

# Freedom to Teach

## @BIT16

Marc Lijour

November 10, 2016



# Table of Contents

- 1 Introductions
- 2 Teaching with technology in 2016
- 3 Challenges to our Freedom
- 4 Working Efficiently AND (not OR) Protecting our Freedom



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# Presenter: Marc Lijour

Helping businesses and countries digitize

- Director @ Savoir-faire Linux
- OCT, Maths, Computer Science
- Former Education Officer @Ministry of Education  
(Tech Ed & Computer Studies Curriculum, e-Learning Ontario)
- Using Free Software since 1999
- Non-profit: Officer of the ICTC Board, PIEnier with Prepr Foundation



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## TPACK Framework

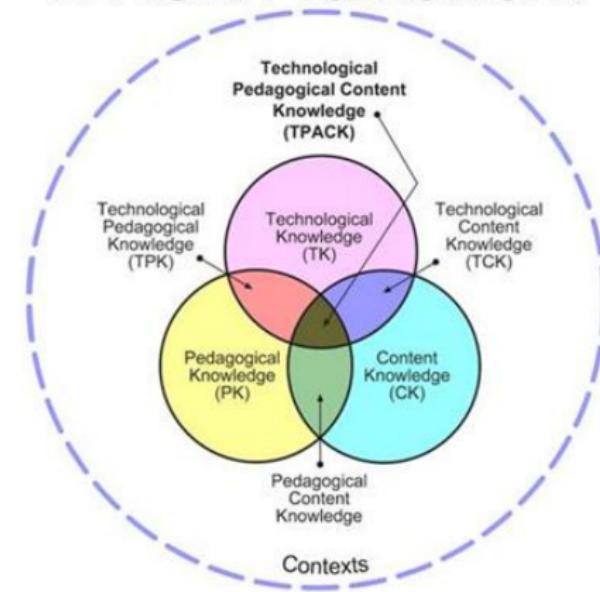


Figure: from Common sense media



# Karen Billing's take on EdTech



Figure: Credit © Robert Martellacci (on Twitter)

# A slow motion digitization of learning

- 70's openness



# A slow motion digitization of learning

- 70's openness
- 80's personal computer



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- 70's openness
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- 90's 'fat clients', software packages



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# A slow motion digitization of learning

- 70's openness
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- 00's web, web2.0
- 10's cloud-centric
- present: strengthening trend towards decentralization



