1

OLPC and sugarlabs

Get Involved!

Presented by Caryl Bigenho
OLPC Support Volunteer and Sugarlabs Facilitator
Bozeman Linux Users Group, MSU, MT
June 25, 2009

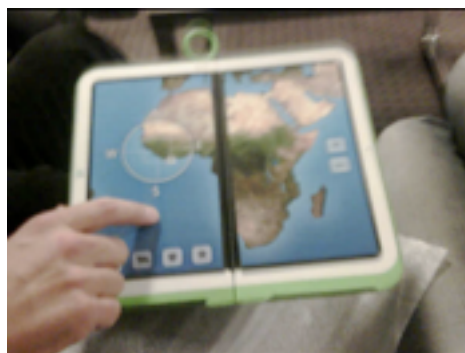# START A PROJECT THAT WILL CHANGE KIDS' LIVES WORLDWIDE!

http://wiki.laptop.org/go/Contributors_program

Meet The XO

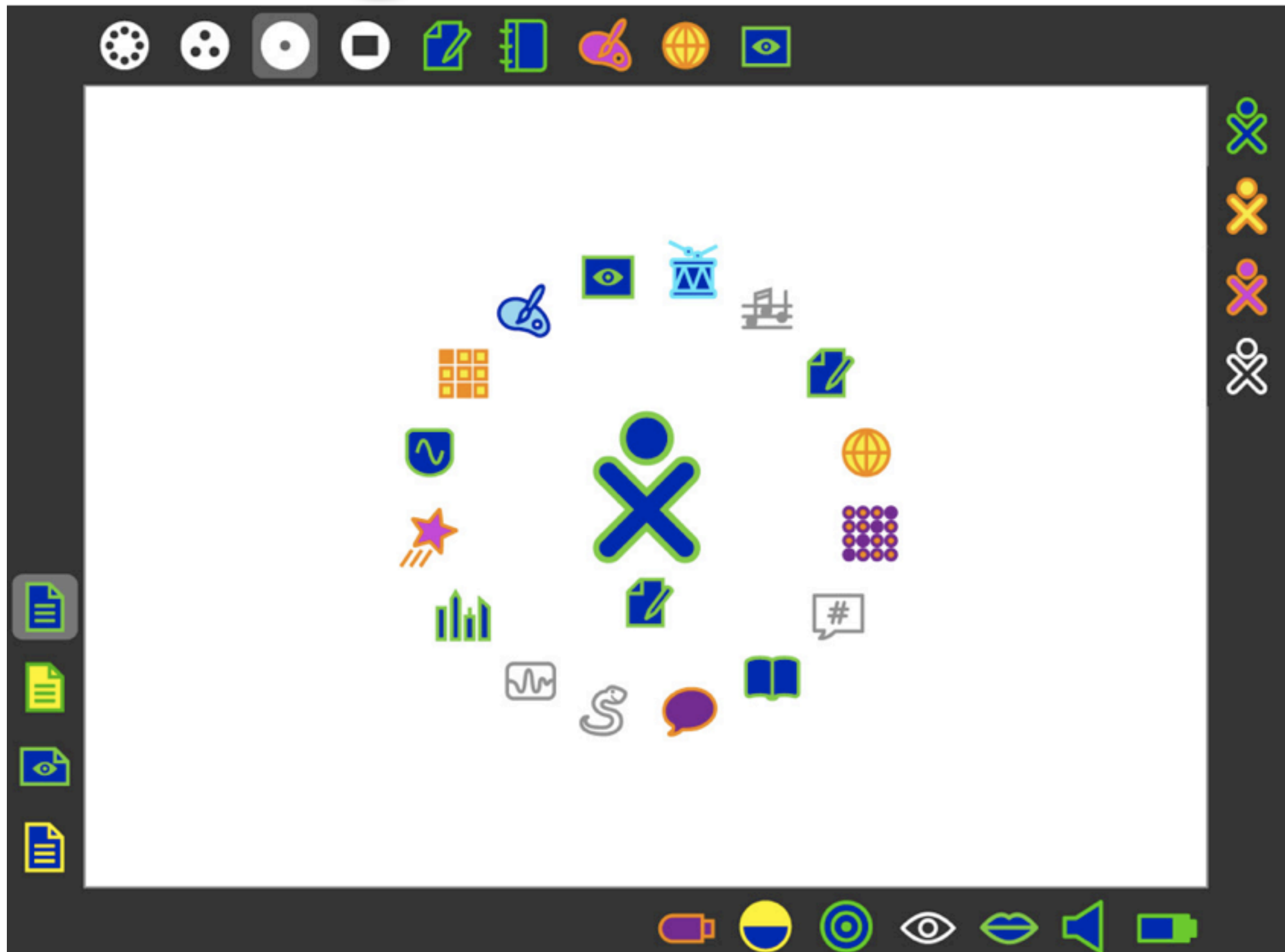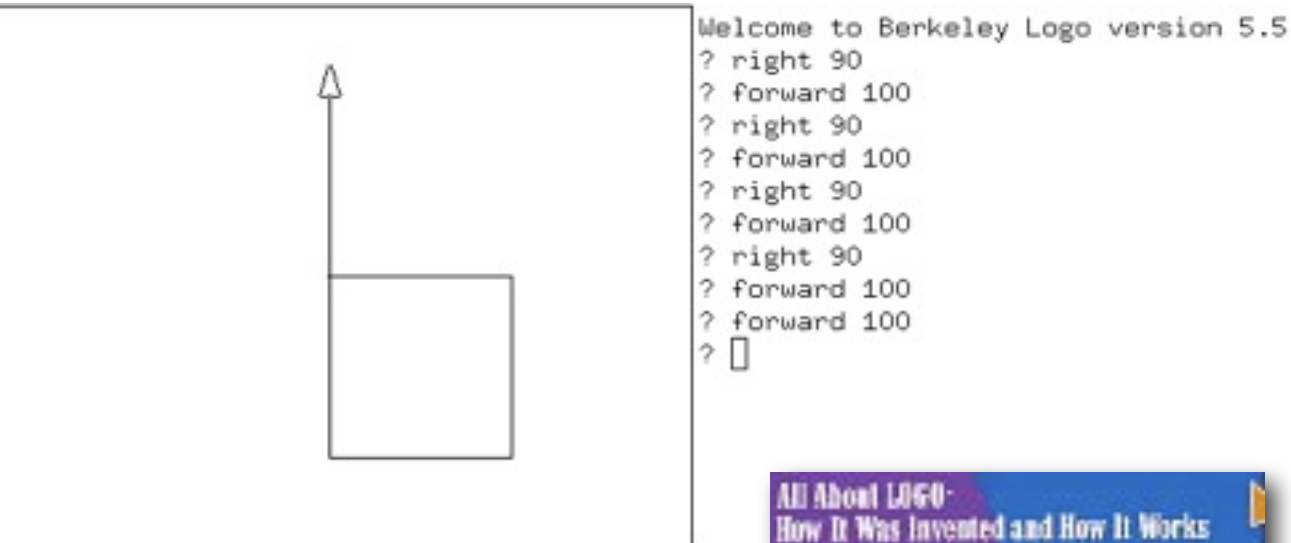## Some Prototypes

The Future?

