THE OPEN ROAD

highway to the future of
technology in education

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The Dusty Information Super Highway

Illustration: Arthur Rackham
Digital File: http://www.artpassions.net/galleries/rackham/willows3.jpg

"The open road,
the dusty highway...
Here today, up and off
to somewhere else
tomorrow!

The whole world before
you, and a horizon that's
always changing!"

Said Toad.
The Wind in the Willows
Kenneth Graeme

Donna Benjamin – the open road

- Who I am not!
- Education revolution
- Standards
- The future – utopia or distopia

One Laptop per Child

"It's an education project not a laptop project"

Nicholas Negroponte

www.laptop.org

"The biggest barrier to improving education for children, with or without computers, is the completely impoverished imaginations of most adults."

Alan Kay

Sugar – Constructivist Computing

The XO exists because Free Software exists.

Free Software developers helped make it happen.

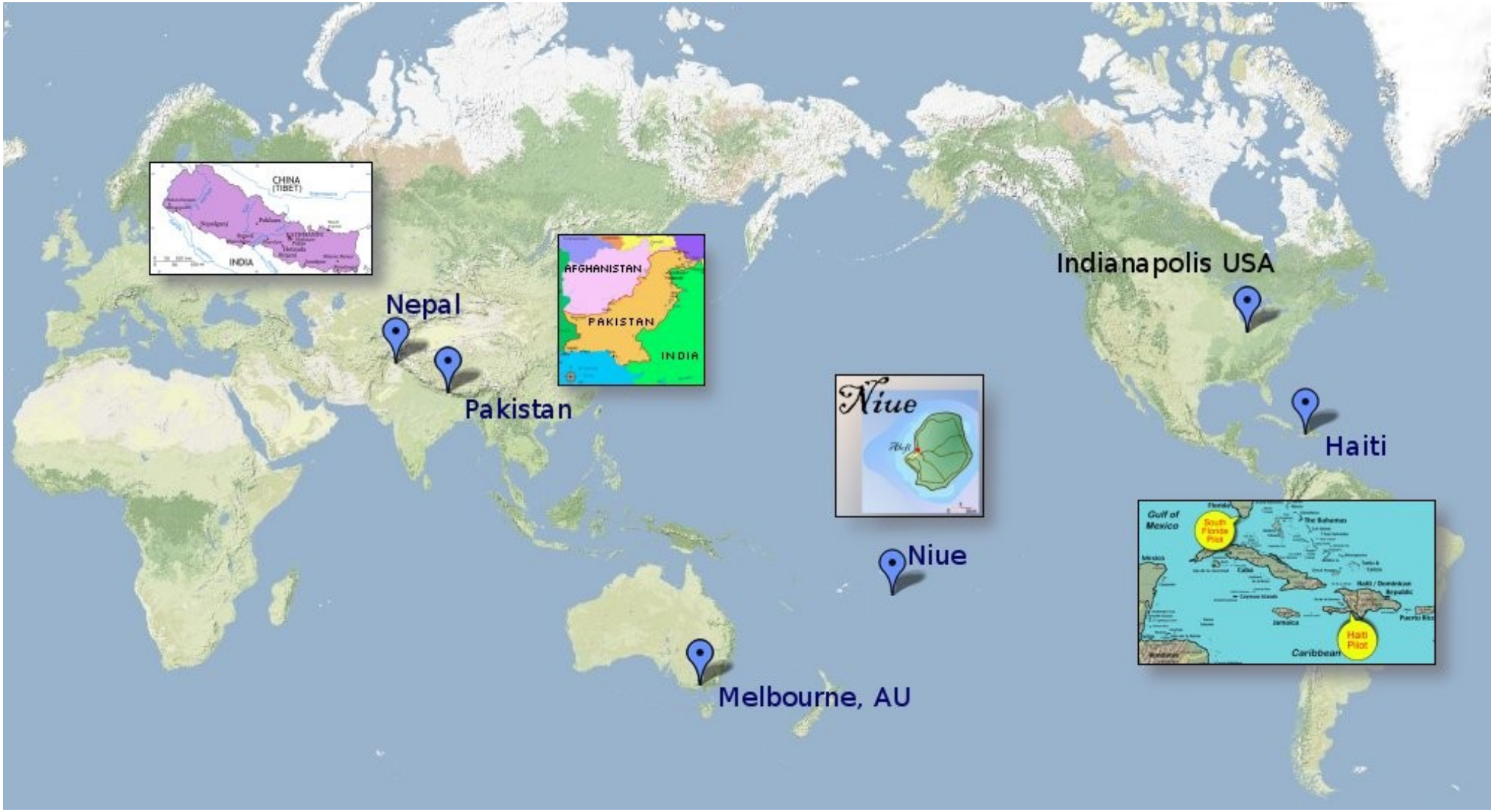
Sugar is radical.

