

The impact of new technologies in rural Canada

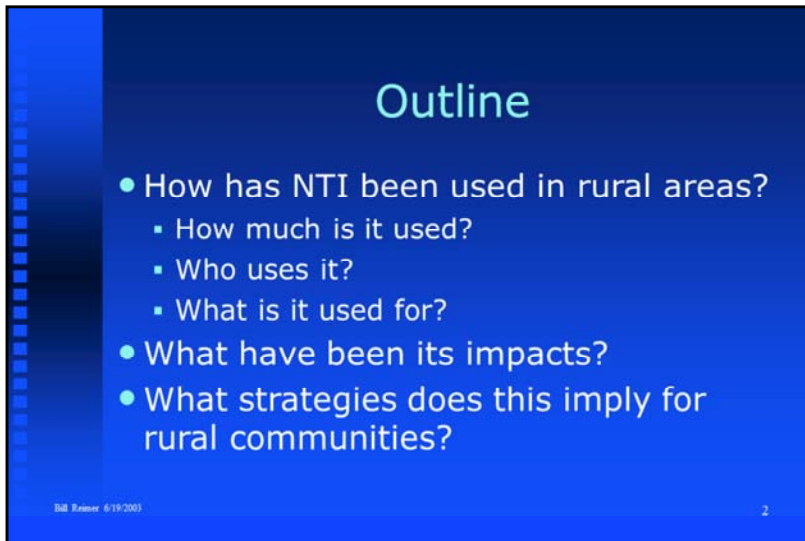
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2003/08/21

Bill Reimer 6/18/2003

CI Project

NRE  
Network of Rural Extension

- Acknowledgements:
- Social Sciences and Humanities Research Council of Canada
- The Rural Secretariat of Agriculture and Agri-food Canada
- Rural Citizens in our field sites

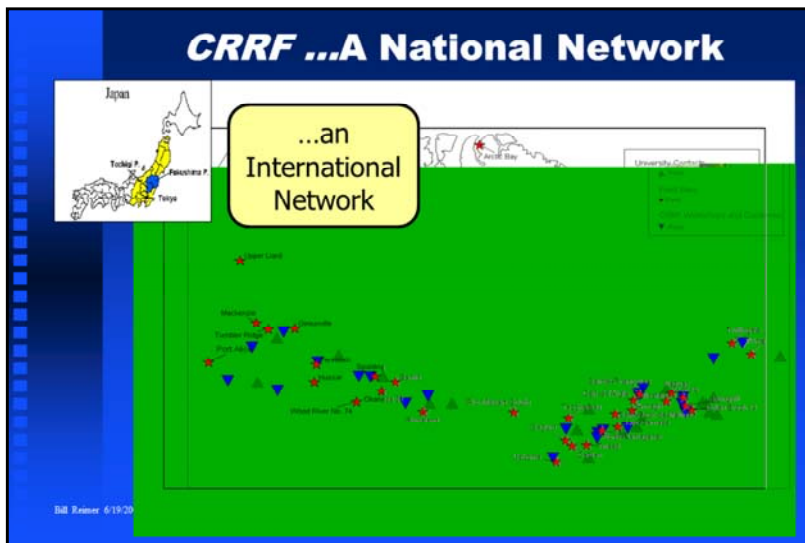


## Outline

- How has NTI been used in rural areas?
  - How much is it used?
  - Who uses it?
  - What is it used for?
- What have been its impacts?
- What strategies does this imply for rural communities?

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- Recently returned from UK – Scotland and Wales
- Even in larger centres:
  - Difficult to get access (e.g. slow)
  - Technology limited (e.g. networking)



Who are we? CRRF

Our perspective is based on collaborative rural research over the past 15 years

- (A) Researchers associated with more than 20 universities and institutes
- (A) 32 field sites chosen (5 dimensions of comparison)
- (A) Program of workshops and conferences – in our 15<sup>th</sup> year, about 28 locations (always select rural areas)
- International collaboration
  - 2 sites in Japan (Iitate, Awano)
  - Colleagues and centres in USA, UK, the Netherlands, Germany, Italy, Mexico
- We invite you to work with us

## How can rural Canada (re)vitalize?

- By building capacity appropriate for the new economy
- Capacity to operate with:
  - Markets
  - Governments
  - Voluntary organizations
  - Family and friendship networks

How do/can new technologies contribute to this revitalization?

