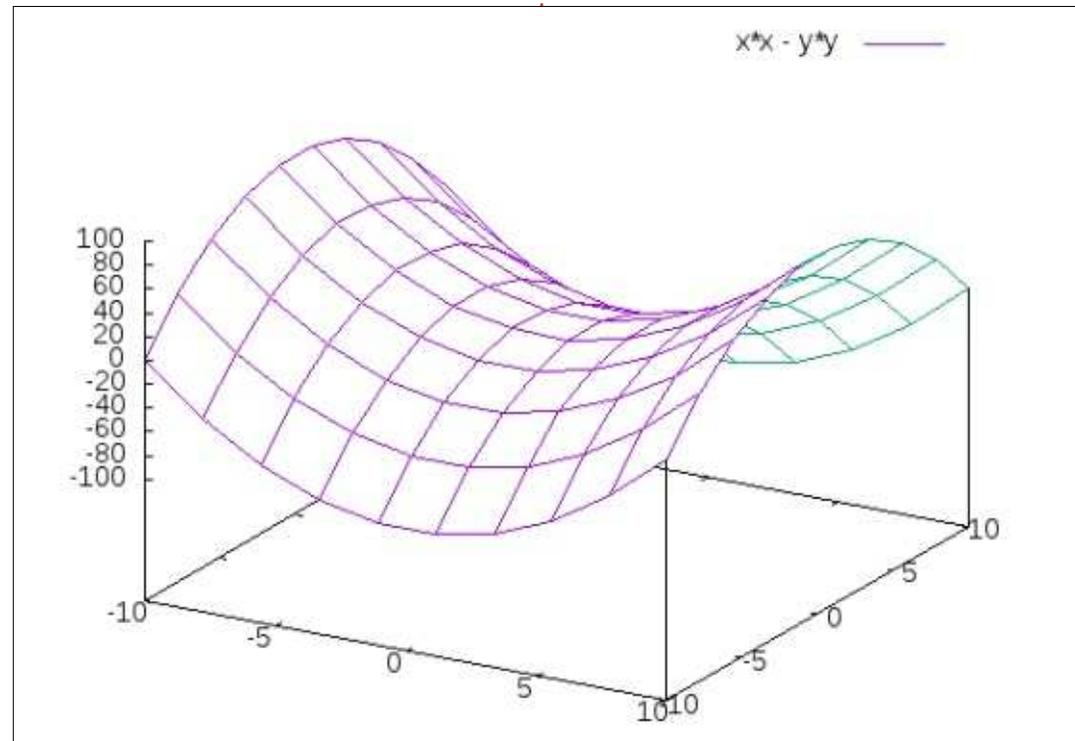
les choses tendent à devenir un peu plus complexes. C'est là que l'ordinateur prend place comme outil essentiel pour calculer la position de chaque point du treillis et, de là, calculer les contraintes attendues dans la structure physique.

Par exemple, considérons la fonction hauteur $h(x, y) = x^2x - y^2y$. Un simple tracé de la surface nous montre que, au voisinage du point d'origine des coordonnées (0, 0, 0), cette surface montre une courbure concave vers le

haut, le long de l'axe X. Cependant, la courbure est convexe le long de l'axe Y, tournée aussi vers le haut. Cette fonction très simple montre une double courbure qui est facile à calculer, mais qui n'est pas facile à dessiner avec précision sans l'aide d'un ordinateur.

INTÉGRATION D'UN TREILLIS DANS UN BÂTIMENT

Dans la présentation qui suit, nous créerons un pavillon de taille moyenne



utilisant un treillis défini avec la fonction ci-dessus. Naturellement, le lecteur n'est pas encouragé à construire en vrai une telle structure, à moins de disposer d'une grande expérience d'ingénieur et d'architecte pour s'assurer que les matériaux sont correctement choisis et dimensionnés, que les règles d'urbanisme local sont respectées et que la construction a des chances de résister pour l'usage prévu. Il y a quelques aspects délicats à considérer avec ce type de construction, le fait que le treillis soit contraint en compression dans l'axe Y et en tension dans l'axe X, n'étant pas le moindre, et le tout

par son propre poids. Des facteurs comme la pression du vent et le poids de la pluie, de la glace, de la neige, etc., seraient aussi à prendre en compte.

Commençons par écrire un court programme en Python pour créer un fichier STL avec le maillage. Le code complet peut être trouvé à : <https://pastebin.com/tsi5dbLw>.

Travaillant sur une surface de base de 40 x 30 m dans le plan XY, nous calculerons une valeur de hauteur suivant l'axe Z. Pour cet exemple, les hauteurs minimum et maximum ont été

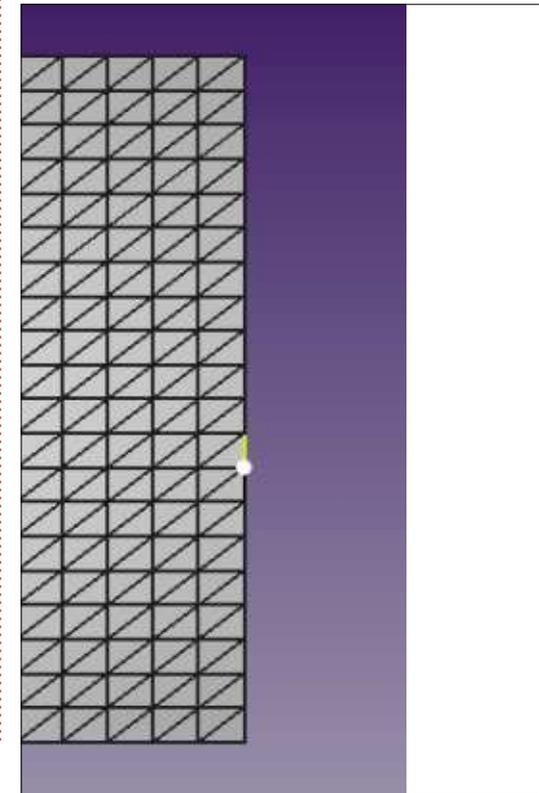
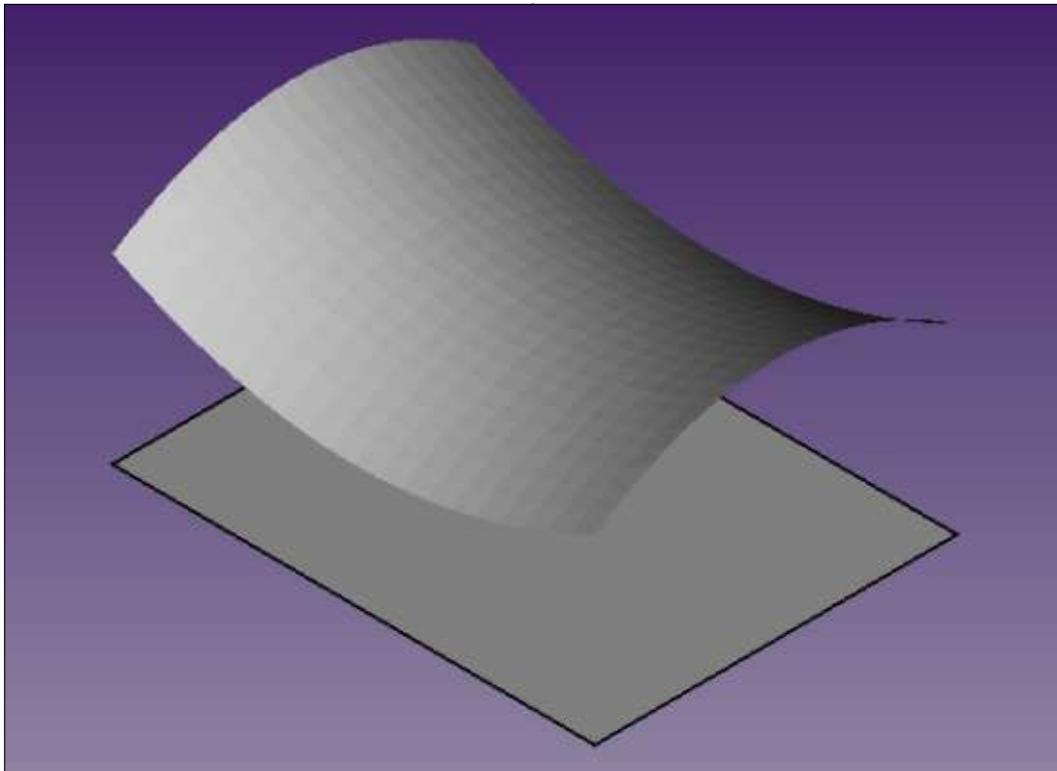
respectivement prises à 10 et 20 m au-dessus du niveau du sol, bien que cela puisse être facilement mis à l'échelle et ajusté pour correspondre à une implantation particulière. Enfin, 20 points de maillage séparés ont été pris le long des deux directions X et Y.

Le résultat final de ce programme est un fichier STL qui peut être importé dans un nouveau projet FreeCAD en utilisant la technique présentée dans la partie précédente de la série. Pour mieux visualiser les proportions, un rectangle de 40 x 30 m a été dessiné au niveau du sol, sous le toit.

Poser les cloisons pour fermer les murs des quatre côtés ne sera pas une tâche facile, car les quatre cloisons auront trois côtés droits, mais le quatrième (celui du haut) devra suivre une courbe parabolique. Il y a plusieurs solutions à ce problème. L'une d'elles est d'écrire des programmes supplémentaires en Python pour créer les fichiers de maillage qui conviennent. Cependant, FreeCAD a d'autres alternatives. Dans ce cas, je rends visibles les lignes du maillage. Sélectionnez l'objet maillé et, dans la zone des Propriétés, sélectionnez « Display mode » (mode d'affichage) et passez du mode d'origine « Shaded » (ombré) à « Flat lines » (simples lignes).

Nous pouvons aller maintenant dans l'atelier Draft et, en travaillant soigneusement, dessiner un nouveau « Wire » - en sélectionnant, point par point, tous les sommets le long d'un bord du toit. Ensuite, fermez la forme en sélectionnant chaque coin de rectangle du sol en dessous de ce bord. Cette forme plane peut ensuite être transformée en objet Wire plan. Simple ? [Ndt : plain, en anglais, d'où le jeu de mots plane/plain] Puis, procédez de la même manière pour les autres parois.

Une fois que les murs ont été



définis, le maillage du toit peut, soit être laissé avec sa structure maillée apparente, soit le mode d'affichage peut être remis à « Surface », comme vous le voulez.

On peut ensuite ajouter des colonnes pour tenir le maillage du toit. Cependant, il devient apparent que le maillage n'a pas d'épaisseur. Même si beaucoup de soin est pris avec la hauteur des colonnes, certains dysfonctionnements apparaissent car les extrémités des colonnes sont des disques horizontaux, mais la partie du maillage qui les touche n'est pas plate. Les intersections avec les quatre murs ex-

térieurs du bâtiment deviennent aussi apparentes.

Une solution relativement réaliste est de donner un peu d'épaisseur au maillage du toit. Il suffit de sélectionner le maillage et créer une nouvelle Extrusion dans l'atelier Part. Les surfaces du dessous et du dessus auront la forme du maillage, tandis que l'épaisseur verticale de l'objet sera la même tout au long de sa surface. Une valeur d'un mètre semble appropriée pour ce bâtiment.

Enfin, la couleur et le niveau de transparence de chaque objet peuvent

être ajustés dans la zone Propriétés. Par exemple, pour représenter des murs en verre - permettant à la lumière d'entrer dans le bâtiment entre les colonnes - les quatre murs peuvent rester avec leur couleur par défaut ([204, 204, 204]), mais avec une transparence de 40 %.

