

After the Hype
*The current state of
One Laptop per Child and Sugar Labs*

[26C3, 2009-12-28]

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@random_musings



The history of OLPC and Sugar Labs



Status Quo

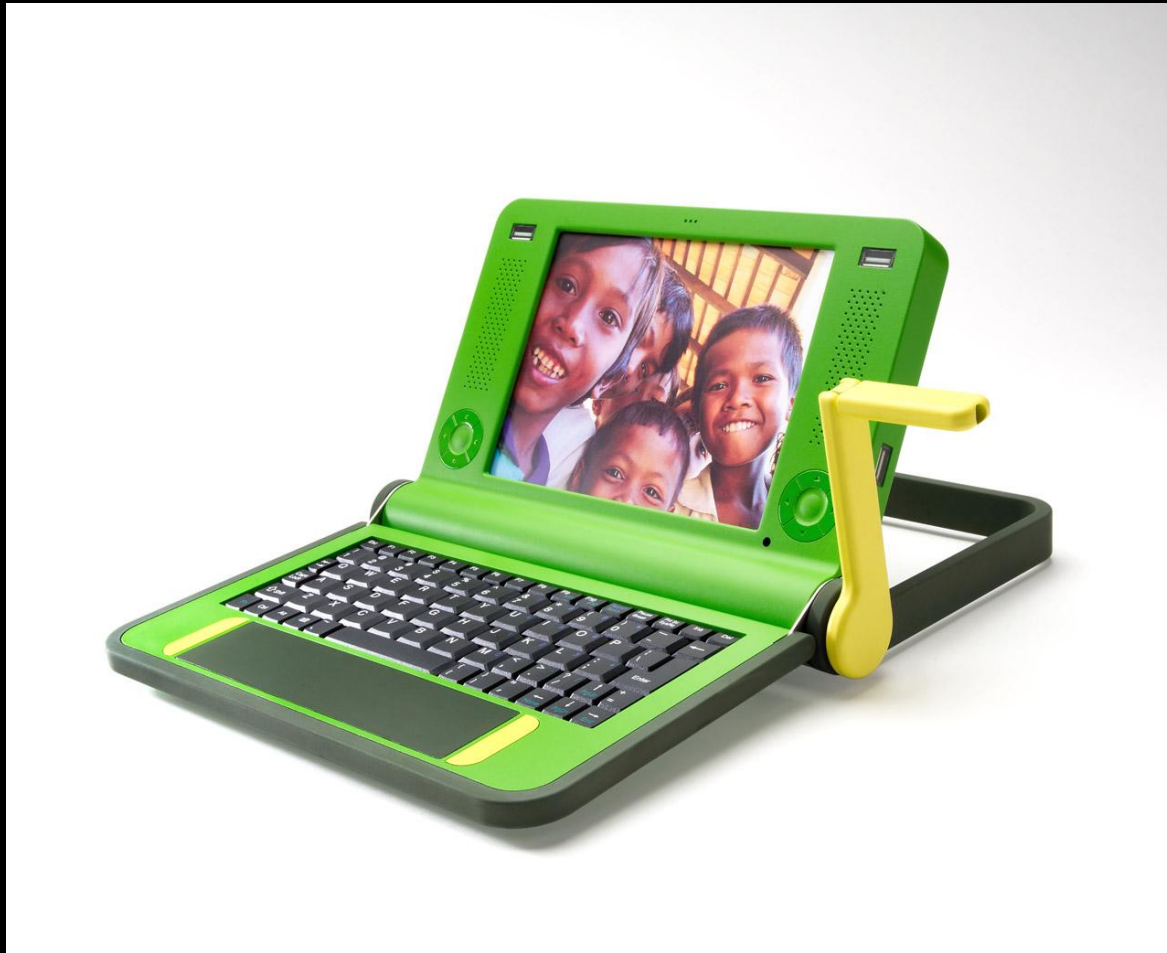


What FLOSS can do



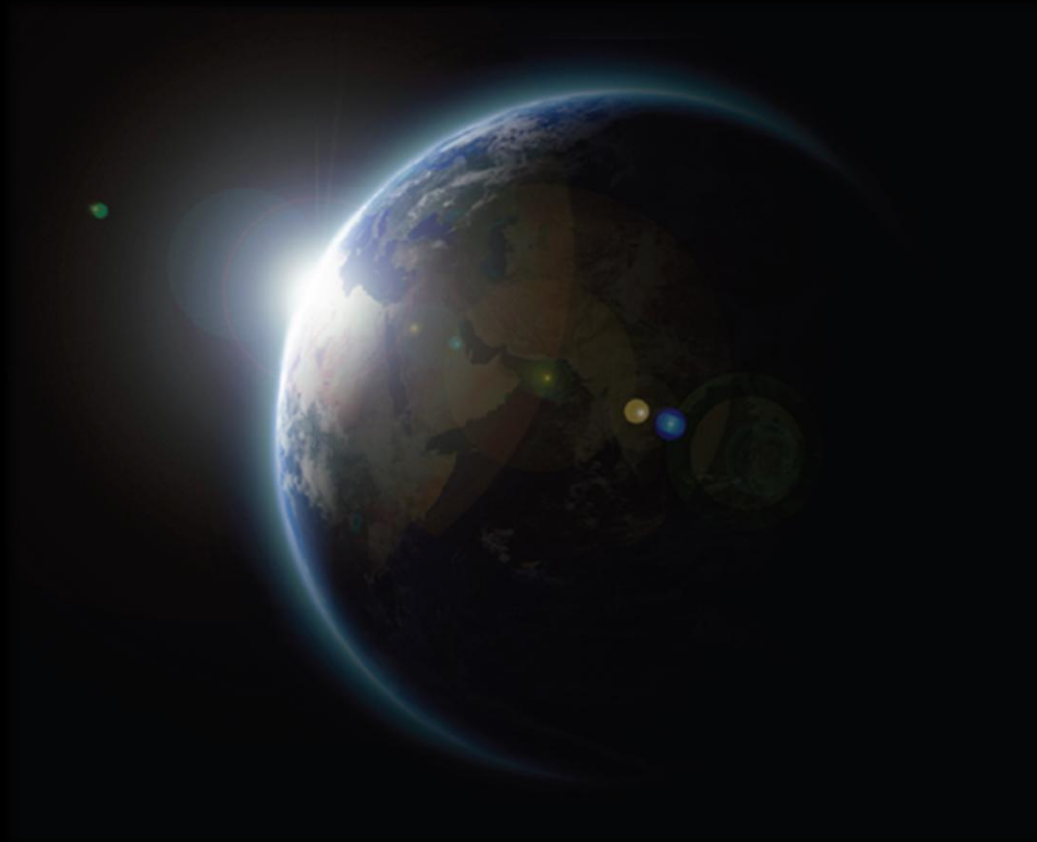
A little history
or
How the hype got started

The \$100 laptop...