Today's XO

- Antennae
- Audio ports and one USB on side under antenna
- Power connector on side
- Speaker
- Directional pad
- Rotate Screen
- Wireless acquisition
- Wireless activity
- Two USB ports on side under antenna
- Microphone
- Camera
- Speaker
- Game buttons
- Power button
- Power
- Battery indicator
- SD slot bottom under
- Hinge
- Keyboard LED's
- Stylus area
- Capacitive touchpad area
- Latch
- Mouse buttons
- Latch

00199_africanlandscape_1280xE

Sugar Software

Origins At MIT

- Seymour Papert

Remember LOGO? 1967

```
Welcome to Berkeley Logo version 5.5
? right 90
? forward 100
? right 90
? forward 100
? right 90
? forward 100
? right 90
? forward 100
? forward 100
? 
```
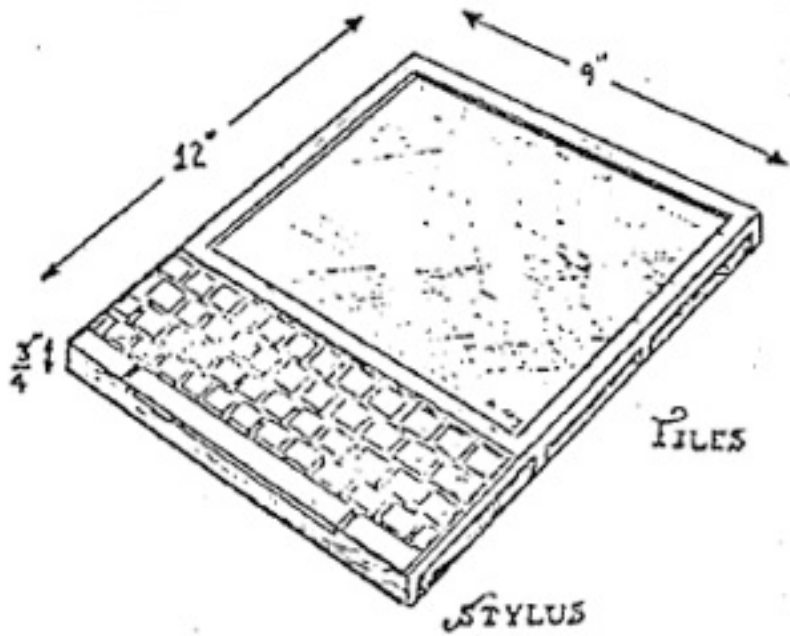
Educational
Best Seller
1980-present
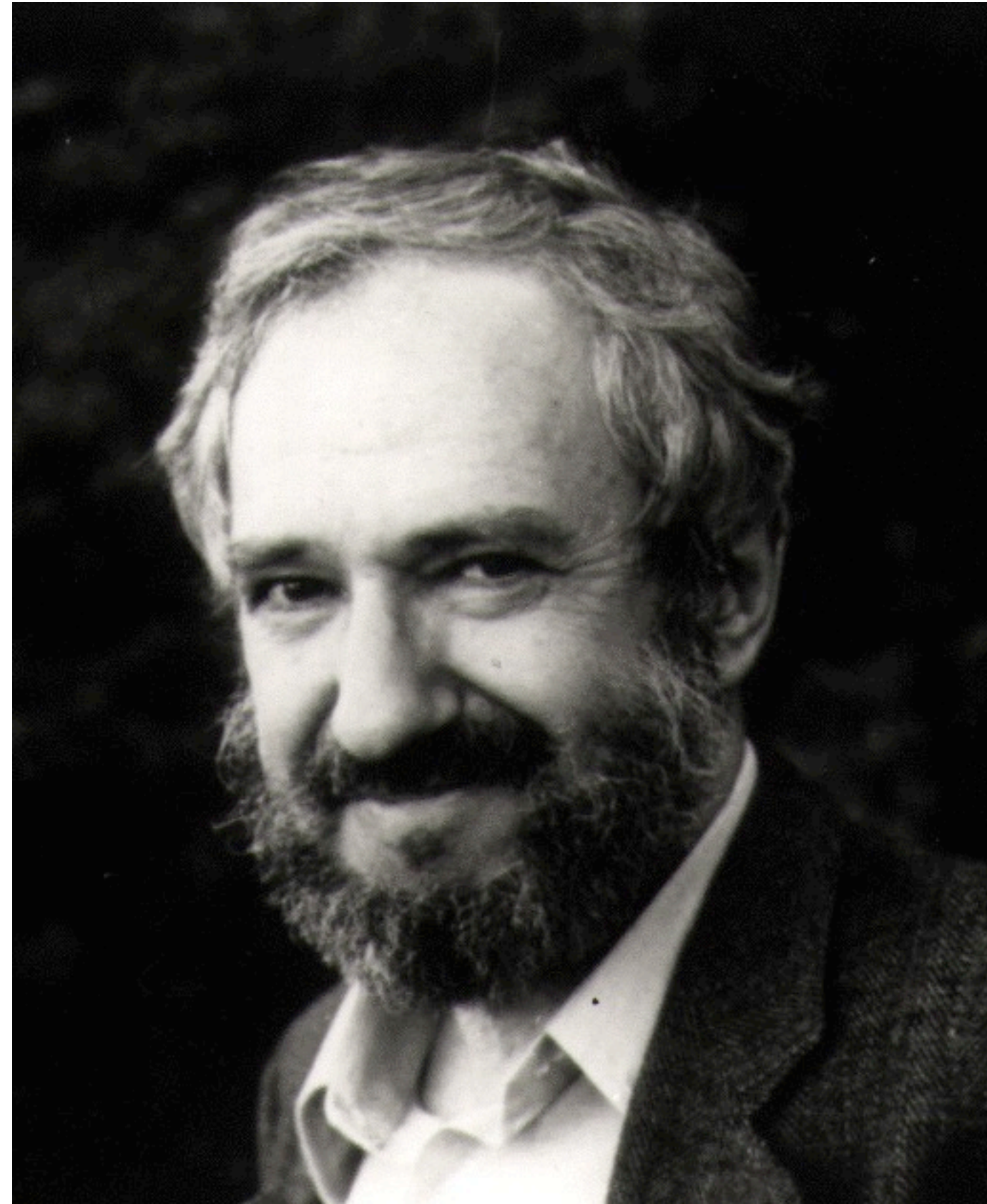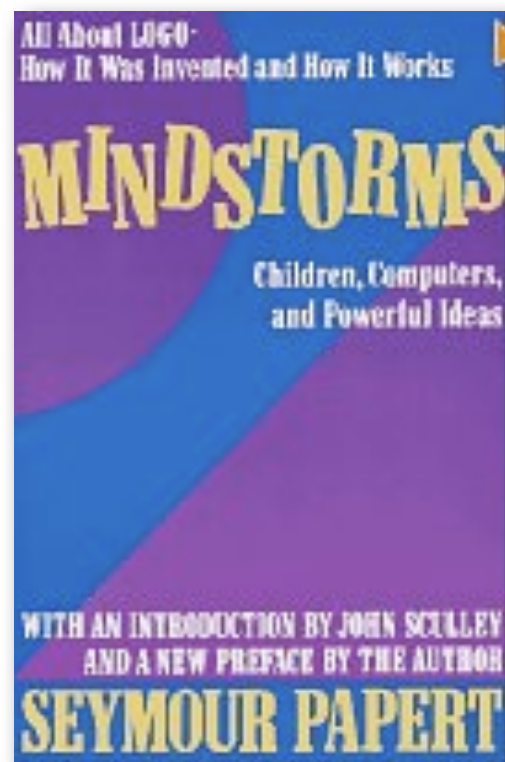
'The best way to predict the future is to invent it' - **Alan Kay**.
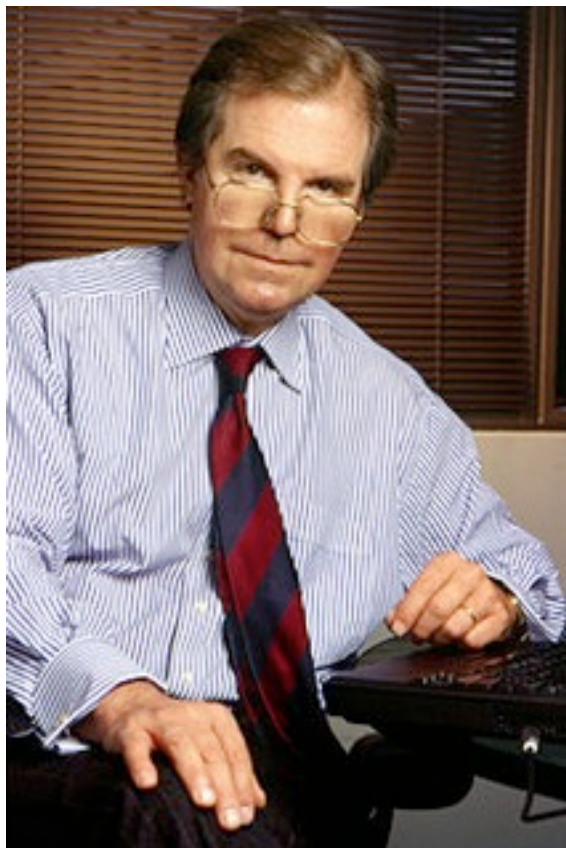

