

Digital Divides and the 'First Mile': Framing First Nations Broadband Development in Canada

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FIRSTMILE ►





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Presentation Thesis

Many First Nations communities face a 'digital divide'.

But they are working to address it on their own terms by using locally-driven “first mile” approaches to broadband development.

Presentation Overview

- First Nations Self-Determination and ICT Development
- Digital Divides
- Bringing back the 'First Mile'
- The First Mile Report
- Two Case Studies
- Next Steps



First Nations Self-Determination & ICT Development

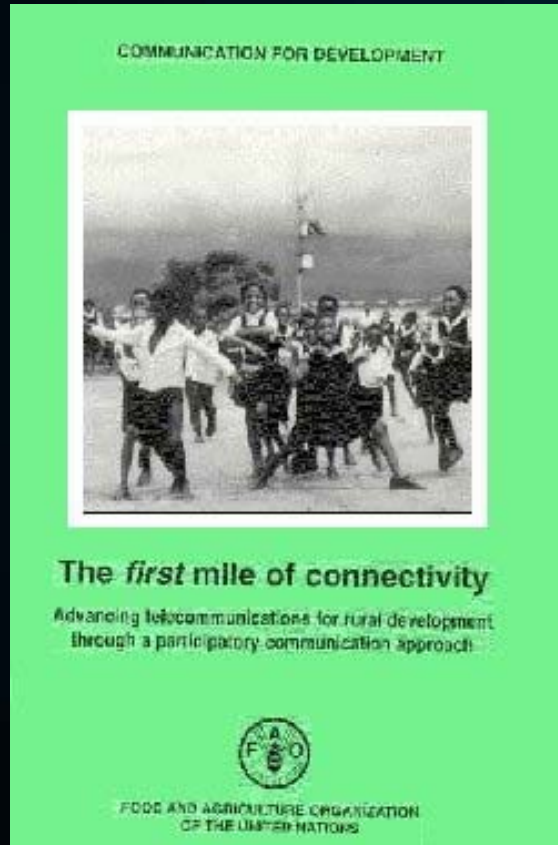
- First Nations are unique political entities
- Rights enshrined in treaties and the Constitution
- However, lack of clarity around self-determination
- This impacts infrastructure development, including broadband



Digital Divides

- Digital Divide
 - Technical -> Cultural (Norris, 2001)
- Diffusionist Arguments
 - Critiques
- Alternatives:
 - Community Informatics (Gurstein, 2007)
 - Access Rainbow (Clement & Shade, 2000)
 - First Nations broadband and ICT development projects (see White et al, 2010)
 - 'First Mile' of Connectivity (Paisley & Richardson, 1998)

Bringing Back the 'First Mile'