Source: wiki.laptop.org/go/Image:Laptop-crank.jpg

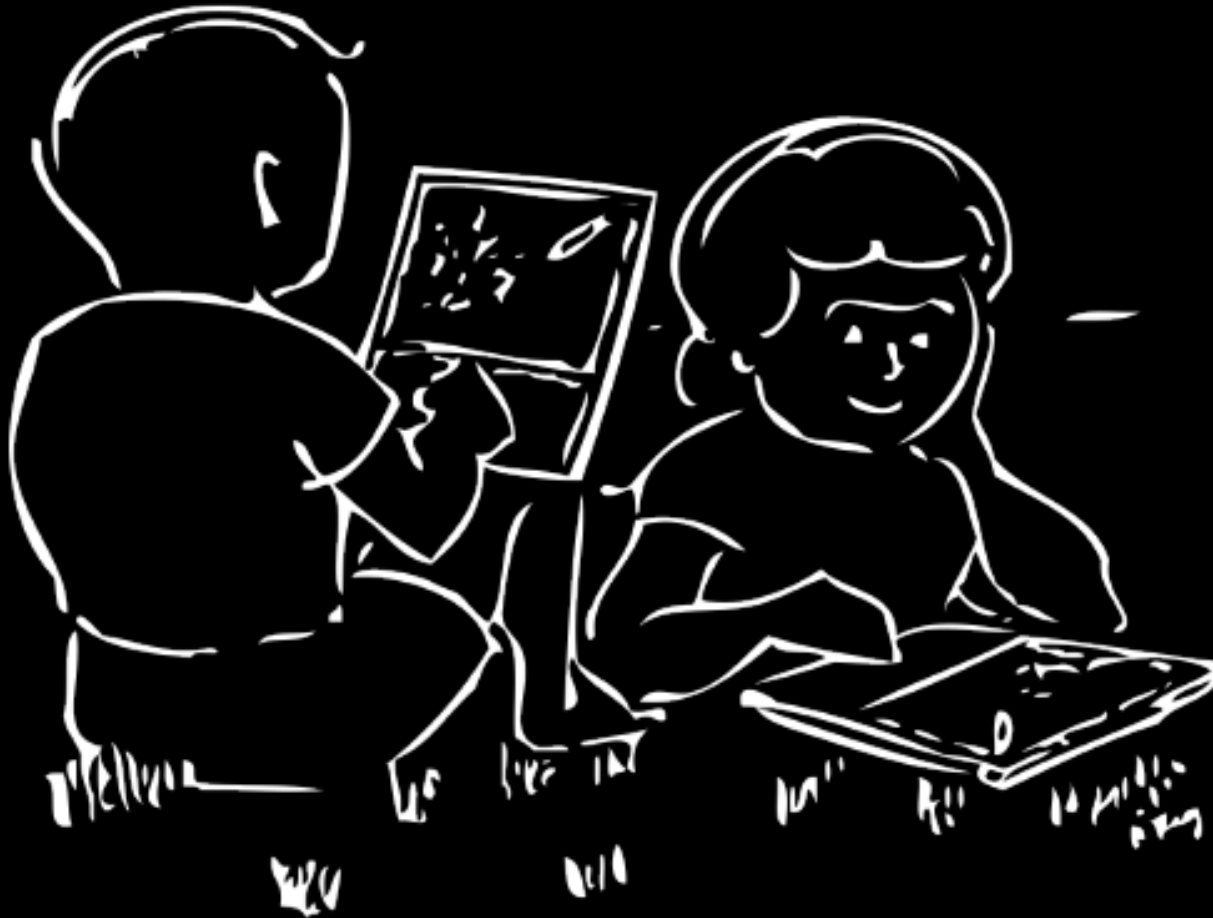
An ambitious education project





massachusetts institute of technology

Since the 60ies



Source: Viewpoints Research Institute

One Laptop per Child

- Nicholas Negroponte, MIT Media Lab / Wired
- Founded in early 2005 (non-profit)
- First prototype: late 2005
- Production: November 2007



Source: www.laptop.org

The Five Principles

Child Ownership

Low Ages

Saturation

Connectivity

Free and Open Source

The Five Principles

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Free and Open Source

Every children gets a laptop

A special laptop



Source: www.flickr.com/photos/olpc/sets/72157605729498226/



Source: www.flickr.com/photos/olpc/sets/72157605729498226/

Hightech

Display

7.5" Dual Mode TFT (colour, B/W)

1200 x 900 pixel (200dpi)

E-book mode

0.1W ~ 1W power consumption

Hardware Specs

CPU: AMD Geode LX-700 (433MHz @ 0.8W)

RAM: 256MB

HDD: 1GB Flash

I/O: 3x USB, SD-Card, Audio

WiFi: 802.11s Marvell 8388

Camera: Omnivision OV7670

Where is the crank?

Power consumption (1)



Source: www.flickr.com/photos/curiouslee/2720751393/

Power consumption (2)



