

Is there anybody out there? A journey towards a National Education Network

New Zealand

QuestNet Conference

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New Zealand....some education facts (and Aussie equivalents)

750,000 students	(3.3m)
45,000 teachers	(220,000)
2650 schools	(10,000)
one national policy body/curriculum	
	(....err....numerous...)

continued....

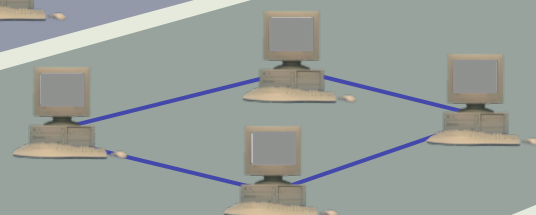
- All schools self-managing since 1989.....this model is now being challenged in an internet-connected world
- Schools are either state/state-integrated/private
- NZ 3% students are in the independent sector/(Australia about 30%)
- 75% of NZ schools <325 kids....mostly rural
- average spend by schools \$1.09 per student per month
- NZ MoE been involved over the past 10 years with TLF/MYCEETA/AICTEC
- Longstanding VC programme to broker lessons to schools from unis/polytechs and other content providers

The last 25 years.....

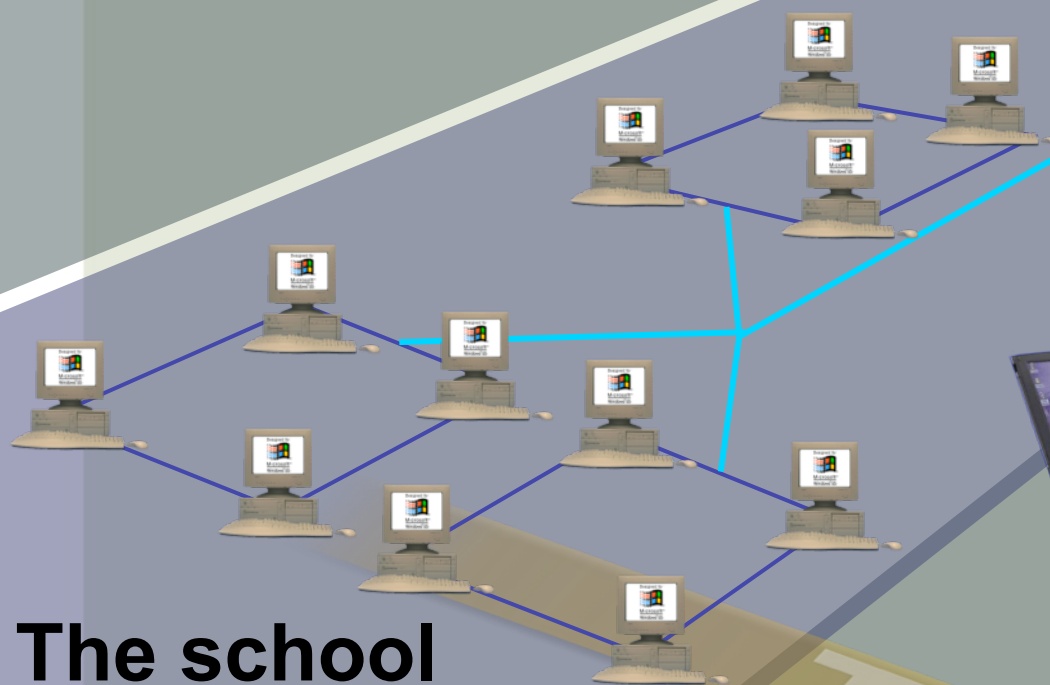
The standalone school
computer
1985



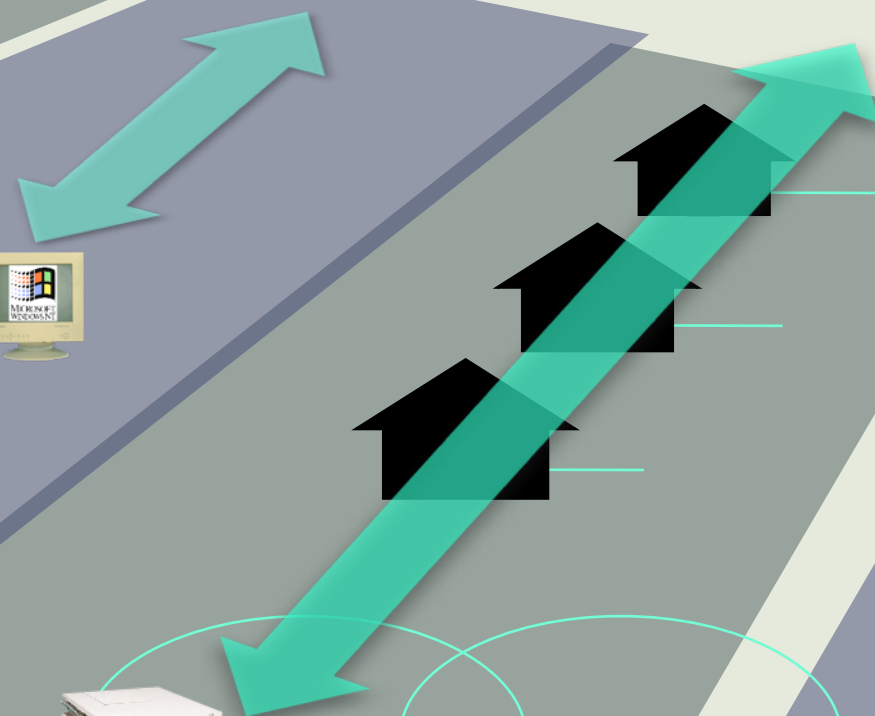
The
computer room
1990s



The school
network
1995-2010



Internet



A potential education
network
2010-2016



Teaching and learning tools

1980/90s

- Pen
- Chalkboard/Whiteboard
- Banda
- Gestetner
- 16mm projector
- Slide shows
- Telephone
- Fax
- Library

Now

- Txting/Pxting
- Blogs/Wikis
- Pod/Vod-casting
- Data projector
- LMS
- IM/SMS
- Digital cameras
- iMovie
- Google
- Peer2peer networks

Next?

