



› In the North Togo Savannah region, the first training room equipped with Emmabuntüs.

Jonni Bidwell talks to Patrick from the Emmabuntüs collective to see how its distribution is helping humanitarian efforts in France and around the world.



› Emmabuntüs has been used in award-winning digital projects in West Africa, see p41.

# A Distro for All Seasons



**Emmabuntüs is an Ubuntu (and now Debian) based distribution (distro) designed for lower-spec hardware and suitable for users of all ages. The project is**

**based in France, where donated machines are refurbished by volunteers and sold at bargain prices to raise funds. But it's also part of a bigger picture, being allied with all kinds of charity work around the world, particularly in Africa. We spent some time with lead developer Patrick to find out more.**

**Linux Format:** Let's talk about the charity side of things first, tell me about the history of the Emmaüs communities, how they've grown, where they are etc?

**Patrick d'Emmabuntüs:** The Emmaüs movement was initiated in 1949 by a catholic priest named Abbé Pierre (although the movement has no religious affiliation), who really wanted to put solidarity into action in helping "those who suffer most" and also being "the voice of those without a voice".

You will find more historical information on the Emmaüs-International website (<http://bit.ly/HistoryOfEmmaus>).

The official Emmaüs France association was officially created in 1985 to regroup and somewhat unify the various flavours of the Emmaüs movement. As of today, this association federates 240 communities across the entire world, among which 115 are located in France for historical reasons. These communities are living, working and welcoming places cemented by social solidarity, and they are functioning thanks to the collecting and recycling work of the Emmaüs companions. These people (around 4,000 in France today) are usually homeless people hosted unconditionally and for an unlimited duration. The main activity of these communities is to receive donations from individuals (furniture, clothes, ornaments, bicycles and computers etc) to repair them if necessary and resale them to the public.

**LXF:** How did you get involved with them?

**P d'E:** As far as I am concerned, I started to help as a volunteer in the computer refurbishing activity of the Emmaüs community of Neuilly-Plaisance in May 2010. I started by developing a set of scripts to handle the software installs in Windows XP, making sure we didn't mess around with the original Windows licence.

After that, I noticed that the majority of the PCs were donated without a hard drive, so I had the idea of creating a script to install free software and a Dock on a Ubuntu Distribution, in line with the scripts developed for Windows XP. I presented this work at the Ubuntu-party 10.10 in Paris; I wanted to increase the

**> A rare photo of Patrick d'Emmabuntüs helps prefer to put the collective before the individual, so surnames (and mugshots) usually aren't provided.**

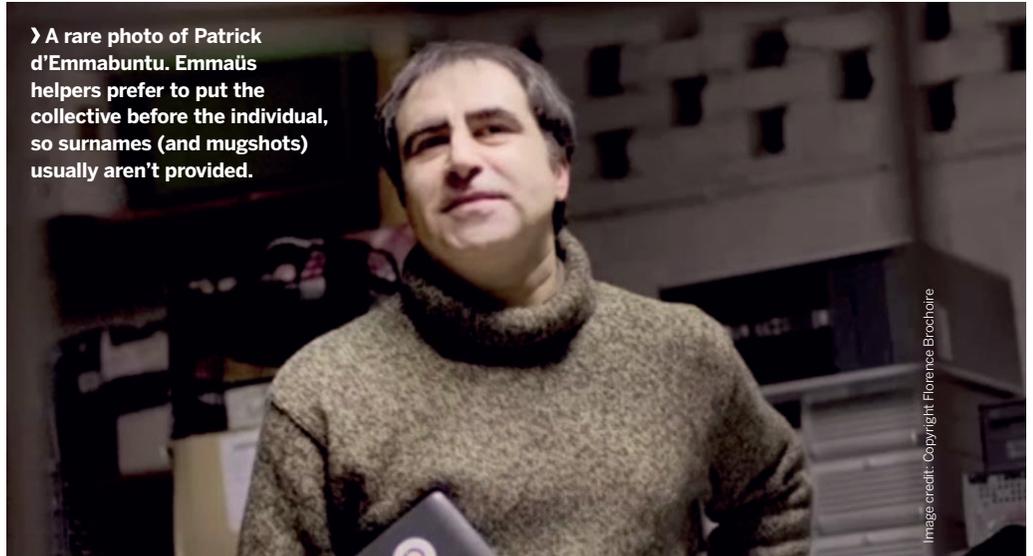


Image credit: Copyright Florence Brochoire

awareness of other people to the necessity of:

- > Developing and promoting a free distribution well suited for the refurbishing of the machines in the Emmaüs communities.
- > Help these communities to refurbish and sell these PCs to beginners without any previous knowledge about Linux distributions.
- > Reduce all waste generated by the overconsumption of raw materials, by extending the hardware lifetime.