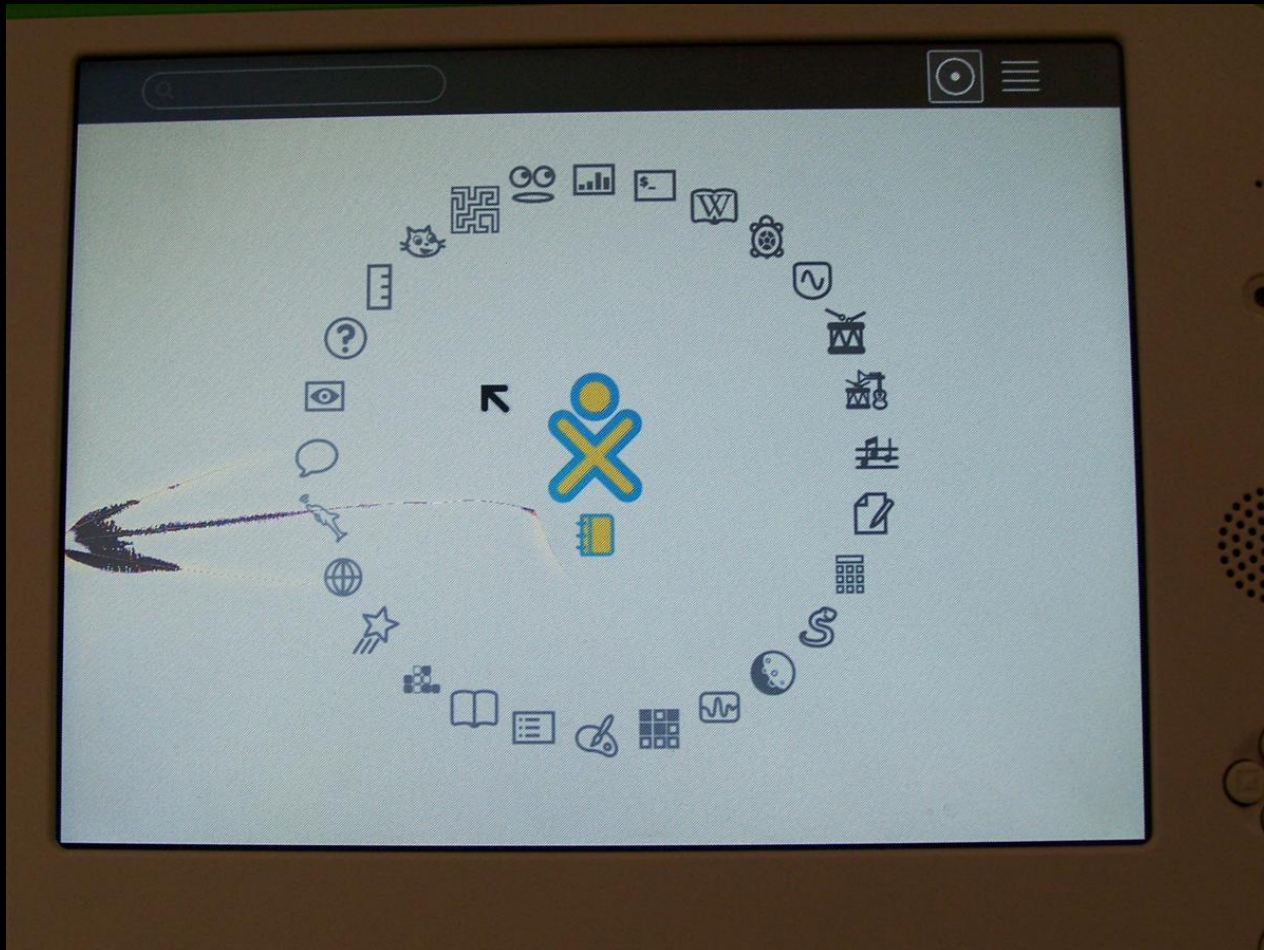
Source: One Laptop Per Child Afghanistan

Extremely robust



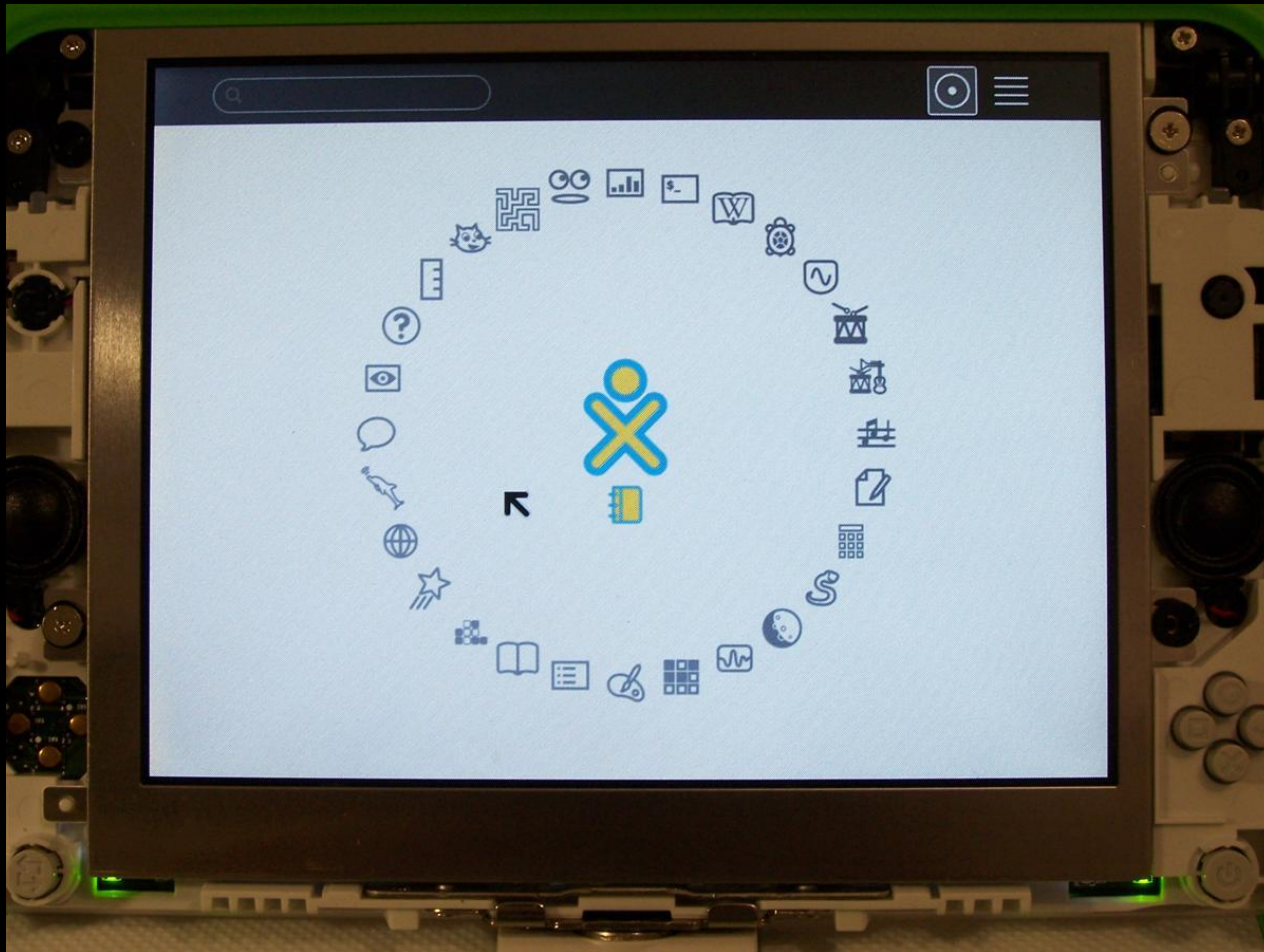
„S*** happens!“

(Thank you Forrest Gump)



Source: olpcaustria.soup.io/post/15559316/Before

10 minutes later



Source: olpcaustria.soup.io/post/15559324/After

10 million units or else!