- Virtual reality
- Wearable computers
- Ubiquitous identity
- Voice recognition
- Agents and avatars
- Visualisation
- Miniaturisation
- Reusable paper
- Semantic web
- Personalised Learning & ownership

Teaching and learning tools

1980/90s	Now	Next?
• Pen • Chalkboard/Whiteboard • Data projector • Gester • 16mm projector • Slide shows • Telephone • Fax • Library	• Txting/Pxting • Blogs/Wikis • Pod/Vod-casting • IM • Digital Movie • Google • Peer2peer networks	• Virtual reality • Wearable computers • Ubiquitous identity • Ubiquitous cognition • Agent-based tutors • Visualisation • Personalisation • Paper • Semantic web • Personalised Learning & ownership

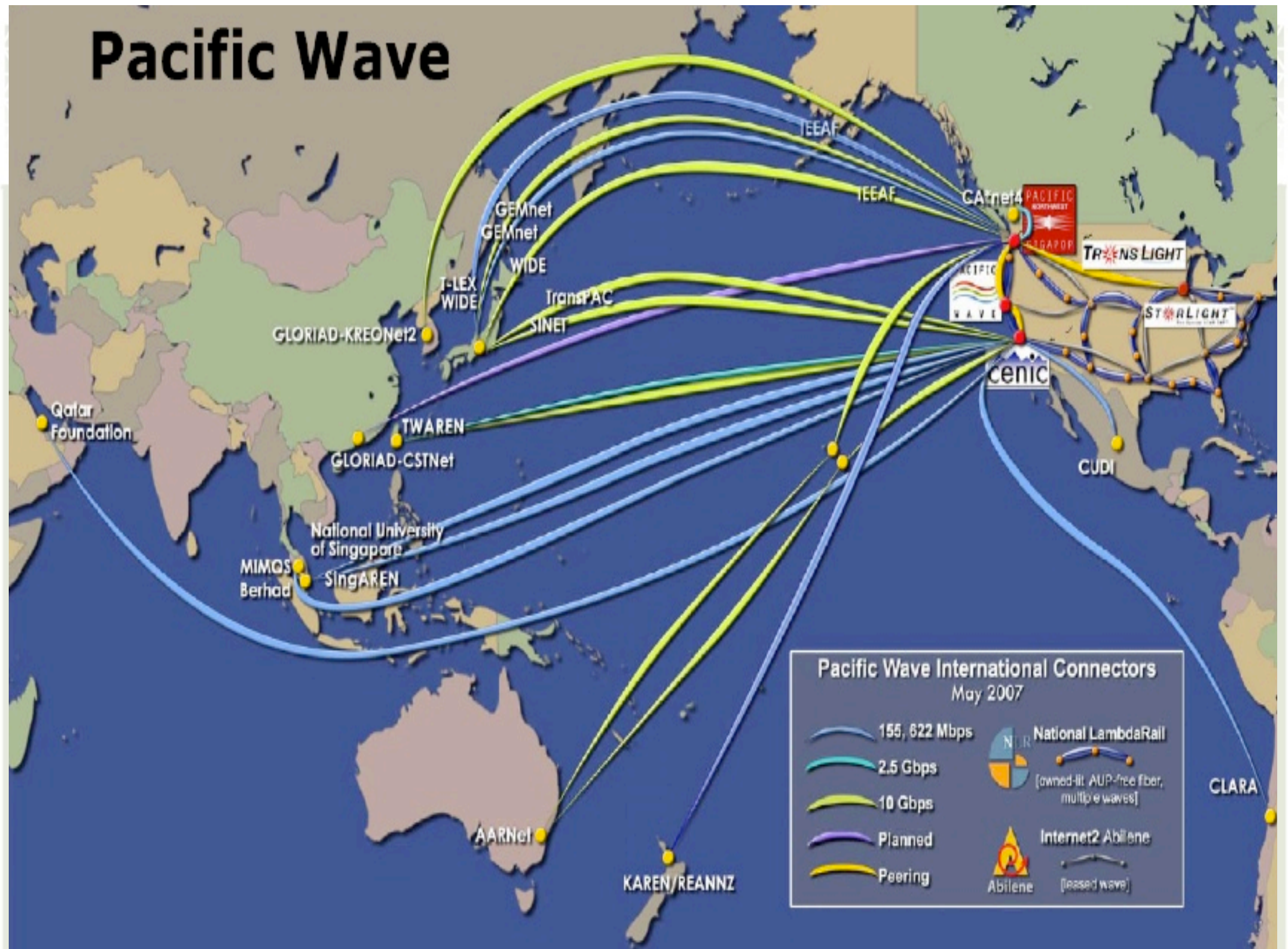
Analog

Digital

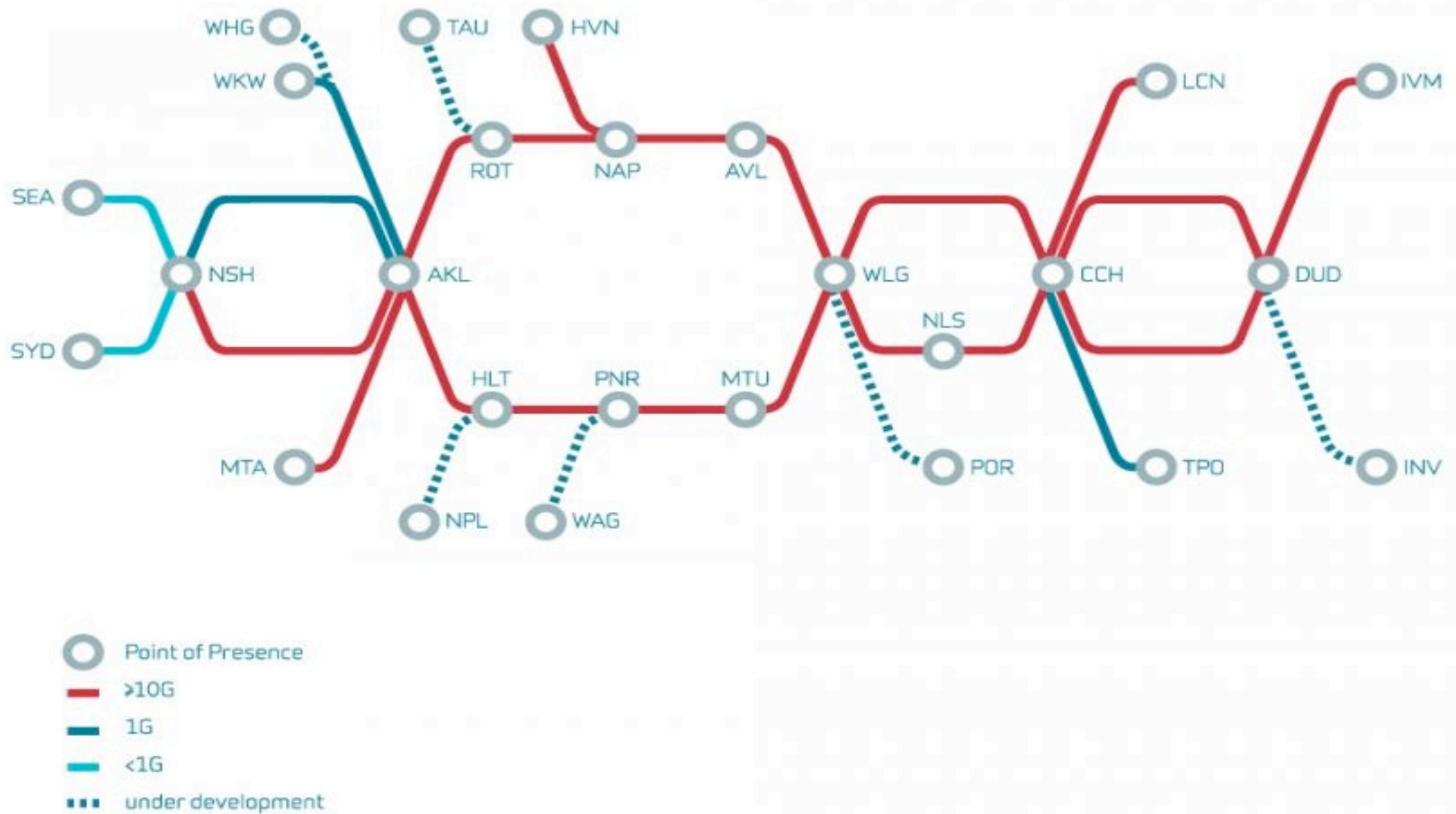
Connected

Ubiquitous

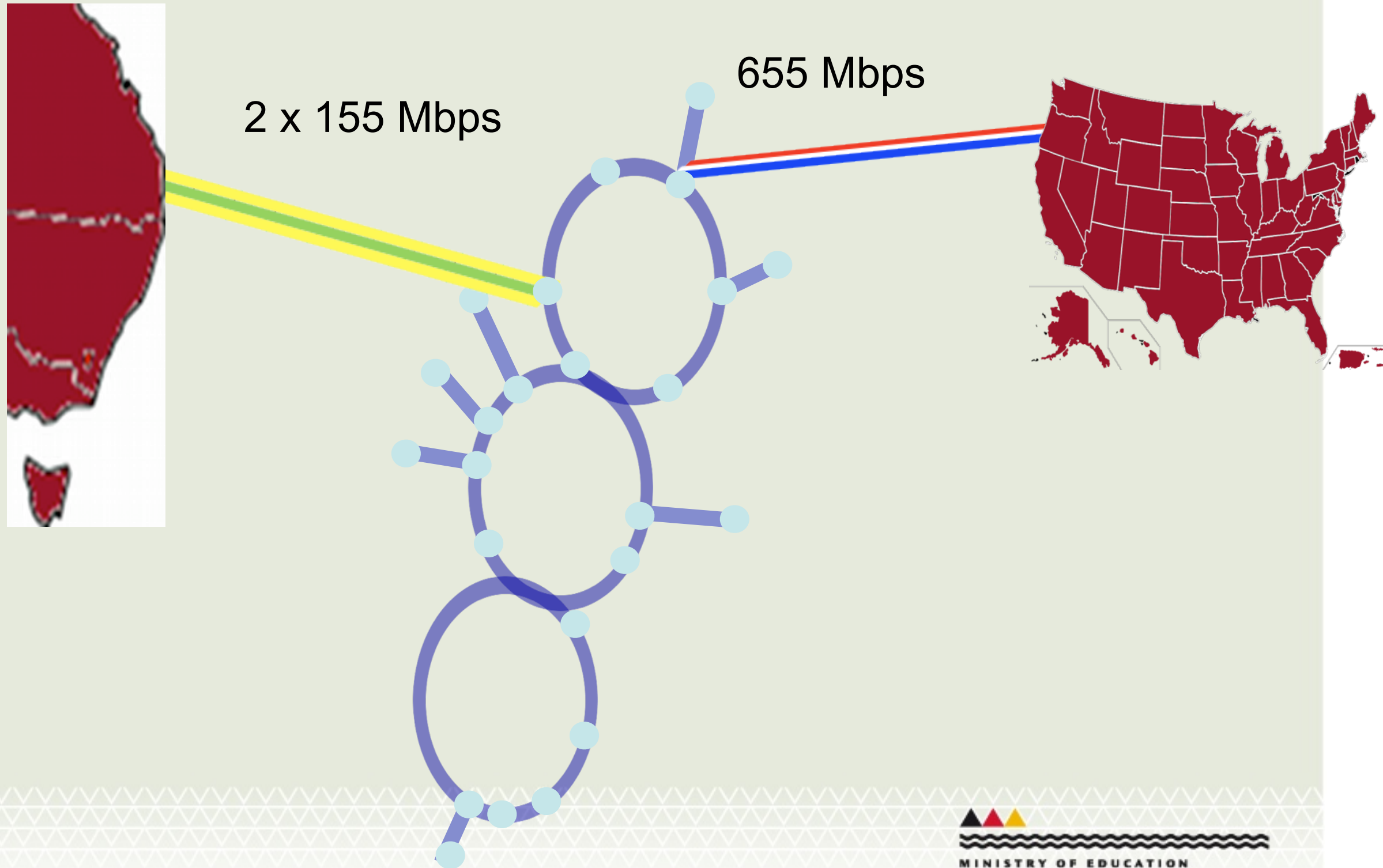
Pacific Wave



KAREN connects New Zealand



Current connectivity to Australia and USA....(about to move to 1Gbps)