Dynabook 1968

Smalltalk for Children 1973

```
to box | x y size tilt
(odraw    =    (@place x y turn tilt. square size.
oundraw   =    (@ white, SELF draw, @black)
oturn     =    (SELF undraw. 'tilt <- tilt + :. SELF draw)
ogrow     =    (SELF undraw. 'size <- size + :. SELF draw)
ISNEW     =    (SELF undraw. 'size <- size + :. SELF draw)
```

Alan Kay

MIT Media Lab

Nicolas Negroponte

Mary Lou Jepson

Walter Bender

Deployments Around The World

- green – pilot schools
- orange – G1G1 supported deployments
- purple – country deployments
- blue - Give Many deployments

Project Ceibal Uruguay
202,000+ laptops

Ceibal Jam!

http://wiki.laptop.org/go/Ceibal_Jam

entrá al wiki y empezá a colaborar

Gyr or Yurt

GIGI Partner Mongolia

A Privately Funded XO Deployment in the Caribbean Area

Immokalee, FL

Nicaragua

Haiti

St. John, VI

St. Vincent

Some Other Deployments

Afghanistan
(GIGI Partner Country)
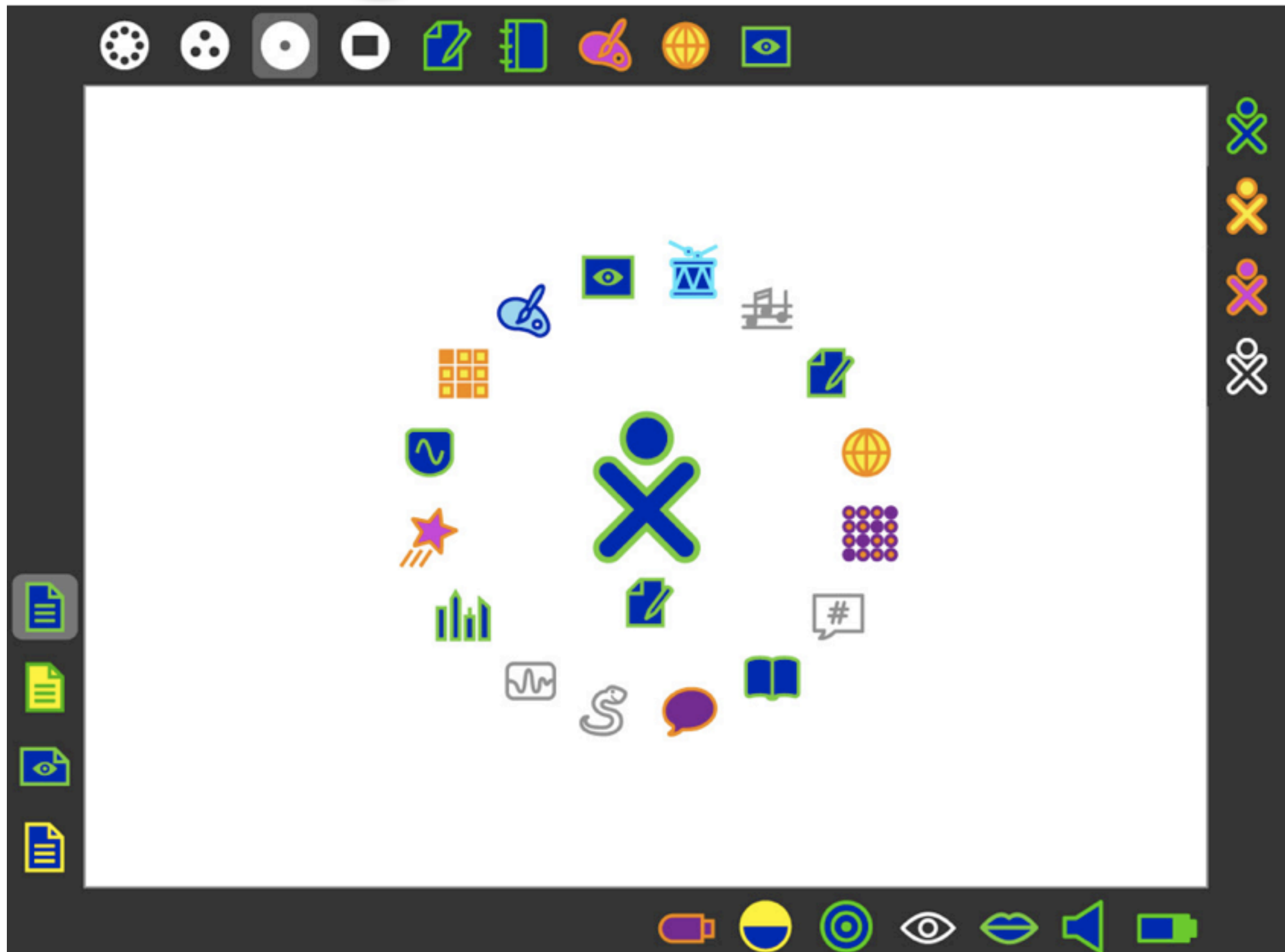

Nepal
(Grassroots Deployment)

Ethiopia
(GIGI Partner Country)

Ghana
(GIGI Partner Country)

Sugar Software

Sugar On Your Computers

Run Sugar On The Computers You Already Have!

Virtual Box
for MacBooks

"Live" CD   "SoaS": Sugar On A Stick

137+ Activities !

- General Search & Discovery (5)

- Documents (Read, Write, & Share) (7)

- Feeds : News & more (1)

- Chat, Mail, & Talk (4)

- Drawing & Media creation/editing (14)

- Programming (13)

- Math & Science (18)

- Maps and Geography (4)

- Media, Audio & Video Players (3)

- Games (47)

- Teacher and New User Tools (5)

- Other (16)

- (Counts as of Feb 2009)

http://activities.sugarlabs.org/en-US/sugar/
http://wiki.laptop.org/go/Activities/All

B *I* <u>U</u> ⬛ ⌄ | 𝚃T 19 ⌃⌄ DejaVu Sans ⌄ | ☰ ⌄

Activity | Edit | Text | Image | Table | Format | View

Sharks ↖

by Nittaya, Jaruwan, Yupin, Viroj

In some form, sharks have been around for about 400 million years. Even before dinosaurs roamed the earth, sharks hunted through the oceans! They're such good survivors that they've had little need to evolve in the last 150 million years. These ancient predators fascinate adults and children alike. Sharks have the most powerful jaws on the planet. Unlike most animals' jaws, both the sharks' upper and lower jaws move.

A shark bites with it's lower jaw first and then its upper. It tosses its head back and forth to tear loose a piece of meat which it swallows whole. Each type of shark has a different shaped tooth depending on their diet. (The shark in the photo is a great white—you can tell he's a carnivore just by looking at those sharp, pointy teeth!)

A shark may grow and use over 20,000 teeth in its lifetime! Sharks never run out of teeth. If one is lost, another spins forward from the rows and rows of backup teeth. Normally, sharks eat alone. But sometimes one feeding shark attracts others. They swim up as quickly as possible and all begin to try to get a piece of the prey. They bite wildly at anything that gets in their way—even each other.

The great white shark rarely partakes in feeding frenzies. Almost all sharks are "carnivores" or meat eaters. They live on a diet of fish and sea mammals (like dolphins and seals) and even such prey as turtles and seagulls. Sharks even eat other sharks. For example, a tiger shark might eat a
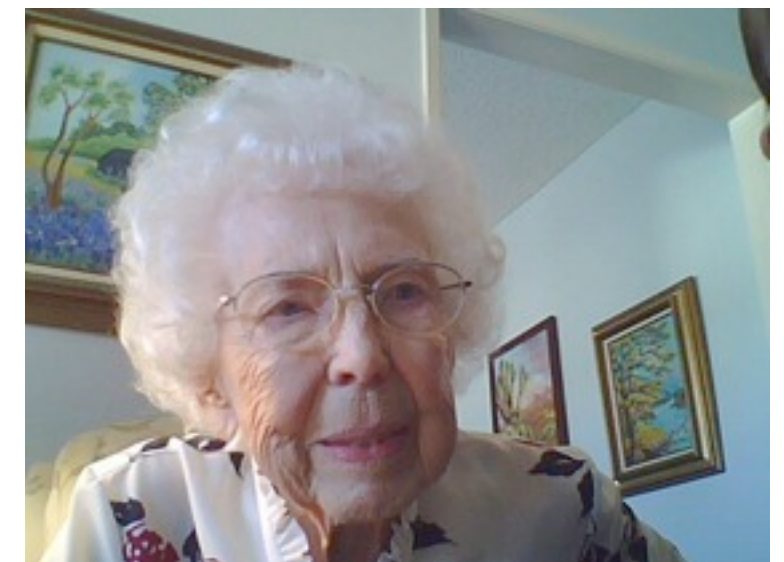
Record Activity