# PC vs Mobile

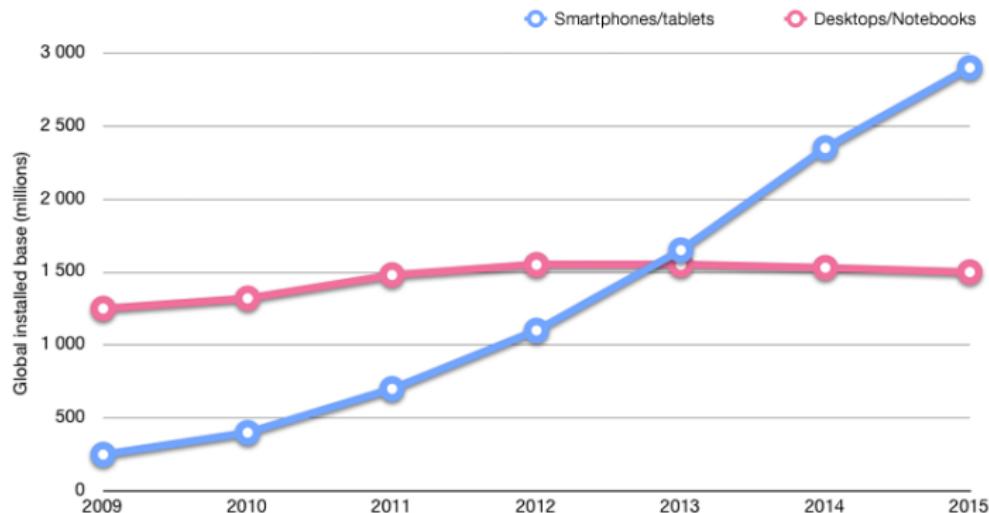


Figure: <http://kacao.fr/blog/>

# PC vs Mobile

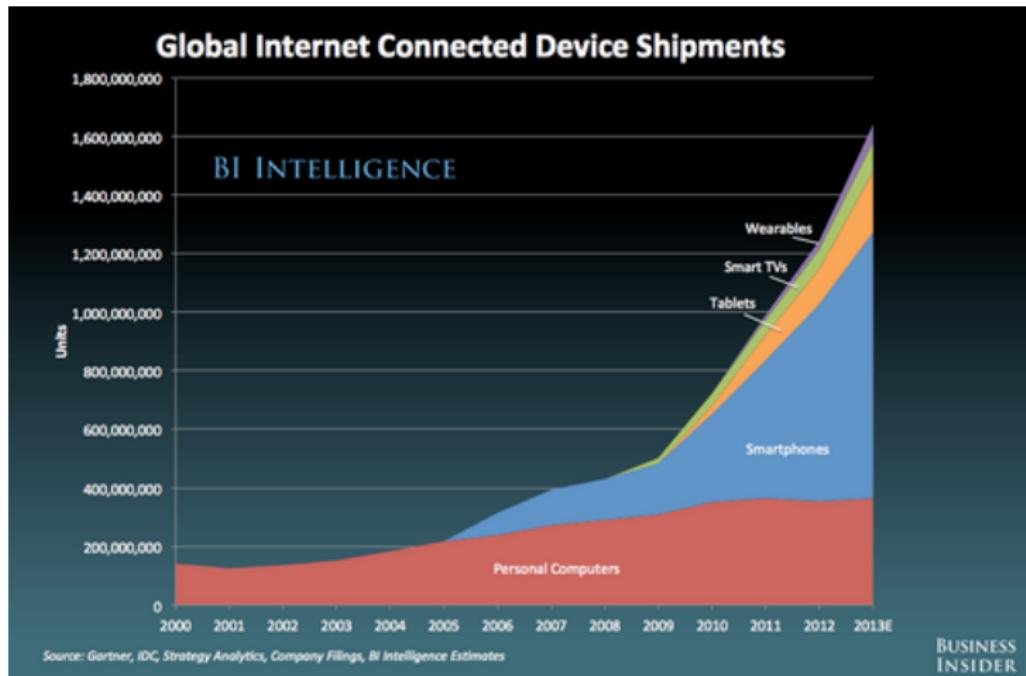


Figure: from Kanyi Maqubela's blog



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# Microsoft's View on IoT by 2015

Azure + IoT



Figure: IoT across devices with Windows 10 and Azure IoT Suite by Admir Tuzović (on Slideshare)



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# All our data is online



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# The meaning of Freedom

- Do what you like while respecting the next in kind's freedom



# The meaning of Freedom

- Do what you like while respecting the next in kind's freedom
- Democracy



# The meaning of Freedom

- Do what you like while respecting the next in kind's freedom
- Democracy
- Citizenship



# The meaning of Freedom

- Do what you like while respecting the next in kind's freedom
- Democracy
- Citizenship
- Human Rights



# The meaning of Freedom

- Do what you like while respecting the next in kind's freedom
- Democracy
- Citizenship
- Human Rights
- Rule of Law (Justice, Equity)



# The meaning of Freedom

- Do what you like while respecting the next in kind's freedom
- Democracy
- Citizenship
- Human Rights
- Rule of Law (Justice, Equity)
- Liberté - Égalité - Fraternité



# Freedom needs to be nurtured



Figure: <http://www.zerohedge.com/news/2016-08-08/trump-financial-plan>



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# What could go wrong?