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### NTI in the Rural Context

•New Technologies have been discussed in the media, business, and government circles with many claims regarding its benefits

#### •Business and commerce:

- E-business allows organizations to streamline production, reduce operational costs, expand markets, enhance collaborative business partnerships and strengthen customer and supplier relationships.
- Technology, within the KBE, can aid small rural businesses requiring a business plan in getting online help and advice, to apply for funding from various government and non-government funding agencies, and to market and advertise products via websites and email.
- Employment training (correspondence courses), employment information
- E-Commerce for sales and marketing

#### •Governments:

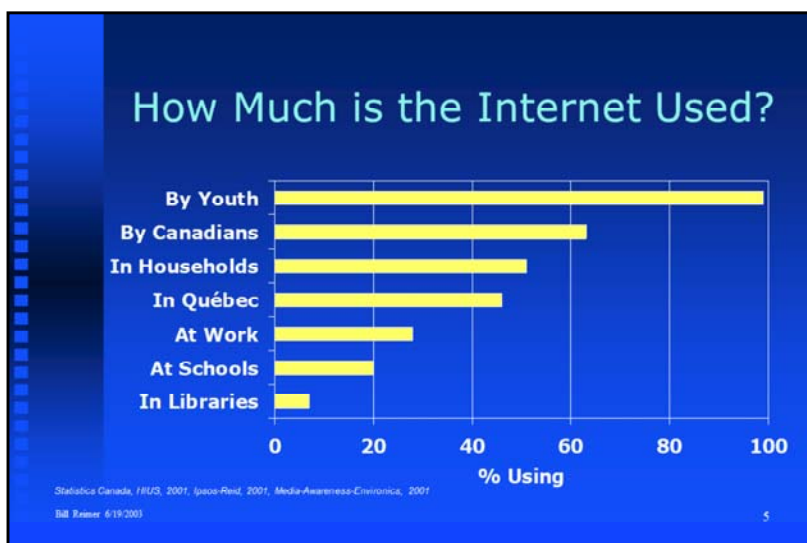
- E-government allows governments to provide information and access to services that are particularly valuable for more remote regions
  - Health information and services provide many examples: medical advice and tele-health
  - Other examples: Agricultural information and programs, taxes, grants available and advice about preparation, environmental protection, weather – become better informed
  - Social and Political information: Statistics Canada site for information about your community
  - Regional and local governments: I can look up my property records on the Laval website

#### •Voluntary Organizations:

- Organizations use the technology to locate members, spread the word regarding their common interests, arrange meetings, even conduct their affairs
  - Our research project is heavily dependent on this technology
    - Widely dispersed (15 researchers in all parts of Canada – mostly relatively remote locations)
    - Working closely with rural people – also dispersed
    - Maintain contact, distribute information and results, get feedback, make decisions
  - Many examples where innovations have developed through new technology (Cap à l'Aigle)

#### •Personal:

- My mother: keeps in touch with our family, researches family history
- All of the other uses: searching, evaluating, purchasing goods; health information; church news
- Recreation: solitaire to EverQuest



• For part 2A - other studies

• From the attached report IDCS:

- non-users continue to struggle with access issues and costs, but addressing the barriers associated with age is one of the keys to greater inclusion online; age picks up all the exclusions of the Internet — the less skilled, the less educated, those in poverty, those in remote or rural areas, those lacking workforce experience – and makes it all more difficult to overcome (pg 5)

- In 2000, household access to the Internet in Canada continued to grow impressively, even as many of the products and services and revenue models for the Internet proved unviable. Some of the gaps and disparities in the earlier demographics of the Internet have begun to narrow, especially participation by women and Francophones and minorities. Connectivity among households with annual incomes of less than \$36,000 jumped by 41% in 2000, and began to erase some of the disparity with higher income households. Regionally, previously low access regions such as Quebec and parts of Atlantic Canada showed some of the highest growth during the year. Rural areas in general still lagged behind urban areas, showing less growth and lower overall access. (pg 10)

• From attached report 56F...0001 (Changing our ways...) Summing up the digital divide

- Internet users differ from non-users in average age, education, and income. Non-users of the Internet are more likely to be older individuals, and are more likely to have less education and lower household income than Internet users. Non-users are more likely to be women than men at every age group. Francophones are less likely to use the Internet than anglophones, and those living in rural Canada are less likely to use the Internet than urban dwellers. The following section provides some insight into why people are not using the Internet. (pg 4)