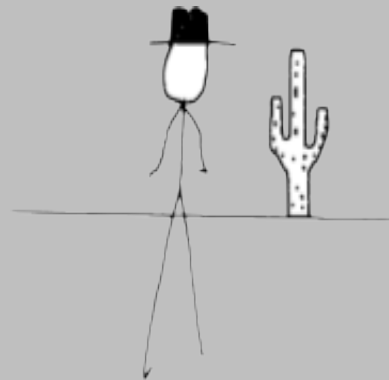
The Government's current commitment

- 97% NZ schools (99.7% of students) will have **access to** UFB (100Mbps) by 2016
- 3% remote schools will have **access to** fast broadband (10Mbps) by satellite or point-to-point wireless
- \$1.5 billion investment overall...re-investment model ...announcement due October re successful bidder(s)
- \$150 million investment signalled to prepare schools for the rollout...networks/PD/fibre tails
- self-managing model means choice may beat mandate

The NEN includes.....



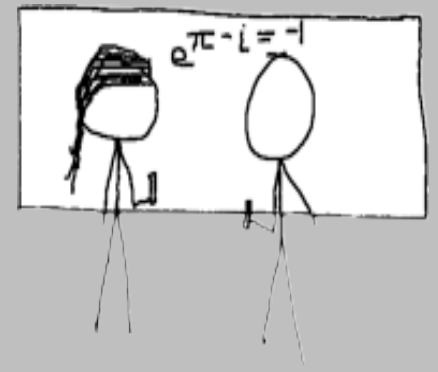
KAREN - Fat,
Fast and Free
from
Restrictions