## Excessive (?) Government Surveillance & Intervention

- Citizen Biometric Registry (e.g. in France)



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- Chinese Firewall



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## Excessive (?) Government Surveillance & Intervention

- Citizen Biometric Registry (e.g. in France)
- Patriot Act (& others: French Govnt Act, 2015...)
- Chinese Firewall
- Government-led Cyberattacks



# The User is the Product

## GAFAM & Corporate Interests under scrutiny

- Google for example (see Forbes)
- Microsoft 'Scroogled' Campaign in reaction
- In a case against Google, US Magistrate Judge Paul Grewal declared: "in this model, the users are the real product"
- Follow the money:
  - ▶ US Internet Advertising Revenue in 2015: \$59.6 billion
  - ▶ Google: \$30 billion
  - ▶ Facebook: \$8 billion
- Big Data & Analytics is thriving with multiple data points (devices, apps, cameras...)
- Organizations are vulnerable to security breaches



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# Educate about Cybersecurity

Example: CyberTitan

- ICTC program for high school students



Figure: <http://www.cybertitan.ca>



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- in partnership with the US Air Force Association's CyberPatriot Program



Figure: <http://www.cybertitan.ca>

# Educate about Cybersecurity

Example: CyberTitan

- ICTC program for high school students
- in partnership with the US Air Force Association's CyberPatriot Program
- to develop in-demand skills needed to work in CyberSecurity, and other STEM areas



Figure: <http://www.cybertitan.ca>

# Learn from Mozilla Internet Citizen



Figure: <https://blog.mozilla.org/internetcitizen/>



# Solve the toughest 21st Century Challenges with PIE®



Figure: <https://prepr.org>

# Design your EdTech Environment with Privacy in Mind

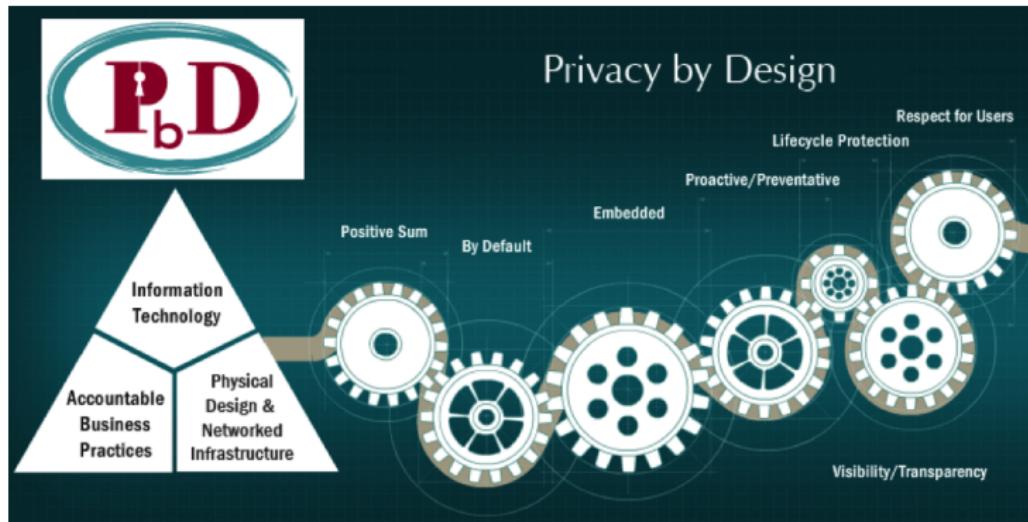


Figure: Dr. Ann Cavoukian, Executive Director, Privacy and Big Data Institute



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# Prefer Decentralized Systems that put you in control