- Non-users say cost and lack of access stopping them from using the Internet. When non-users were asked to identify the greatest barrier that keeps them from using the Internet, cost was cited by the largest percentage of people. Lack of access to computers or the Internet was the second most often cited barrier. Non-users of the Internet who are struggling most with cost and access barriers are 15- to 34-year-olds. Non-users with the lowest incomes were most likely to report cost as a barrier to their Internet use. Of those with less than \$20,000 household income, 42% reported cost as a barrier to use, compared with the next income level of \$20,000 to \$29,999 at 35%. (pg 4)

- The Internet is used to search for information on goods or services, to access online news sites, and to search for health and medical information. Three quarters of all Internet users said they used the Internet to search for information on goods or services. Nevertheless, only 24% of Internet users claim to have ever used the Internet to purchase goods or services. (p 7)

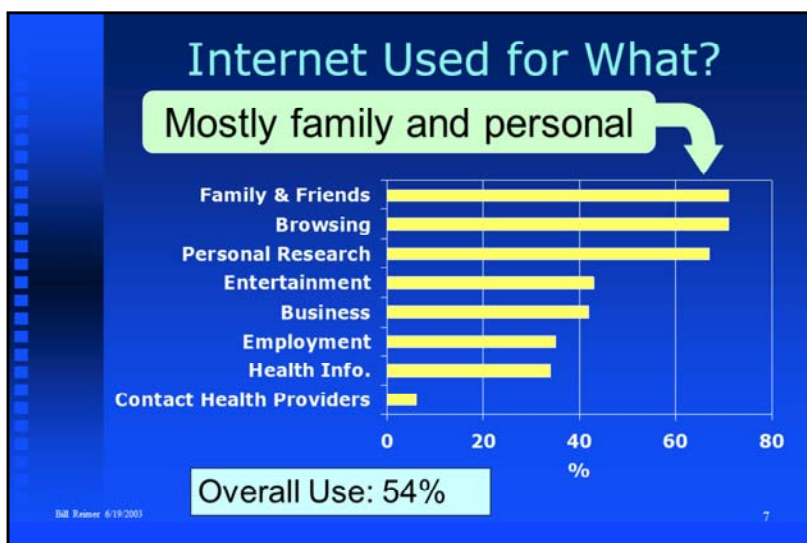
• From attached 56F...007 Unveiling the Digital Divide

- Income is always a key variable for analyses of divides. The penetration of several ICTs by detailed income levels. Clearly, household penetration increases with income. The effect of income is more pronounced on new technologies rather than older and established ones. (p 6)

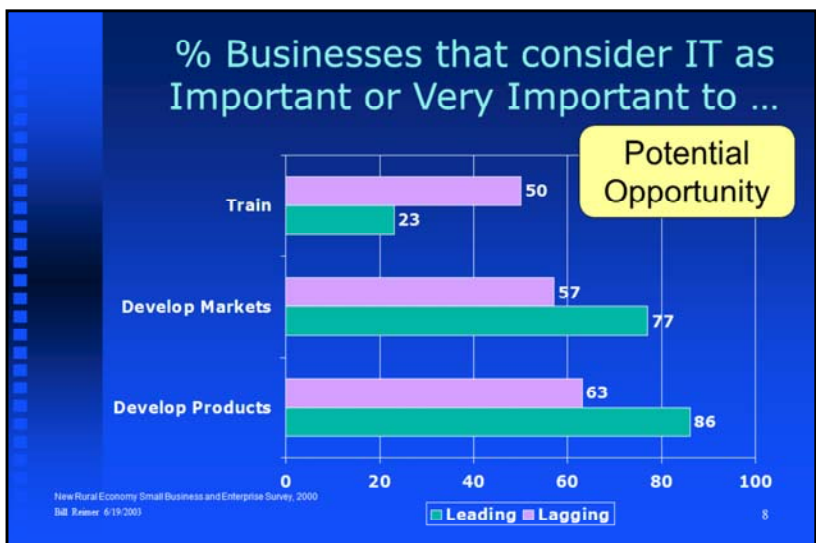
## Who Uses the Internet?