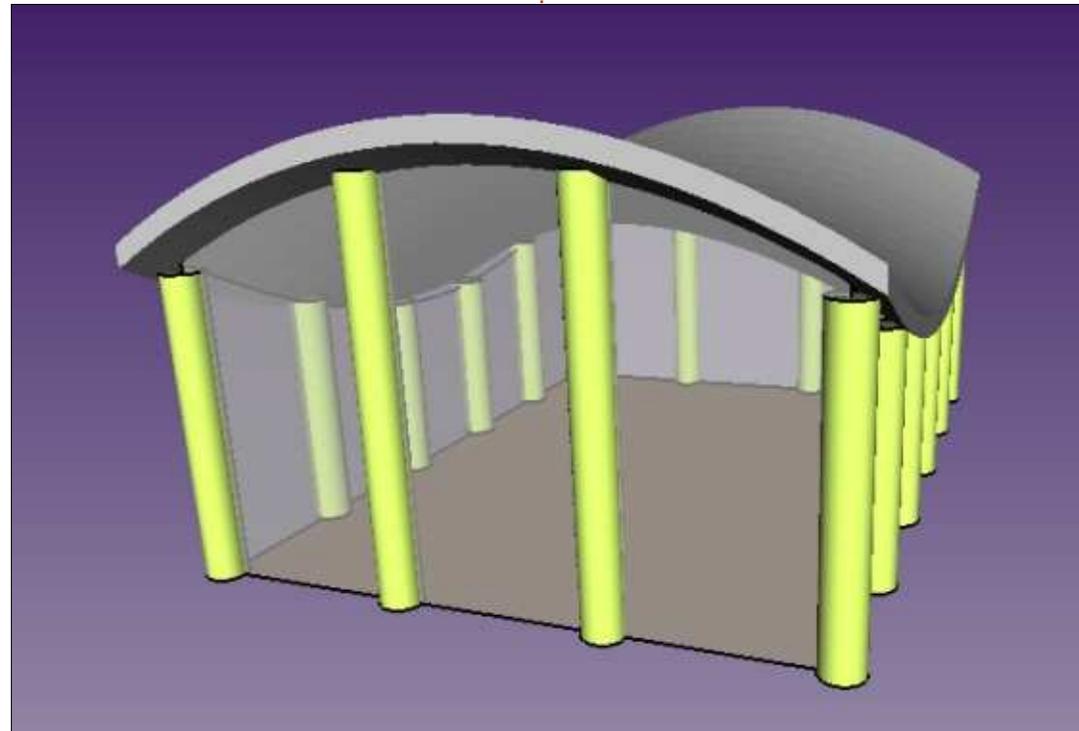
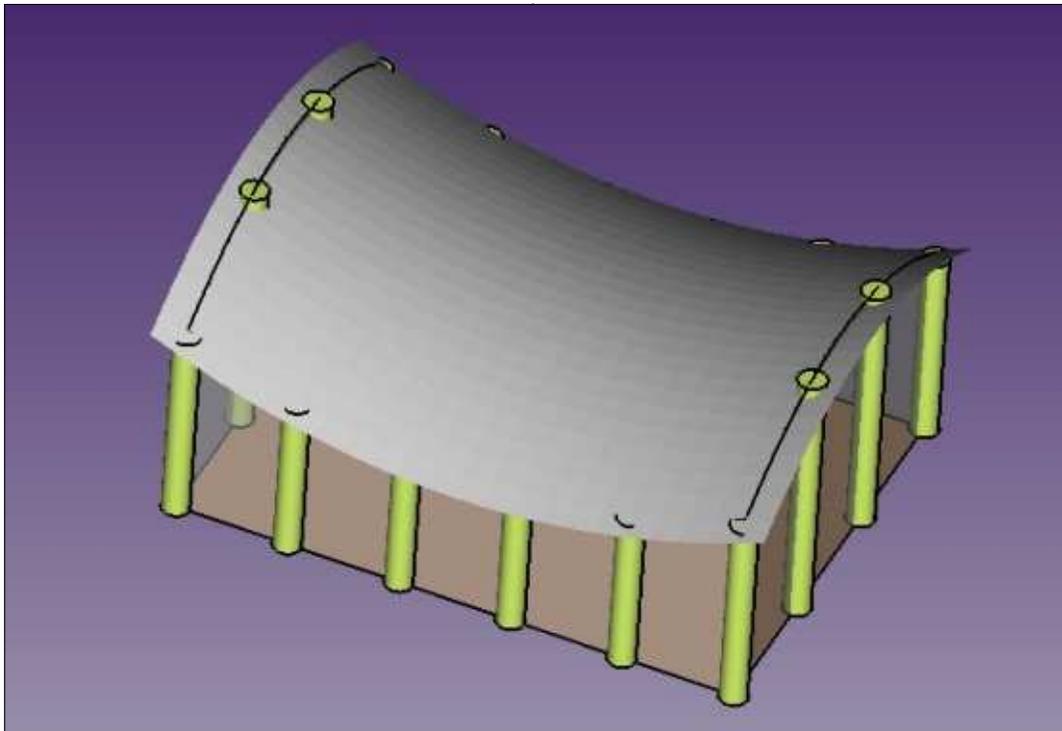
ET ENSUITE ?

Dans cet article sur l'utilisation de FreeCAD, nous avons utilisé un maillage en combinaison avec d'autres outils FreeCAD plus classiques, pour construire une représentation en 3D d'un bâtiment moderne avec un toit à structure maillée.

Dans la prochaine partie, nous explorerons le passage d'un modèle informatique à un objet matérialisé, en exportant un projet finalisé pour l'imprimer avec une imprimante 3D.



Détenteur d'un doctorat au sujet de la société de l'information et du savoir, **Alan** enseigne l'informatique à l'Escola Andorrana de Batxillerat, un lycée. Il a donné des cours de GNU/Linux à l'Université d'Andorre et, auparavant, avait enseigné l'administration des systèmes GNU/Linux à l'Université ouverte de Catalogne (UOC).





For a few challenges at home, I thought I could make some projects with a microcontroller. A microcontroller is small, affordable, and it seemed fun to learn something new. I chose the attiny13a from ATMEL Corp for my first few projects because this microcontroller is not too complicated (with a low pinout), but has enough functions for the first projects, and the attiny13a can operate under low power conditions. First, I tried the obvious for a beginner, and installed Arduino and the smeezekitty-core. But, after some experiments, the compiled code got too big and I had to often refer to the Help to look up the Arduino syntax. Thus, I was looking for a BASIC compiler for AVR for Linux – to flatten the learning curve and eventually get smaller hex files. After research, it shows that, unfortunately, most available products are for MS Windows. In the first place, I thought this was the case for Great Cow Basic - no Linux distribution. The Integrated Development Environment (IDE) or the Graphical Programming Tool are not (yet) available for Linux. However, the Great Cow BASIC compiler can

run natively on Linux. And, to edit the source user programs in Linux, you could use any text editor you like. The result... a native Linux compiler, with an editor of my choice, and support for the microcontroller I had chosen.

GREATCOWBASIC OVERVIEW

GreatCowBasic comes with a syntax similar to QBASIC/FreeBASIC, and supports flow control statements, math operators and data type, subroutines, functions, data tables, and inline assembler. On the hardware side, things like PWM, SPI, ADC and timer handling are handled via an extensive set of libraries.

With GreatCowBasic, you can produce portable, reusable code for most 8-bit PIC and AVR microcontrollers (actually the project lists around 1100 supported chips); due to some hardware differences, one would have to change the code slightly if one changes from AVR to PIC and vice versa. In addition, the code is, as far as I can say, highly optimized both in speed and size

aspects. Recently, a new version (v0.98.01) was released, for this article I used the former version (v0.97). I recommend using the newest release.

INSTALLATION

Because FreeBASIC and GreatCowBasic are not available through the package management, you have to install a binary tarball for FreeBASIC, and then compile GCB from source.

To install FreeBASIC, the following commands (change x86 to x86_64 if using a 64 bit computer) should do. If it is more convenient for you, download the files with your browser of choice and omit the first lines. I assume you are in your home directory:

```
wget
'https://sourceforge.net/projects/fbc/files/Binaries%20-%20Linux/FreeBASIC-1.05.0-linux-x86.tar.gz' -O
FreeBASIC.tar.gz
```

```
tar xvf FreeBASIC.tar.gz
```

```
cd FreeBASIC*
```

```
sudo ./install.sh -i
```

To get the compiler to work without the path prefix, make a softlink:

```
sudo ln -s /opt/bin/fbc
/bin/fbc
```

After that, the FreeBASIC compiler should just work; try with:

```
fbc -version
```

If you get an error message, or, later on, have issues with compiling, you may need some additional software in order to get the FreeBASIC compiler to run. With the following, you install the necessary libraries as stated in the FreeBASIC README:

```
sudo apt install gcc
libncurses5-dev libffi-dev
libgl1-mesa-dev libx11-dev
libxext-dev libxrender-dev
libxrandr-dev libxpm-dev
```

Get the archive from the GreatCowBasic project site, extract it with unrar (when prompted, enter the password "GCB").

OPTIONAL:

```
sudo apt install unrar (maybe
unrar-unfree depending on
*buntu-Version)
```

```
wget
'https://sourceforge.net/proj
ects/gcbasic/files/_
GCBasic%20-
%20Linux%20Distribution/GCB%4
0Syn_9801.rar/download' -O
GCB.rar
```

```
sudo unrar x GCB.rar
```

For building GreatCowBASIC, I just compile it without the installation script:

```
cd Great*/Sources/
```

```
fbc -exx -v -arch native
gcbasic.bas
```

The installation part works fine, so that you can use the script at least to copy the files to the right place:

```
sudo chmod +x install.sh
```

```
sudo ./install.sh install
```

Make another softlink (to omit the path prefix later on):

```
sudo ln -s
/opt/GCBASIC/gcbasic
/bin/gcbasic
```

After that, test if it works:

```
gcbasic /version
```

The installation is done; you are ready to develop your first programs with Great Cow BASIC!

FIRST PROGRAM

Have a look at the recently installed folder /opt/Demos. There you can find plenty of examples of projects already done with GreatCowBasic. 'First-start-sample.gcb' is a good starting point for a first physical "hello world", eg, blinking a LED. An attiny13a has an internal clock up to 9.6 MHz which is set at 1.2 MHz fresh from factory. To change this in order to get faster timing, you would have to change the fuses, which is not within the scope of this article. And unless you know what you are doing, do not change the fuses, because you could brick the chip and render it useless.

```
#chip tiny13a, 1.2
Do Forever
  PulseOut PortB.4, 100 ms
  Wait 900 ms
Loop
```

This code infinitely lights up the LED for 100 milliseconds, after this period of time the LED stays off for

ATTINY13A FEATURES

- 1 KByte flash memory for programs
- 64 Byte EEPROM non volatile memory
- 64 Byte SRAM volatile memory
- 1 8-bit Timer/Counter
- 2 PWM Channels
- 4 channel 10-bit analog digital converter w. noise reduction mode
- 6 programmable I/O PIN
- 1 programmable watchdog timer
- 3 sleep modes (idle, ADC noise reduction, power down)
- brownout detection (e.g. detect weak batteries)
- operating voltage: 1.8 V to 5.5 V depending on clock settings

another 900 milliseconds. Save the code in a text editor under blink.gcb. Then compile it, using GreatCowBasic with the integrated assembler, to a hex file that the attiny13a understands. Other supported AVR chips need other options, have a look at the datasheet for individual changes.

```
gcbasic /O:blink.hex /A:GCASM
blink.gcb
```

GreatCowBasic gives some information about the compilation: in blink.lst, there is info about used registers and ram usage, and, in blink.html, you get a comprehensive overview about the compile run. For this example, it shows Chip Model: TINY13A, Program Memory: 32/512

words (6.25%), RAM: 0/64 bytes (0%).

To program the microcontroller afterwards, you need:

- 1 breadboard
- 6 jumper wires, maybe some short wire bridges
- 1 LED, a 5 mm red, yellow, green would suffice
- 1 resistor, say 220 ohm
- 1 Arduino with ISP-Sketch or any other AVR programmer
- (1 10 µF capacitor if using Arduino as ISP, see references)

If using an Arduino UNO as ISP; Put the capacitor between RESET and GND (please note the right polarity), then look at the table for how to connect from Arduino UNO to attiny13a.

TUTORIEL - GREAT COW BASIC

After preparing the breadboard, the arduino, and the chip, use avrdude to get the hex file to the attiny13a.

```
avrdude -p t13 -P  
/dev/ttyACM0 -c avrisp -b  
19200 -U flash:w:blink.hex
```

This command tells avrdude to flash the hex file with the ArduinoISP on /dev/ttyACM0 with a baudrate of 19200 to the attiny13a (if avrdude complains that the chip identifier does not match, try the -F parameter to force the flash operation, this normally does not brick the chip). After the hex file is written successfully, connect the resistor and the anode (the side with the longer lead) of the LED to PB4 (PIN3). Connect the cathode (with the shorter lead or the flat spot on one side) of the LED with GND.

Note: you could write a small shell script which gets the name of the chip and of the hex file so that GCB has a more streamlined workflow of compiling and flashing the microcontroller. For example, see `\GreatCowBasic\flash.sh` in the programs directory, and check the cli parameter section of the help file. I omitted this step and therefore flashing the microcontroller is an extra step for me.