\$100 Laptop

\$188 Laptop

Microsoft #1

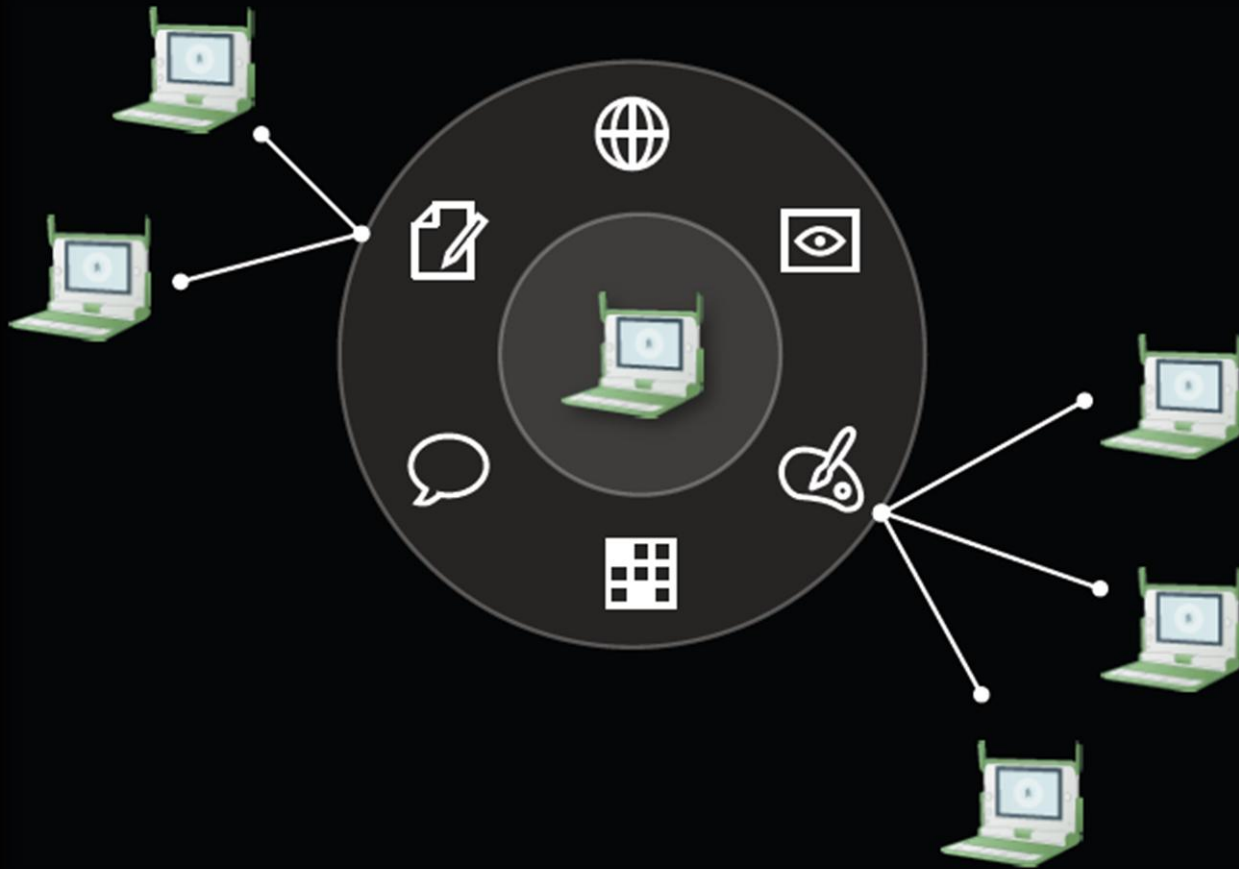
- May 2008: Windows XP for the XO-1...
 - Walter Bender
 - Ivan Krstić
- Loss of a lot of FLOSS good-will

Sugar Labs

- Sugar: more than just UI -> platform for learning
- Free and Open Source
- Independent since mid-2008
- Initially focus on hardware independence