www.sugarlabs.org

And wonderful.

Thank you Walter.

OLPC around the world



OLPC Pakistan

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

OLPC Nepal

Teachers professional learning with the e-paati

Proud kids with their new electronic learning platform

OLPC Haiti

Waveplace raises money to purchase laptops for Caribbean children.

Waveplace creates training materials that teach digital media skills.

Waveplace inspires teachers to use computers in new ways.

Squeak – eToys
teaching teachers
to teach programming

Niue: 1-1 XO deployment

Teacher Preparation...

... and professional learning is critical!

Teachers around the world are taking time to explore the XO and experience a new way of teaching...

Free and Open Source Software is at your fingertips to explore, tinker with, develop your own materials, share them with others and work together to improve them.

Changing the World

http://gizmodo.com/5043089/olpc-origin-bittersweet-success-and-future-of-the-xo-laptop

Hrmmmm...

DEECO Panel Price
Acer Aspire One ACR9034
only $313 ex GST each (Win XP)
Acer Aspire One ACR9000
only $469 ex GST each (Linux)
The Aspire One is Acer's first 8.9" Netbook powered by the latest Intel® Atom™ processor technology, providing leading performance. Weighing less than 1kg and designed with mobility in mind the Aspire one features a 8.9 inch widescreen, Crystal Eye Webcam, and 8GB / 120GB storage capacities for Windows® and Linux operating systems.
8.9" Display, 1024 x 600 resolution
Intel® Atom CPU & 945 GSE Chipset
Windows® XP Home / Linux
1GB DDR2 (XP) / 512MB DDR2 (Linux)
120GB (2.5" HDD) Microsoft Windows OS Version
8GB (Internal flash) Linux OS Version
HD audio / built-in speakers
Built-in 10/100 LAN, Built-in 802.11b/g/ WLAN
5 in 1 Card reader (SD, MMC, MS, MS PRO, XD)
Dedicated SD Card reader for storage
Crystal Eye Webcam
3xUSB, VGA-out, earphone jack, mic
24.9cm(W) x 17.0cm(D) x 2.9cm(H)
Weight 0.98 kg
3 Year Pick up Return Warranty

Digital Education Revolution

National Secondary School Computer Fund
One computer per senior secondary student.

Commonwealth funds / State implementation

Blueprint for deployment
"Better Practice Guide: ICT in schools"
- Netbooks
- Open Source
- Thin Clients
- Professional Learning

http://www.digitaleducationrevolution.gov.au/resources/guide/about/default.htm

Where do we start?

The ***technical*** issues are ***easy*** to solve.
The ***social*** problems are the real ***challenge***.

I'm terrified of this project. Not terrified for me, but for the 70% of teachers at my school that refuse to use technology with the students.

We need to change the syllabus and integrate the ICT resources into all subjects.