Conclusion

For me, the GreatCowBasic compiler offers a convenient and efficient way to program the microcontroller of choice. Additionally, it gives the option to quickly change the microcontroller between PIC and AVR. The project is active, and the developers (and also the community) seem to be very kind and helpful. There are plenty of device drivers and example code for

an array of projects which can be built with it (there are drivers for EEPROM, LCD, RTC - too many to list them all). If this article has attracted your attention, try GreatCowBASIC yourself. In further articles, I will show what the attiny13a and GreatCowBASIC have to offer.

Drop some comments at <https://www.evilmagazine.de/fcm> if you wish.

REFERENCES

GreatCowBasic Project
<http://gcbasic.sourceforge.net/>

GreatCowBasic Release notes
<https://sourceforge.net/p/gcbasic/discussion/579125/thread/d86422f0/>

GreatCowBasic help file
<http://gcbasic.sourceforge.net/help/>

GreatCowBasic cli parameter
http://gcbasic.sourceforge.net/help/command_line_parameters.html

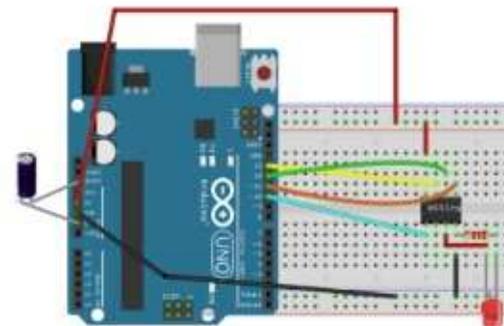
FreeBASIC
<https://www.freebasic.net/>

attiny13a datasheet
<http://www.atmel.com/images/doc8126.pdf>

ArduinoISP
<https://www.arduino.cc/en/Tutorial/ArduinoISP>

ArduinoISP > attiny13a
<https://gist.github.com/dwaq/8239080>

ARDUINO UNO	ATTINY13A	COLOR OF WIRE
5V	VCC (PIN8)	RED
GND	GND (PIN4)	BLACK
PIN10	RESET (PB5)	CYAN
PIN11	MOSI (PB0)	ORANGE
PIN12	MISO (PB1)	GREEN
PIN13	SCK (PB2)	YELLOW



Boris est titulaire d'un baccalauréat en administration des affaires et travaille pour une compagnie d'assurance. Quand il ne travaille pas, il s'occupe de sa famille et aime jouer avec ses enfants ou bricoler avec ses projets personnels.

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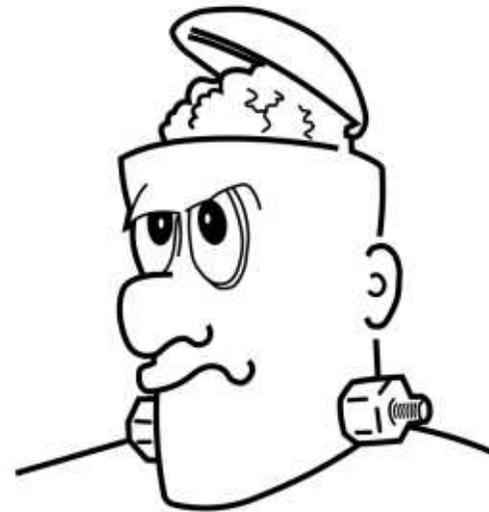
En faisant des recherches pour l'article du mois dernier, j'ai trouvé que le comportement par défaut d'Inkscape quand on ajoute un LPE à un clone, ou quand on utilise l'option Édition > Cloner > Cloner le chemin original (ECI), a changé, utilisant l'effet « Remplir dans les nuées » en remplacement de l'effet « Cloner le chemin original ». Au premier abord, il semble que ceci apporte une régression évidente : il n'est plus possible de déplacer le clone indépendamment de son original. Aussi, pourquoi cette modification a-t-elle été faite ? Pour pouvoir l'expliquer, vous devez comprendre ce que fait ce LPE dans une utilisation quotidienne.

Une chose, souvent mal comprise à propos des LPE (sauf pour les lecteurs de cette série d'articles, car j'y ai attiré votre attention précédemment), est que la sortie d'un LPE n'est qu'un seul chemin. Celui-ci peut être compliqué, comprenant des sous-chemins, mais en termes de style, il reste un chemin unique. Il ne peut avoir qu'une couleur et un style de ligne uniques, et un seul remplissage. Quand vous utilisez quelque chose comme le LPE Contour dynamique (voir partie 47),

ou le nouveau LPE Contour fuselé (voir ci-dessous), il n'insuffle pas, en quelque sorte, à Inkscape la capacité magique de créer des contours à largeur variable (une fonctionnalité que le SVG 1.1 sous-jacent ne permet pas). À la place, il crée une forme remplie qui suit votre chemin original et donne l'apparence d'avoir une largeur de contour variable. Mais, en prenant cette approche, la capacité à remplir l'original est perdue, tout remplissage s'applique au chemin avec le semblant de contour qui est la sortie du LPE.

C'est particulièrement un problème pour des choses comme les bandes dessinées et les comics, où un contour variant artistiquement est une nécessité, mais où vous voulez aussi colorier les zones. C'est ainsi qu'est né le LPE Cloner le chemin original (vu aussi dans la partie 47), qui vous permettait enfin d'appliquer un effet dynamique à votre contour, mais qui, ensuite, clonait aussi la forme originale avec un chemin à sacrifier sur lequel était appliqué le LPE et qui pouvait être rempli indépendamment. Mais ça ne marche que sur un seul chemin à la fois. Et les personnages de bande dessinée sont souvent faits de plus d'un

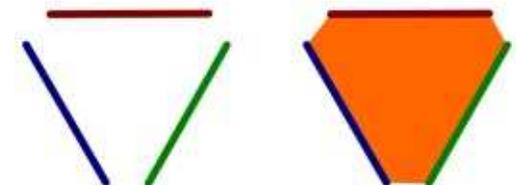
chemin - avec, parfois, des zones effacées le long du trait, placées avec art. Pour preuve, revenons à Frankie, un personnage de la bande dessinée *Monsters, Inked* dessinée par mon co-auteur Vincent Mealing. Ce coup-ci, je le représente avec les lignes « faites à la main » déjà tracées manuellement, avec des interruptions artistiques du trait pour les besoins de la démonstration :



Remplir une telle forme est un problème. Cela peut être fait manuellement en créant un objet séparé pour le remplissage, dont la forme est ajustée pour qu'elle convienne. L'outil Seau peut aider, mais de tels vides doivent, en premier, être reliés avec soin à des

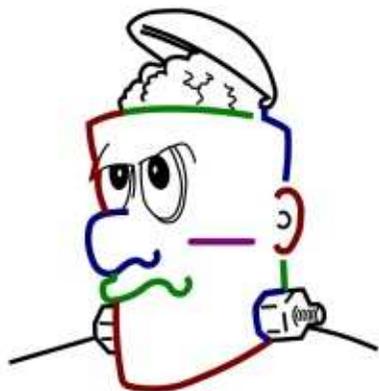
objets temporaires. Dans un cas comme dans l'autre, un ajustement de la silhouette ne serait pas automatiquement reflété dans le remplissage. Pour cela, nous avons besoin d'un quelconque clone, mais cela interfère avec notre possibilité d'ajouter des LPE pour faire varier la largeur du trait. Le LPE Cloner le chemin original ne peut pas non plus nous aider, car la forme que nous voulons remplir (juste le visage, pour l'instant) est clairement construite avec plus d'un chemin. Et c'est là justement que l'effet « Remplir dans les nuées » passe au premier plan.

Remplir dans les nuées vous permet de rassembler plusieurs chemins dans un seul LPE. La sortie est le résultat de la création d'un chemin qui relie tous les chemins constituant en une seule forme, par une liaison implicite de l'extrémité de l'un à celle de l'autre dans la liste et la fin du dernier chemin au début du premier. Un exemple évident permet de s'en faire une idée :



Sur la gauche, nous voyons trois chemins - en ligne droite dans ce cas pour la clarté, bien que des lignes courbes fonctionneraient tout aussi bien. Sur la droite, le résultat de créer un chemin temporaire, de lui ajouter le LPE, puis d'ajouter chacun des trois chemins, est visible. Le résultat du LPE a été rempli avec de l'orange et son contour a été enlevé. Il se met à jour automatiquement pour correspondre aux modifications qui sont faites aux formes des chemins d'origine. J'espère qu'il est clair que la nouvelle forme est le résultat du dessin d'un chemin qui suit chacune des parties qui le compose et relie leurs extrémités avec des lignes droites.

Maintenant que vous comprenez l'idée de base derrière cet effet, passons à un exemple plus détaillé en coloriant Frankie. Pour la clarté, Je vais commencer par changer la couleur et l'épaisseur de chaque chemin que nous ajouterons au LPE :



Vous avez peut-être noté la balafre violette sur son visage. Ne vous inquiétez pas, il n'y a pas eu de bagarre. Cette ligne est le chemin temporaire auquel le LPE sera ajouté ; il disparaîtra dans un moment. Une sélection du chemin et l'ajout de l'effet Remplir dans les nuées donne le résultat suivant dans l'interface utilisateur :

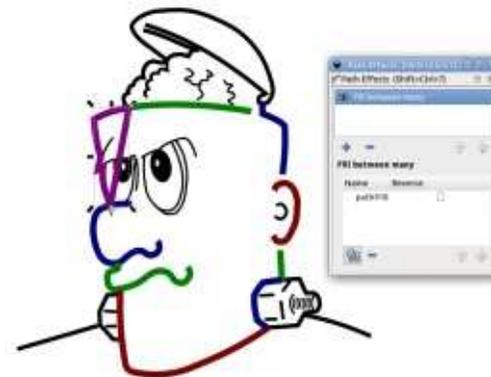


Maintenant, le plus dur commence. Nous devons copier chacun des chemins sources dans le presse-papier de façon à lui ajouter un lien dans ce dialogue en utilisant le bouton en bas à gauche. Le bon sens suggérerait que vous pouvez sélectionner tous les chemins et les ajouter d'un seul coup ; mais, malheureusement, le bon sens aurait tort dans ce cas. À la place, vous devez les ajouter un par un. Pour aggraver les choses, chaque fois que vous sélectionnez un chemin à copier, le chemin à sacrifier se désélectionne, ce qui fait que l'interface utilisateur ci-dessus disparaît. Vous devez alors re-sélectionner le chemin temporaire avant

de pouvoir ajouter le lien copié. Ce n'est pas difficile, mais ça prend du temps. Aussi, pour ajouter votre premier chemin (celui sur la gauche en haut du visage), voici les étapes :

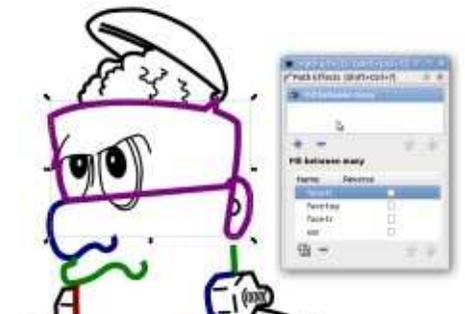
- 1) Créez un chemin temporaire, si vous ne l'avez pas déjà fait, et ajoutez-le le LPE.
- 2) Sélectionnez le premier chemin à ajouter et copiez-le dans le presse-papier.
- 3) Re-sélectionnez le chemin temporaire.
- 4) Cliquez sur le bouton en bas à gauche du dialogue du LPE pour ajouter le lien.

Faites-le correctement et vous arriverez à quelque chose comme ceci.



Il y a quelques points importants à noter à ce stade. D'abord, vous pouvez voir que le chemin temporaire a disparu, remplacé par la sortie du LPE. Celui-ci a la même forme que le chemin attaché, mais les terminaisons

sont reliées. Il adopte aussi le style du chemin temporaire. Si votre premier chemin est droit, il est facile de louper la sortie du LPE qui est dessus ; aussi, l'utilisation d'un style contrasté pour le chemin temporaire est fortement recommandé pour cette partie du processus. Vous noterez aussi que le chemin est listé dans le dialogue du LPE, comme chemin « path918 » ici. C'est bien pour des formes avec seulement une poignée de chemins, mais vous pouvez rapidement perdre de vue à quoi chacun correspond au fur et à mesure que la complexité croît. Ce nom est pris à partir de l'étiquette du chemin, qui peut être paramétrée via le dialogue Propriétés de l'objet dans le menu contextuel de l'objet. Comme cela deviendra clair sous peu, vous aurez besoin de distinguer les chemins et la saisie d'étiquettes peut vous rendre la vie beaucoup plus facile, au prix d'un travail supplémentaire au début. Attention : la liste dans le dialogue du LPE ne se met pas à jour automatiquement ; aussi, il est impératif d'adapter les étiquettes en premier. La

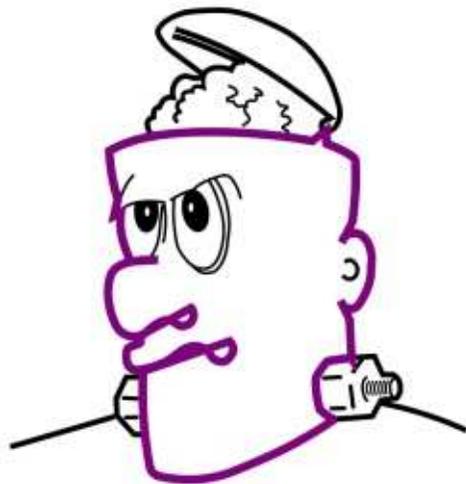


répétition des étapes 2-4 pour quelques autres chemins nous amène à ceci (voir bas de la 4^e colonne page précédente).