sugarlabs

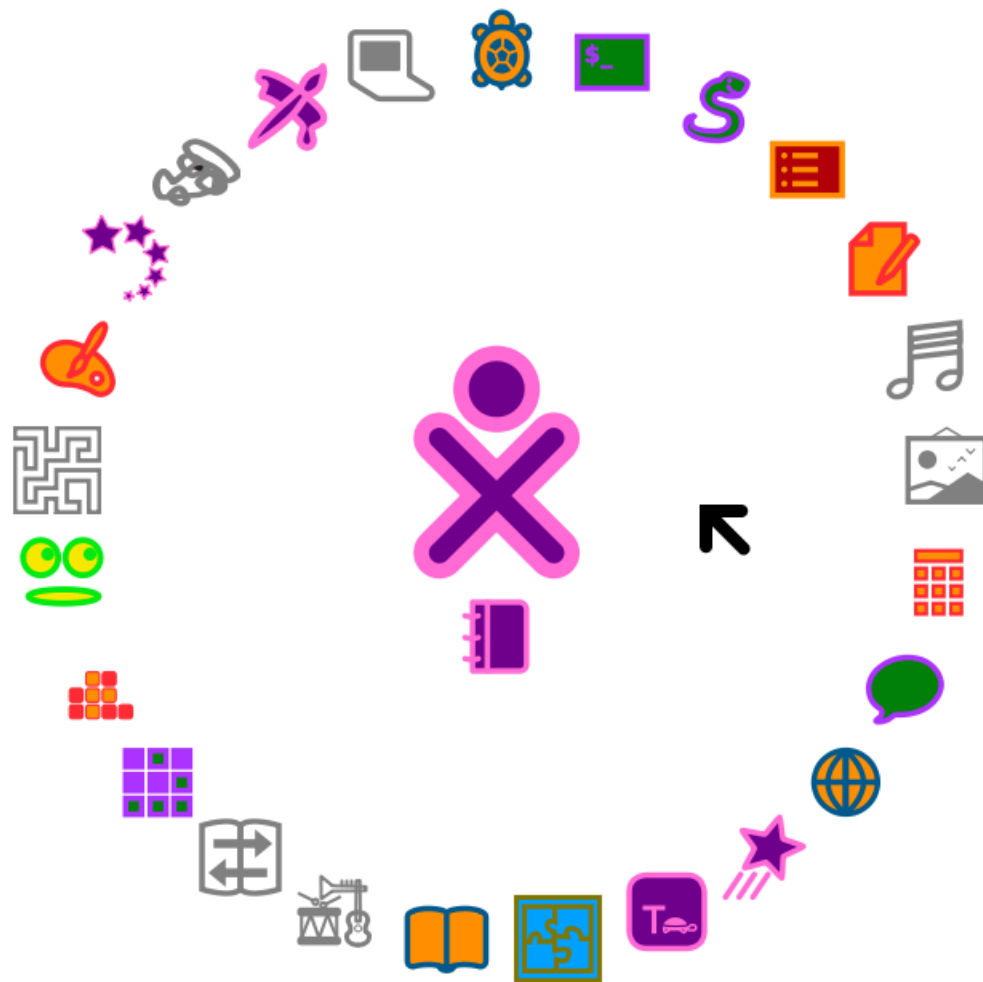
Collaborative learning



Learning by making



Activities





Anything



Anytime



Screenshot

4 seconds



Record Activity

2 minutes and 50 se...



Photo by asd

2 minutes and 51 se...



Paint Activity

3 minutes and 8 se...



Paint Activity

3 minutes and 13 se...



Write Activity

3 minutes and 41 se...



Write Activity

3 minutes and 46 se...



SimCity Activity

1 hour and 4 minutes



SimCity Activity

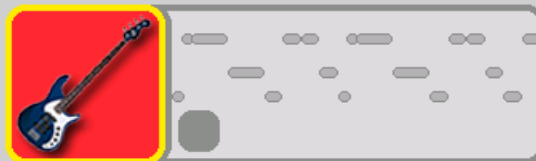
2 days and 20 hours



Write Activity

2 days and 20 hours





A horizontal timeline with a series of small grey dots.

A horizontal timeline with several grey rectangular notes.

A horizontal timeline with several grey rectangular notes.

A horizontal timeline with several grey rectangular notes.

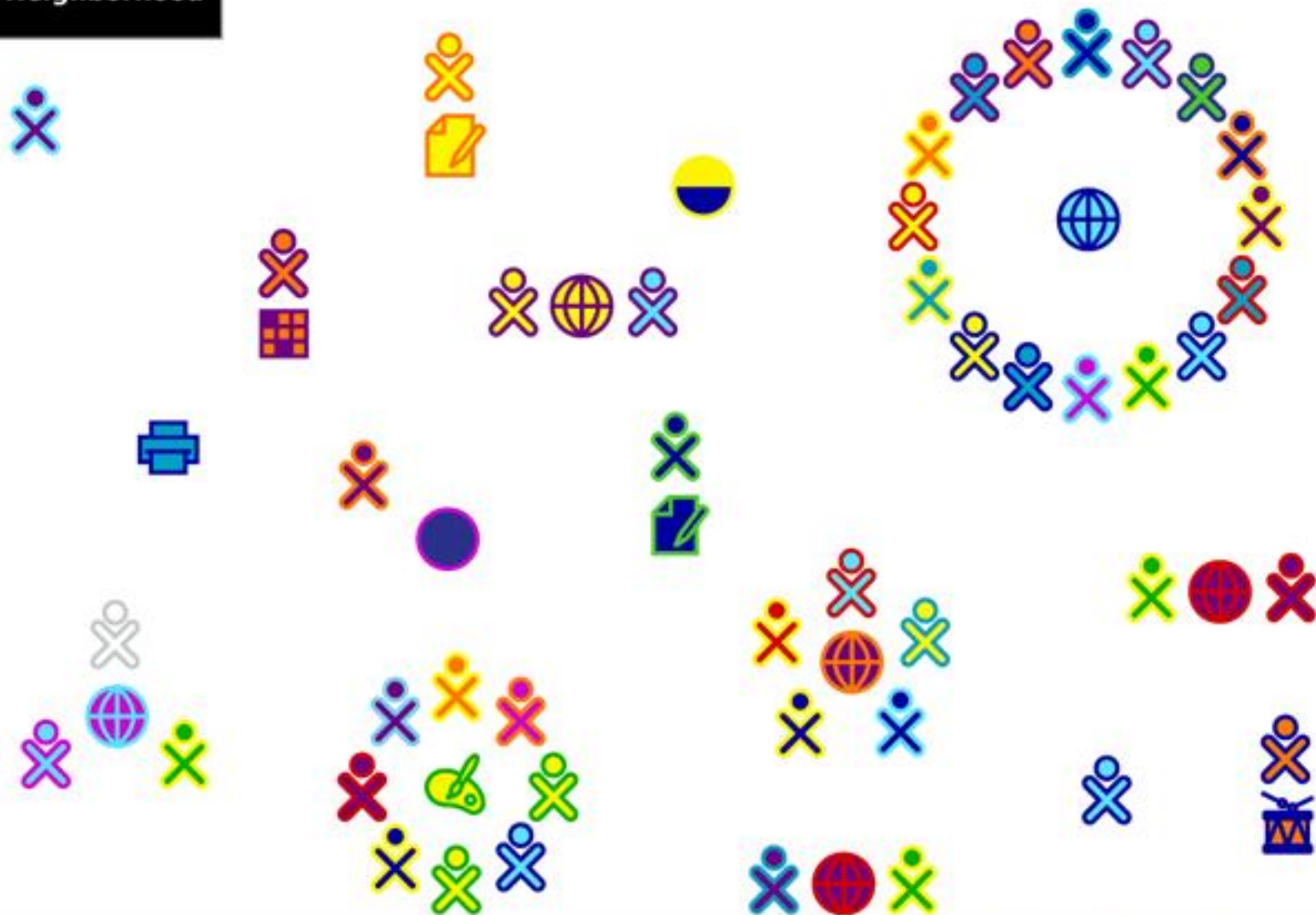
A horizontal timeline with several grey rectangular notes.

A horizontal timeline with several grey rectangular notes.



Neighborhood

Source: www.sugarlabs.org/index.php?template=gallery&page=media_04



Sugar on a Stick



Source: www.flickr.com/photos/curiouslee/3358546796/

Microsoft #2

FSF Windows 7 Sins Campaign – Education:

“Negroponte, desiring the financial support of Bill Gates and Microsoft, ignored them and proceeded with his decision. As a result, it is expected that the main effect of the OLPC project -- if it succeeds -- will be to turn millions of children into Microsoft dependents. That is a negative effect, to the point where the world would be better off if the OLPC project had never existed.”