Technical
Support and
Network
Wrangling

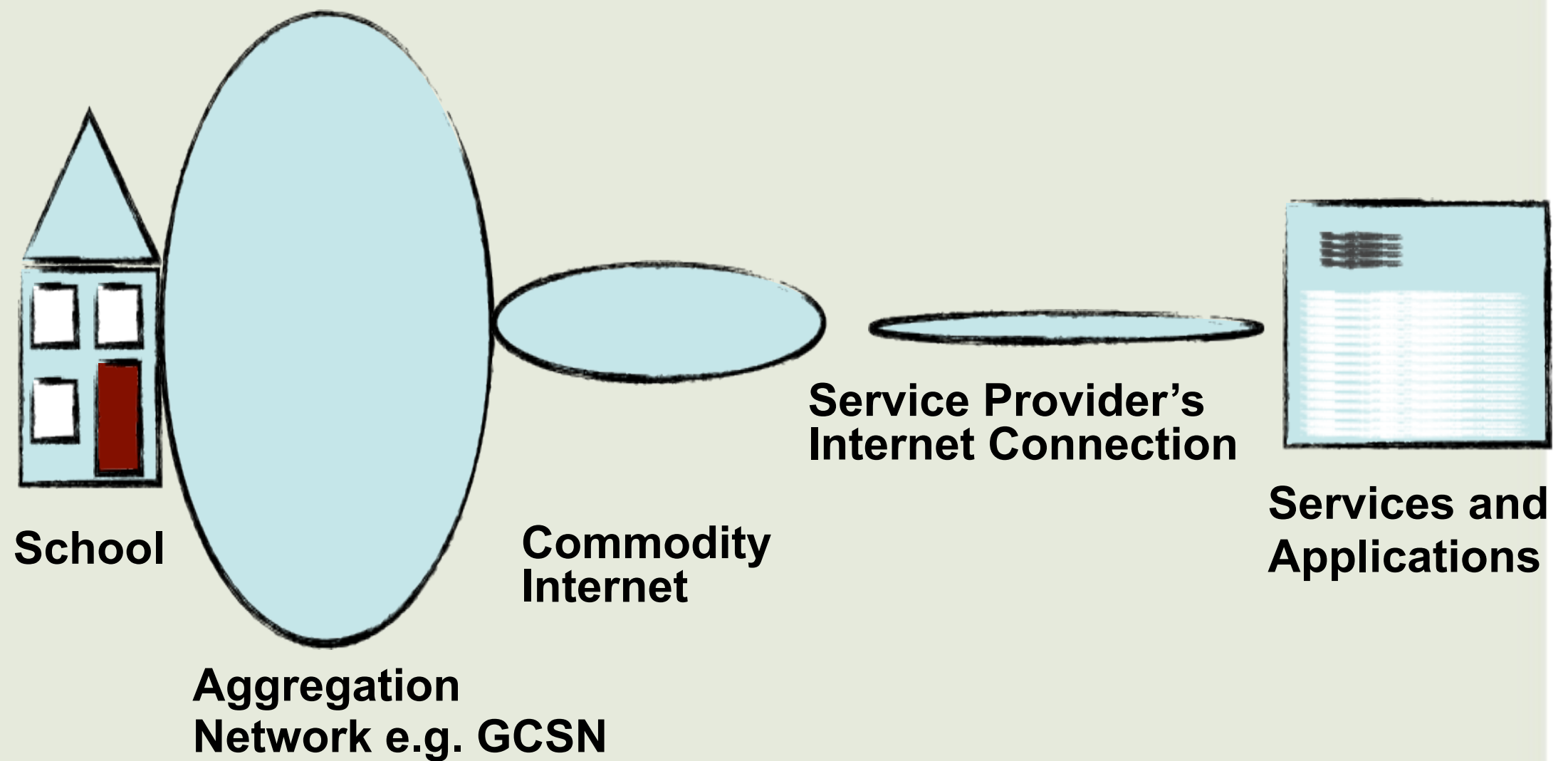


Demand
Aggregation
and Expert
Procurement

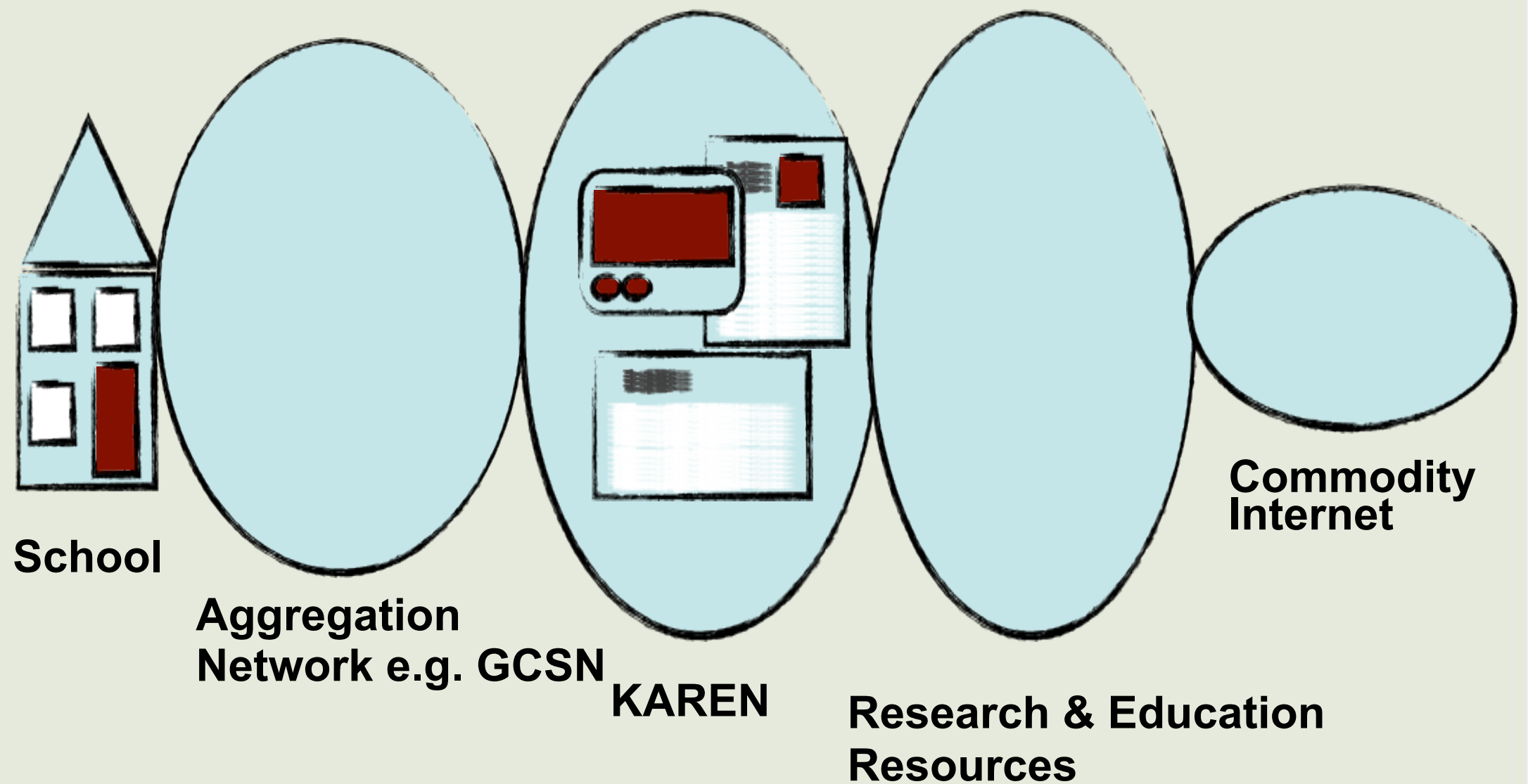


Learning
Support and
Professional
Development

Today's Internet restrictions.....



Getting fatter and 'closer' to content



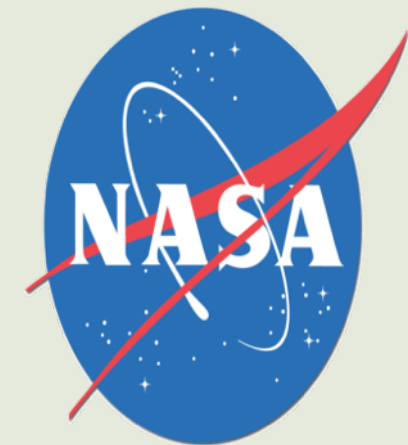
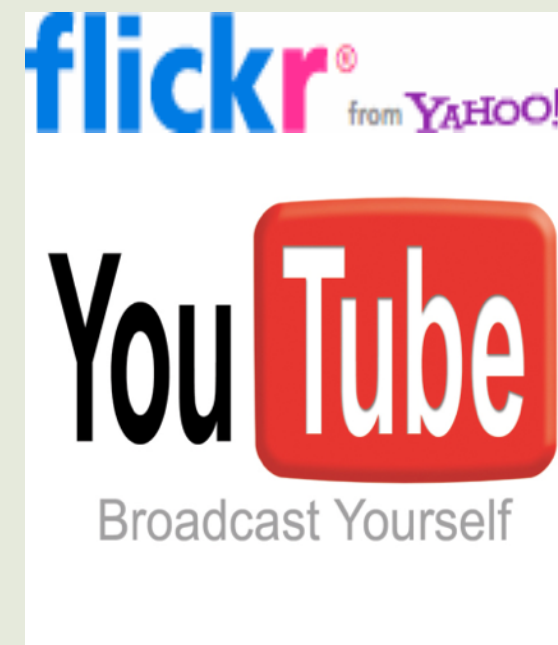
KAREN Research & Education Resources