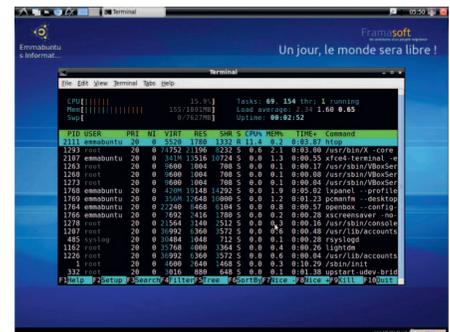
During this Ubuntu-party, I had the chance to meet Gérard and Hervé. They convinced me to create an ISO image dedicated to installations without an internet connection, and they had the idea of calling it 'Emmabuntüs', a portmanteau obviously made of Emmaüs and Ubuntu.

After that, David Rochelet and Morgan Duarte joined the core of the actual Emmabuntüs Collective. They are responsible for publishing Emmabuntüs respectively on Sourceforge and on Freetorrent (<http://freetorrent.fr>). The first version of Emmabuntüs, based on Ubuntu 10.04, was released on the March, 29 2011.

## ON THE COLLECTIVE'S GOALS

**"Selling used computers at a very attractive price is a good way to close the digital gap."**

In short, the Emmabuntüs Collective develops and maintains the various flavours of the Emmabuntüs Distribution, and in parallel its members help Emmaüs, and other associations, to refurbish old donated computers. The synergy between these two tasks is obvious. Due to historical and deep sociological reasons in France, many in the Emmaüs Communities are computer illiterate and selling them used computers at a very attractive price is a good way to close



**> The LXDE desktop environment consumes only 155MB of memory at start up.**

the digital gap in France between poor and rich people.

**LXF:** So hardware is donated by the public, tested/fixed and Emmabuntüs installed by volunteers, and then sold back to the public. What sorts of other work are the volunteers involved with?

**P d'E:** Our Emmabuntüs volunteers have a regular job during the week, and they spend their week-end refurbishing old computers. They are between 25 and 75 years old. At the beginning of the Emmabuntüs

adventure, they were mainly engineers or technicians in Electronic or Computer Science, but we see more and more non-geek persons joining us. Teachers, for example, who see in Emmabuntüs a great set of tools to educate children and promote the 'Free Culture'. At any rate there is no entry selection: all volunteers are very welcome.

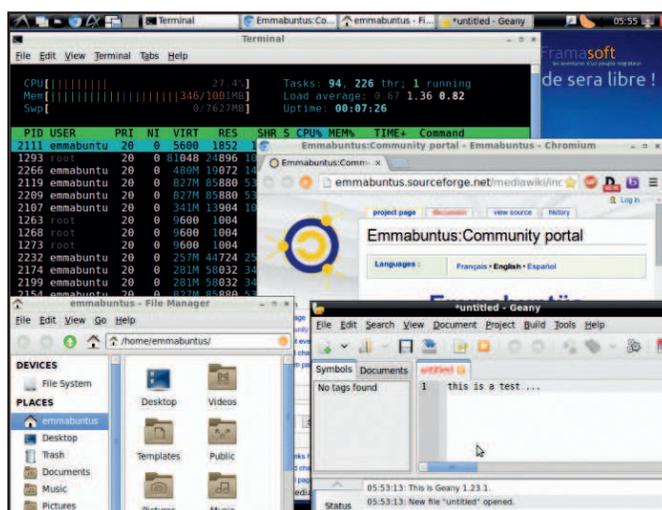
We must mention also Montpel'libre (<http://montpel-libre.fr>), the Software Libre User Group, which has helped us for three

» years to promote Emmabuntüs and free software at the Emmaüs Community of Montpellier ([www.emmaus-montpellier.fr](http://www.emmaus-montpellier.fr)) in French, by performing once a month sales animations including Emmabuntüs presentation and quick takeover of the system.

Besides the machine refurbishment and on-selling, the Emmabuntüs Community contribute in a number of other ways too, eg we train and support other associations like CalviX (<http://calvix.org>) which do the Emmabuntüs installations for the humanitarian charity Ailleurs Solidaires (<http://bit.ly/AilleursSolidaires4Linux>), helping needy children in Nepal, and refurbishing donated computers in our own lab and give them back, in turn, to support the projects in partnership with Partner Communities. There are also some training session around Paris, or we travel in the regions during our vacations, and sometimes we do remote training (as an example in Africa for YovoTogo and JUMP Lab'Orione) by having a remote access to the local computers (using *TeamViewer*) and holding the hand of the trainee until he is up to speed.