XO-1.5



Source: <http://www.flickr.com/photos/curiouslee/>

XO-3



Source: blog.laptop.org

XO-3

ONE LAPTOP PER CHILD DRIVES
BREAKTHROUGH ADVANCES IN
REVOLUTIONARY XO CHILDREN'S LAPTOP
Product Road Map to Deliver **Unprecedented**
High Performance, Low Power Consumption
and Design Innovation at **Lower and Lower**
Cost

XO-10

- will produce electricity while in use
- will print money
- consume CO²
- cure cancer
- include a kitchen sink
- ...and brew Club Mate



Status quo

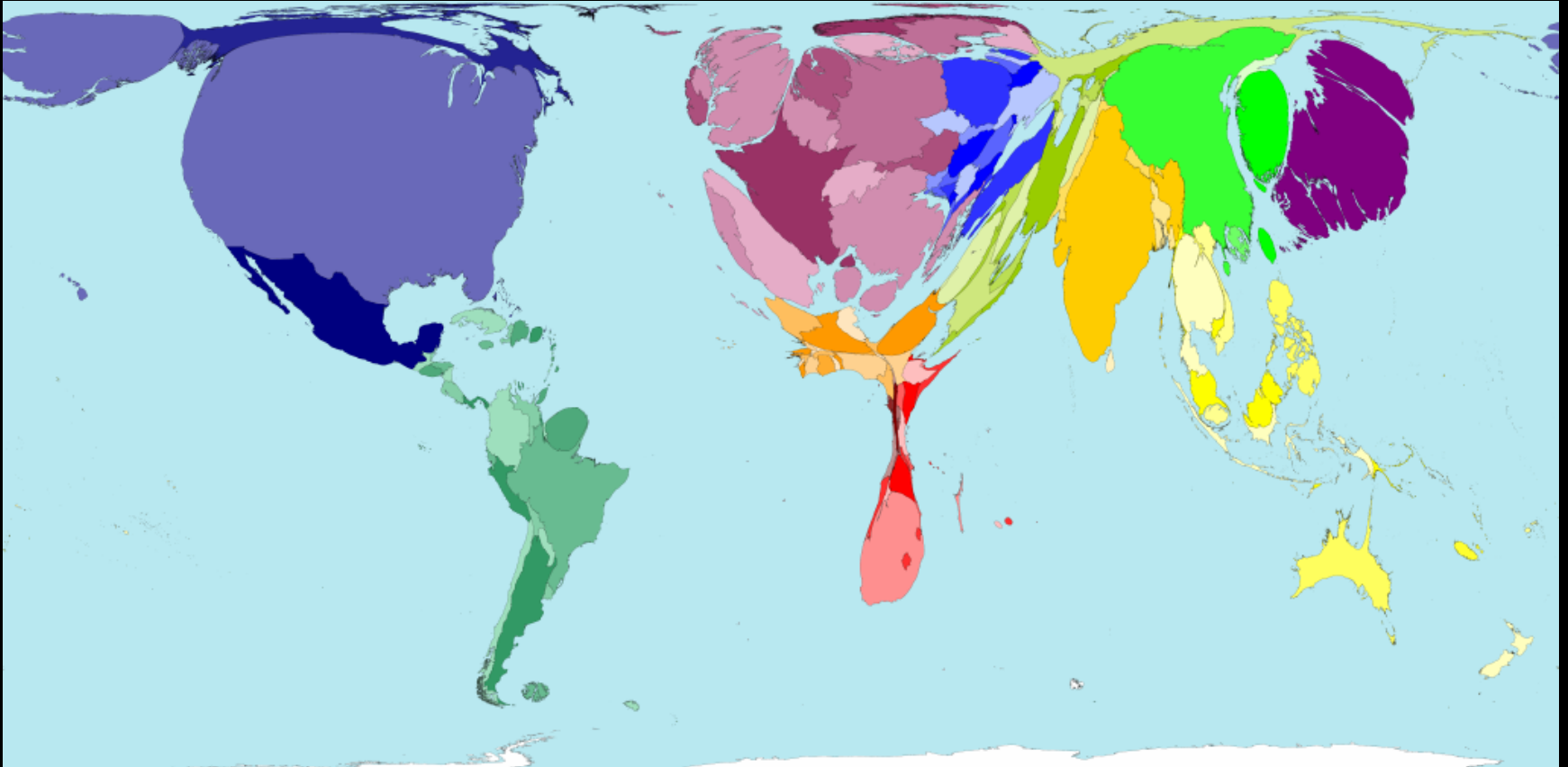
>1.000.000 children
using XO's and Sugar today

OLPC is currently in >30 countries:

Afghanistan	Lebanon	Russia
Austria	Mali	Rwanda
Bhutan	Mexico	Senegal
Brazil	Mongolia	Solomon Islands
Cambodia	Mozambique	South Africa
China	Nepal	Thailand
Colombia	Nigeria	United States
Ethiopia	Niue	Uruguay
Ghana	Pakistan	
Haiti	Palestine	
India	Papua New Guinea	
Iraq	Paraguay	
Kazakhstan	Peru	

Today children are being prepared for tomorrow, using yesterday's methods.

Primary education spending



© Copyright 2006 SASI Group (University of Sheffield) and Mark Newman (University of Michigan).
Source: www.worldmapper.org/display.php?selected=207

Primary education spending

country	population (age 0-15)	spending on primary education	education spending per 0-15 population
Austria	1 million	\$ 3759 million	\$ 2864 (?)
Nepal	10 million	\$ 674 million	\$ 68
Peru	9 million	\$ 1847 million	\$ 205
Rwanda	4 million	\$ 141 million	\$ 38
USA	63 million	\$ 217.494 million	\$ 3460



and tomorrow?

“So much has changed in technology in the last 12 years, **how can we know what will 2020 look like?** In education, how do we prepare children for a world we cannot predict? What should education be when information is just a few clicks away?

Here are some things we do know about the school leavers of 2020:

- They will be competing for **jobs on a global market**
- They will be working with as yet undeveloped computational devices, many in still to be imagined industries, in **digitally connected** communities;
- They will need **21st century skills** to succeed: information literacy; critical thinking; innovation & creativity; open-ended problem solving; technological fluency...”