Nos affaires avançaient plutôt bien, avec le nouveau chemin qui suit le tracé de la tête de Frankie, jusqu'au point où j'ai ajouté l'oreille. Quand ce LPE fait la connexion des extrémités des chemins, il ne relie pas une extrémité à la plus proche, mais plutôt la fin d'un chemin au début du suivant. Dans ce cas, le chemin de l'oreille a été créé « à l'envers », le départ étant en bas et la fin en haut, entraînant la torsion de la sortie que vous pouvez voir sur l'image. Heureusement, il y a plusieurs solutions faciles à ce problème : vous pouvez simplement inverser la direction du chemin source en utilisant Chemin > Inverser, ou, encore mieux dans la plupart des cas, vous ne touchez pas au chemin source et vous l'inversez dans le LPE en cochant la case Inverser dans le dialogue des effets du chemin approprié. Maintenant, vous pouvez voir pourquoi il est utile de nommer clairement les chemins.

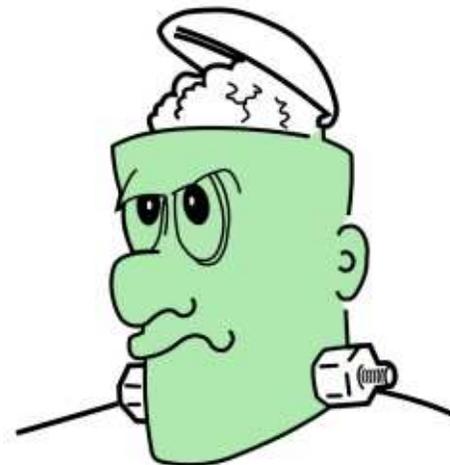
En parlant des modifications du chemin de sortie, il est bien de noter que le dialogue a aussi des boutons pour enlever de la liste un chemin sélectionné (pas de sélection multiple) et pour déplacer un chemin vers le

haut ou le bas, changeant ainsi l'ordre dans lequel les chemins sont reliés pour générer la sortie. En continuant à ajouter les chemins restants et en inversant quelques-uns, le résultat suivant est obtenu :



Comme vous pouvez le voir, le résultat n'est pas parfait. Du fait que les terminaisons du nez et de la bouche dépassent à l'intérieur de la silhouette, il en résulte une forme aux lignes croisées, et l'inversion du sens des chemins ne fait qu'empirer les choses. La division des chemins du nez et de la bouche en morceaux plus petits m'aurait permis de produire le résultat désiré, mais, une fois remplie, cette seule forme ne laisse vraiment qu'un petit vide au bout de la bouche qui peut être visuellement corrigé avec un autre chemin, ce que je considère comme un compromis acceptable. Aussi, mainte-

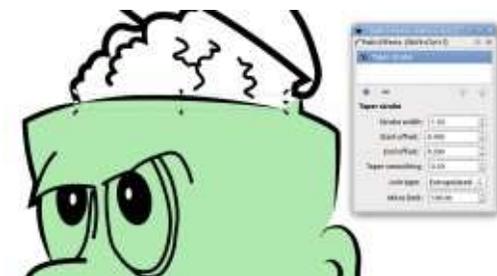
nant, je peux remplir le chemin résultant, enlever le contour, le placer en arrière-plan et ajouter une petite pièce pour boucher le trou. Et, aussi, ramener les chemins d'origine à une plus fine largeur du trait noir.



Une pause à cette étape s'impose pour vraiment apprécier ce nous venons de réaliser. Bien que le résultat final apparaisse similaire à ce qu'on obtient en traçant le contour à la main ou en remplissant certains espaces pour ensuite utiliser l'outil Seau, il y a une différence substantielle : la forme est dynamique. Une modification du nez de Frankie, ou de la courbe de son oreille, est accompagnée par une modification instantanée de la forme du remplissage. Si nous devons faire des changements plus radicaux, il est par conséquent possible d'ajouter, d'enlever et d'inverser des chemins. Et, finale-

ment, c'est la raison pour laquelle cet effet est utilisé par défaut quand un LPE est ajouté à un clone. Contrairement à l'effet Cloner le chemin original, le LPE Remplir dans les nuées est plus flexible, mais rend le même service s'il est utilisé avec un seul chemin. Malheureusement, comme indiqué la dernière fois, l'incapacité de déplacer les chemins résultants le rend inutilisable pour certaines applications ; il y a donc toujours une place pour Cloner le chemin original dans votre boîte à outils.

Pour terminer Frankie en beauté, nous pouvons encore appliquer d'autres LPE aux traits d'origine : Le Contour dynamique est une option classique dans les éléments d'une bande dessinée qui nous permet de régler la largeur du contour arbitrairement,



mais, la plupart du temps, une simple et faible variation de largeur est tout ce qu'il faut. Pour cela, le nouvel effet Contour fuselé est une option beaucoup plus simple.

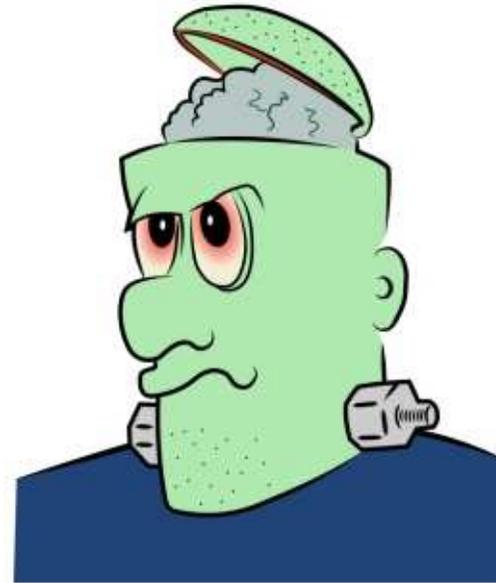
Plutôt que de manipuler des types de nœuds supplémentaires sur le canevas (l'approche prise par l'effet Contour dynamique), cet LPE vous laisse simplement régler la largeur du contour pour la partie non effilée de la ligne ; deux décalages représentant la distance depuis les extrémités à laquelle le trait atteint cette largeur. Si la valeur est à zéro, la terminaison a un bout carré normal sans effilement ; autrement, des valeurs plus grandes signifient généralement des effilements plus longs.

Maintenant, il y a quelques avertissements : d'abord, l'effilement ne peut progresser que jusqu'au premier nœud pointe ; deuxièmement, je n'ai aucune idée du type d'unité utilisé pour les décalages. En pratique, j'ai tendance à faire tourner la roue de ma souris sur chaque champ tout en regardant le chemin sur le canevas pour régler la valeur qui donne le résultat artistique que je recherche. Ces valeurs peuvent aussi être réglées en passant à l'outil Nœuds et en déplaçant les poignées sur le canevas, si vous préférez travailler ainsi.

Le contrôle Lissage de l'effilage règle effectivement la forme des deux effilements, mais peut donner des résultats curieux dans des valeurs extrêmes. J'ai tendance à rester autour de 0,5

qui donne un effilement raisonnablement linéaire qui convient au style de bande dessinée sur lequel je travaille. Les contrôles Type de jointure et Limite de raccord ont le même effet que ceux du dialogue Fond et contour, à ceci près que le LPE offre aussi le type de jointure « Extrapolé » qui peut être meilleur pour certains angles particulièrement aigus.

Pour être honnête, certains de ces nouveaux LPE ont encore des problèmes par moment. J'ai trouvé que ce peut être le cas particulièrement en essayant de combiner les effets Remplir dans les nuées et Contour fuselé pour finaliser le visage de Frankie. Finalement, j'ai dû avoir recours à quelques chemins dessinés manuellement ou en « fixant » certains LPE en utilisant Chemin > Objet en chemin, de façon à obtenir les résultats que j'attendais. Encore une fois, même avec ces compromis, cette représentation de Frankie est l'une des meilleures qui soient.



Mark a utilisé Inkscape pour créer trois bandes dessinées, *The Greys*, *Monsters*, *Inked* et *Elvie*, qui peuvent toutes être trouvées à <http://www.peppertop.com/>



FAIRE DES RECHERCHES AVEC LINUX

Écrit par S. J. Webb

My ITS department cycled out older laptops in our research institute. The new computers are running Windows 10, and numerous programs required updating. We use a specialized 2D camera system that requires Adobe Photoshop. We contacted our ITS and it turns out that Photoshop is now available only as a monthly subscription. As the department does not want to accommodate this new monthly expense, I suggested using GIMP as a free solution. We used Photoshop only about 4 times a year.

This new detail is a byproduct of 'subscription as a sales' phenomena. This arises from so many items moving to the cloud. I read a few online articles. The main premise is that the subscription is a cheap solution for smaller companies. These companies will not have to spend time troubleshooting or fixing the programs.

A number of free and open source software programs are available. These programs are available for Linux and Windows, and sometimes macOS. For example, GIMP is

available for those three operating systems. However, I will focus mostly on free programs for Windows that I use on some of the research laptops.

My main resource for finding free software is using the website AlternativeTo (<https://alternativeto.net/>). The website covers all of the mainstream desktop and mobile operating systems. It has an easy-to-use search

interface that lists all free and commercial programs.

For example, I wanted to find free alternatives to MS Office. The website gave a quick overview of MS Office, and a list of 39 alternatives. Each alternative is given a quick description, and a user's ratings if it is an acceptable substitute program. From this list, I would find an alternative that was available for both

Windows and Linux platforms. Accordingly, I would place this program onto my Linux machine, so I can transport any work between the two computers.

This is a quick and relatively easy way to find an alternative program. The reviewers will list the perks and fails of each program. Additionally, the website will also flag an application that could be potential



malware. However, I have come to the conclusion there is a large pool of free software for Windows. There is a secondary resource that I use – the Free Software Directory (<https://directory.fsf.org/wiki/Category/All>). Yet I do not venture down this path very often.

This directory is maintained by the Free Software Foundation with ties to Richard Stallman. There is a list of free applications in various categories, however the list is restricted. The foundation has a unique way for classifying what is truly free and non-intrusive. There can not be any commercial ties into the software application listed within the directory. Yet Stallman is correct in developing the software philosophy that we are in control of technology.

I mostly use AlternativeTo though, to find the “free programs.” For MS Publisher, I use LibreOffice or Scribus; however it is an adequate replacement. MS Publisher is utilized to create conference posters.

I use a ‘Mass File Renamer’ when I need to do batch file renames. GIMP is my replacement for Photoshop. When I have to do paperwork at home, I use the Google Productivity

The Free Software Foundation (FSF) is a nonprofit with a worldwide mission to promote computer user freedom. We defend the rights of all software users.

Take Action!

Apps. These apps being Google Drive and Google Docs mostly. I use Openshot when I need to edit videos, it is OS agnostic. When I need to share electronic documents off-campus, I use Dropbox.

Nitro PDF reader is a great PDF app. It enables me to strip text or pictures out of PDFs when necessary for research development or if I need an electronic signature; I dislike Adobe Reader. For mouse/keyboard recorders, I utilize Jitbit, or some program similar to it. When I need a disposable email for research recruitment, I use Proton Mail.

Overall, the trend of monthly subscription can be avoided by utilizing free and open software sources. I donate small amounts to LibreOffice, GIMP, and other projects. This is my answer to this new and developing trend. This is an opportunity for the open software niche to become more mainstream and gain greater rates of adoption by

new individuals. The open solution is the best answer many times.