We collaborate also with associations specialised in the computer refurbishing, like THOT Cis, Les PC de l'Espoir (<http://pcdle.fr> en français), and Trira ([www.trira.com](http://www.trira.com)) which was founded by the Emmaüs community in Lyon and is using Emmabuntüs in the frame of their hacker workshops where they conduct training sessions explaining how to reuse components of obsolete machines to build a computer within a plastic can: Jerry Do-It-Together (<http://youandjerrycan.org>).

**LXF:** Installing Linux on one machine (usually) doesn't take too long. But when



» We run a test by launching, in parallel, *Chromium*, the *Clementine* music player, the *Thunar* file manager, the *Geany* text editor, and the *htop* system utility, you get a memory utilization of 346MB, which leaves yet another 156MB of free space, if you have only 512MB of RAM installed on your computer.

you have to do it on hundreds its nice to automate things. Have you managed to streamline the installation process?

**P d'E:** Volunteers spend 30 minutes on average per computer, using a automatic cloning technique based on an USB key, which installs the system in five minutes, then we load the various Free Culture components. These include ePub books in the public domain, free music, the Vikidia kids encyclopedia (see <https://en.wikidia.org>), plus some language customisation when the computers are sent to foreign countries (we do have an Albanian version of Emmabuntüs). This year alone, and beside the Emmaüs activity, the Emmabuntüs collective prepared and donated about 130 machines for various projects run by humanitarian associations, like YovoTogo et JUMP Lab'Orione (in Togo, see the Emmabuntüs blog, <http://bit.ly/YovoTogoDigitalAge>), RAP2S (actions in Togo and Ivory Coast, RAP2S standing for 'Réseau Afrique Partage Savoir Solidaire' which translates into Africa Solidarity Network Sharing Knowledge), Emmaüs Solidarity for Albany; and we also equipped four preschools in the Parisian area.

**LXF:** If you have an old motherboard lying around doing nothing, then it's tempting to update the BIOS, find the fastest CPU it can handle on eBay and fill it with RAM. This is fine from a hobbyist point of view, but it takes time and money and sometimes doesn't work. Do you get involved with this kind of thing? Do you provide any aftersales support for the machines that you sell?

**P d'E:** No, BIOS upgrades and sourcing suitable hardware would take too much of our time and cost too much, without being sure of a good result. It's just not worth it when you sell a system for between 50 and 70 Euros. On the other hand, in the frame of an Emmaüs sale, there is a three months' warranty for the hardware. The customer can return the machine without any justification and get, in

exchange, a purchase voucher of the same value. During the sale transaction we are training the new user during the half hour and show the first steps to get used to it.

And yes, we are also handling some post-sale support, sometimes six months after the purchase, eg to install a new printer. For some customers we replace – free of charge – their computer with a more powerful one, eg because there were driver issues with full-screen video. Sometimes big companies give us a lot of depreciated computers which are still in very good shape. They are easy to refurbish, and we give them back to other humanitarian associations, eg the YovoTogo et JUMP Lab'Orione project in Togo.

**LXF:** Linux can run on pretty much anything, but if you want to run a desktop and browse modern websites then there must be some minimum hardware requirements. What are the recommended specs for Emmabuntüs? What can be done with hardware that falls below these?

**P d'E:** We recommend the following minimum configuration: 2.0 GHz CPU, 40GB of hard disk space and 1024MB of RAM.

If the system is on the low end of the performance you can launch LXDE instead of Xfce. We dispose responsibly of computers which are really too old and hardware limited.

**LXF:** Major distros are starting to talk about dropping 32-bit support. Ubuntu has said that we won't be seeing 32-bit live images for 16.10. How will this affect you?

**P d'E:** Yes, we are concerned by the 32/64 bits issue. As a matter of fact we started developing Emmabuntüs Debian Edition because of the impending Ubuntu situation. We hope Debian will continue to support the 32-bit architecture for a long time. To build the Debian image we are using the LiveBuild utility and the same source for both 32 and 64-bit systems. And in order to improve co-ordination with different partners, we are using a Git solution on the



» Computer class in the Akashganga Intl Academy equipped by Ailleurs-Solidaires.

collaborative Framagit.

**LXF:** There's a few different software options for a lightweight desktop system—can you explain some of the choices made in Emmabuntüs? How do you balance wanting to give users a choice against baffling them with too many alternatives?