Examples: Blockchain, and Ring for Secure Communications

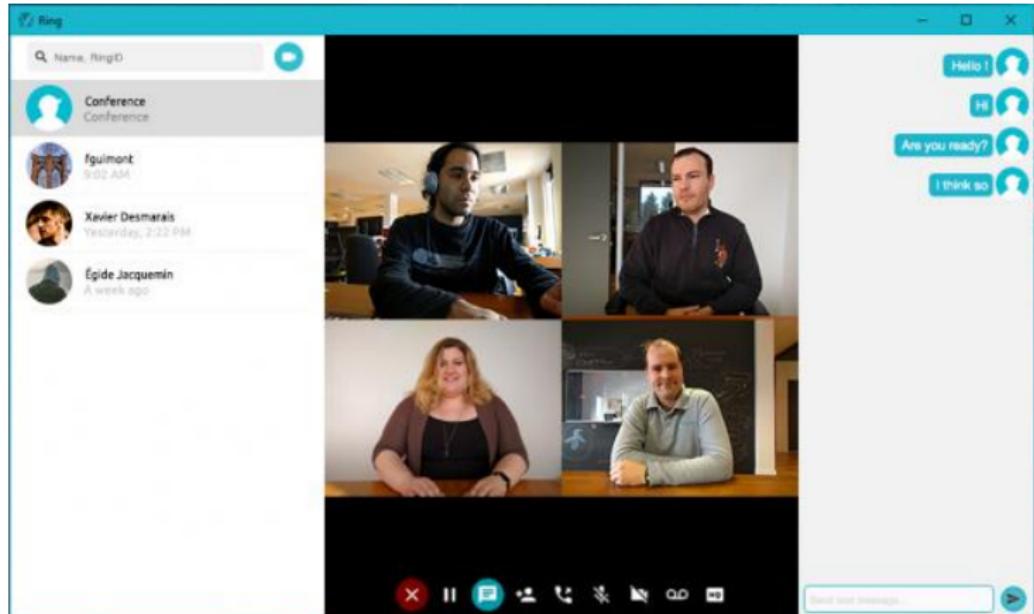


Figure: Data is shared as a need-to-know basis, see <http://ring.cx>



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# Build Community Clouds that you control

- Hosted in Canada



# Build Community Clouds that you control

- Hosted in Canada
- On your premises or at a secure location



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- On your premises or at a secure location
- As a school board, or an association of privacy-conscious teachers



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- As an individual (for example on OVH or Microsoft Azure)



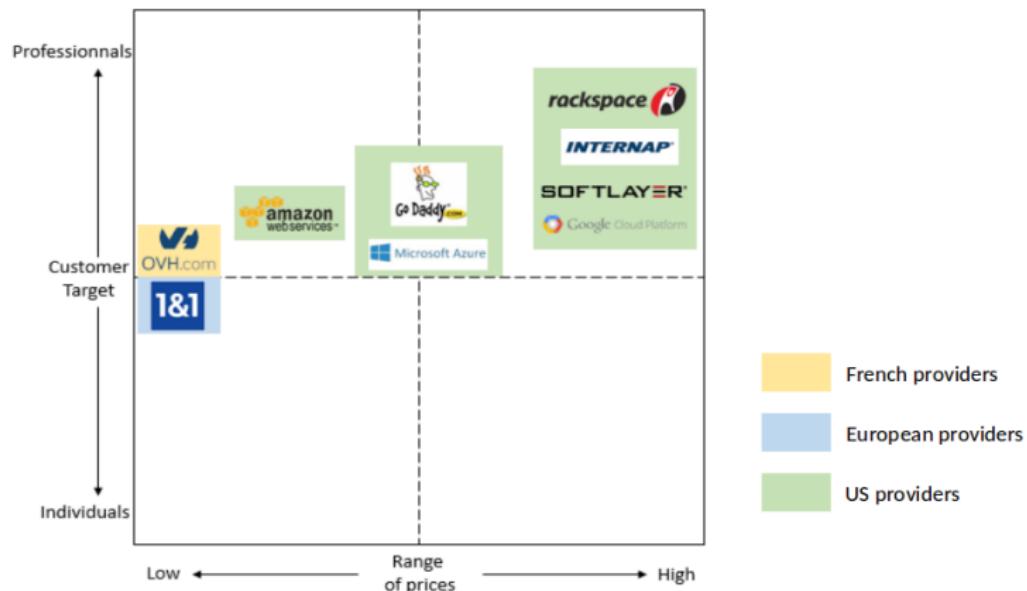
# Build Community Clouds that you control

- Hosted in Canada
- On your premises or at a secure location
- As a school board, or an association of privacy-conscious teachers
- As an individual (for example on OVH or Microsoft Azure)
- With the help of students