Comment by "Marko"

http://paralleldivergence.com/2008/06/01/australias-digital-education-revolution/

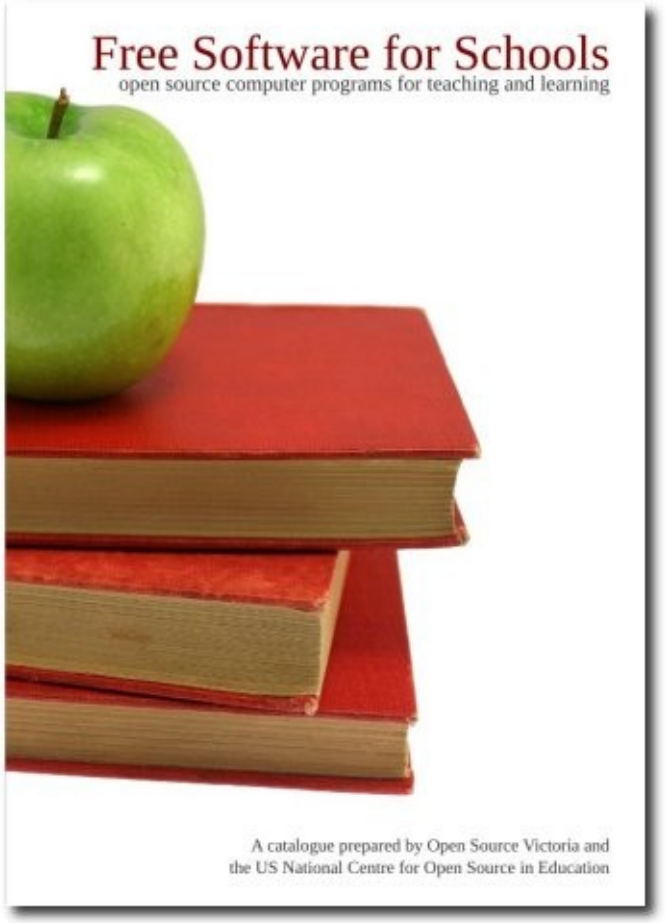
Work in Progress

FOSS VELS:

matrix matching FOSS
to the Victorian prep
to Yr10 curriculum.

Free Software for Schools:

a catalog of FOSS produced
by Open Source Victoria
and National Center for
Open Source in Education.



VICTORIAN ESSENTIAL LEARNING STANDARDS

A WHOLE SCHOOL CURRICULUM PLANNING FRAMEWORK

Three interwoven purposes

To equip students with capacities to:

manage themselves and their relations with others
understand the world and
act effectively in that world

to prepare them for success in education, work and life.

This is achieved through the three core, interrelated strands of

Physical, Personal and Social Learning
Knowledge, skills and behaviours in
Health and Physical Education; Personal Learning; Interpersonal Development; Civics and Citizenship

Discipline-based Learning
Knowledge, skills and behaviours in
The Arts; English and Languages Other Than English; The Humanities; Mathematics; Science

Interdisciplinary Learning
Knowledge, skills and behaviours in
Communication; Design, Creativity and Technology; Information and Communications Technology; Thinking Processes

across the stages of learning

Years Prep to 4	Years 5 to 8	Years 9 to 10
Laying the foundations	Building breadth and depth	Developing pathways

underpinned by educational purposes, principles and values

to form

Victorian Essential Learning Standards
a framework for whole school curriculum planning

Schools plan their teaching and learning programs, using the three strands, to enable their students to achieve the essential statewide learning standards.

Figure 1: Whole school curriculum plan

VELS = Victorian Essential Learning Standards

ISTE NETS

- Facilitate and Inspire Student Learning and Creativity
- Design and Develop Digital-Age Learning Experiences and Assessment
- Model Digital-Age Work and Learning
- Promote and Model Digital Citizenship and Responsibility
- Engage in Professional Growth and Leadership

International Standards

Europe - IDEALS

Improving Distance Education and (ICT) Learning Standards
http://phosphorus.it.kth.se/ideals/

Asia - KERIS

Korea Education and Research Information Service
http://english.keris.or.kr/es_online/es_online.html

Africa – Cape Town Declaration

Open Education – Participate, S
http://www.capetowndeclaration.org/

Standards Shmandards

http://www.learnativity.com/standards.html

The Future is Open.