OLPC Thailand
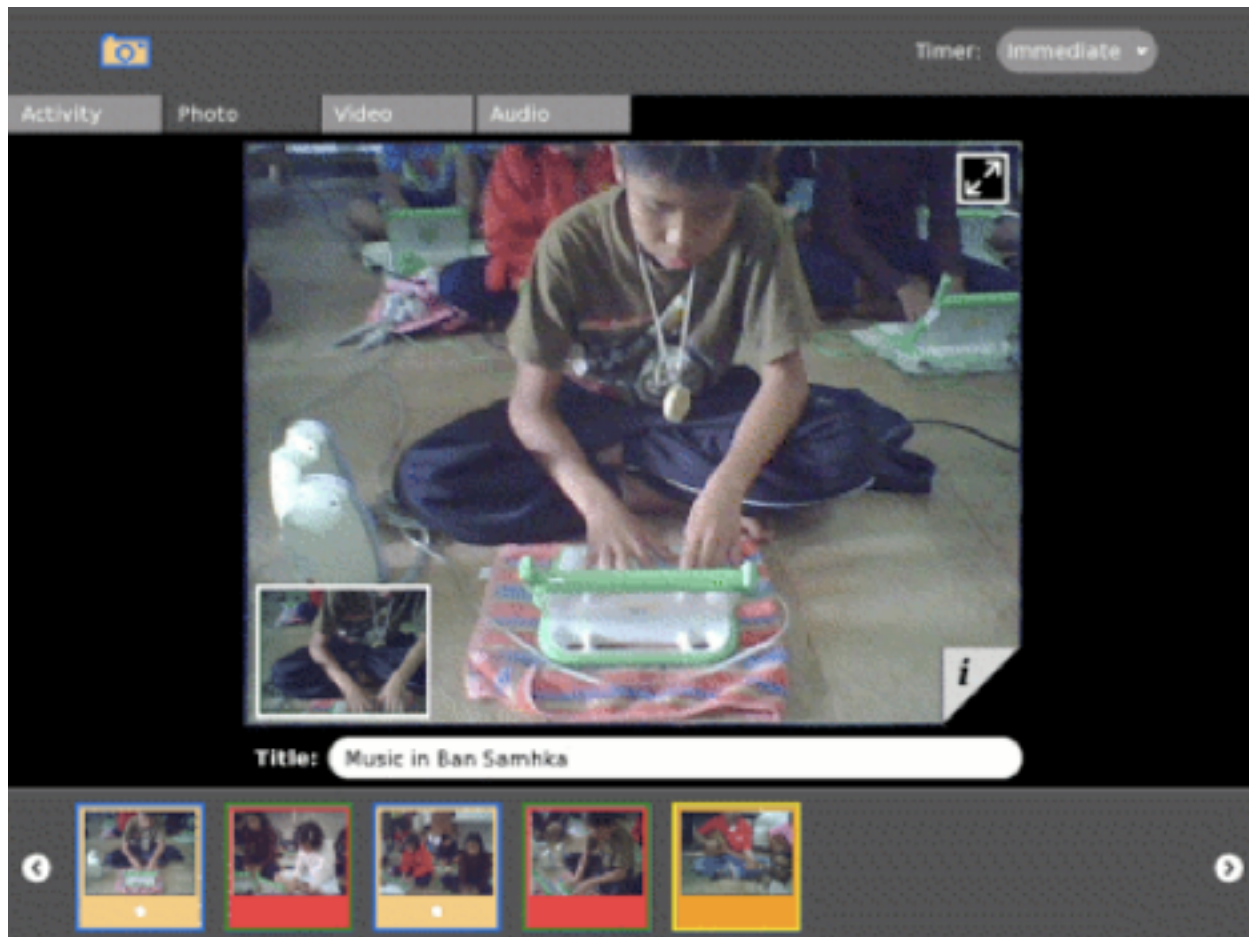
9-months-old   9-years-old   90-years-old

Tam Tam Suite

TamTamJam
The Play Tab

Adjust the balance between the drum beat and the keyboard sound(s)

Adjust the amount of reverberation on the sounds

Click here to start/stop the drum beat

Select to show sounds in a given category (all, animals, objects, electronic, keyboards, humans, percussions, strings and winds)

Adjust tempo of drum beat loop

Adjust length of drum beat loop

Adjust overall volume

Adjust complexity of drum beat loop

Click on any sound icon to select it and play it on the XO keyboard

Click to generate a different drum beat

Click to select one of five drum/percussion kits
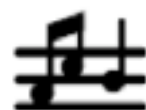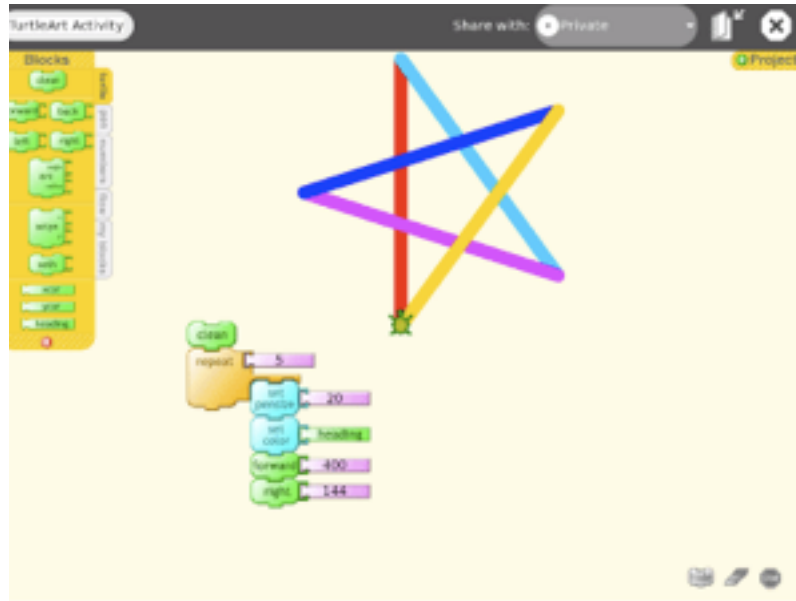
TamTamMini   TamTamEdit   synthLab

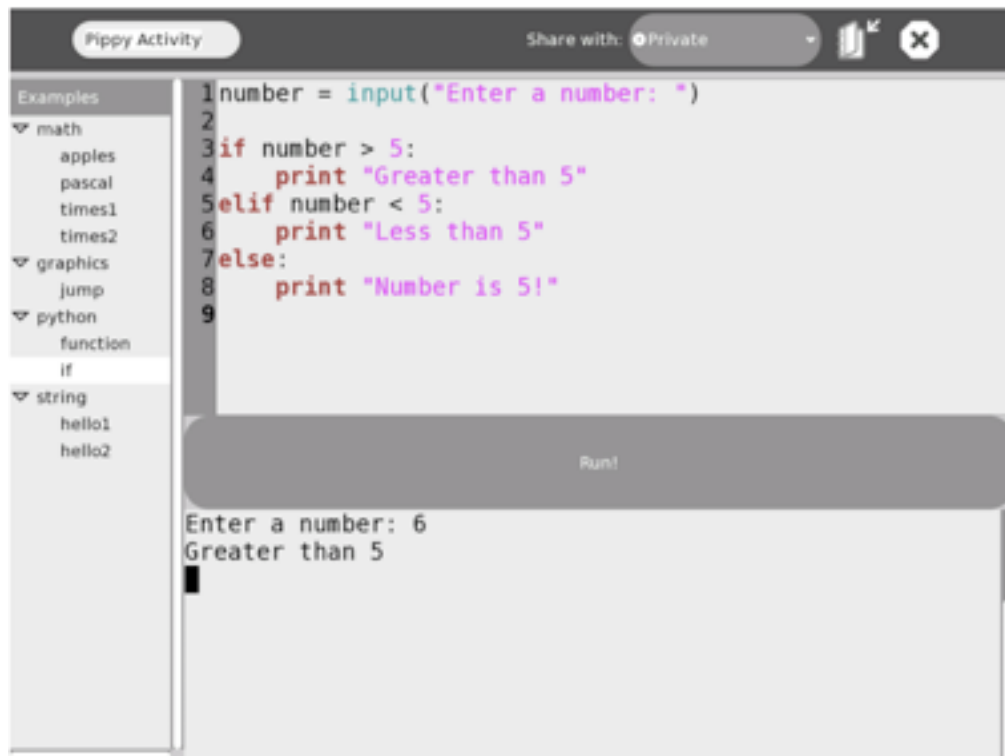# Programming for Kids
(Adults can Play Too!)