# Secure Clouds for your Pocket Book

OVH is the Top 3 Cloud Company with a data centre in Canada



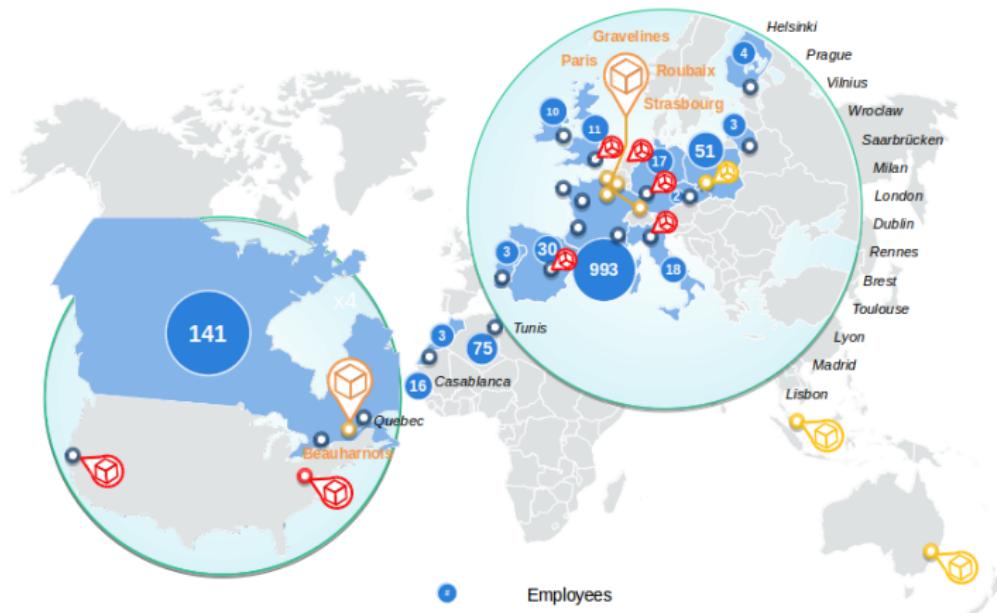
# OVH in Canada

- +30M\$ invested in Canada since 2013
- +3,000 Customers in Canada
- 2 PoP in Canada (Montreal and Toronto) and 11 in the US
- Strategic partnerships:
  - Rogers as a reseller of Public Cloud Enterprise solutions Canada-wide
  - VMWare (Partner Innovation Award received in 2016)
  - OpenStack (one of the 3 major contributors WW)
- Technological partners: **Savoir-faire-Linux**, LinkByNet...



# OVH Global Footprint

#1 in Europe, Top 3 Globally



# Build your own server / IoT device with lunch money

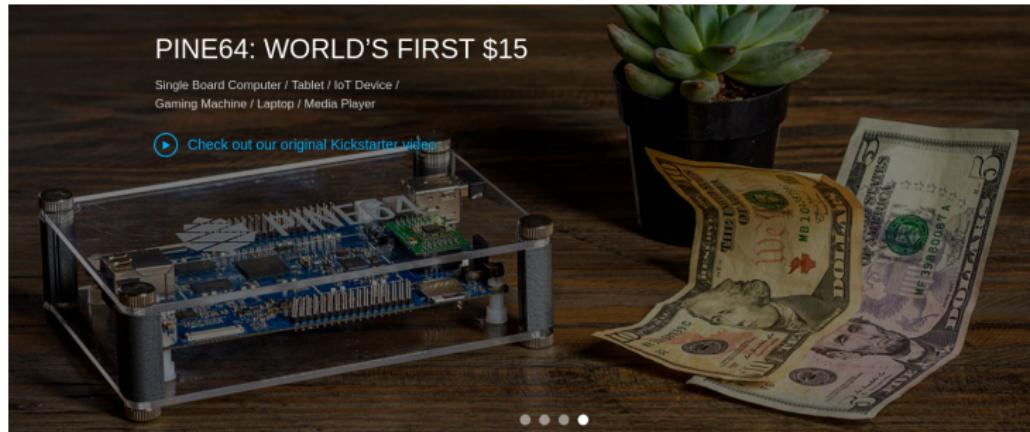
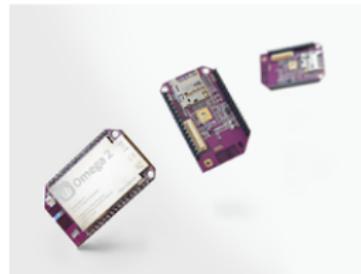


Figure: <https://www.pine64.org>

# Build your own server / IoT device on a coffee budget



Introducing the Omega2, the \$5 IoT computer. What the heck is an IoT computer? It is a Linux computer designed specifically for building connected hardware applications. It combines the tiny form factor and power-efficiency of the Arduino, with the power and flexibilities of the Raspberry Pi. With the Omega2, we want to lower the barrier of entry, and allow everyone to take the leap into hardware development.