It has to be.

Future scenarios

	Under the Volcano	A Farewell to Arms	The Grapes of Wrath	The Magic Mountain
Defining characteristic	**The great divide**	**Community**	**Fear**	**Corporatisation**
Society	Polarised Intolerant Resentful Pessimistic Personalised values	Harmonious Appreciative Optimistic Tolerant Feminised values	Disintegrating Pessimistic Intolerant Sustainability of kinship groups Survival values	Corporate loyalty Competitive Marginalised underclass Ambivalent Male-dominant values
Education	For haves and have nots Individualism Personal growth Vocational	Centre of community Individualised self-paced learning plans Well balanced	Local fortress Protection Social havens	Corporate ethos Privatised Profit-driven Vocational
Teacher's role	Facilitate diversity Agents of integration Safety net for have nots Diminished status	Multi-tasking Social Collaborative Trusted and well respected	Social, pastoral and health care Cross-cultural Model inclusiveness High status due to pastoral care role	Achieving measurable student outcomes Value-adding Highly respected and well rewarded
Family life	Cult of youth Small nuclear Family/work balance	Children highly valued Resurgence of extended family	Children provide cheap labour Protective urban/rural tribes	Children are assets Global orientation
Role of technology	Pervasive Social differentiator Focus on innovation and ideas Surveillance	Social integrator	Irrelevant Focused on science for survival	Integral Customised biotechnology
Immigration	Creates pressure	High Drives innovation Underlines social cohesiveness	Indigenous focus Flood of illegal immigrants Racial tension	Asia focus
The economy	Unequal access to wealth Great divide User pays approach	Stable and strong Companies collaborate Traditionally resource based	Global recession Survival economy Crumbling infrastructure Scarcity of jobs and resources	Global wealth Competitive Innovative
Politics	Highly centralised	Global alliance	Fragmented	Global corporate alliances No local voice for people
The environment	Climate change managed by technology and regulation	Social focus on better futures using clean energy	Harsh, unpredictable climate	Corporate competition for control of resources

Under the Volcano

A Farewell to Arms

The Grapes of Wrath

The Magic Mountain

What is your future scenario?

What's your first step?

Learning Management?

- LMS – CMS – VLE? Managing Learning?
- Engage students: Contribute to FOSS projects.
- What is Learning? What is Knowledge?
- Measurement, Assessment, Administration
- Consuming / Using tech is not sufficient...
- We must create, innovate and improve our tech tools, and supporting material.

Overcome fear, uncertainty & doubt

The shy, timid, and scared must be invited to contribute. If something doesn't work, help them learn to submit good bug reports...

“It's broken”

Is not helpful, whereas

“When I click on the node icon in Inkscape, the application crashes my ubuntu machine”

Can be used to find the problem and empower the reluctant.

Share your Stuff

- Educators play an important role in the open source community.
- Use FOSS tools to connect to each other.
- Share pedagogy
- Share learning materials.

References

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http://www.appa.asn.au/cms/uploads/articles/leadership%20and%20learning%20with%20ict.pdf

Pedagogy Strategy : Learning in an online world. MCEETYA, 2005.
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http://www.becta.org.uk/page_documents/research/open_source_teaching.pdf

Hayes, Terry. *Professional teaching associations and professional standards* Teaching Australia Sep 2006
http://tinyurl.com/3e83nm

Webb, Ian. *National computing studies summit: Open learning approaches to computing studies.* Australian Educational Computing Vol.23 No.1 – 2008
http://www.acce.edu.au/uploads/documents/store/resources/res_1124_AEC_vol23_1_2008.pdf

Collected Links

OLPC – Teacher Preparation Resources
http://delicious.com/kattekrab/olpc-teacherprep

Australia's Digital Education Revolution
http://delicious.com/kattekrab/DER

General Stuff I thought was kinda interesting whilst preparing this talk
http://delicious.com/kattekrab/k12openminds