Work began on the Plasma 5 desktop environment more than three years ago at the time of writing, since its first edition came out in the year 2014. Built upon version 5 of the famous Qt widget libraries, it can now be considered to have achieved relative stability. The previous version, Plasma 4, had, at the time, received quite a bit of criticism due to issues in its initial offerings, perhaps due to the rather radical paradigm change from the KDE 3 desktop to KDE 4. Some of us received the arrival of KDE 5 / Plasma 5 with some trepidation. With a bit of hindsight, however, it would seem that the change to version 5 has gone quite well, and the final product does seem to run quite more sprightly even on lower-end hardware. It must be said that some of the main peevs about KDE 4 were its use of resources and general lack of speed. So Plasma 5 is definitely a step forward in this sense.

However, all is not well. The change from version 4 to version 5 came with the KDE project succumbing to the recent tendency for flat graphics. The new Breeze

themes have flat icons, flat window borders, and, pretty much, flat everything. This may be to some users' taste, and does fit with other operating systems and desktop managers such as Apple's Mac OS Sierra, Microsoft's Windows 10, and recent versions of the Android mobile operating system. However, some of us do prefer more visually complex themes, and, in this sense, KDE 4's default Oxygen theme can be preferred.

Luckily, even a more recent Plasma 5 desktop can be tuned to resemble Plasma 4, but with stability

and performance as added benefits. In this article, we will see how to do this. It is a rather straightforward process, and needs no special knowledge of the inner workings of Ubuntu or Kubuntu.

Let us begin by installing an LTS version of Kubuntu, though the basic procedure will be the same for editions without long-term support. In this case, I used CD image kubuntu-16.04.2-desktop-amd64.iso downloaded in February, though more recent images are available. The first thing I did was a "plain vanilla" installation, with automatic

partitioning and no special choices or strange configurations. I then opened up Konsole, and updated the complete system and all software packages to their latest versions:

```
sudo bash
apt update
apt install aptitude
aptitude safe-upgrade
```

There are, obviously, many other ways of doing this, but, in the past, I have found graphical software managers to be slightly more involved than inputting straightforward terminal commands - which probably says more about myself than about software managers.

The end result is a standard Kubuntu 16.04 desktop, with Plasma 5 in all its (rather flat) glory:

The default icon set is not to my liking. For instance, I find the difference in style between the desktop icon and those for folders to be a bit off-putting. In my view, the small, monochrome, icon set used in



toolbars on all windows is not clear, and I question the need to have two different icon sets as standard. In comparison to the very small icons in the toolbars, the large top border in the standard window decoration theme sticks out a little, and the default background may very well not be to everyone's liking. These are all subjective issues, but also very easy to modify if so inclined.

Now, to achieve a perfect lookalike to an earlier Plasma 4 system, we need a point of comparison. Here is a screenshot of a Kubuntu version 14.04 Live CD

session running inside Virtualbox. In comparison to Plasma 5, we are clearly back to 3D effects or what has been called at times "skeuomorphism". Some of the main differences include:

- The desktop is seen in "Default desktop" mode, and not in "Files".
- Desktop background.
- Icon theme.
- Application widget theme.
- Window shadows - that are, in fact, more of a glow than a proper shadow.
- Desktop and panel theme.

We note that the "Newspaper" mode available in Plasma 4 is no

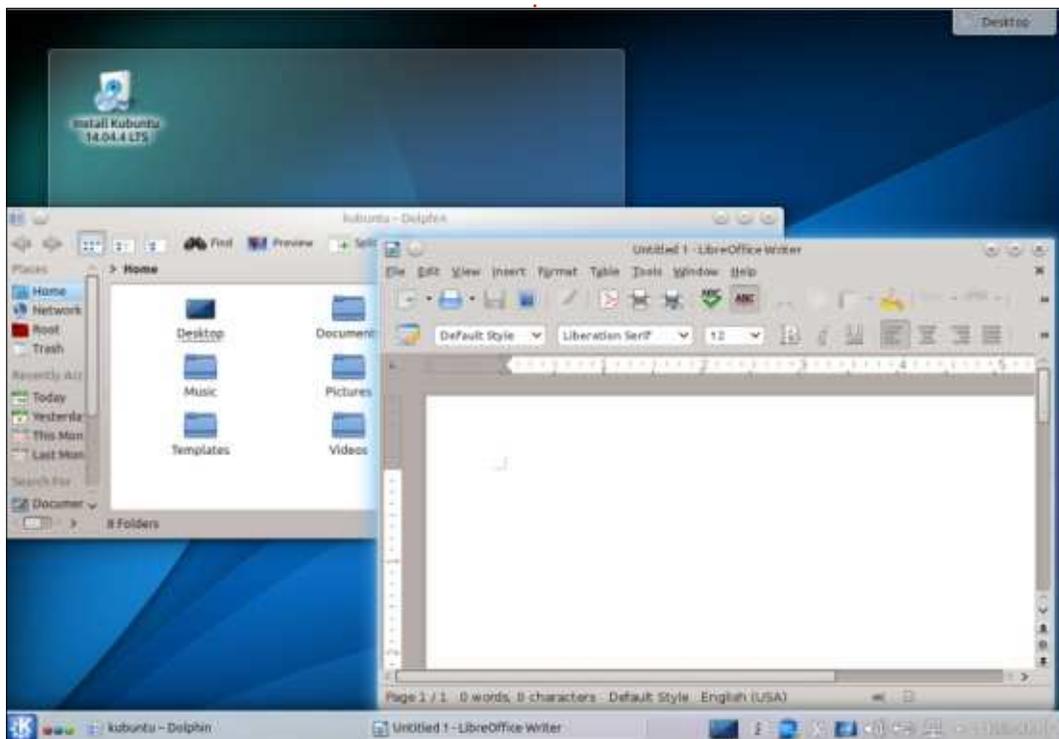
longer present in Plasma 5, but, aside from that particular aspect, all of the differences can be seen to and reversed in Plasma 5.

Let us go point-by-point, and begin with the desktop mode. Simply do a right-click on the desktop, choose "Desktop Settings", and change the Layout to "Desktop" if necessary.

As for the background or wallpaper, the default Kubuntu 14.04 wallpaper is easily located on the Internet. Tip: look for "KDE 4.10" in Google Images, and a 1600x1200 pixel version will be found. Download a suitable background and then, still in "Desktop Settings", load it from the file icon and set it as default.

Let us go on to the icon theme. In "System settings", choose Appearance > Icons, and then Icons. We can find the Plasma 5's default icon set (Breeze), as well as some standard Ubuntu icon sets such as Humanity and Ubuntu-Mono. However, at least in Kubuntu 16.04, we still have access to the Oxygen icon theme. Choose that, and apply changes. Once the system configuration has been saved, icons in the panels and taskbar should change to the new theme. However, those in specific applications such as Dolphin or Libreoffice will not come up until these applications have been quit and restarted.

If not present, the Oxygen icon theme can be installed with the following command:



```
sudo aptitude install  
oxygen5-icon-theme
```

On to application style; choose “System Settings”, then Appearance > Application Style, and Widget Style. Here, as before, the default widget style is “Breeze”, but “Oxygen” is still available in Kubuntu 16.04.

In the same window, choose the Window Decorations tab. Here, we run into a small problem, since the only choices available are “org.kde.breeze”, i.e. the large, grey Breeze window bars, and “Plastik”. We will need to get back into Konsole, and install the appropriate software package:

```
sudo aptitude install kwin-  
decoration-oxygen
```

Close “System Settings”, and reopen the application. Back in Appearance > Application Style > Widget Style, a new option named “org.kde.oxygen” should now be available. Choose and apply. Things are already quite a bit closer to Plasma 4 than before.

Window shadows (“glow”) should also appear. These are configurable: just hit the monkey wrench icon beside the theme, and the appropriate dialog box should come up.

Finally, we need to change the general desktop and panel theme. This is done in “System Settings”, then Appearance > Workspace Theme, and then “Desktop Theme”. However, in

Kubuntu 16.04, the only themes available are “Air”, “Breeze” and “Breeze Dark”. This strikes one as lacking in coherence, in comparison to the availability of application widget Oxygen artwork. So it’s back to Konsole, and let us install the necessary package:

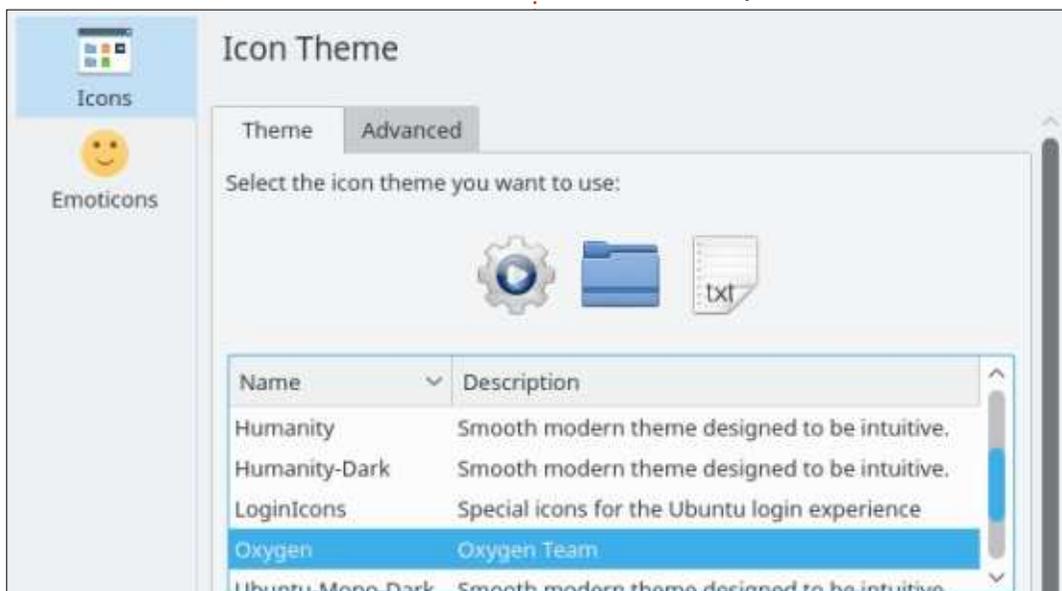
```
sudo aptitude install plasma-  
theme-oxygen
```

Now, in “System Settings”, Appearance > Workspace Theme and “Look and Feel”, we can choose “Oxygen” as the general workspace theme. Then, go into the next tab, “Desktop Theme”, and replace “Breeze” with “Air”.

Finally, the graphical desktop launcher and login manager, SDDM,

seems to lack an Oxygen theme. The closest match can be found in software package “sddm-theme-circles”, if desired.

The end result of our modification process is not quite a perfect clone of Plasma 4, since desktop themes such as Air have been altered in subtle ways. For instance, the “KDE” logo is not the same, nor is the level of transparency in desktop widgets’ surface areas. The icons in the bottom panel’s notification area are also different, though the new versions can actually be found more readable since their new, dark color shows up better against the panel’s light background. The icons for logout buttons are also the new version, not Plasma 4’s. However, the general look of our desktop is much the same as in