**P d'E:** The heart of our distribution is the Cairo Dock (which actually was developed at the beginning, with a different name, when I was refurbishing the first XP machines). The Dock gives us some degree of independence against the regular desktop of the underlying distribution (be it Xubuntu or Debian). In addition the Dock has three different profiles (Experts, Beginners, Kids) which give you access to different sets of applications and activities. Kids really love Cairo Dock, and it's great that they can have easy access to Wikipedia (or a subset of it), even when no Internet connection is available. The educational tools embedded in this distribution are also

## ON THE PROJECT'S VALUES

**“It's not a distribution for poor people, but a distro for all the people.”**

quite fun to use (speech synthesis, eg).

At the same time we kept the Xfce menu in its corner for people who do not want to use the Dock, and then later on, we added the option to use LXDE instead for reduce even more the desktop footprint in memory.

**LXF:** Are you looking for any help? How can volunteers get involved?

**P d'E:** Yes, we welcome all people who want to help. We need more people in the Refurbishing Labs; more people to staff training centres; more people to write user documentation and articles.

As mentioned above we once shipped an Albanian version of Emmabuntüs, but besides the French version, we support several languages (Arabic, English, German, Italian, Portuguese, Spanish) in our regular Emmabuntüs releases. This implies a lot of translation work in the code itself, but also for the user's documentation online, the wiki, the forum etc. And, as a matter of fact, one of our volunteers, Arpinux, just completed an excellent Debian Beginner's Book of 280 pages (<http://lescahiersdudebutant.fr>) and we need to translate it quickly into various language. Any volunteers out there?

**LXF:** Can you talk about the other communities you partner with ?

**P d'E:** As mentioned before, Ailleurs Solidaires installed computers running Emmabuntüs in two places: one is the Akashganga International

Academy (school based in Katmandhu, with 250 children), the other is the Disabled Service Association (<http://disabledservice.org.np>) (centre for 55 disabled – blind, deaf and dumb, physically impaired – children and all of them are very poor).

We also mentioned the Jerry DIT project. Jerry is an open source hardware project which is fully up-cycled and very low-cost. It gives a new life to computer components that would otherwise be directly dumped in the trash bin.

A couple of years ago this project chose Emmabuntüs as its favourite distribution on the Jerry desktop version, and on the JerryClan Ivory Coast work. Thanks to this, the JerryClan de Côte d'Ivoire and FabLab AyiyiKoh ([www.fablab-ayiyikoh.tk](http://www.fablab-ayiyikoh.tk)) teams were able to build SMS-based services aimed at medical aids and information, for which they were awarded more than five prizes during the Digital innovation challenge in Africa.

These services are based on a mobile application using SMS to monitor patients with tuberculosis, or follow up pregnant women, and provide more accurate information (see JerryTub, m-Pregnancy, OpenDjeliba, GBATA, Môh Ni Bah, Gbamé,

JerryCyber). And you can watch the video of Jerry-Marathon at Attécoubé at <http://www.youtube.com/watch?v=Ru4w6vU3kt4>.

In the coming years we will support important projects in Cameroon with David, who is a founder member of our collective, and who recently settled in Douala to establish its hackerspace: the DouaLab (<http://blog.doualab.org>). One project, running in 2017, is

to equip an orphanage in partnership with the SAVAS association (to support women who are victims of sexual abuse). To remain in Africa, we also have a project in Togo with the YovoTogo and JUMP Lab'Orione to help disabled children. These two associations are taking care of the transport, the installation and the maintenance of the computers, as well as building classrooms. In October 2016, there will be seven operational training rooms with 140 computers under Emmabuntüs in the North Togo Savannah region. The full story can be read in post The march of the YovoTogo children (<http://bit.ly/YovoTogoDigitalAge>).

Finally, we have also a project with ([www.blolab.org](http://www.blolab.org)) in Benin, to refurbish used computers, donate them to schools in less favoured areas and teach the students how to use free software

**LXF:** What do you think are the best things about being part of the Emmabuntüs collective?

**P d'E:** The Emmabuntüs collective thinks that Information Technology should be accessible to everybody, whatever could be their revenue level. We believe that giving a second life to aging computers reduces the electronic waste in the world. But to facilitate this choice, the cost is an important criteria, and this is why we offer computers at a very attractive price. In addition, we recycle waste that nobody want to reuse or knows how to dispose of correctly, with an estimated value under one euro. We transform it into a very useful object for training, knowledge and information, which costs between 50 and 70 euros. Brilliant isn't it? In short, Emmabuntüs is not a distribution for poor people, but a distribution for all the people.

*Interview realised with David, Patrick and Yves for the Emmabuntüs collective. LXF*