Figure: <https://www.indiegogo.com/projects/omega2-5-linux-computer-with-wi-fi-made-for-iot>

# Use Free Software Alternatives

Example: Framasoft alternative to G Suite for Education & other popular SaaS



- Founded in France (2004)
- Promotes and educates about Free Software, Free Culture, Free Services
- Flagship project to offer Free/Libre alternatives to dominant proprietary offers
- 3 FTEs, and a large community
- 30 solutions online (SaaS), or download and install on your own cloud/server



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# 30 Framasoft Services



Frama.link



Framindmap



MyFrama



Framadate



Framadrive



Framanotes



FramaspHERE



Framagit



Framagenda



Framabookin



Framapad



Framaforms



Framallistes



Framacarte



Framanews



Framabee



Framacalc



Framapic



Framinetest



Framememo



Framabin



Framabag



Framavox



Framatalk



Framateam



Framaboard



Framadrop



Framagames



Framavectoriel

# Framadrive ↔ Google Drive

The screenshot shows the OwnCloud web interface. On the left, there's a sidebar with links: 'Tous les fichiers' (selected), 'Favoris', 'Partagés avec vous', 'Partagés avec d'autres', 'Partagés par lien', 'Fichiers supprimés', and 'Paramètres'. The main area displays a list of files and folders:

	Nom	Taille
	Documents	35 kB
	Photos	663 kB
	ownCloudUserManual.pdf	2.1 MB

Below the list, it says '2 dossiers et 1 fichier' (2 folders and 1 file). To the right, there's a large stylized 'OC' logo.

Figure: Based on OwnCloud -with calendars, contacts, mobile app...



# Framacalc ↔ Google Spreadsheet

The screenshot shows a spreadsheet interface with a toolbar at the top containing various icons for file operations, search, and data manipulation. The main area displays a table with the following data:

	Dénomination	Lien	Licence
1	Framakey Mint		
2			
3	Dénomination	Lien	Licence
4	Logiciels		
5	Framakey 2 (structure interne)	<a href="http://framakey.org/Pack/Pack20Base">http://framakey.org/Pack/Pack20Base</a>	GPL
6	Linux Mint	<a href="https://www.linuxmint.com/">https://www.linuxmint.com/</a>	Multiples (Principalement GPL)
7			
8			
9	7-zip	<a href="http://www.7-zip.org">http://www.7-zip.org</a>	GPL
10	Audacity	<a href="http://audacity.sourceforge.net">http://audacity.sourceforge.net</a>	GPL
11	CAFE	<a href="http://clief.usb.googlepages.com/cafe">http://clief.usb.googlepages.com/cafe</a>	GPL
12	Cdex	<a href="http://cdexos.sourceforge.net">http://cdexos.sourceforge.net</a>	GPL
13	ClavicomNG	<a href="http://www.i-comprovence.net/?ClavicomNG">http://www.i-comprovence.net/?ClavicomNG</a>	GPL
14	Coolplayer	<a href="http://coolplayer.sourceforge.net">http://coolplayer.sourceforge.net</a>	GPL
15	Ditto	<a href="http://ditto-cp.sourceforge.net">http://ditto-cp.sourceforge.net</a>	GPL

Figure: Based on EtherCalc



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# Framagenda ↔ Google Calendar

Agenda

septembre 2016

lun. mar. mer. jeu. ven. sam. dim.

jour Semaine Mois Auj.