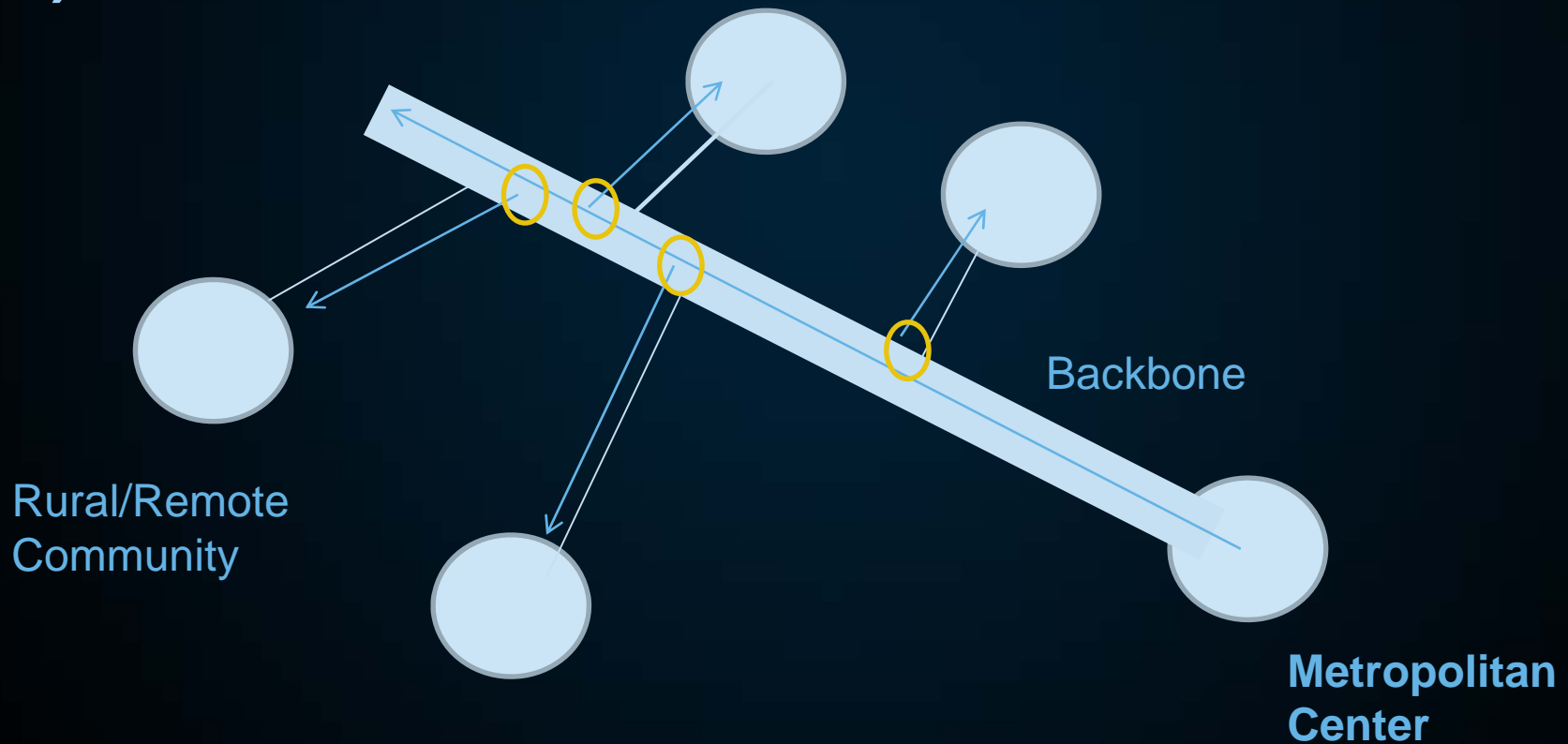
1998: *The First Mile of Connectivity*

Paisley & Richardson

<http://www.fao.org/docrep/x0295e/x0295e00.htm>

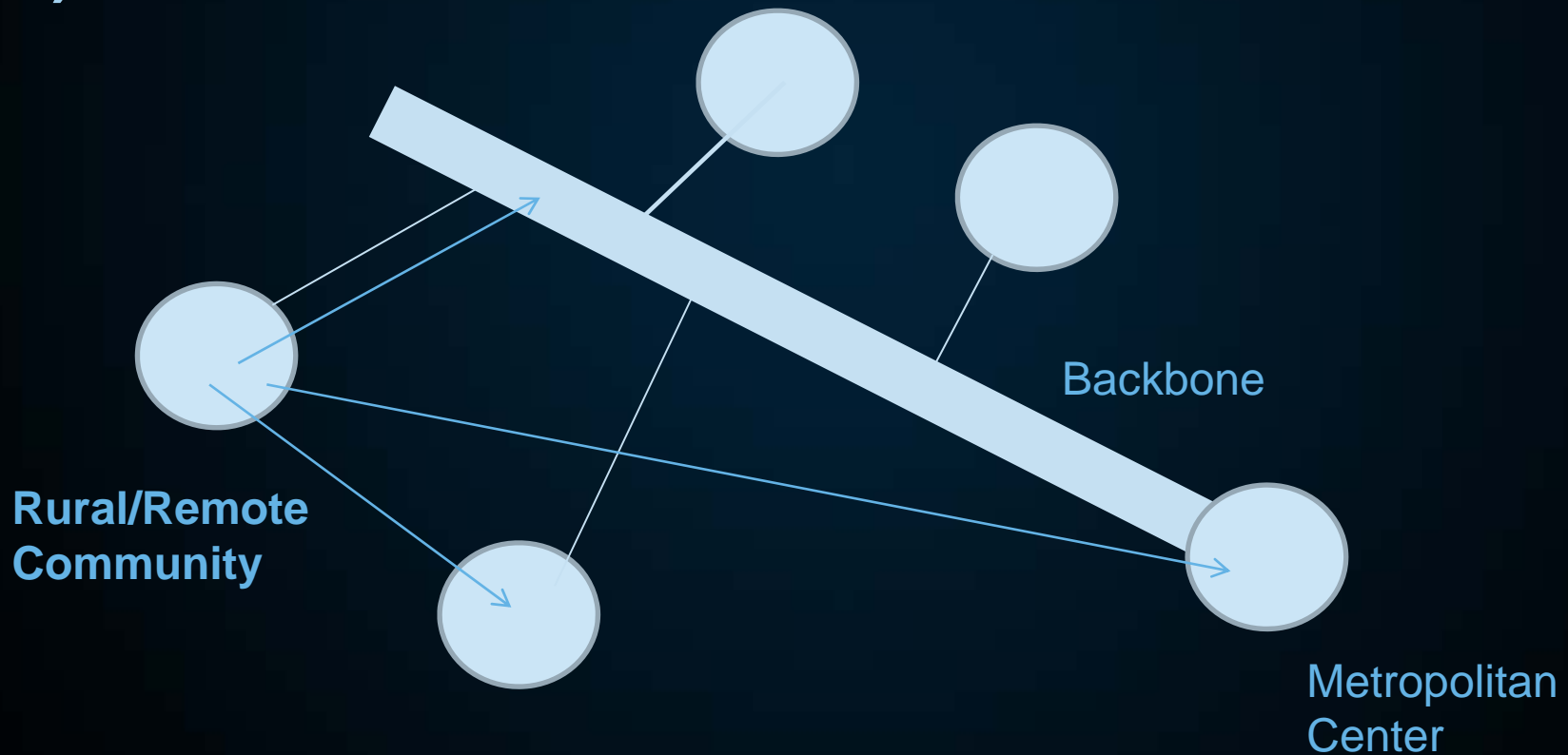
Models of ICT Development

1) The Last Mile



Models of ICT Development

2) The First Mile





'First Mile' Approach

- 'Communication for development'
- Participatory communication (media tools)
- Process not product
- Communities drive process
- Community ownership of infrastructure / ICT
- Holistic approach – dialogue between diverse stakeholders: technical/non-technical; rural/urban



Benefits of the 'First Mile'

- Capacity building: Technical skills; 'Soft' skills
- Supports community as well as technical priorities
- Local control / ownership / administration
- Supports jobs and economic development
- Encourages community buy-in
- Counteracts dependency relationships



Putting the 'last-mile' first: Re-framing Broadband Development in First Nations and Inuit Communities

Simon Fraser University
University of New Brunswick
Keewaytinook Okimakanak
Atlantic Canada's First Nation Help Desk
First Nations Education Council
First Nations Technology Council

December 2010

What did we do?

- Synthesis of existing research
- Highlighted leadership shown by communities
- Participated and collaborated
- Published a PDF final report





First Nations and Information and Communications Technology (ICT) Development

It is not enough for a First Nations community to simply be 'connected':

A First Nation community must also be connected in ways that support sustainable, locally-driven development and operational practices

- Designing and Planning
- Administering and Maintaining
- In some cases, **Owning**



Key Findings

- A knowledge gap exists in how First Nations are developing and using ICTs
- First Nations have a history of and commitment to developing broadband