- Younger
- Educated
- Higher Incomes
- Anglophone
- Urban
- Western Canadians

...but differences  
are becoming less



- What is the Internet used for?
    - Asked of 1995 rural households in 20 field sites: "Have you personally used the Internet in the past month for any of the following purposes?"
    - "Avez vous personnellement utilisé Internet dans les 30 derniers jours pour une ou plusieurs des raisons suivantes?"
  - Bénévole: Dans le cadre de votre travail bénévole
  - Emploi:
    - Pour toute raison reliée à votre emploi rémunéré
    - Pour contacter des employeurs potentiels au sujet d'un emploi, ou pour trouver des opportunités d'emploi ou de carrière
  - Education: à des fins d'éducation dans le cadre d'un cours ou d'un programme d'études
  - Gov't Prov.:
    - pour obtenir des informations du gouvernement provincial
    - pour remplir des formulaires électroniques du gouvernement provincial
  - Santé:
    - pour contacter des organismes de services de santé
    - pour trouver de l'information sur la santé dans un site Internet canadien
  - Divertissement: Comme divertissement (écouter de la musique, regarder un vidéo, jouer à un jeu, etc)
  - Gov't Féd.
    - pour obtenir des informations du gouvernement fédéral
    - pour remplir des formulaires électroniques du gouvernement fédéral
  - Consumption:
    - pour obtenir des informations chez un commerçant ou pour obtenir des informations financières ou sur les marchés boursiers (vérifier les taux d'intérêt, chercher des investissements intéressants, etc)
    - pour acheter des produits sur Internet
    - pour payer des comptes ou pour faire des transactions bancaires en ligne
  - Personnel:
    - Contact personnel
    - Pour obtenir des informations personnelles ou à des fins de recherche (planification d'un voyage, recherche sur vos origines familiales, etc)
    - Par simple curiosité (lire les actualités, consulter la météo, recherche sur un sujet qui vous intéresse)
- use Fig 6.2 (CH6 paper), and these bullets
  - rural HH use in 2001 was just over 50%
  - mostly used for browsing, email communication, and personal research
  - very little "applied use" such as e-banking, purchases
  - some use for health information - slightly less than the Dryburgh findings (34% vs 44%)
- HH Survey:
    - 61.5% of times internet used in response to changes, it was found helpful or very helpful
    - 69.4% of times other sources of support were use, they were found helpful or very helpful



- Potential Market-Related Opportunities
  - How has IT been used to build market-related capacities?

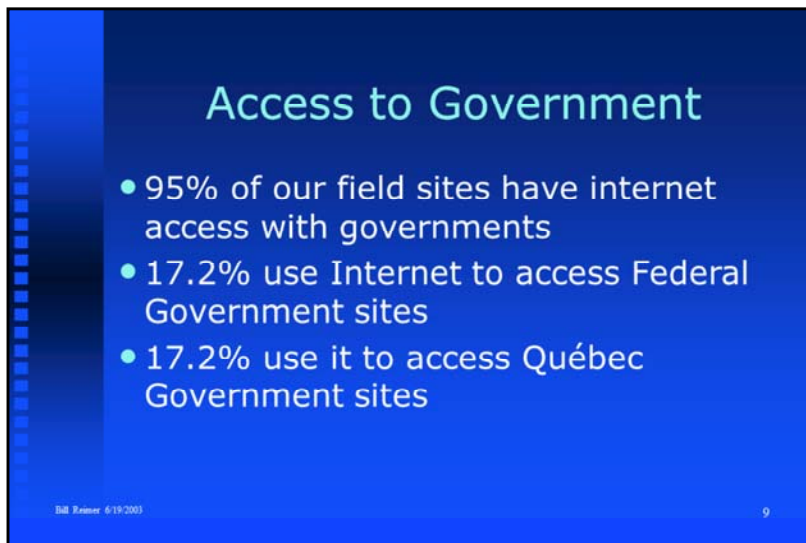
**• Table 6.3 Percentage of Rural Businesses who feel that adopting new technologies for the following variables is Very Important/Important**

	Lagging	High Capacity	N	Tot	Leading	Low Capacity
• Develop new products/services	75%	60%	24	73%	86%	63%
• Develop new markets	68%	57%	25	66%	77%	57%
• To address training needs	35%	50%	13	37%	23%	50%

• Source: New Rural Economy Small Business and Enterprise Survey, 2000

- - use Table 6.3 (CH6 paper), and use these bullet points
- - few businesses see the adoption of technology, including IT, as important to addressing their training / HR needs
- - this represents an opportunity
- - businesses in lagging and low capacity communities less likely to see tech adoption as important for new products / services development, or for new market development (do they feel trapped, or are they unaware of the opportunities?)