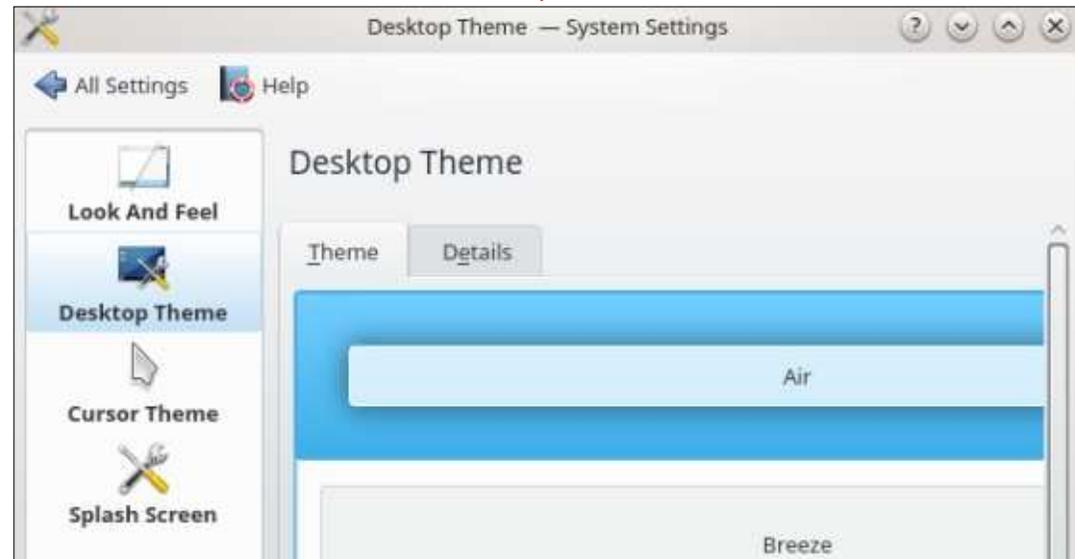
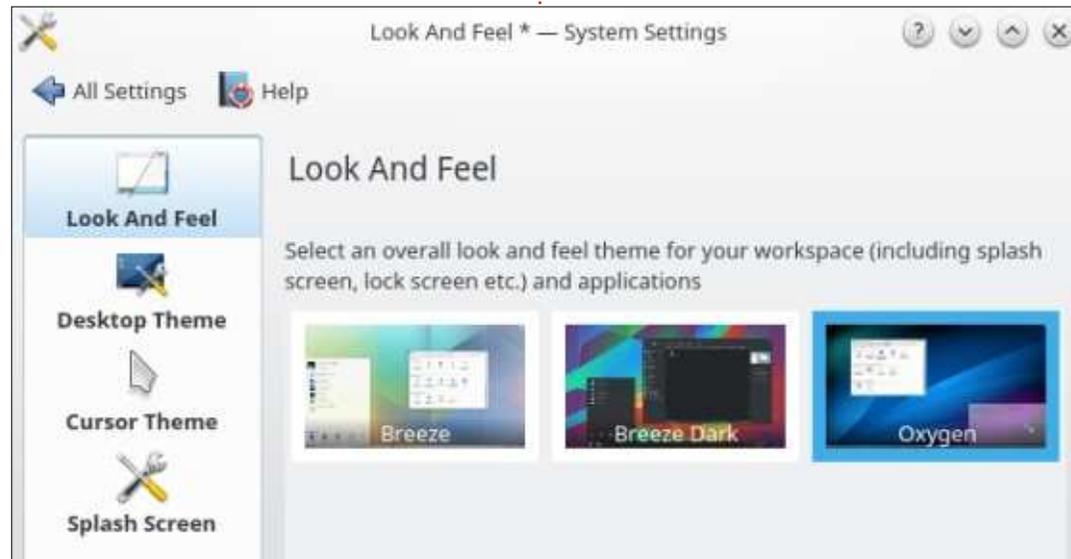
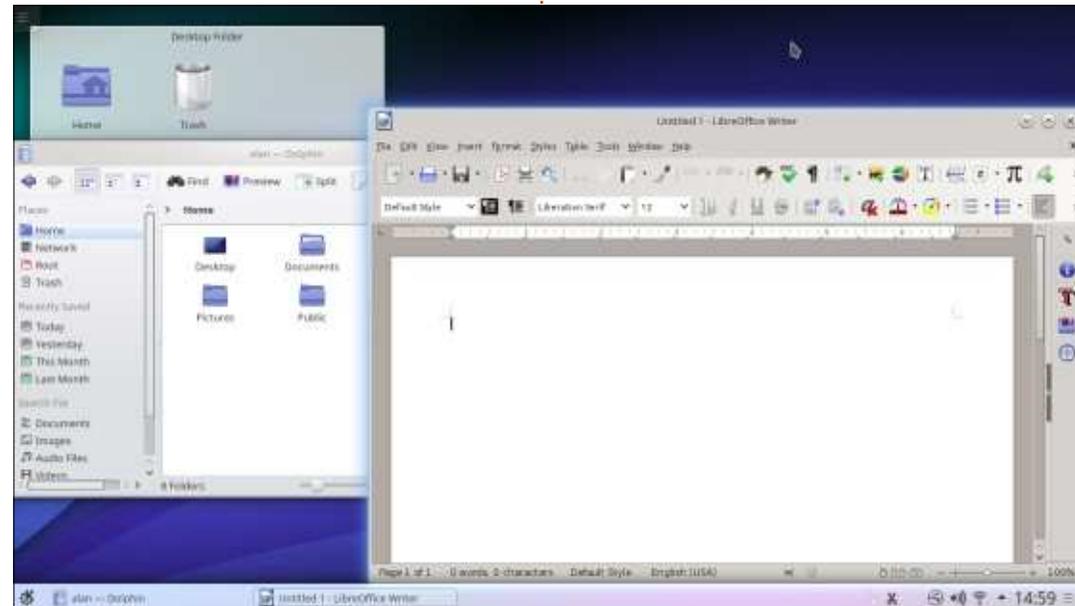
MON OPINION

earlier versions of the desktop, though the underpinnings are more modern: Plasma version 5.5.5, using Qt library version 5.5.1 when we work on Kubuntu 16.04, going up to Plasma 5.10.4 and Qt 5.7.1 on alpha versions of Kubuntu 17.10.

As a side-note, it should be mentioned that this process was tested on a slightly ancient and very underpowered Acer Aspire One model 722 (11.6" screen version), equipped with a dual-core AMD C-60 processor and a USB 32 GByte stick en lieu of a hard drive. Performance was good, though not stellar. The final system ran at the same speed as the original, unaltered, Kubuntu installation.

that no one is obliged to alter their Plasma 5 desktop setup. On the other hand, neither is anyone obliged to keep the flat look of Plasma 5 if they are adverse to it. Other options, based neither on Plasma 4's nor Plasma 5's default looks, are also available. As often applies to general discussions about Linux and Ubuntu, the final choice is left to the user; all the moreso in a highly configurable desktop manager such as KDE/Plasma.

My final thought on this subject is





I was always a die-hard Windows fan.

It started with Windows 3.1 – I was amazed at what I could draw (cartoons) with MS Paint. My son was 3 years old when I introduced him to computers using a custom desktop program called Kid Desk. It was a way to introduce him to working with computers, while keeping my install safe from him. Windows 3.1 used, I think, 3 diskettes, but even a video resolution change could destroy the installation. That would require me to install DOS first (6 floppies, I think).

I went into Windows 95 and remember it didn't come with a mail program. Most people were using a different version, that included Outlook Express, but I couldn't afford that. I tried to download it via 56K modem, which resulted only in large charges for my phone bill – I lived out of town, so the ISP was long distance. I remember the dawn of the world wide web. I went to a site (using Quarterdeck Mosaic as my browser), and literally screamed when I saw an image of the Canadian Flag on my screen. It was the first image I had

ever seen on the net!

I finally bought Windows 98 and was blown away by the OS. Cost was ~\$200. Compared to Windows 95, it was positively elegant. I kept Windows 98, and skipped the SE version. The next upgrade was to Windows ME. I paid around \$200 again. The icons were rendered better, I don't remember if there were any other differences, so there probably weren't.

I waited in line for the next release, Windows XP. I had heard how much better this OS was over ME. I used XP until Vista came out, and yes, I was Microsoft blind and bought that for around \$250. It was horrible! All my old programs failed to run, and I was forced to buy another version of MS Office at around \$400. This was SERIOUS money.

But I wasn't fazed; as soon as Windows 7 came out I plunked down \$250 and installed it. Everything worked! I used Windows 7 until I decided that I'd spent enough cash on Microsoft products. I had heard about Linux before, but dismissed it,

thinking I wasn't computer savvy enough to use it. A friend mentioned Ubuntu. He showed me his laptop and I was intrigued. He wasn't a computer geek (like me), and he was using this beautiful OS!

And it was FREE!!

I heard thru the grapevine that Windows 8 was coming out. I was unsure whether I would get the upgrade.

I stayed with Windows 7 on my main machine, and downloaded and ran Puppy Linux on my laptop. I was visiting my dad's and he was having troubles with Windows 7 so he had upgraded to Windows 8. He was having significant issues with some of his old apps which failed to work. I managed to get all but one working after several long, frustrating hours. It was then I decided to never purchase another OS again.

I made the jump to Ubuntu on my main machine with Karmic Koala – that was the only CD I had. I later upgraded (fresh install) of Lucid Lynx (2010), and have never looked back

since.

I am currently on release 16.04, Xenial Xerus. I look forward to many more years with Linux, specifically Ubuntu. I am disappointed with the discontinuation of support for 32-bit systems. Perhaps I will buy a new PC when this LTS runs out of support. But for now, Long Live Linux! Long Live Ubuntu!



Lignes directrices

Notre seule règle : tout article **doit avoir un quelconque rapport avec Ubuntu ou avec l'une de ses dérivées (Kubuntu, Xubuntu, Lubuntu, etc.)**.

Autres règles

- Les articles ne sont pas limités en mots, mais il faut savoir que de longs articles peuvent paraître comme série dans plusieurs numéros.

- Pour des conseils, veuillez vous référer au guide officiel *Official Full Circle Style Guide* ici : <http://url.fullcirclemagazine.org/75d471>

- Utilisez n'importe quel logiciel de traitement de texte pour écrire votre article – je recommande LibreOffice –, mais le plus important est d'en **VÉRIFIER L'ORTHOGRAPHE ET LA GRAMMAIRE !**

- Dans l'article veuillez nous faire savoir l'emplacement souhaité pour une image spécifique en indiquant le nom de l'image dans un nouveau paragraphe ou en l'intégrant dans le document ODT (OpenOffice/LibreOffice).

- Les images doivent être en format JPG, de 800 pixels de large au maximum et d'un niveau de compression réduit.

- Ne pas utiliser des tableaux ou toute sorte de formatage en **gras** ou *italique*.

Lorsque vous êtes prêt à présenter l'article, envoyez-le par courriel à :

articles@fullcirclemagazine.org.

Si vous écrivez une critique, veuillez suivre ces lignes directrices :

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Si vous aimeriez traduire le Full Circle dans votre langue maternelle, veuillez envoyer un courriel à ronnie@fullcirclemagazine.org et soit nous vous mettrons en contact avec une équipe existante, soit nous pourrions vous donner accès au texte brut que vous pourrez traduire. Lorsque vous aurez terminé un PDF, vous pourrez télécharger votre fichier vers le site principal du Full Circle.

Auteurs francophones

Si votre langue maternelle n'est pas l'anglais, mais le français, ne vous inquiétez pas. Bien que les articles soient encore trop longs et difficiles pour nous, l'équipe de traduction du FCM-fr vous propose de traduire vos « Questions » ou « Courriers » de la langue de Molière à celle de Shakespeare et de vous les renvoyer. Libre à vous de la/les faire parvenir à l'adresse mail *ad hoc* du Full Circle en « v.o. ». Si l'idée de participer à cette nouvelle expérience vous tente, envoyez votre question ou votre courriel à :

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Écrire pour le FCM français

Si vous souhaitez contribuer au FCM, mais que vous ne pouvez pas écrire en anglais, faites-nous parvenir vos articles, ils seront publiés en français dans l'édition française du FCM.

CRITIQUES

Jeux/Applications

Si vous faites une critique de jeux ou d'applications, veuillez noter de façon claire :

- le titre du jeu ;
- qui l'a créé ;
- s'il est en téléchargement gratuit ou payant ;
- où l'obtenir (donner l'URL du téléchargement ou du site) ;
- s'il est natif sous Linux ou s'il utilise Wine ;
- une note sur cinq ;
- un résumé avec les bons et les mauvais points.

Matériel

Si vous faites une critique du matériel veuillez noter de façon claire :

- constructeur et modèle ;
- dans quelle catégorie vous le mettriez ;
- les quelques problèmes techniques éventuels que vous auriez rencontrés à l'utilisation ;
- s'il est facile de le faire fonctionner sous Linux ;
- si des pilotes Windows ont été nécessaires ;
- une note sur cinq ;
- un résumé avec les bons et les mauvais points.

Pas besoin d'être un expert pour écrire un article ; écrivez au sujet des jeux, des applications et du matériel que vous utilisez tous les jours.





Depuis peu de temps, nous utilisons le serveur KODI dans le séjour principalement pour la diffusion de musique de fond. La musique de fond est très bien, mais, parfois, nous voulons connaître les informations, ou écouter quelque chose d'utile comme les podcasts, ou apprendre des choses nouvelles.

AudioPodcatcher est une extension qui prend le fichier OPML que vous spécifiez et vous permet d'écouter des émissions à partir du flux. OPML, ou Outline Processor Markup Language

est un format XML pour les plans de documents. Wikipedia propose un article intéressant au sujet du format OPML à https://fr.wikipedia.org/wiki/Outline_Processor_Markup_Language ou, pour la version anglaise, qui est plus complète, <https://en.wikipedia.org/wiki/OPML>.