- **Turtle Art**
- **EToys**
- **Scratch**


```python
number = input("Enter a number: ")

if number > 5:
    print "Greater than 5"
elif number < 5:
    print "Less than 5"
else:
    print "Number is 5!"
```

Enter a number: 6
Greater than 5

```python
# Source for TestActivity.py
import logging
from sugar.activity import activity
import sys, os
import gtk

class TestActivity(activity.Activity):

        def click(self, widget, data=None):
                logging.info('Button clicked')

        def __init__(self, handle):
                activity.Activity.__init__(self, handle)

                self.button1 = gtk.Button('Button1')
                self.button1.connect("clicked", self.click, None)

                self.add(self.button1)
                self.button1.show()
```
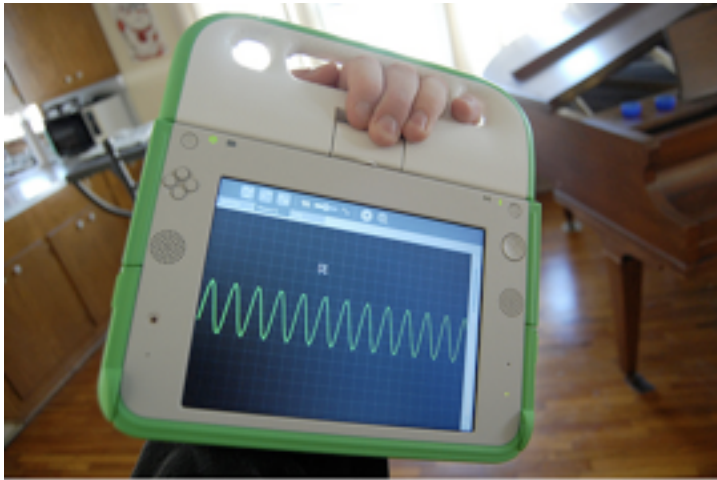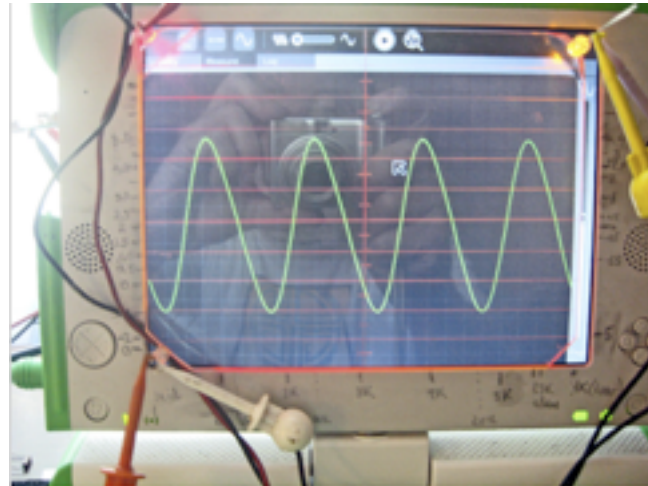
- **Pippy**
- **Terminal**
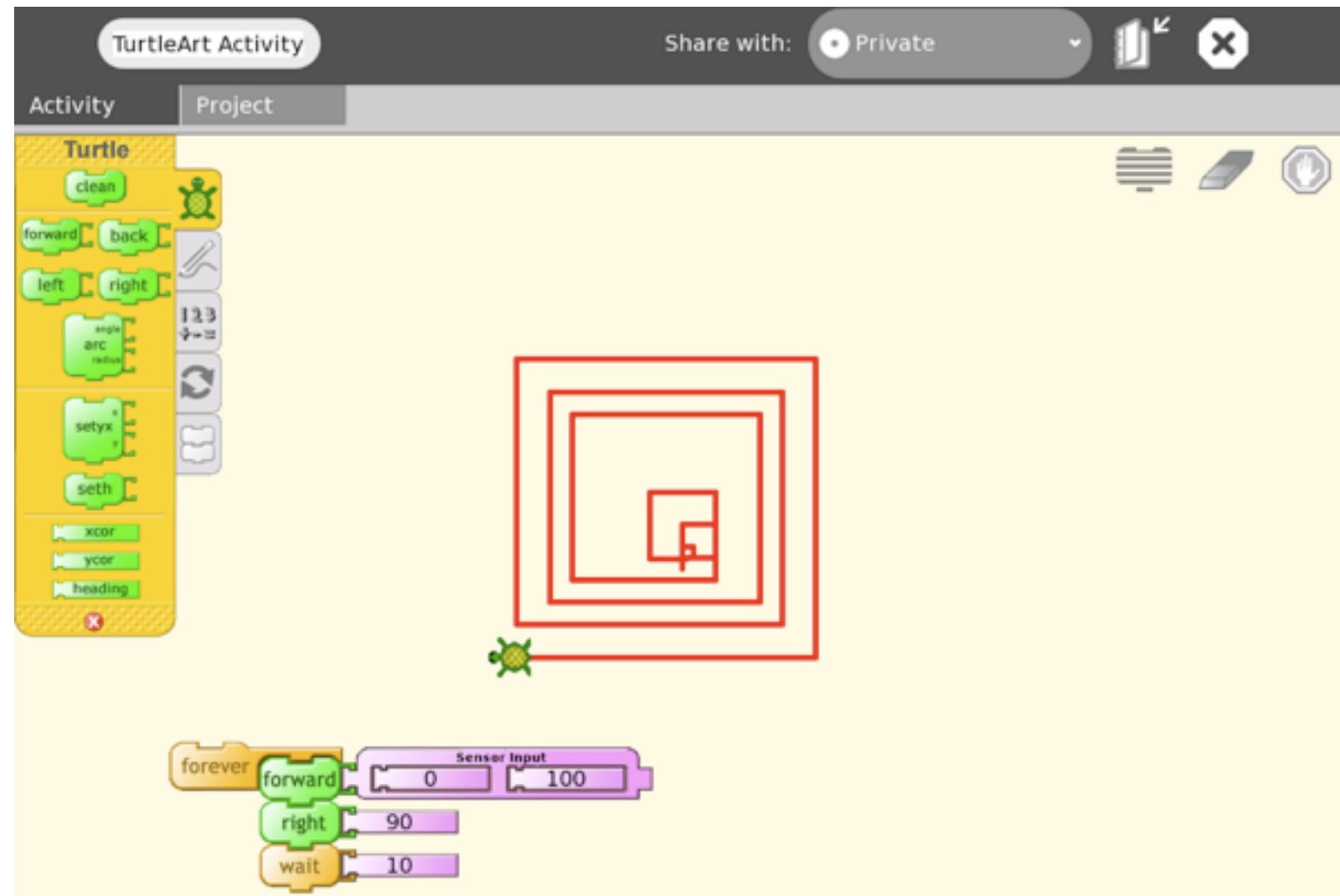
Measure Activity

Oscilloscope

Electronic Tuning "Fork"

Temperature Sensor

Temperature Turtle Art

START A PROJECT THAT WILL CHANGE KIDS' LIVES WORLDWIDE!