## Access to Government

- 95% of our field sites have internet access with governments
- 17.2% use Internet to access Federal Government sites
- 17.2% use it to access Québec Government sites

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- Access to Government
- Accenture report: Canadian gov't is best in the world at e-government presence.
- Need the IT infrastructure and skills to make use of it.

## Bureaucratic Opportunities: Health, for Example.....

- Centre for Disease Control & Prevention - [www.cdc.gov](http://www.cdc.gov)
- Cdn. Institute for Health Information - [www.cihi.ca](http://www.cihi.ca)
- Canadian Health Network - [www.canadian-health-network.ca](http://www.canadian-health-network.ca)
- Medical Council of Canada - [www.mcc.ca](http://www.mcc.ca)
- College of Family Physicians of Canada - [www.cfpc.ca](http://www.cfpc.ca)
- Health Canada - [www.hc-sc.gc.ca](http://www.hc-sc.gc.ca)
- Canadian Paediatric Society - [www.cps.ca](http://www.cps.ca)
- Canadian Institute of Child Health - [www.cich.ca](http://www.cich.ca)
- Child and Family Canada - [www.cfc-efc.ca](http://www.cfc-efc.ca)
- Cyberisle Teen Health Web site - [www.cyberisle.org](http://www.cyberisle.org)
- Canadian Women's Health Network - [www.cwhn.ca](http://www.cwhn.ca)

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### •Potential Bureaucratic-Related Opportunities

- How has IT been used to build market-related capacities?
  - Health data?
  - Governance-related?

### •From the SKHEALTH PPT:

•- I don't know specifically what is most useful from that, but suggest the following:

- slide 5 shows examples of health information sites
- slide 8-9-10 breaks down the general internet users - for Part 2 perhaps?
- slide 11 shows the general HH use
- slide 15 - almost all of those with a health status change and have
- Internet users do in fact use the Internet to get health information - shows practical application
- slide 16 - only half of those who are health sector volunteers and Internet users actually use the Internet for health information - suggests an opportunity here
- slides 18-19 show impact / usefulness of the Internet - part 4 of the show

## Voluntary Group Opportunities

- Communication with clients
- Communication with members
- Communication with funders
- Searching funding opportunities

but – for members:

- Only 13% of Internet users use it for volunteering activities (2000)

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- VolNet may have resulted in higher use.

**Voluntary Group Challenges**

- Few resources
- Volunteer burn-out
- Time for learning

Recent VolNet program  
<http://www.volnet.org/>

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- Potential Opportunities for Voluntary Associations
  - How has IT been used to build associative-related capacities?
- - use Fig 6.1 (CH6 paper), and these bullets
- - voluntary sector in 2000 did not use email or websites very much for member communication - only a handful
- - recent VolNet program which was designed to get more vol groups online, may have resulted in an increase
- - real challenge here - vol groups have few resources, volunteer run, limited time for learning, etc