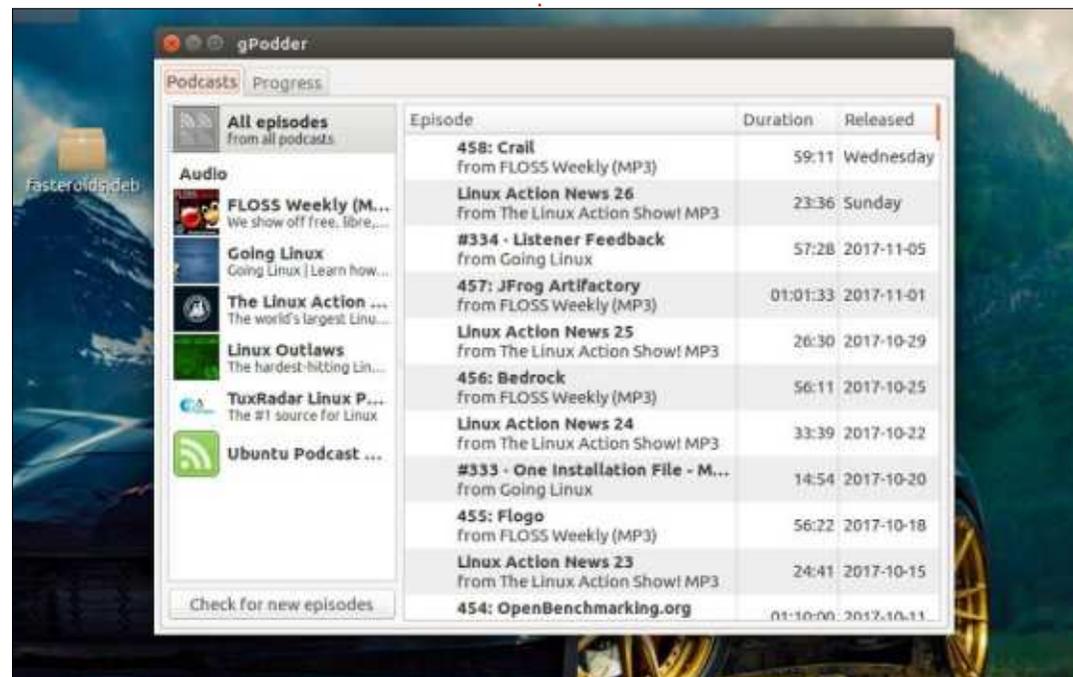
Pour l'instant, l'important, c'est de savoir qu'on peut utiliser OPML pour récupérer des podcasts. Si vous lisez l'article Wikipedia en anglais, vous arriverez sur des pages où vous pouvez créer votre propre flux OPML. Vous

pourriez ouvrir vi sur votre machine KODI basée sur Linux et créer un fichier OPML à la main, mais la façon la plus simple de créer un fichier OPML est d'utiliser tout simplement un programme qui peut exporter vers OPML. Chez moi, on utilise un ordinateur séparé sous Linux (qu'on utilise pour les tâches quotidiennes) sur lequel nous installons un logiciel qui sait lire et écrire les fichiers OPML.

Le logiciel gPodder est un client Podcast gratuit, libre et Open Source disponible pour les systèmes d'exploita-

tion Linux, Mac OS X, Windows et BSD. gPodder est un client podcast génial pour commencer, car c'est plutôt simple à utiliser et largement supporté.

Au lancement, gPodder vous demande de choisir à partir d'une liste de podcasts, mais, si vous rejetez l'invite de démarrage, vous pouvez toujours ajouter des podcasts individuellement avec le menu « Subscriptions » (abonnements) > « Add Podcast via URL ». À partir du menu de démarrage, j'ai sélectionné plusieurs podcasts dont le thème était Linux. Exporter les pod-



casts vers un fichier OPML est aussi simple que de cliquer sur « Subscriptions » > « Export to OPML file ».

Il vous appartient de choisir comment transférer le fichier OPML sur votre machine KODI (USB sneakernet, SSH, partages SAMBA), mais vous devriez placer le fichier quelque part où votre machine KODI en aura l'accès (cela pourrait être un dossier partagé sur votre ordinateur de bureau). Quant à nous, nous l'avons transféré via SSH.

Sur votre machine KODI, survolez l'extension AudioPodcatcher et tapez « c » pour le configurer, ou, si vous utilisez une télécommande, servez-vous de la touche menu pour faire afficher le menu contextuel. Dans le menu

contextuel, sélectionnez Settings (paramètres). Le menu des paramètres d'AudioPodcatcher est très insuffisant ; cliquez sur l'espace vide entre GENERAL et le bouton OK pour ajouter l'emplacement de votre flux OPML.

Cliquez sur le bouton OK et AudioPodcatcher fait le reste. Maintenant, appuyez sur ÉCHAP (ou le bouton de marche arrière sur la télécommande) jusqu'à ce que vous arriviez au menu des extensions. Cliquez sur AudioPodcatcher et parcourez vos Podcasts.

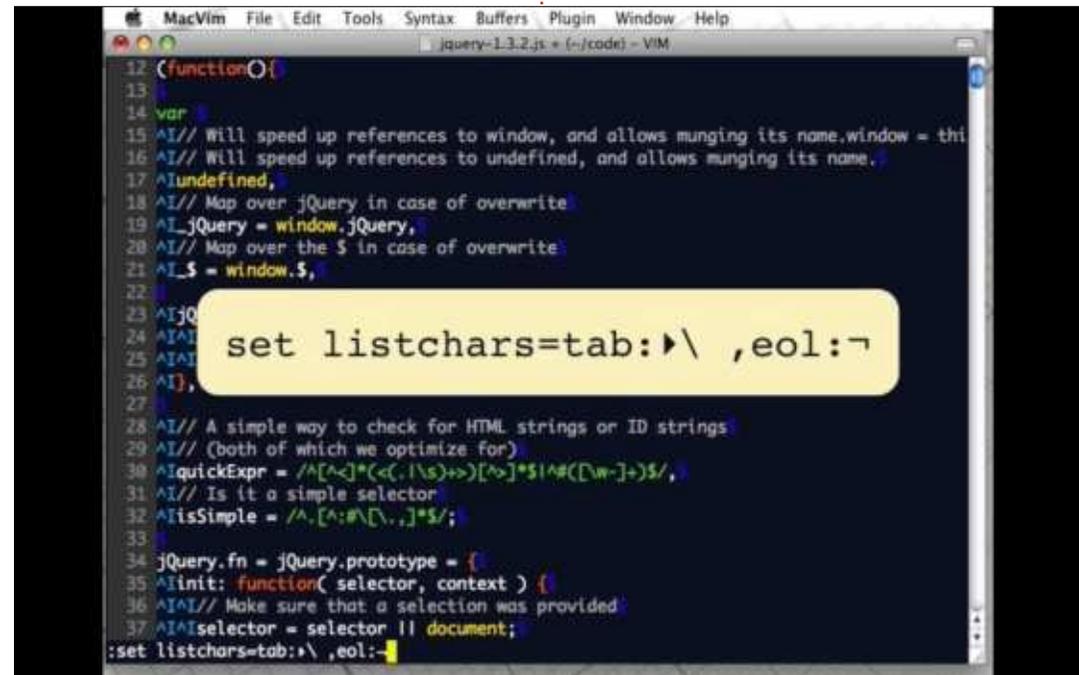
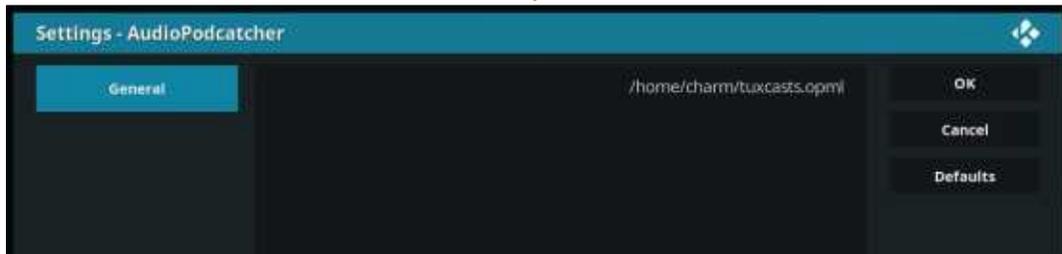
Récemment, j'ai dû faire un peu de soudure et l'écoute des podcasts en retard - pendant que je maniais le fer à souder - était une très agréable façon de passer le temps.

Encore un exemple : à cause d'un projet au boulot, j'ai dû faire du codage pour la première fois depuis une éternité. Pour rafraîchir mes connaissances en codage, j'ai cherché dans les dépôts KODI où j'ai trouvé deux extensions intéressantes : Vimcasts et TheNewBoston.

Bien que VIM soit un éditeur, apprendre à utiliser les outils de codage est sans doute aussi important que d'apprendre à coder. Quand vous connaissez vos outils à fond, vous avez tendance à travailler avec plus de productivité. L'extension Vimcasts, trouvée sous Extensions Vidéo est une compilation de trucs et astuces pour Vim. Vimcasts n'est pas un introduction

douce à Vim ; dès le premier podcast, il se lance dans l'activation/la désactivation des fonctionnalités. Si vous ne savez pas comment entrer dans/quitter le mode insertion, sauvegarder des fichiers, insérer des lignes sous une ligne, enlever du texte..., vous pourriez vouloir compléter vos connaissances de Vim via des vidéos sur YouTube avant de vous lancer dans les Vimcasts.

L'extension TheNewBoston, également disponible parmi les extensions Vidéo, traite de l'apprentissage des produits Adobe, la programmation, l'informatique, et la mise en réseau avec sécurité, ainsi que quelques sujets divers qui n'appartiennent à aucune des



quatre catégories. Dans la section sur la programmation, il y a des vidéos sur, notamment, AJAX, le développement des applis Android, C, C#, C++, Java, Python, PHP, ReactJS et Ruby...

Les vidéos sont l'œuvre de différents individus (bien que, quand nous avons regardé TheNewBoston pour la première fois, il y a deux ou trois ans, elles aient été toutes faites par « Bucky »), mais, en tout, plus de 7 000 vidéos sont disponibles avec l'extension TheNewBoston. Si vous préférez parcourir la même collection sur le Web, allez à : <https://thenewboston.com/videos.php>.

KODI a souvent mauvaise réputation à cause des nombreuses exten-

sions « piratées », mais il y a pas mal d'extensions géniales pour les gens qui aiment s'occuper tout en travaillant sur autre chose, ou pour ceux qui veulent apprendre. Des extensions géniales, comme TheNewBoston, Vimcasts et AudioPodder sont disponibles dans le dépôt KODI par défaut ; juste un peu d'effort sera nécessaire pour trier les types de contenus que vous voudriez regarder ou écouter.

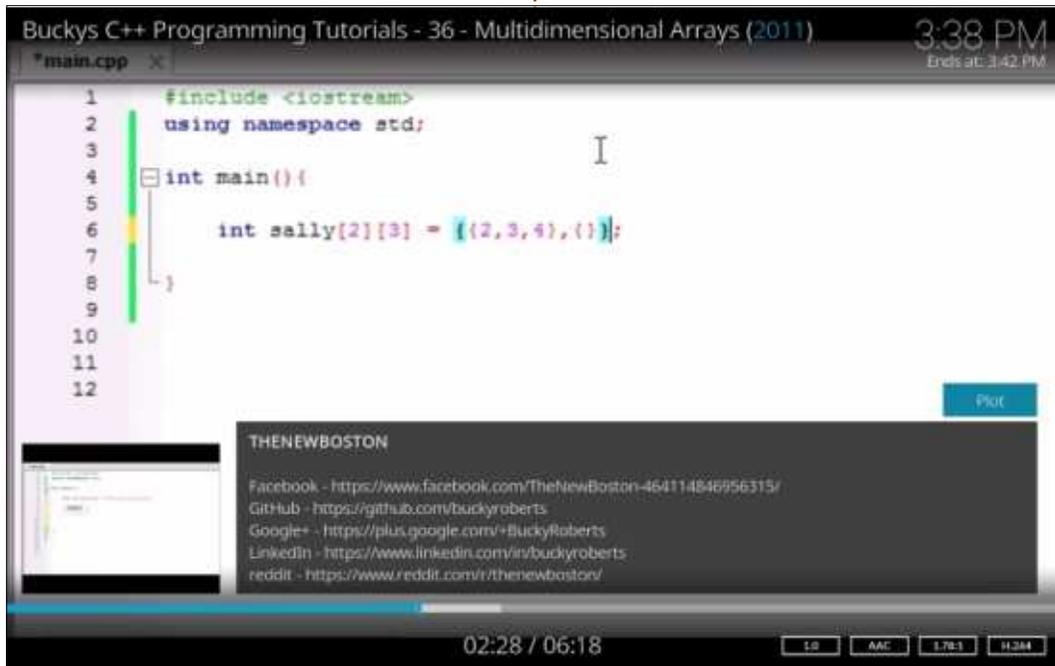
LIENS INTÉRESSANTS :

Article Wikipedia sur l'OPML : <https://en.wikipedia.org/wiki/OPML>
ou, en français : https://fr.wikipedia.org/wiki/Outline_Processor_Markup_Language

gPodder: <https://gpodder.github.io/>

KODI.tv Add-on showcase (vitrine des extensions) : <https://kodi.tv/addons>

Le site Web de TheNewBoston : https://thenewboston.com/**



Charles est l'auteur d'*Instant XBMC*, un petit livre sur l'installation et la configuration de XBMCbuntu, une distribution *buntu + XBMC. Il est le gestionnaire d'un projet non-lucratif de réutilisation d'ordinateurs. Quand il ne fabrique pas des PC, il supprime les logiciels malveillants, en encourageant les gens à utiliser Linux et en accueillant des « heures Ubuntu » près de chez lui. Son blog est à : <http://www.charlesmccolm.com/>.