http://wiki.laptop.org/go/Contributors_program

How To Contribute

People Person

Translator

Educator

Developer

Designer

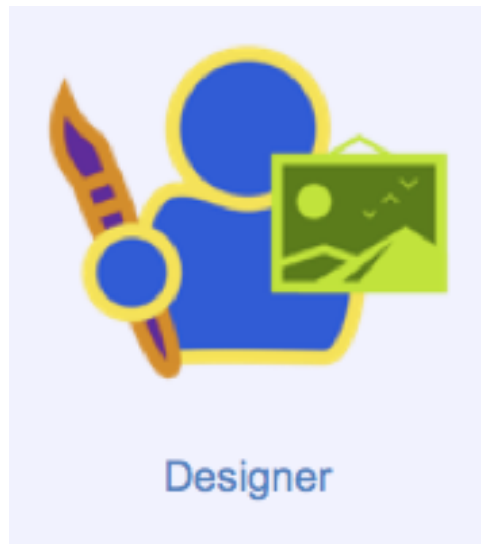Content Writer

Educator

Educators
Students

- Suggest New Educational Activities

- Test new Activities

- Provide Feedback for Software Developers

- Write Teacher Guides

- Design Lesson Plans Using Sugar Activities

- Help Set Educational Goals

- Start new Campus Chapters

Translators

- Translate and "Localize" Activities

- Translate FLOSS Manuals

- Translate wiki Pages With the "Wiki Team"

- Translate Online Using Moodle/Pootle
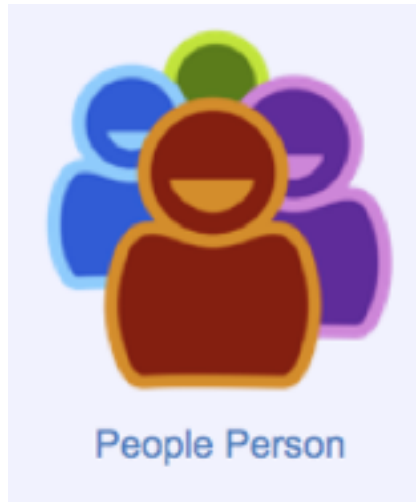
- Most Languages Needed

Designer

- Sugar Art Work

- Activity Image Content

- User Interface Design
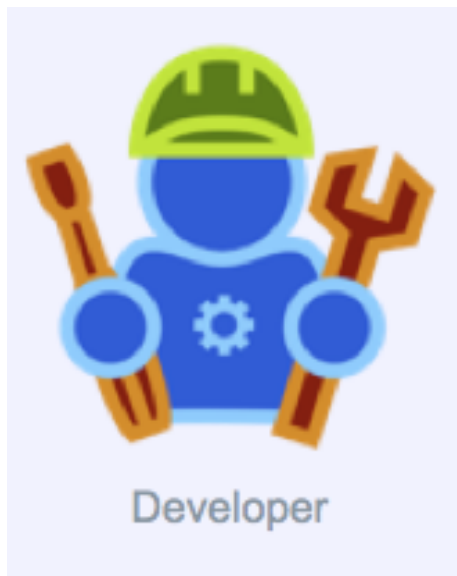
- Web Design

- Icons

- Design Mock-ups

Content Writer

- Write A FLOSS Manual For Your Favorite Activity

- Write Lesson Plans

- Write Wiki Pages

- Write How-tos

- Write FAQs

People Person

- Help/Support Team

- Conferences

- Press Releases

- Local Events

- Sugar Labs Forum

- Cat Herding

Developer

- Program in Python, C, GTK+

- File & Fix Bugs

- Design & Build Sugar & Sugar Activities

- Develop New Features

- Design New Peripherals

- "Sugarize" Existing Open-Source Programs

Cows and effect

Cows — and some creativity — drive a unique experiment launched by the One Laptop Per Child foundation

C Sujit Chandra Kumar
Mumbai

AT VILLAGE Khairat in Raigad district, about 40 km east of Navi Mumbai, the scene seems surreal. Just outside a one-classroom school set amid a cluster of huts, a teacher and 22 children carrying colourful laptops are conducting a unique experiment that makes a bullock cart stop in its tracks.

What I see is a contraption that connects the two wheel-rims of a motorcycle to the dynamo of an old Fiat car. The rims are connected by a belt and they act as pulleys. They are in turn attached to a cow that goes round, making them revolve. The other end is connected to a laptop.

A cow-powered laptop? Bizarre as that sounds, it is not hard to see why it works here, in village Khairat, where every household has a few cows and the villagers, who belong to a nomadic tribe, sell milk for a living. The idea came from Arjun Sarwal, a student of the Delhi Institute of Technology and volunteer with the One Laptop Per Child (OLPC) foundation. "In these remote villages, there is often no power for up to seven hours a day because of load-shedding. Solar panels are not cheap and generators have recurring costs. So we thought of this alternative source of energy. With one cow, we
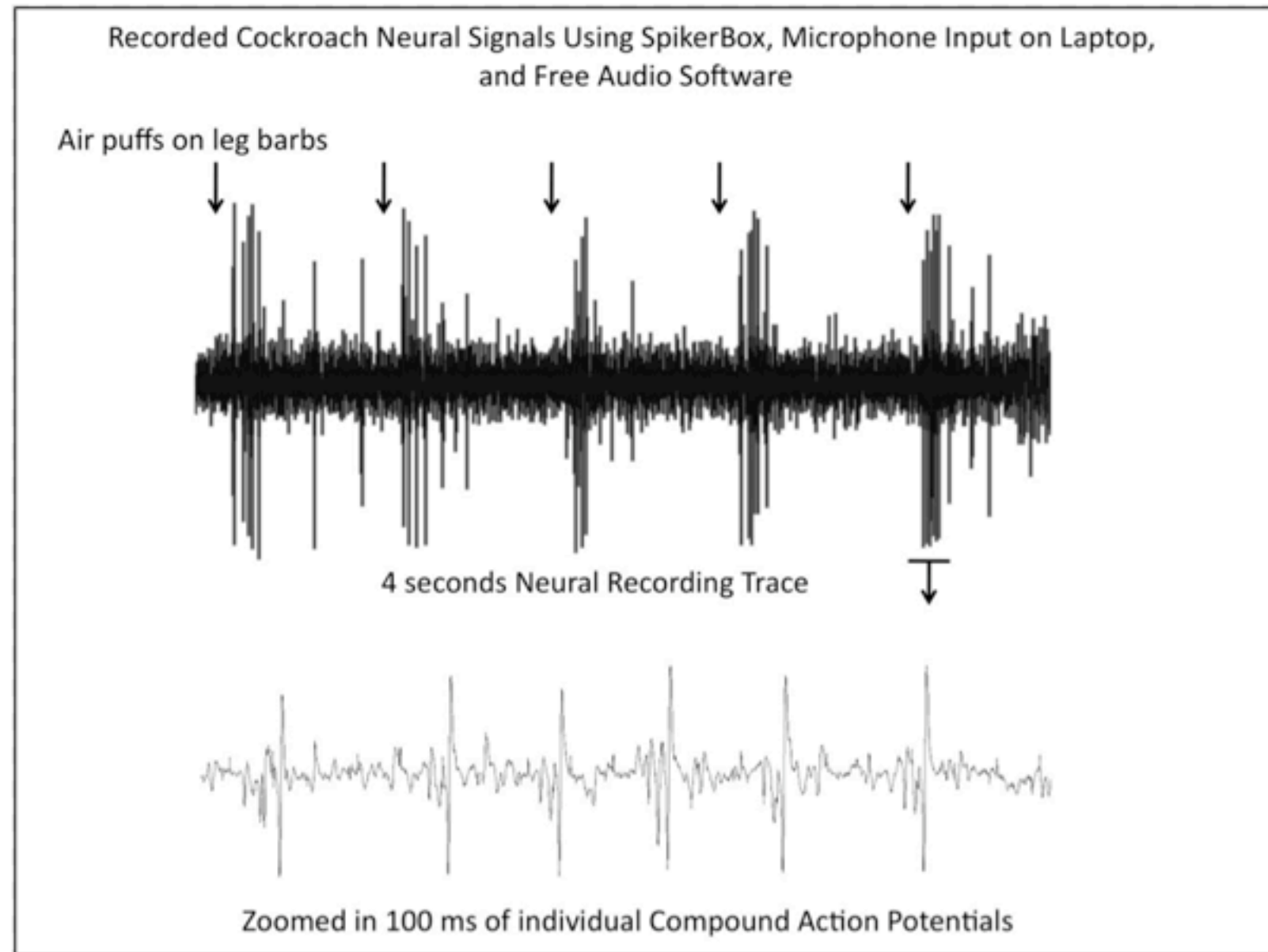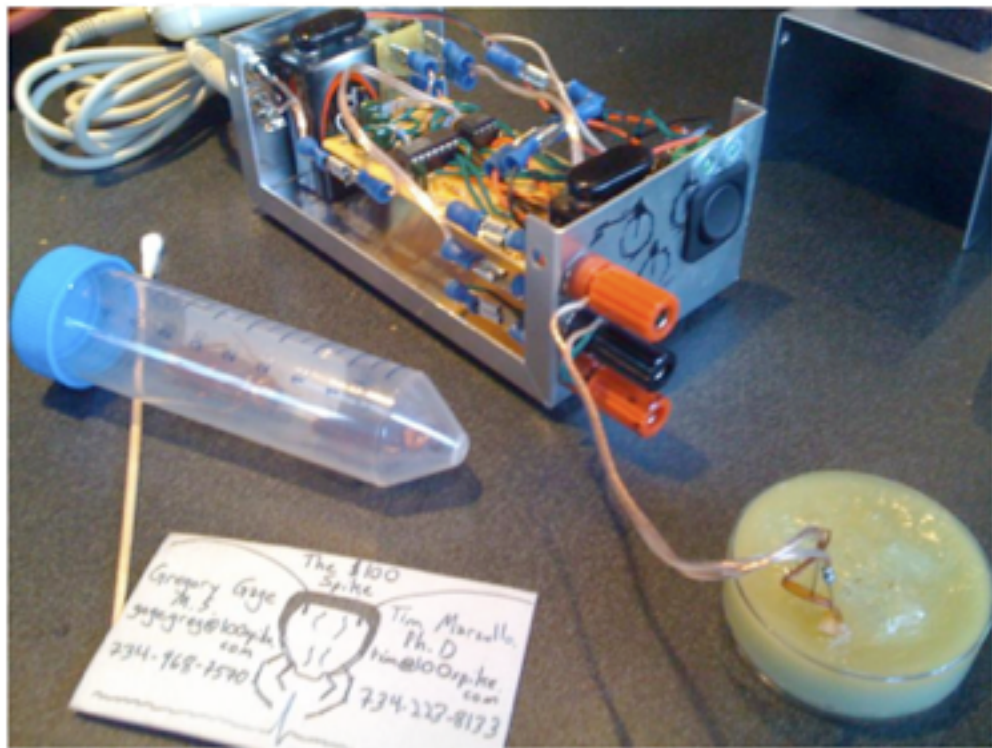