NATIONAL LIBRARY
OF NEW ZEALAND
TE PUNA MĀTAURANGA
O AOTEAROA



sciencemuseum

NIWA
Taihoro Nukurangi
National Institute of Water & Atmospheric Research



GmailTM
by GoogleTM BETA

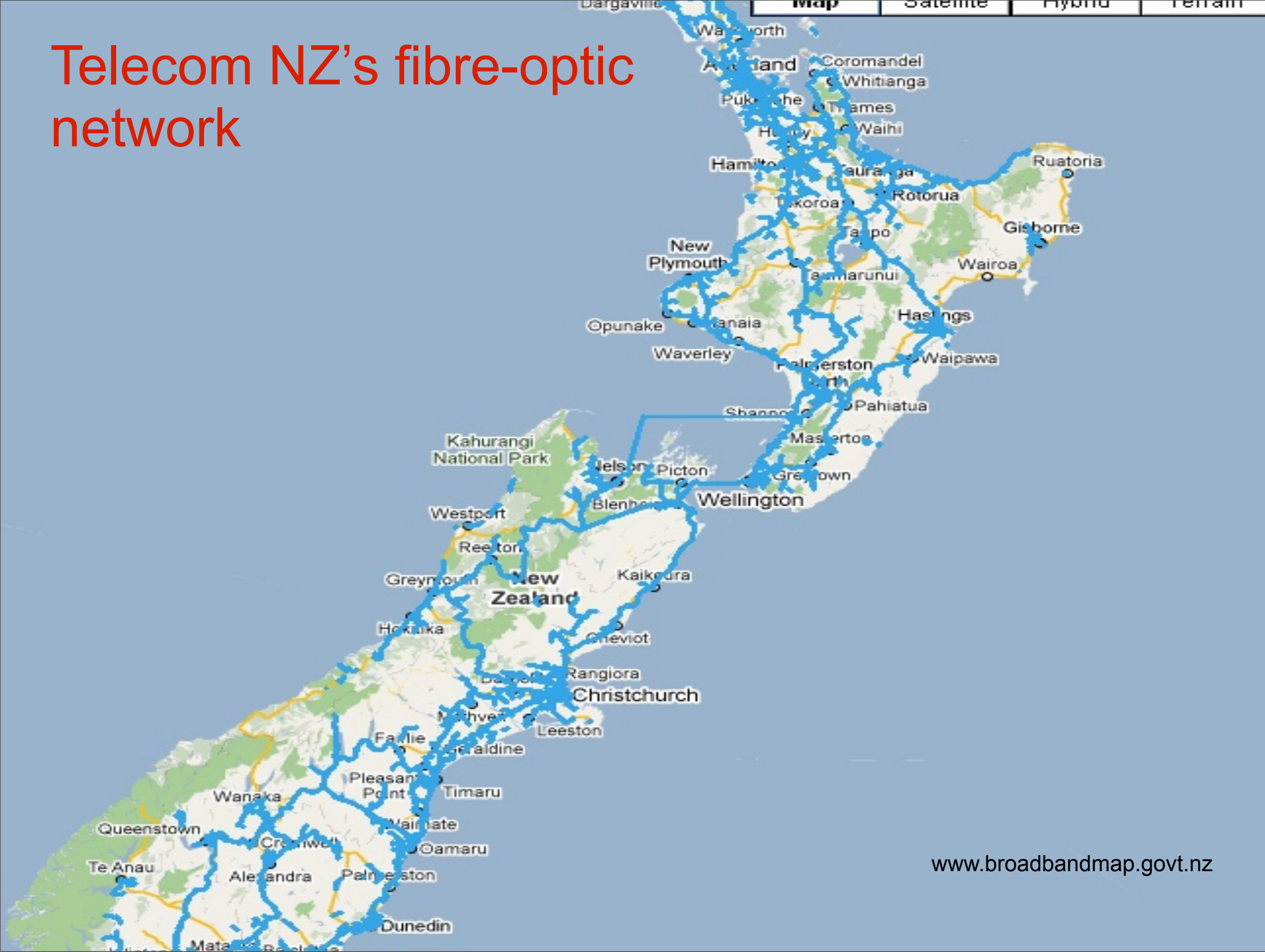


TE PĀTAKA MATIHIO DIGISTORE

Issues

- Most schools on broadband of between 0.5-5Mbps – inadequate for many online services to work properly
- Currently < 200 New Zealand schools have bandwidth required for e-AsTTle, streaming video, high definition VC
- Next generation of applications will assume high speed, synchronous (i.e. fast in both directions) connections to the internet

Telecom NZ's fibre-optic network



www.broadbandmap.govt.nz

NEN Trial Extension - background

- Original trial in 2008 involved 23 schools
- Trial extended to up to 200 schools and until June 2011
- To be eligible schools have to be on an open-access fibre service
- Schools connect to the NEN trial schools using the existing KAREN network
- Business case for full NEN about to go to government – balance between education and business transformation

What is the MoE doing?

- Helping prepare schools for the rollout in the following areas:
 - Infrastructure
 - Schools hardware and software
 - Capability
 - Networks
 - Content and Services



NEN Content and Services

Other content and services will be added progressively to the NEN Trial Extension.

The following are some types of content and services being considered for connection to the NEN Trial Extension:

- Learning Management Systems
- Student Management Systems
- ePortfolios



**A schools journey on the high
speed network... infinity and...
beyond**

Infrastructure



Infrastructure - at the local level



Christchurch City:

150 Km of existing fibre

Over 325 km within the
City by 2012

National Curriculum

Confident

Positive in their own identity
Motivated and reliable
Resourceful
Enterprising and entrepreneurial
Resilient

Connected

Able to relate well to others
Effective users of communication tools
Connected to the land and environment
Members of communities
International citizens

Actively Involved

Participants in a range of life contexts
Contributors to the well-being of New Zealand – social, cultural, economic, and environmental

Lifelong learners

Literate and numerate
Critical and creative thinkers
Active seekers, users, and creators of knowledge
Informed decision makers





The GCSN is a community of educators, learners and service providers in Christchurch enabled by an advanced network infrastructure. [Join Now](#)



Great Barrier Reef Video conference

07/07/10 ---- I was fortunate to sit in on a live video conference with a diver on the Great Barrier Reef while attending a conference in Australia. The video conference system is sponsored by Polycom and allows students to interact with the diver during an hour long excursion. ReefHQ is the Reef Education...