[“One Laptop per Pacific Child” Concept Note]

*„Laptops are the pencils
for the digital age.“*

[David Cavallo, OLPC]

Case Study: Uruguay



Source: www.cia.gov/library/publications/the-world-factbook/maps/maptemplate_uy.html

Uruguay



- 3.5 million inhabitants
- ~€500 average monthly income
- 98% literacy
- HDI: 0,865 (rank 50 of 182)

Uruguay

396.727 XOs

Uruguay

396.727 XO's

One Laptop per Child
(1st – 6th grade)

Uruguay

396.727 XO's

One Laptop per Child

(1st – 6th grade)

\$276 / child

(4-year TCO)

Uruguay

- 2068 schools
- 18.000 teachers
- 1500 volunteers
- cooperation w/ post
- Blogging
- Evaluation



Source: www.flickr.com/photos/dcmetroblogger/

presentation: http://tr.im/iadb_uy_salzburg (.PPT)

Case Study: Nepal



Source: en.wikipedia.org/wiki/File:Nepal-CIA_WFB_Map.png

Nepal



- 28 million inhabitants
- ~€30 average monthly income
- Less than 50% literacy
- HDI: 0,534 (rank 144 of 182)
- Load shedding

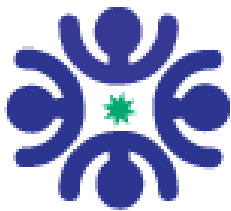
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OLE Nepal



- Founded 2007
- 35 employees
- Close collaboration with Ministry of Education
- Supported by Danish IT Society



Open Learning Exchange
Universal Basic Education 2015

E-Paath

Interactive learning activities

subjects: English, Mathematics, Nepali

grades: 2, 3, 6

inkl. *Teacher's Note and Lesson Plan*

Technology: Flash

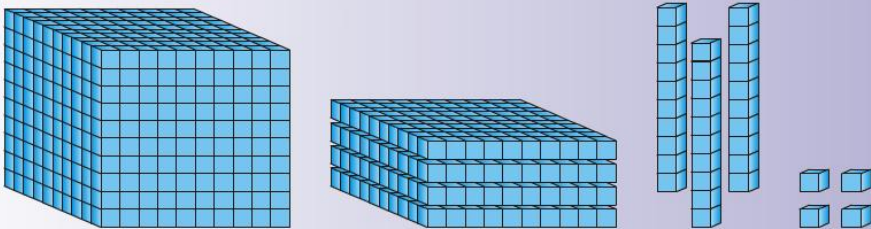
E-Paath

ठूला सङ्ख्याहरूको जोड

पाठ अभ्यास

1 देखि 1999 सम्मकाका कुनै सङ्ख्या टाईप गर र सङ्ख्या बराबरको घनहरू हेर ।

सङ्ख्या बक्समा लेख **1434**



1 2 3

E-Pustakalaya



Source: OLE Nepal

Karma

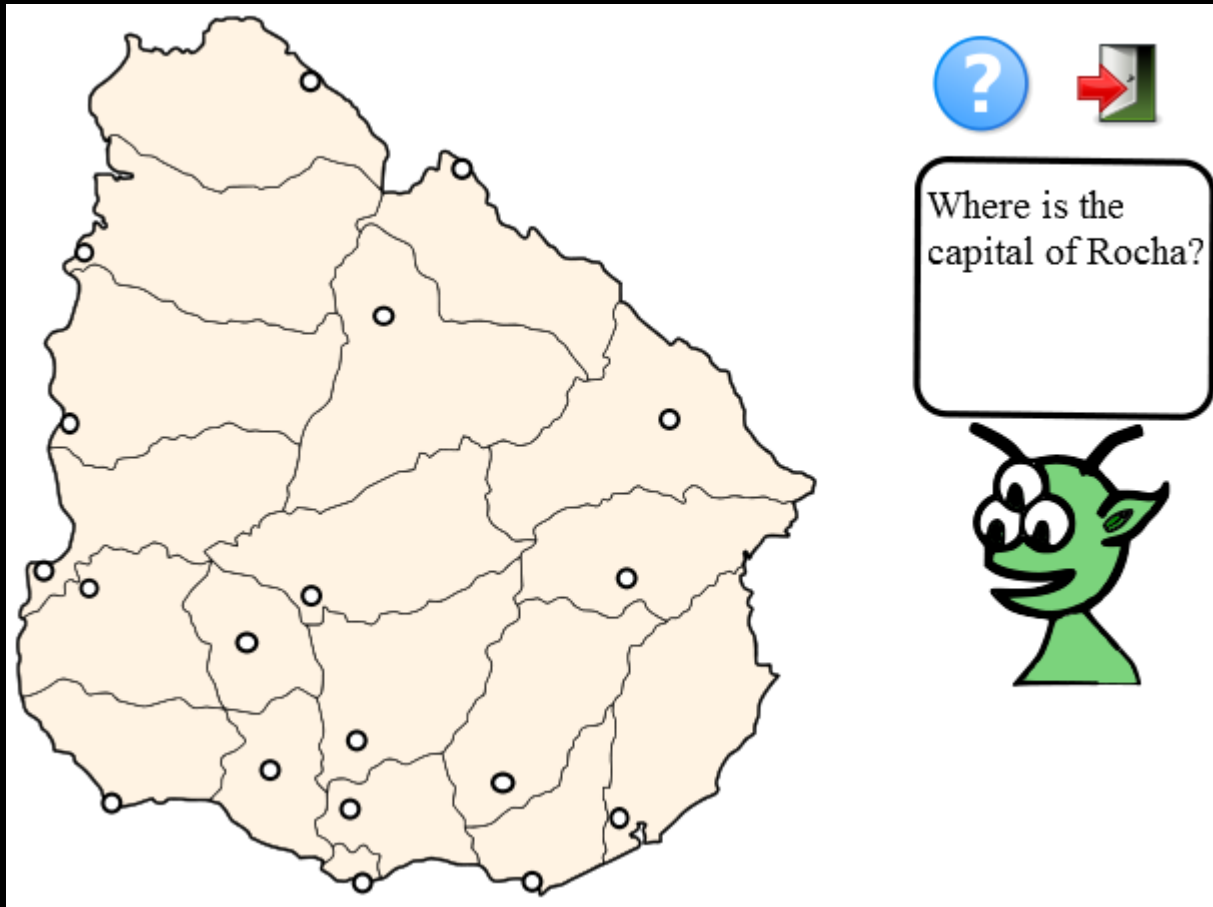
FLOSS toolkit for creating interactive learning activities