+ Nouvel agenda

● Démonstration ⚡ Partagé \*\*\*

5 6 7 8 9 10 11  
15:00 Conférence ownCloud

+ Nouvel abonnement

Conférence

Anniversaires des con... \*\*\*

12 13 14 15 16 17 18

19 20 21 22 23 24 25

26 27 28 29 30 1 2

3 4 5 6 7 8 9

Paramètres

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## Framadate

Make your polls

English OK

		octobre 2014					
		mer. 22	jeu. 23	ven. 24	sam. 25	matin	soir
		10h	19h	15h30	20h	10h-19h	
	Vacé	✓	✓	✓	✓	✓	✓
Agnès		✓	✓	(✓)	✓	✓	✓
Mohamed		✓	✓	✓	✓	✓	✓
Cathy		✓	✓	(✓)	✓	✓	✓
Adelin		✓				✓	✓
Claire		(✓)	(✓)	✓	(✓)	✓	✓
Luc		✓	✓	✓	✓	✓	✓
Somme		2	3	2	2	4	1

		octobre 2014					
		mer. 22	jeu. 23	ven. 24	sam. 25	matin	soir
		10h	19h	15h30	20h	10h-19h	
	Vacé	✓	✓	✓	✓	✓	✓
Serge		✓		✓	✓	✓	✓
Jeanne		✓		✓	(✓)	✓	✓
Émilie		✓		✓	✓	✓	✓
Xavier			(✓)		✓	✓	✓
Hugo		✓				✓	✓
Somme		★3	2	★3	2		

Schedule an event

Make a standard poll

B I U S    Normal    A    C    x<sup>2</sup> x<sub>2</sub>    Entrez votre i  
1 Nasreddin et le pommier  
2 Nasreddin plantait un pommier dans son jardin quand le sultan vint à passer ;  
3 il s'arrêta et dit à Nasreddin, d'un ton moqueur :  
4 – Voyons, Nasreddin ! Pourquoi te donnes-tu tant de peine ? Tu ne mangeras jamais les fruits de ce pommier.  
5 Tu sais bien que tu mourras avant qu'il ne commence à produire des pommes.  
6 Ce à quoi Nasreddin répondit :  
7 – Oh Sultan ! Nous mangeons les fruits des pommiers plantés par nos pères, et nos enfants mangeront les fruits  
8 des pommiers plantés par nous.  
9 Cette réponse pleine de sagesse plut au sultan qui, en récompense, donna une pièce d'or à Nasreddin.  
10 – Oh Sultan ! , dit Nasreddin en empochant la pièce, voyez comme ce pommier a déjà donné des fruits.  
11 Cette remarque fit rire le sultan, qui lui donna une autre pièce d'or.  
12 – C'est de plus en plus extraordinaire, s'écria Nasreddin. Voilà un pommier qui donne deux récoltes par an.  
13 Le sultan se mit à rire aux éclats et donna une troisième pièce d'or à Nasreddin.