For anyone who has never heard of a FixMeStick, it's essentially a bootable USB device for finding and removing malware on Windows computers. That being said, it will also boot and run on other computers (eg. a Linux laptop). However, the scans are intended for windows malware. I was sent a review copy, and what follows are my thoughts on the device.

EASE OF USE

The device can be booted normally via the BIOS, or booted via an executable available in Windows. In my testing, I only booted it via BIOS, and I also ran into issues running the device in a virtual machine.

Once booted to the device, it guides you into connecting to a network, and then doing the updates, registration, and scan. The steps were easily enough completed, but if your device suffers from compatibility issues with Linux and network-manager, you may not be able to connect, which seems to prevent the

stick from working.

EFFICIENCY

Once the network connection is active, the process seems to be largely automated. The exception is registration of the device, which should need to be done only once.

ALTERNATIVES

If you don't mind putting in a little more work, you can set up a linux-based live USB with linux-based AV software. It gives you more control, but is more work to keep updated and running. That being said, you can

include other tools for managing and fixing other issues, giving you more of a one-stop tool for your problems.

EFFECTIVENESS

Unfortunately, I wasn't able to test this very well. I would have run the device on a virtual machine that I had previously infested with malware. However, due to my inability to run the stick in a virtualized environment, I could not do this. As the alternative was to infest an actual Windows computer, which was not an option, I simply ran it on a working PC. The result was no malware found (as I expected). Out of curiosity, I also ran it on a Linux laptop. It successfully

scanned the EXT4 partition. I would assume it was still only checking for Windows malware, but it offers you the ability to make sure you're not sharing infected files.

You can also start a custom scan, where you can choose disks and folders to scan. This means you can take a system drive out of another computer and check it for malware.

As for performance - I didn't notice the FixMeStick completing the scans much faster than the live USB. But that could be due to USB 2.0 on my test device, or other hardware.

DOWNSIDERS

The stick can only be registered on 3 computers at a time, and the updates only run for a year. Amazon (Germany) has the stick available for 60€. So depending on how often you expect to use it, it may be too steep of a price for you. If the limitation of 3 computers makes you worry about false positives (i.e. the same PC being registered as a second one after a motherboard upgrade/replacement), I was assured by their support team



CRITIQUE

that it would be possible to be available for Mac as well. unregister a computer.

VARIANTS

According to an Amazon listing, there seems to be a FixMeStick

VERDICT

If you're frequently scanning a computer for malware, and want to reduce the effort on your part, you

may want to consider the FixMeStick. If, however, it's more of an occasional task, I would instead set up a decent liveUSB stick with a persistence so you can run your updates.

I can't say that the FixMeStick did anything better than the liveUSBs I've used in the past, but it did definitely require less effort on my part. If that's worth the price to you, go for it.



Lucas a appris tout ce qu'il sait en endommageant régulièrement son système et en n'ayant alors plus d'autre choix que de trouver un moyen de le réparer. Vous pouvez lui écrire à : lswest34@gmail.com.



COURRIERS

Si vous voulez nous envoyer une lettre, une plainte ou des compliments, veuillez les envoyer, en anglais, à : letters@fullcirclemagazine.org. NOTE : certaines lettres peuvent être modifiées par manque de place.

WINDOWS QUI ?

Je me suis converti à Linux il y a déjà 5 ans et j'ai oublié ce que Windows fait ces derniers temps.

Un grand nombre d'auteurs écrivent au sujet de Linux comme si le lecteur venait d'arriver de Windows et ils y font référence continuellement pendant leurs explications de certaines des instructions Linux.

Je me sentirais tellement mieux si toutes les instructions pour Linux répondaient vraiment aux questions posées aux auteurs, plutôt que devoir lire des trucs sur la dérivation à partir de Windows.

Bref, au-delà de XP, Windows ne me dit plus rien du tout.

Rob Gurr

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LE FULL CIRCLE A BESOIN DE VOUS !



Sans les contributions des lecteurs, le Full Circle ne serait qu'un fichier PDF vide (qui, à mon avis, n'intéresserait personne). Nous cherchons toujours des articles, des critiques, n'importe quoi ! Même des petits trucs comme des lettres et des écrans de bureau aident à remplir le magazine.

Lisez [Écrire pour le FCM](#) dans ce numéro pour suivre nos lignes directrices.

Jetez un œil à la [dernière page](#) (de n'importe quel numéro) pour accéder aux informations détaillées concernant l'envoi de vos contributions.



Q. et R.

Compilées par Gord Campbell

Si vous avez des questions sur Ubuntu, envoyez-les en anglais à : questions@fullcirclemagazine.org, et Gord y répondra dans un prochain numéro. Donnez le maximum de détails sur votre problème.



For this month I decided to give a nod to the good folks at Humble Bundle and all of the goodies that they bring to the Linux landscape. Way before Valve brought us its Steam OS along with the much needed support for Linux games, the Humble Bundle was a leading pioneer in bringing what at the time were mostly independent games to Linux. In fact, before being called the Humble Bundle, the original name was the Humble Indie Bundle, with emphasis on Indie because they were focused on delivering bundles of independent developers not just to Linux but also to Microsoft Windows, OS X and shortly thereafter to Android & iOS as well. During those early releases it became very clear, not just to the Humble Bundle people but to other bigger players (such as Valve for example), that Linux gamers were willing to not only pay for games but predominantly pay much, much more than their Windows & Mac counterparts. This was perhaps one of the turning points in Linux gaming. Before the Humble Indie Bundle, there was a fear from game developers & publishers that Linux was not a lucrative investment which

in turn was preventing them from bringing games over to Linux. It was one of those chicken and egg scenarios where the companies didn't want to bring games to Linux out of fear they wouldn't sell while at the same time there were no Linux game sales to validate or contradict such fear because of the lack of games with which to prove or disprove this theory. All of those doubts and fears were put to rest when the Humble Indie Bundle arrived, which definitely and without a doubt proved that if games were brought over to Linux, gamers would buy them (and in many situations even pay more than premium price for these games).

What was once a small idea from a couple of guys working out of their parent's garage has grown into a 60-person operation that was just recently bought by IGN. There may be some criticism as to whether this was a good move to make or not. Since its foundation, the Humble Bundle has been involved in donating part of its proceeds to charity. One of the things I've always liked about The Humble Bundle is that they donate to a variety of charities and let the consumer decide which percentage of their purchase will go to each charity. This is one of the main selling points of The Humble Bundle and has

been since its inception. With the recent acquisition by IGN we are left to wonder if the original vision of what the Humble Bundle was and the impact it's had since its birth will continue or if the Humble Bundle will sell out and become another part of the corporate machine. So, I've decided to sort of freeze the moment of what the Humble Bundle had to offer and where its money was going at the time of acquisition by IGN, then at a later time we could revisit and see what changes have taken place. We'll begin by looking at the three-pronged portion of what is The Humble Bundle video game store. You can read more about the Humble Bundle & IGN merger at: <https://techcrunch.com/2017/10/13/ign-acquires-pay-what-you-want-game-shop-humble-bundle/>

HUMBLE BUNDLE GAME BUNDLES

The Humble Bundle has a special place in my heart because of its contribution to the Linux game scene. Back when few games were available



for Linux, the Humble Indie Bundle began to offer game bundles which offered games that were Linux compatible. Originally, these bundles contained primarily games from small & independent publishers/developers. In fact, the early bundles were called Humble Indie Bundle and they were a hit among Linux gamers. The average price paid by Linux gamers was considerably more than the average price paid by Windows/Mac gamers. This phenomenon sent a clear signal to many in the game industry. The message was simple: Linux gamers were willing to pay top notch for Linux games. One interesting factor about these bundles is that you literally name your own price for each bundle, as long as it's \$0.01 or more. Times have changed and these bundles are no longer exclusively made up of independent games but two things that haven't changed are that these bundles continue to offer games that can be played on Linux and you can still name your own price for each bundle.

Nowadays, the Humble Bundle has expanded into more than just games. Currently there are eight bundles on offer at the time of this writing. Some of these bundles continue to offer Linux games but in

addition to these, there are also bundles that don't contain any games at all. In fact, on any given month, you can count on finding at least one Humble Book Bundle which can be made up of books and/or graphic novels. There are also bundles that offer software, videos and more. Also there's the Humble Mobile Bundle which is comprised exclusively of games for mobile systems such as Android & iOS. It's always a good idea to periodically look at what bundles are available; you never know what you'll find.

HUMBLE MONTHLY

In addition to the regular bundles,



there is also The Humble Monthly subscription for the low price of \$12 per month. The Humble Monthly usually has a handful of top notch AAA titles that could each cost up to \$40 or maybe even more for each title. Also, every month, the subscription includes other games that maybe you haven't heard of which often can turn into hidden gems that you wouldn't have discovered if they weren't included in the subscription. I've been paying for a subscription for a few months and some of the games I've gotten that run on Linux include Total War: Warhammer, Pillars of Eternity and Dirt: Rally. To name but a few.

HUMBLE STORE

Last but not least, there's the Humble Bundle Store which is much like other online video game stores & offers a very wide selection of games that you can buy the regular way which is one game at a time. These games usually run for about as much as they would cost if you were to get them from other places such as Steam or GOG. However, just like any other store, there's the Humble Store's weekly sale prices which can include games for 25%, 50% or even up to 90% off for a limited time.

HUMBLE BUNDLE CHARITY DONATIONS

Since its inception, when you buy one of the offered Humble Bundles you've been allowed to pick where your money goes. You've been previously allowed to choose between the following three things:

- Game developers
- Charity donations
- Tip for the Humble Bundle store

Then there's more choices under each section ordinarily. For example

under the charity section, you've been allowed to then pick which charities your donation is going to or divide it among any other number of charities any which way you want. The tradition is still the way it's done today. We, as consumers must periodically check to see whether this tradition of the Humble Bundle organization is still being true to its origins. Otherwise it might be hard to continue calling it The Humble Bundle after it's lost its humility and turned into yet another for-profit corporation.



Oscar diplômé de CSUN, est un directeur musical/enseignant, bêta-testeur, rédacteur Wikipedia et contributeur sur les forums Ubuntu. Vous pouvez le contacter via : <https://twitter.com/resonant7hand> ou par e-mail à : 7bluehand@gmail.com



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Le site actuel du Full Circle Magazine fut créé grâce à **Lucas Westermann** (Monsieur Command & Conquer) qui s'est attaqué à la reconstruction entière du site et des scripts à partir de zéro, pendant ses loisirs.

La page Patreon (Mécènes) existe pour aider à payer les frais du domaine et de l'hébergement. L'objectif annuel fut rapidement atteint grâce à ceux dont le nom figure sur cette page. L'argent contribue aussi à la nouvelle liste de diffusion que j'ai créé.

Parce que plusieurs personnes ont demandé une option PayPal (pour un don ponctuel), j'ai ajouté un bouton sur le côté droit du site Web.

De très sincères remerciements à tous ceux qui ont utilisé Patreon et le bouton PayPal. Leurs dons m'aident ÉNORMÉMENT.



<https://www.patreon.com/fullcirclemagazine>



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Un magazine n'en est pas un sans articles et Full Circle n'échappe pas à cette règle. Nous avons besoin de vos opinions, de vos bureaux et de vos histoires. Nous avons aussi besoin de critiques (jeux, applications et matériels), de tutoriels (sur K/X/Ubuntu), de tout ce que vous pourriez vouloir communiquer aux autres utilisateurs de *buntu. Envoyez vos articles à :

articles@fullcirclemagazine.org

Nous sommes constamment à la recherche de nouveaux articles pour le Full Circle. Pour de l'aide et des conseils, veuillez consulter l'Official Full Circle Style Guide :

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Envoyez vos **remarques** ou vos **expériences** sous Linux à : letters@fullcirclemagazine.org

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