HEMANT PADALKAR/HT

VILLAGE ON THE M(O)OVE: The cow power experiment involves a cow which drives a dynamo that powers the laptop; (below) Sandeep Surve, the teacher, explains a concept to his students with the help of the XO laptops

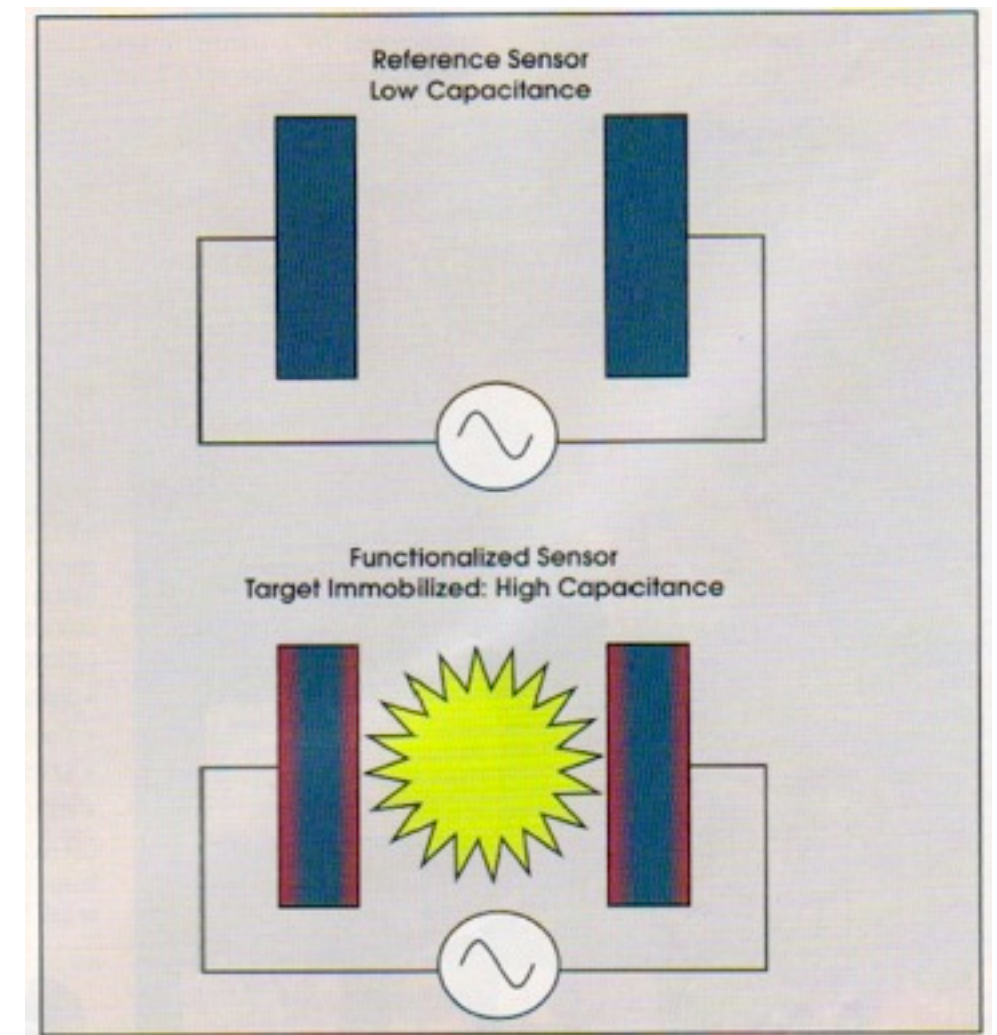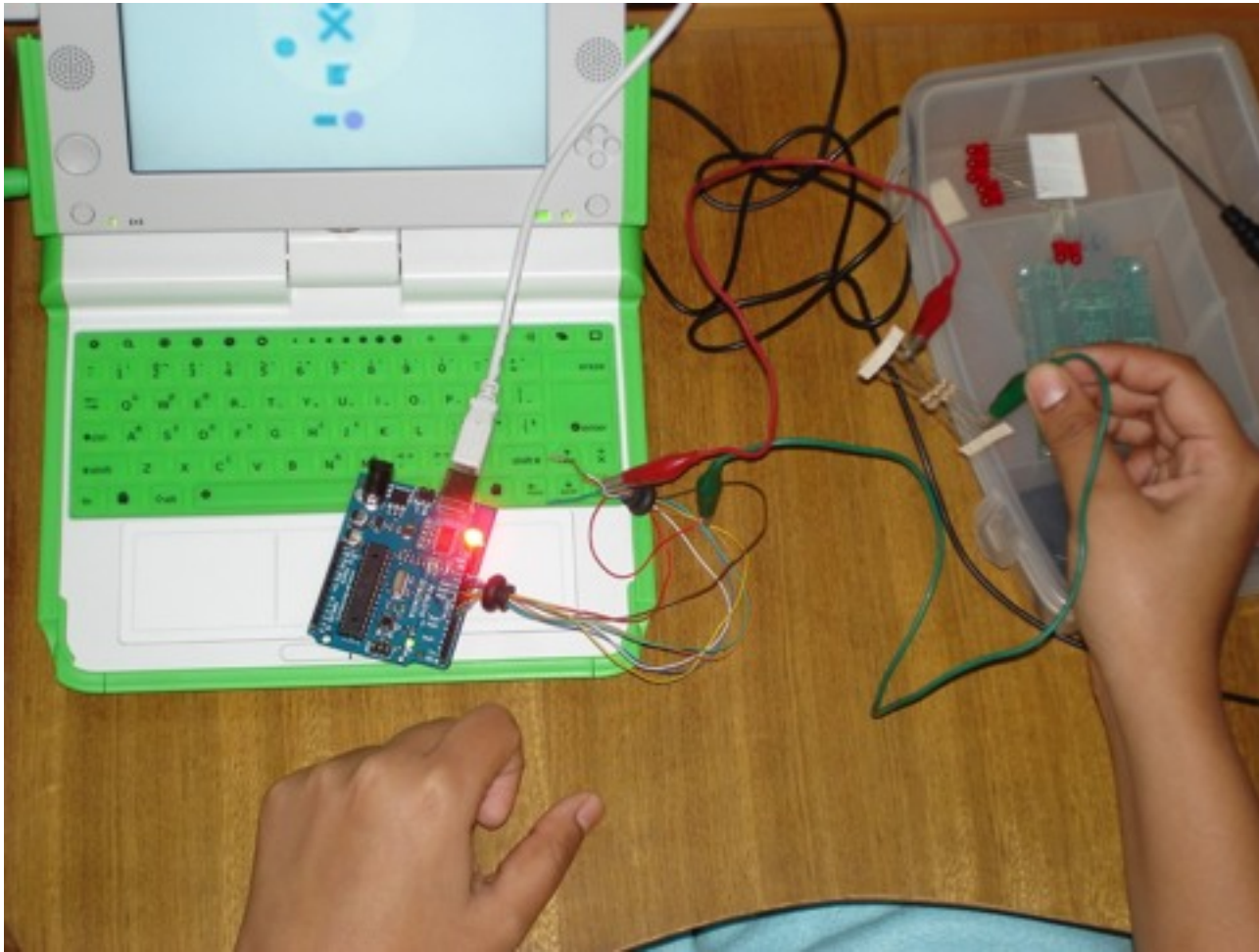# The SpikerBox: Bringing Neurophysiology to Everyone