[> Read More](#)



Ministry of Education Announces 239 Additional Schools Selected for SNUP Program

01/07/10 ---- Big congratulations to the 30 Christchurch schools on the list, great result!!!! Go here 239 schools in upgrade for the list. Education Minister Anne Tolley and Communications and Information Technology Minister Steven Joyce today announced the next 239 schools to receive government...

[> Read More](#)



Kate De Goldi Video conference

18/06/10 ---- On June 17 the National Library Christchurch Centre and the Aotearoa Peoples Network arranged a video conference linking five schools to the New Zealand award winning author - Kate De Goldi. The main focus being literacy. Who was involved in the video conference:...

[> Read More](#)

External News

- Interface Magazine
[The potential appeal of virtual instruction](#)
07/07/10
First it was music. Then it was theater. Now it's...education? Technology has enabled...
- Interface Magazine
[Foreign pupils taught using computers](#)
07/07/10
A school where more than half of pupils are non-English speakers has been forced to buy...
- Interface Magazine
[Labour may give free computers to schoolchildren](#)
06/07/10
Families with school-aged children could be provided with portable computers under a future Labour...
- Interface Magazine
[Google acts to fix YouTube flaw exploited by hackers](#)
06/07/10
YouTube has been forced to fix a flaw allowing hackers to bombard users with fake pop-up messages...
- Interface Magazine
[Nintendo Brain Games Are Good For Pupils](#)

From around the Blogs

Principles of GCSN

- **Educationally focussed**
- **Access for all**
- **Openness**
- **Affordability**
- **Flexibility**
- **Advocacy**
- **Responsiveness**
- **Collaboration**

Community

Professional Learning for Teachers

Welcome to the Professional Learning space, an area for teachers to access learning opportunities relevant to their personal learning needs, and to work through them at their own pace.

Access to quality professional learning is essential to the ongoing development of high quality teachers. In this area you can find the following:

- Links to Tutorials on the web that have been checked for quality.
- Lists of workshops provided within the GCSN community that you can participate in.
- Links to professional learning opportunities provided by 3rd party providers who are specialists in professional development.



Recent Tutorial Links



Moodle Tutorials

Listed 06/06/10



Video conferencing tutorials

Listed 06/06/10



Developing ICT Skills

Listed 06/06/10



Google Docs - Sharing and Collaborating

Listed 06/06/10



Google Docs - An Introductory for Teachers

Listed 06/06/10

[> View All Tutorial Links](#)

Upcoming Workshops



Making the Most of the GCSN website

Tue, 27/07/2010 - 13:00 - 15:00



Integrating VIDEO as a Resource and Tool in the Classroom

Tue, 10/08/2010 - 13:00 - 15:00



Building a WIKI as a Collaborative Online Resource

Thu, 12/08/2010 - 15:30 - 17:00

[> View All Workshops](#)

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Community - Services



Greater Christchurch Schools Network

Enter your username and password

The service you are trying to access has requested that you authenticate yourself.

Please enter your school network username and password, and select your school, in the form below.



Username

Password

Login

Organization

Christs College



Help! I don't remember my password.

If you can't remember your login details please contact your school IT Support person.

[Home](#) | [About GCSN](#)



IDP Server

Community

- **Concept design by MoE and Catalyst (NZ largest open source developer)**
- **Local implementation involves commercial High availability infrastructure - always there and scalable
(Other loops have put in their own hardware)**
- **Schools pay monthly fee for the service (low fee)**
- **Federation of IDP servers in the future?**

Pedagogy



Pedagogy



Staff - professional learnings series



**Karen Boyes - Habits of Mind - staff session
- HIGH definition Video Conferencing**



GIS Training from SCION



Building capacity - Professional learning



**Scion/GCSN GIS Training
Geography teachers**

Building capacity - Professional learning



Moodle Development Group

Te Papa



**Te Papa - Monet/F1 Cars
- HIGH definition Video
Conferencing**

Mobile HD VC- seeding resources



Building capacity/Relationships



Nat Lib CHC



ANZPN



ANZPN



Christ's College



ANZPN



Riccarton High School



Burnside High School

Kate de Goldi - NZ Author - National Library

Emerging opportunities



**Students writing
educational iphone apps**

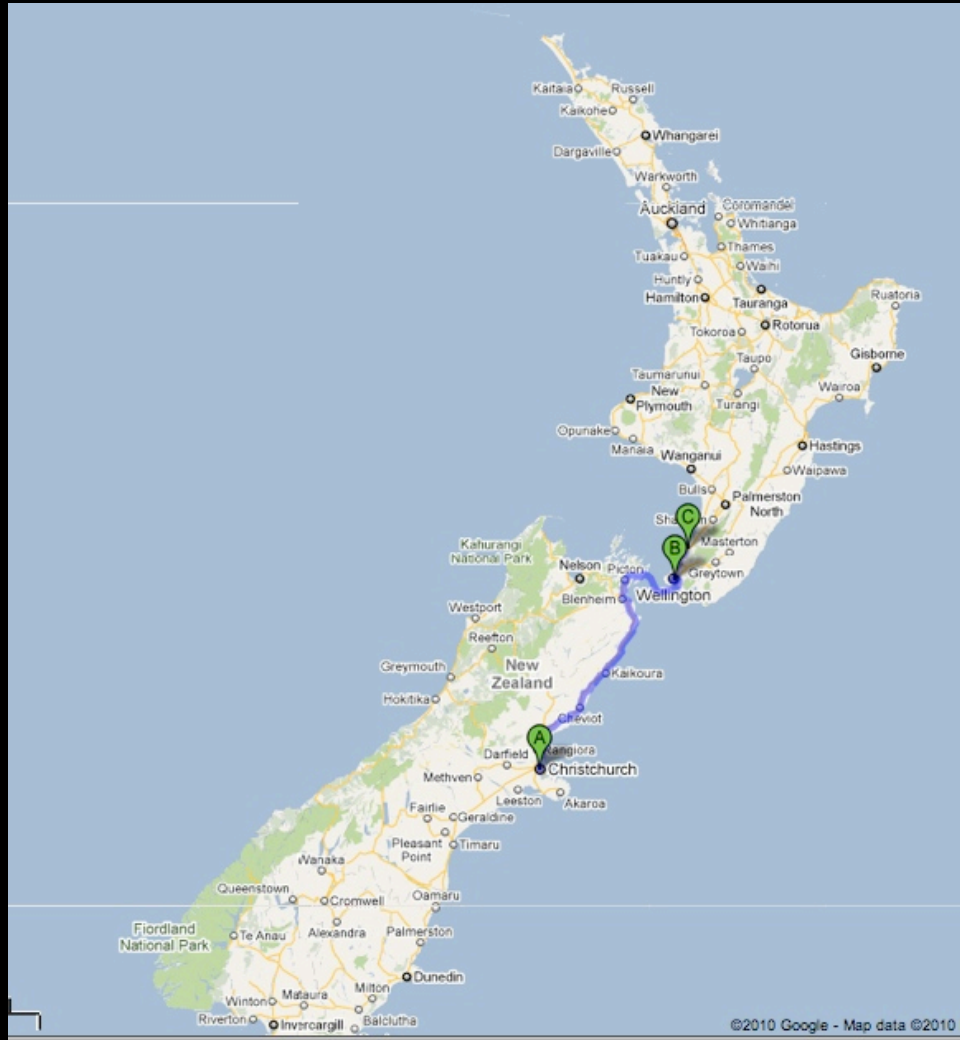
**Students delivering
courses to other schools**