HTML 5 + JavaScript

GSoC 2009 sponsored

www.karmaeducation.org

Karma



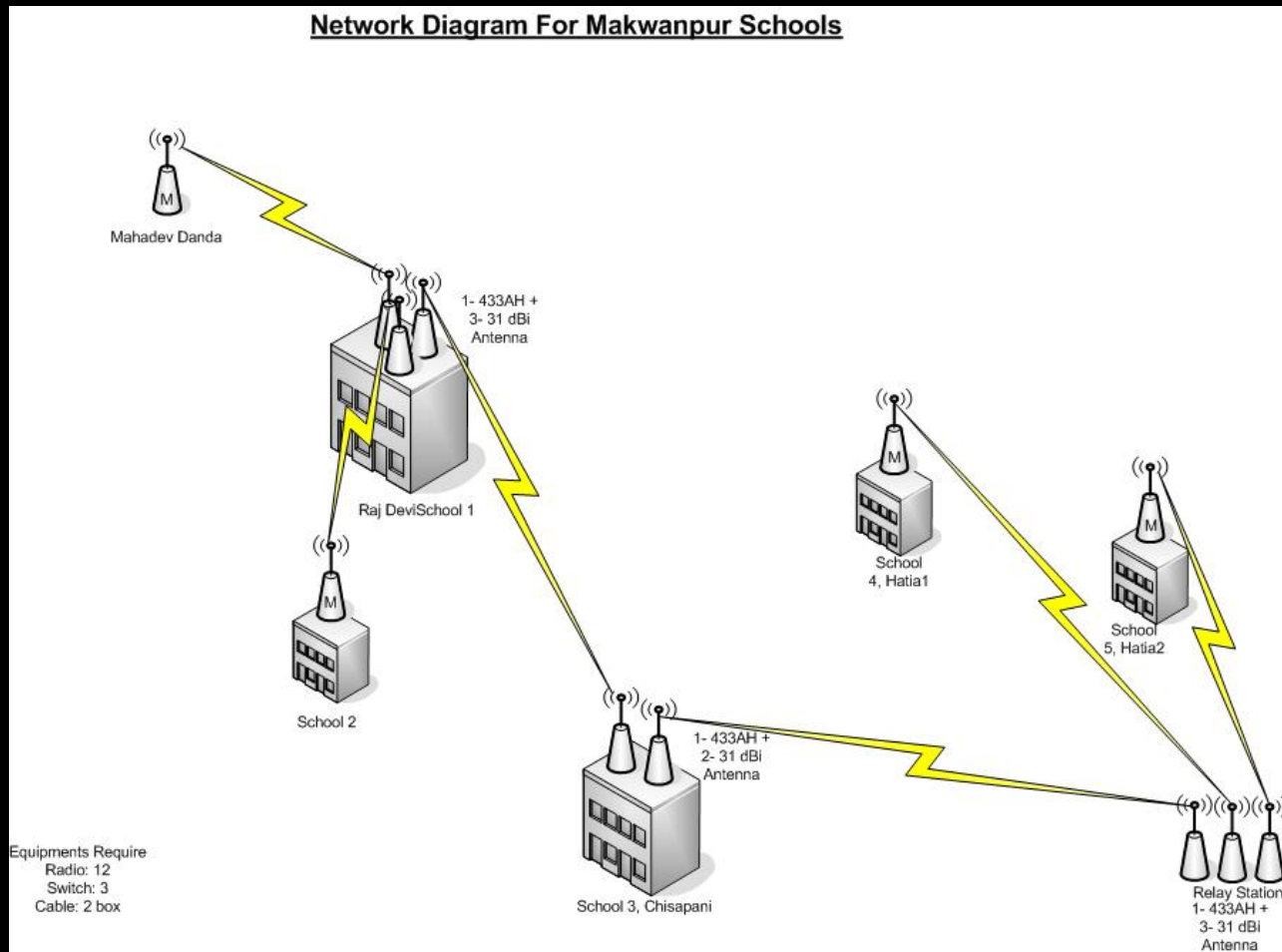
Source: Christoph Derndorfer

Power



Source: Christoph Derndorfer

Connectivity



Source: OLE Nepal

2200 XO's | 26 schools | 6 provinces



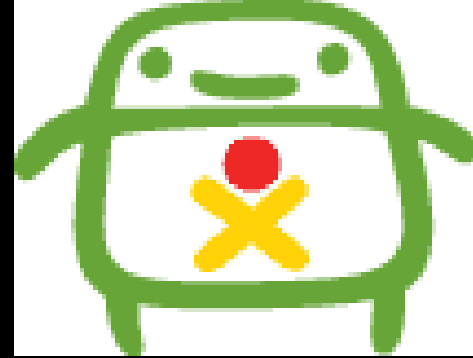
Source: Christoph Derndorfer



What FLOSS can do



OLPC Austria
(www.olpc.at)



OLPC Deutschland
(www.olpc-deutschland.de)



OLPC France
(www.olpc-france.org)



OLPC Switzerland
(www.olpc.ch)



OLPC SF

(wiki.laptop.org/go/OLPC_SanFranciscoBayArea)

OLPC Learning Club DC

Open Learning Club DC

(<http://olpclearningclub.org/>)

...and many more.

To develop educational tools in
the form of open technologies,
platforms, software and content
for (not only) developing
countries.

Austrian pilot project



Source: elearningblog.phst.at/?p=236

What's been done

- Translating software and documentation into French, German, etc.
- Testing software
- Writing learning activities
- Running pilot projects
- Working on wireless networks
- Spreading the word
- ...

What needs to be done

- Teachers
- Technologists
 - Software testing, software writing, package maintaining, networking stuff, etc.
- Twitterers
- -> Even if you don't care about education, politics and development: There's lots of interesting technical challenges to be solved!
;-)

ICT for Education (ICT4E)

- Connexions: <http://cnx.org>
- Curriki: <http://www.curriki.org>
- iTunes U (TU Graz, University Innsbruck)
- MIT OpenCourseWare: <http://ocw.mit.edu>
- ...

ICT for Development (ICT4D)

Inveneo



Ndiyo



Conclusions



Don't believe the (counter-)hype



>30 countries
a dozen grassroot communities
>1 million children



Lots of things to be done with FLOSS

Thank you!

Further information

www.laptop.org

www.olpc.at

www.sugarlabs.org

www.olpcnews.com

Contact

christoph@olpcnews.com