Chat

Matéo: Coucou	13:41
Maya: Salut Matéo	13:41

# Framacarte: Draw your own maps



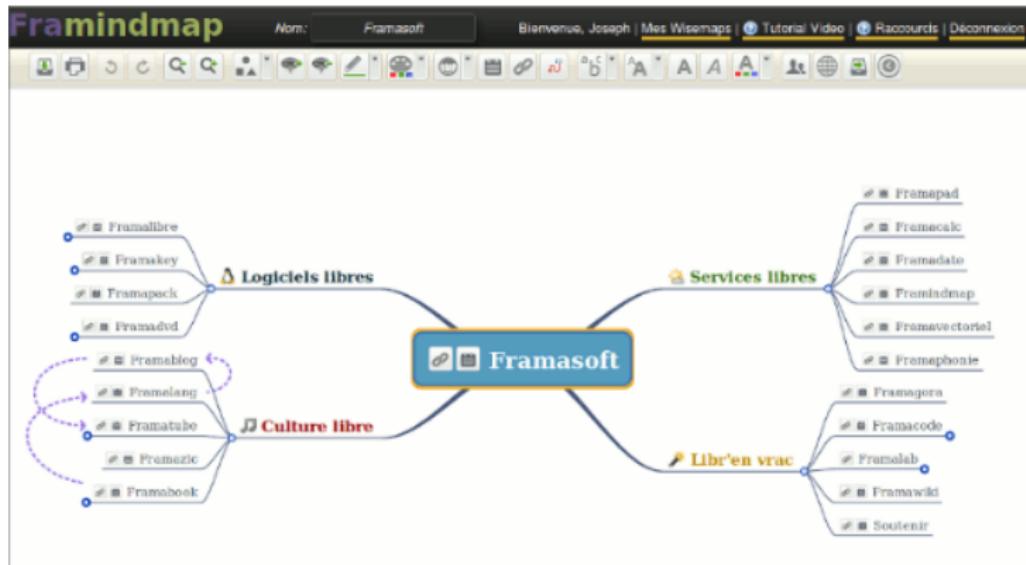
Figure: Based on uMap and OpenStreetMap

# Framinetest ↔ Minecraft



Figure: Based on Minetest

# Framamind ↔ Inspiration / Freemind



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# Framabookin ↔ Kindle Store (for free books)



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**LINUX**

# More Software -beyond Framasoft

**FREE DVD!**  **3 UBUNTU DISTROS**

# LINUX FORMAT

Get into Linux today!

## Hack! Code! Build!

The 100 must-have open source tools for your Linux desktop

- » Improve your documents
- » Monitor your systems
- » Edit video and audio
- » Secure your PCs
- ...and loads more!

 A large illustration of Tux the Penguin standing on a track made of various Linux application icons like a terminal, file manager, and browser.

**IS YOUR FREE DVD MISSING?**  
Check if you've received it now!

**All's faire...**

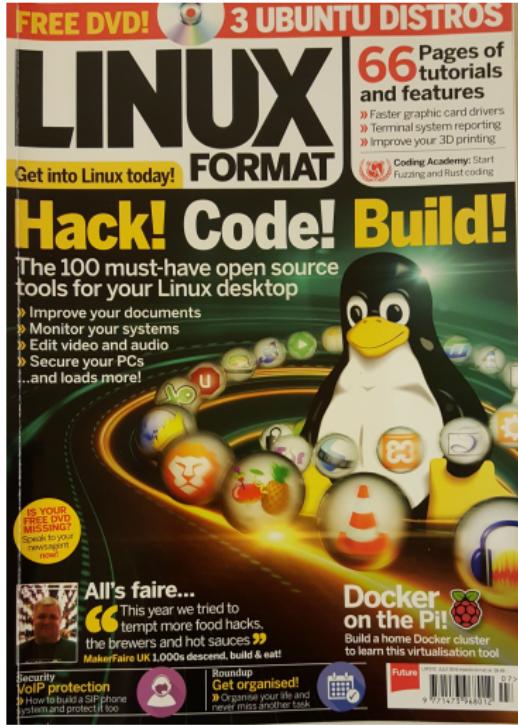
  
This year we tried to tempt more food hacks, the brewers and hot sauces”  
— MakerFaire UK 1,000s descend, build & eat!

**Docker on the Pi!**

Build a home Docker cluster to learn this virtualisation tool

**Roundup** **Get organised!**  
Organise your life and never miss another task

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9 771475192102



**FREE DVD!**  **MINT 17.3: TRY IT NOW!**

# LINUX FORMAT

Get into Linux today!

## ESCAPE WINDOWS

Discover the freedom and power of Linux

- » Free to install
- » Easy to use
- » Fast, secure and powerful
- » Get started right now!

 Tux the Penguin is shown in a cityscape at night, holding a small yellow book titled "Linux for Dummies".

**IS YOUR FREE DVD MISSING?**  
Check if you've received it now!

**Of mice and Python**

It's great for everyone to use open source, but with science it's especially important  
— Amy Boyle on Python in science p40

**Plus: Pi User**

8-page Raspberry Pi companion

- » Games and GPIO in Scratch
- » Discover OpenMediaVault

**Roundup** **Backup and secure**  
Keep your data intact and safe with tools to use

**Network storage** **Build a Pi NAS**  
Create an eco-friendly and cost-effective solution

**Future** ISSUE 107 APRIL 2016 PAGE 67  
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# Feel Free Be Free!