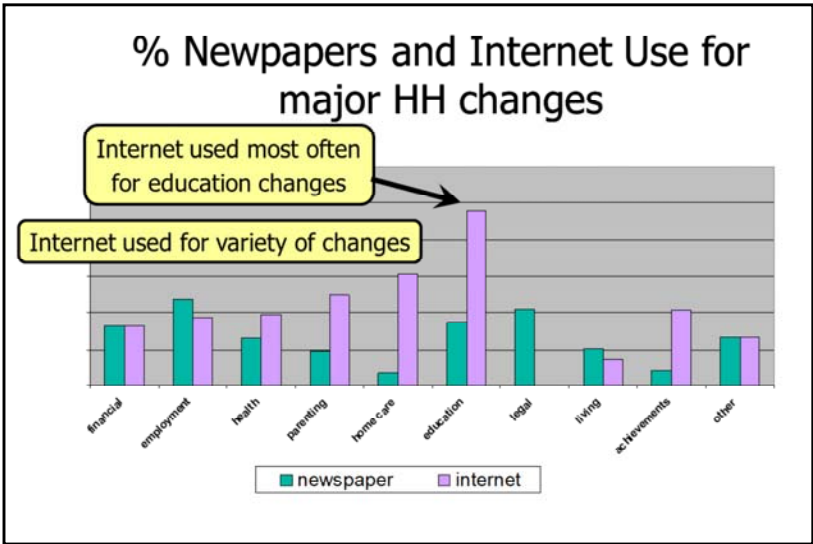


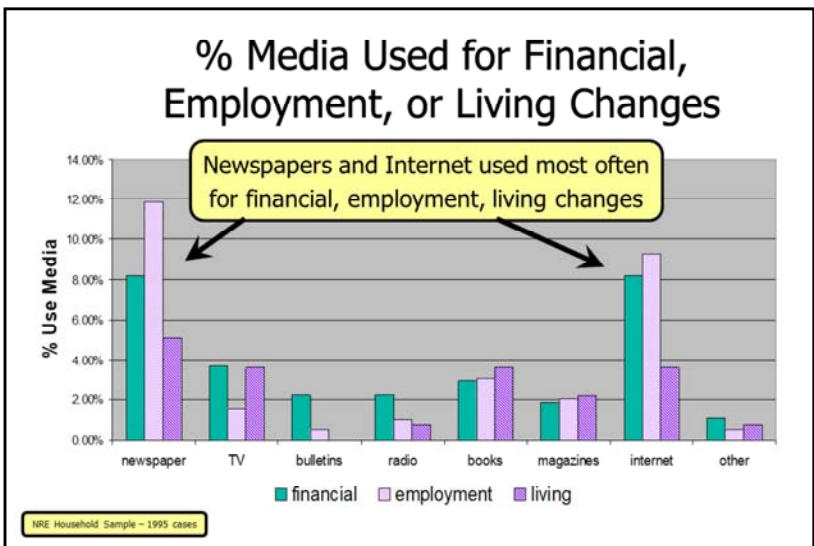
## Family-related Opportunities

- Contact with family and friends
- Contact with diaspora
- Building local image
- Building local pride
- Dealing with household changes

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- Potential Opportunities for Family and Network Relations
  - How has IT been used to build communal-related capacities?
    - Relation to use of informal economy?
    - Use of IT for major changes in the HH





## Obstacles to Internet Use

- Cost
  - Equipment
  - Connections
  - Learning
- Access
  - Little awareness of opportunities
  - None or slow connections
  - Little technical support

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- Obstacles to Internet Use
- Evidence from IDCS report, etc.
- Cost and Access: Major issues for rural areas



## Strategies and Options

- Assess resources, assets, knowledge, skills
- Identify types of local enthusiasm
- Explore multiple options
- Build incrementally
- Collaborate – individually and institutionally
  - Seek help
  - Initial contacts open opportunities for more – even outside of rural

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- What are some strategic directions for rural communities that wish to build capacity?
- In what ways does IT help?
- How to get started?
  
- Plan for the future (i.e. youth)
- Become familiar with existing resources – and use them
  - Start with existing interests and competencies
- Combine resources:
  - Don't overlook possibilities for innovation
  - Eg. Libraries, community centres, churches
- Plan incrementally (e-mail and basic computer use make fewer demands on infrastructure)
  - Throw away machines in one location are useful in another
- Take advantage of cross-over skills: Internet skills for music can generalize to other searches for information (employment, markets, resources)
- Put needs and people together – old (networking with family) and young
- Budget for breakage
  
- VolNet,
  - Please note that the Voluntary Sector Network Support Program (VolNet) has
  - come to an end on March 31st, 2002. The program has successfully met and
  - surpassed its objectives of connecting 10,000 voluntary organizations to
  - the Internet while at the same time training more than 17,000 staff and
  - volunteers.
  - We hope that the link section is still useful in your search of information.
  - However, this site is provided as information only concerning a Federal
  - Program that has come to an end on March 31st, 2002 and no more services
  - are offered through this Program.
  - The Government of Canada is committed to continue working with the
  - voluntary sector through various initiatives. For more information on the
  - Government of Canada's voluntary Sector initiatives, visit [www.vsi-isbc.ca](http://www.vsi-isbc.ca)
  
- Broadband for Rural and Northern Development Pilot Program - Industry Canada This program provides funding through a competitive process to bring
  - publicly available broadband access to Canadian communities, with priority
  - given to First Nations, northern, remote and rural communities which are
  - currently unserved by Digital Subscriber Line (DSL) or cable modem service.
  - Internet: [http://broadband.gc.ca/guide/index\\_e.asp](http://broadband.gc.ca/guide/index_e.asp)

Internet Capacity-Building

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# Building Capacity in Rural Canada

## The Canadian Rural Revitalization Foundation

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<http://www.crrf.ca>

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