**Tech Hui (meeting) - techhui.org.nz
Students running a tech conference - by
students for students**

Emerging technologies



**Christ's College
Wellington College
Kapiti College**

**iPhone development Course
By students... for Students**

Emerging technologies



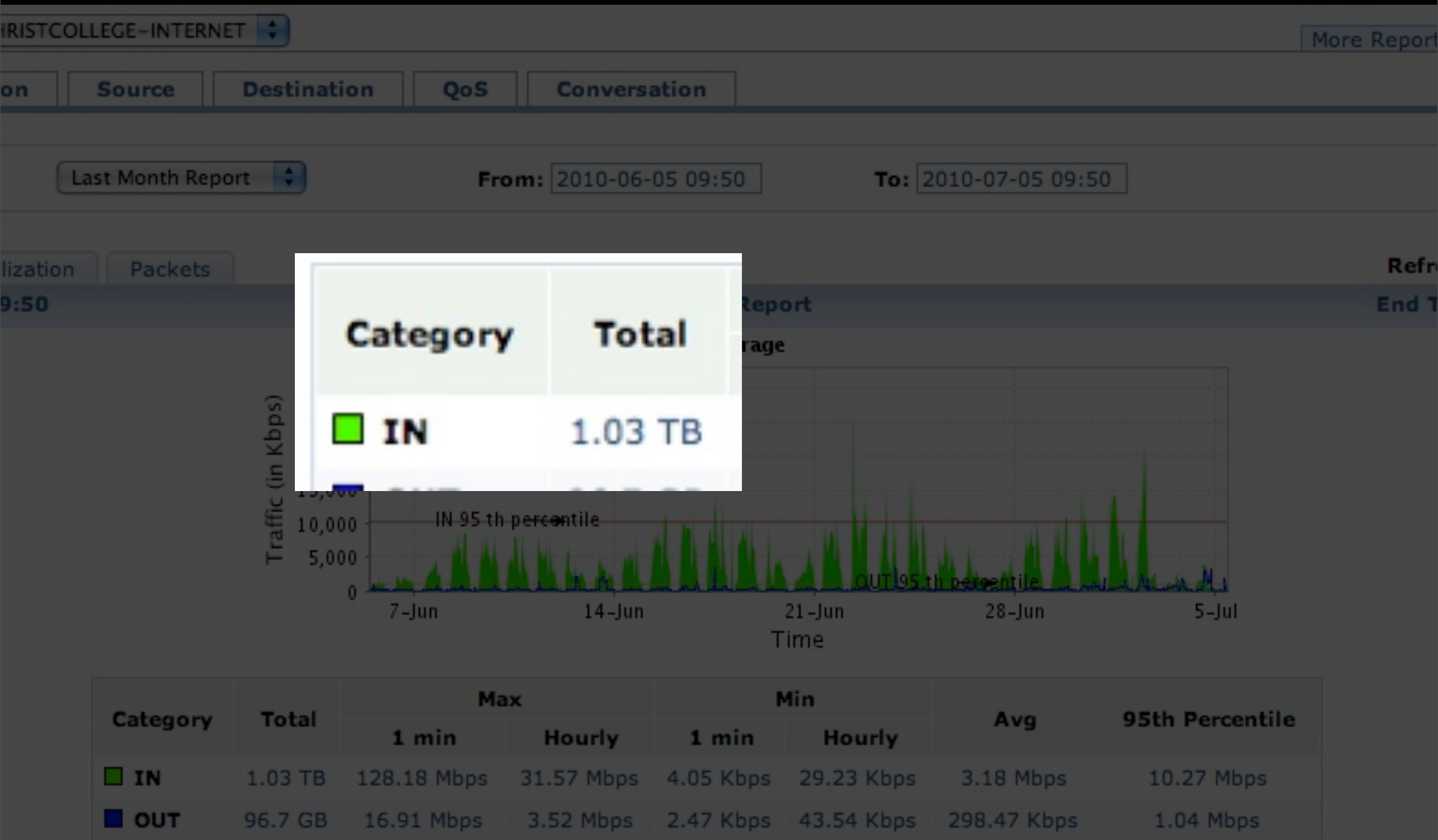
**Wirecast from
Telestream
Student Television**

TV Studio for Live Webcast
on your Mac and PC



**German -
edited
Group project
Record to Hard
Drive
Broadcast TV -
HD**

Challenges



Building capacity and capability

Regional Resource Centre - an online **High Definition** resource centre of quality educational resources (including PD) developed by teachers and students.

(Complementing things such as wikieducator, TKI etc)

Regional schools Learning Exchange

- Regular online/VC meetings of teachers passionate about learning.

GCSN TV - an online (not necessarily “web”) educational TV show run by schools - complementing other ED TV sites

Regional “ambassadors” - Passionate teachers supported to research, promote and advocate learning in high speed environment

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