Greg Gage & Tim Marzullo
U of Michigan Department of Biomedical Engineering

BioSensor

A low cost sensor for sensing pathogens and contaminants in food, water and soil.

Paola Lira, Lima Peru

Apply now for XO-1.5 Boards

OLPC XO-1.5
A1 Prototype

DCON
Hymax HX8837

Companion Chip
Via VX855

Processor
Via C7-M ULV
0.4 - 1.0 GHz

WLAN
Marvell 8686
SDIO connect

HD Audio Codec

LCD Power Supply

RAM
DDR2 SDRAM
128 MBytes each

Solid State Disk
4+ GB Flash

+2.8V Pwr Sup.

+1.8V Mem. Pwr Supply

Backlight Power Supply

+5V Supply

+3.3V Supply

SD/MMC Slot

Embedded Controller
ENE KB3700

VCORE Power Supply

+1.2V Power Supply

+1.05V Power Supply

Clock Synth
ICS9UM702

3VPCU Power Supply

Battery Charger
Fujitsu MB39A129

Start A Local SugarLab!

- Adapt Sugar technology and pedagogy to an area's culture and resources

- Support Sugar deployments in area schools

- Create a local community devoted to making Sugar more open and sustainable

- Provide communication between local & global Sugar Labs communities

- Develop Local content and software that can also be used by for the overall Sugar community

- Host or co-host conferences, workshops, talks and meetings related to the use or development of Sugar

Successful SugarLabs Might Have:

A university connection as a local human resource

- A local pilot user group from which to learn

- A local passion or sub-goal that provides a rationale for the work

- Bi-directional communication with the global Sugar community and other Sugar Labs

- A sustainable and well-defined entrepreneurship model

- A program to reach out to local free-software community and local industry

Bring The World To Montana Rural Schools

Deer Park School near Columbia Falls 1948
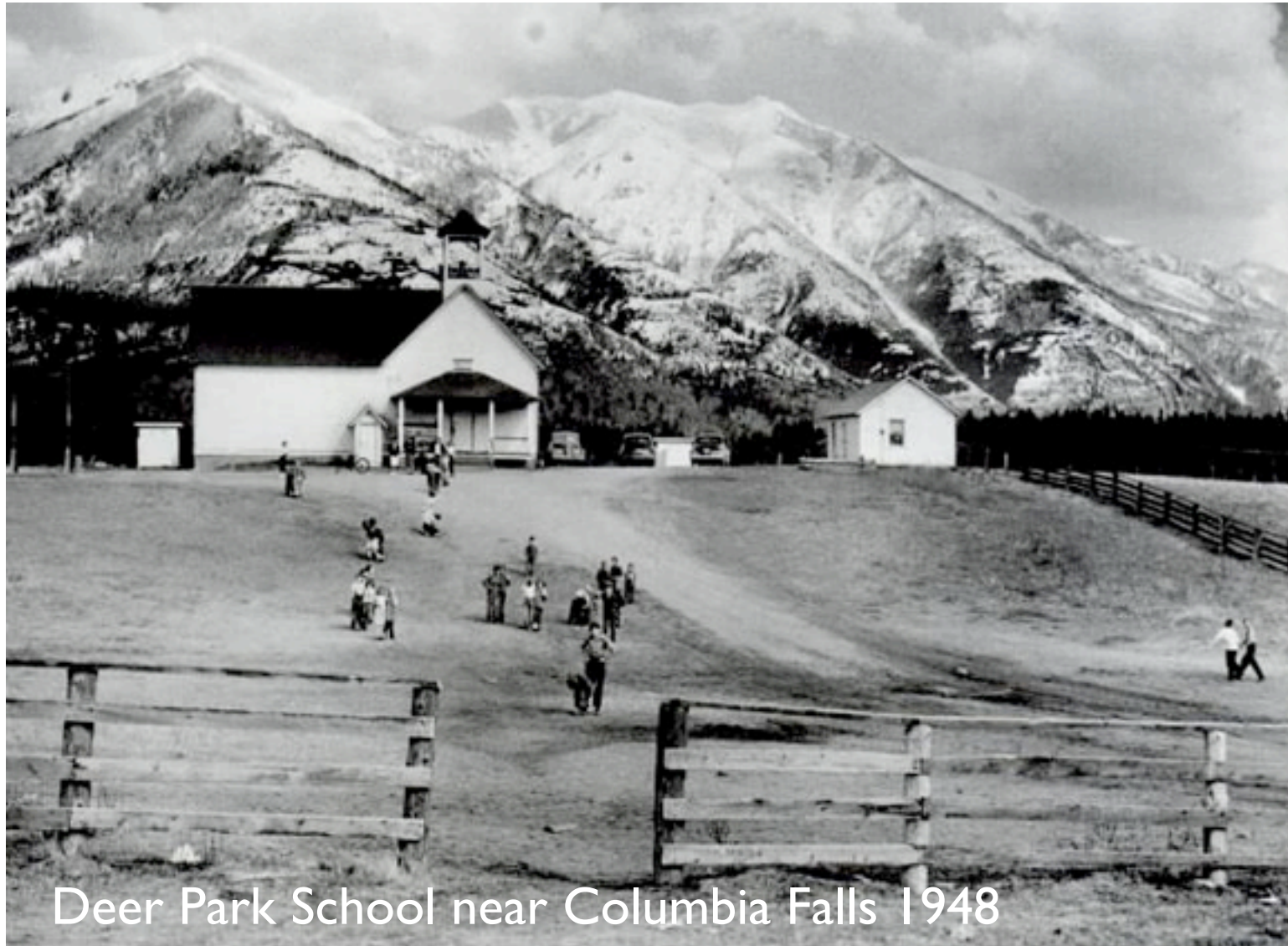
- File project proposal with OLPC
- Identify possible school
- Get support of teachers, parents, community
- Train staff
- Distribute XOs
- Provide Support
- Evaluate

Contacts/Resources

help@ laptop.org   caryl@laptop.org
http://wiki.sugarlabs.org/go/Welcome_to_the_Sugar_Labs_wiki
http://sugarlabs.org/go/Sugar_Labs/GettingInvolved
http://wiki.laptop.org/go/The_OLPC_Wiki
http://wiki.laptop.org/go/Participate
http://wiki.laptop.org/go/Contributors_Program

For More Info, Attend Free Virtual Sessions About Sugar and OLPC at
NECC Unplugged

Mon 6/29
9:30-10 am MDT
1:30-2 pm MDT

Tues 6/30
9-9:30 am MDT
9:30-10 am MDT

Be sure to sign up and configure your computer ahead of time at:
www.elluminate.com/

30th annual

iste nECC 2009

NATIONAL EDUCATIONAL COMPUTING CONFERENCE
WASHINGTON, DC ■ JUNE 28–JULY 1, 2009
WALTER E. WASHINGTON CONVENTION CENTER

http://www.neccunplugged.com/