- First Nations deliver a range of broadband-enabled public and community services
- There has been no strategic federal policy in Canada to develop broadband in First Nations
- Private-sector broadband is not in itself sufficient or sustainable over the long term, due to small populations and remote locations




Study Limitations

- Not enough involvement from ICT organizations representing Inuit
- Relatively short time frame
- Diversity of communities not represented
- Need more analysis of existing regulatory/institutional frameworks



Ch. 3 – Examples of First Nations 'Community-based' ICT Projects

- AFN's *e-Community Strategy*
- First Nations IT Regional Networks
- Northern Indigenous Community Satellite Network
- Eeyou Communications Network
- Fort Severn First Nation's Community-Based Local Broadband Infrastructure and Connectivity Model



Northern Indigenous Community Satellite Network

- Satellite-based network serving 46 First Nations, Inuit, and non-Aboriginal communities
- Single network more efficient and effective than separate regional networks
- Balance of regional network management and engineering resources (earth station at Sioux Lookout) and local network management

<http://smart.knet.ca/satellite/>



Eeyou Communications Network

- Fibre-optic network serving 9 Cree and 5 non-Aboriginal James Bay communities
- Infrastructure owned by the Cree Regional Authority and the Cree School Board, in partnership with non-Aboriginal organizations
- Service delivery (education, health, economic development) and local telecommunications capacity

<http://www.eeyou.ca/>



Steps Forward

- National videoconference in late June 2011
- First Nations, federal government, telecommunications corporations
- Explore how First Mile approaches might be put into practice
- Alternatives to bureaucratic and legal requirements regarding infrastructure development on First Nations lands

Thank you!