



SUMMARY

REGIONAL CONSULTATIONS

KAMLOOPS

FEBRUARY 18, 2004

PREMIER'S TECHNOLOGY COUNCIL

This document is a summary only of presentations made during the regional consultations in Kamloops on February 18, 2004 and written submissions provided to the Premier's Technology Council. Every effort has been made to consider all input presented and be as accurate as possible. However, errors or omissions may have occurred. Please notify the PTC of any significant inaccuracies at

Premiers.TechnologyCouncil@gems8.gov.bc.ca.

KAMLOOPS CONSULTATIONS

Date : Wednesday, February 18, 2004
 Time : 09:00-17:30
 Location : Forster's Convention Centre
 1250 Rogers Way, Kamloops

In attendance:
 - Jim Mutter, PTC President
 - Reg Bird, PTC Council Member
 - Bill Koty, PTC Council Member
 - Len Juteau, PTC - Director of Operations
 - Tia Tjandisaka, PTC - Analyst

AGENDA

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UNIVERSITY COLLEGE OF THE CARIBOO (UCC)

Dr. Thomas Dickinson, Donald Noakes, Henry Reiser, Nancy Levesque, Kevin O'Neil

- 10,000 full & part time students in academic, trades, careers & vocational programs
 - 60% students from Kamloops, 20% from outward dispersed population
- Has the best computing facility in the area
- Has a strong science and technology department: eg., UCC's physics department has more graduates than UBC
- The Advanced Technology Center (ATC) establishes a university/industry network that accelerates the development and transfer of applied technology to help industry become more productive and competitive.
 - To date it has 50 technology transfer projects and some innovative partnerships with City of Kamloops and Zenon Environmental Inc.
 - To ensure that the ATC can achieve its full potential – it needs predictable funding
- As a university college, UCC is connected to PLNET:
 - PLNet does not provide enough bandwidth, eg., UCC has access to Vancouver Film Studio database, however, can't access it due to limited bandwidth
 - would like to access BCNET – not allowed (it is by invitation only – need pay to be part of it – UCC has no extra funding)
- BCCampus E-learning Library Committee
 - need to level the playing field for access to library, programs, resources and support for all students
 - this concern has been expressed to BCCampus
- There is lack of access to resources (eg., student support, online library)
 - There is also a need to access high-end research database which will help faculty to teach and do research

E-health:

- UCC has limited access to health care database
 - Access to the health care database is decentralized resulting in inequities in health care information among health care providers, researchers, policy makers, educators, librarians and students
 - A university college is not required to provide research - currently has no access to the electronic health library of BC - this is more of a paradigm shift of a university college's role

In short: to make e-learning and e-health a reality, we need the infrastructure and support structure in place.

Message to the PTC:

- The Advanced Technology Centre needs some form of predictable funding
- There is a need for broadband connection to allow more effective teaching and research - how do we access BCNet?
- There is a need for equity access to electronic research database

INTERIOR HEALTH AUTHORITY
Roy Southby, Rayleen Sheen

- Area covered: 233,000 sq km (25% of BC), population 722,000 (18% of BC)
- Operating budget of \$1.1B; IT operating budget: 1.1% of Gross; new budget: 1.9%
- Facilities: 28 acute facilities, 91 residential facilities, 40 health units
- Employees: +18,000; 1200 physicians

Drivers for telehealth in Interior Health

- Demand for improved access and quality of services in rural and remote areas
- Diminishing and limited availability of health human resources
- Need for professional development and continuing education

Interior Health is using Telehealth in innovative ways to help improve the ways our staff, physicians and patients access one another. Some of our initiatives include:

- tele-radiology
- tele-pharmacy - Kootenay, Kamloops, 100 Mile House, Clinton
- tele-thoracic surgery consultation
 - allows consultation and follow-up procedures by videoconferencing - saves time and money
 - has improved health care services to remote communities
- tele-orthopaedic surgery consultation
 - There's a problem paying doctors who are not on contract (billing code)
- tele-oncology consultation
- tele-homecare
 - partnership with Quebec under Canada Health Infrastructure Partnerships Program (CHIPP) funding and try to get \$ from Health Infoway
 - Will have pilot programs in the Okanagan in the next coming months
 - With this application, doctors only visit patients when needed and will stop patients who regularly come to ER due to feeling insecure
 - With simple tools: it is sufficient to do a check-up once a day – data is sent to hospital and nurse will check the data
- tele-wound care - coming soon. Will be combined with homecare

Issues:

- Consolidating 51 data centres without redundancy.
- Improving network bandwidth - Cariboo Chilcotin area has no connection
- Providing access to rural Aboriginal Bands
- Preparedness of health professionals to use information technology as part of their practice.
- Integrating with outside organizations: pharmanet, private labs (75% use MediTech as Electronic Health Records (EHR), tie with a VPN), physician offices, provincial systems, other Health Authorities

We'd like to integrate EHR to the physician offices. What we need is broadband in rural areas – need high speed: T1 and up

Message to the PTC:

- There is a need to improve network bandwidth

- There is a need to provide access to rural aboriginal bands
- There is a need to prepare healthcare professionals to use information technology as part of their practice.
- Integrating with outside organizations: pharmanet, private labs (75% use MediTech, tie with a VPN (Virtual Private Network)), physician offices, provincial systems, other Health Authorities

SISKA BAND

Chief Fred Sampson

- Siska Band covers the area of Fraser Canyon (from Boston Bar to Lytton)
- 350 people, 108 live in the community
- The Band has put their own satellite system with their own funding
 - T1 line - shared with library and 15 dial-up
 - We have a computer lab - it is packed with youth every night
- HealthCare:
 - The Fraser Canyon area does not have healthcare facility
- Education:
 - Many young FN adults want to go back to education system - many failed as they don't have the social/transition skills
 - Need broadband to provide distributed learning for 8 First Nations communities in the area
 - Retaining indigenous language is provincial-federal government vision, but to date nothing happens except for the First Voice Program.
 - A Community Learning Network project has been approved by the Office of Learning Technologies - however this can't be done without broadband availability.
- Tourism is the main industry in the area
 - There is a huge opportunity in eco-tourism that can improve the economy
 - We need help in promoting/marketing the area
- There is a trust issue in the First Nations communities
 - It took 1 year to start a discussion about learning community
 - there is a need to break silo around communities and integrate healthcare/ education/ administration office to work together

Message to the PTC:

- There is a need for broadband to access education, health care services, and to improve the economy
- Need support/assistance in marketing the area for tourism
- There is a trust issue in the First Nations communities

SD#73 (KAMLOOPS/THOMPSON)

Dr. Terry Sullivan, Greg Ferrie (including written submission)

- 53 schools (39 Elementary, 10 Secondary and 4 Storefront) and approximately 15,600 students
- Approx 4,000 computers (3,600 in education, 400 in administration)
- School District #73 supports technology as an essential component of education. The District's Technology Plan is closely integrated with the School District's strategic direction.

Challenges:

- Declining Enrolment and Budgets
 - Over the past 3 years enrollment has declined – 500 students per year - funding will continue to decrease by almost \$3 million dollars per year.
 - The Ministry of Education used to provide a targeted technology grant of \$8 per student – approx \$136K per year. This grant was incorporated in the Districts general funding 2 years ago.
 - Our IT capital budget has decreased from \$1.3 M in 1998/99 to \$450K in 2003/04 – we need approx \$1.2 M per year for replacement of computers, purchasing software licenses, training and Local Area Network upgrades
 - Current IT operating budget \$650K in 2003/04 – increased from \$480K in 1998/99
- Infrastructure (Available Bandwidth and Access)
 - The network is the cornerstone for enabling centralized shared resources, enhancing distance education, eliminating redundancies and lowering technology total costs of ownership (TCO).
 - Current PLNet connectivity is not sufficient to deliver effective web-based courses
 - o Implementation of PLNet does not involve discussions with School Districts
 - o PLNet is expensive; eg. in Logan Lake Secondary School - pay PLNet \$600/month - compared to a charge by a private sector provider of \$250/month.
 - The School District is currently exploring an alternative option - Kamloops Community Fibre Network. The proposed network will be a publicly owned and operated utility providing businesses and citizens of Kamloops with high speed, low cost communications.
- Limited Resources, Pedagogical Technology Tools and Programming (Minimal Course offerings)
 - Ironically, students who require program options such as library resources, internet access, district resources and other curricular materials cannot get access due to limited budgets and staffing as well as poor infrastructure – a current problem being addressed by PLNet
 - Our challenge is to bring the resources to students through alternate methods which include: video conferencing, virtual classrooms, web-based courses and other curriculum media
 - The goal is to provide as rich an educational experience to rural students as to those in metropolitan areas
- Expensive Hardware & Software
 - Hardware replacement cost for 4,000 workstations on a 5 year cycle – 800 computers/year cost \$1,200,000 per year (assume it costs \$1,500/computer)
 - This does not include software licensing costs, printers, or other technology devices
 - Reduce cost by using Non-Commercial “Open Source” software (Linux Operating System)

Message to the PTC:

- With dwindling financial resources, there is a need to focus on other technologies such as Open Source software and operating systems. This model works in the K-12 sector and can be easily adapted to other areas as well. There is a need to analyze and study which technologies can be used effectively.
- A system of support has to be put into place. Then people need to be properly trained and instructed to utilize the systems.
- PLNet connection is not sufficient/good enough to deliver e-learning programs – we need a reliable, pervasive high speed network.

- Support initiative such as the Kamloops Community Fibre Network and Rural Broadband initiatives

SD#74 (GOLD TRAIL)

Nancy Wells, John Savage (including written submission)

- School Districts are in the business of providing instruction and there is a need for instructional equity in the province
 - we can utilize technology to provide instructional equity (e-learning)
 - the term "equity instruction" will shift the provincial thinking - need to connect with the work of other task groups: Rural Education Task Force and Student Achievement Task Force, also possibly the BC Progress Board
 - Currently, there is no instructional vision in the province
- 53% of our community are First Nations - the completion rates of First Nations students in our districts are higher than those of the non-First Nations students
- Lack of professional development opportunities for teachers to help transition teachers to the online teaching environment (need to provide teacher access to teaching resources)
 - A program called RichNet from School District 38 (Richmond) allows teachers to sign-up to access the resources.
- The School District began providing Internet access to schools and communities a decade ago through a partnership with the first Internet Service Provider (ISP) in the Interior. Partnerships were necessary to provide affordable Internet access. TELUS has been the most active supporter/partner.
- PLNet improved the existing infrastructure by replacing the existing T1 line with a 10mbs fibre link to Kamloops. Further improvement with equipment from PLNet established a Gigabit Ethernet backbone from Cache Creek Elementary to Ashcroft Secondary to the cable company. The first – Gigabit Ethernet between schools.
- With PLNet, the potential for innovative approaches to providing affordable broadband has become limited. This appears to be changing with the Province's Digital Divide enterprise. This new direction deserves praise.
- Aggregating Internet access within a community or region is difficult due to silos at many levels. The Province is in the process of removing those barriers at the government level but local political, bureaucratic, and commercial impediments remain.
- Many of our communities are First Nations. There is a general distrust of "white man bearing gifts".
 - Established policy for most project implementation uses typical tendering processes and administrative oversight that seldom provides any lasting benefit for the community.
 - Contracts are awarded to outside parties. Few band members, if any, are involved in the project. Any profit leaves the community, and seldom are any skills or on-going activities left behind.
 - Providing broadband to First Nations homes typically involve outside consultants due to lack of education and skill in most small communities.
- Worked with Gold Trail Open Network to develop a program that would provide a legacy of skills training - a network craft project (funded by CANARIE)
 - Results: on-line and CD based training materials to assist rural and remote communities, especially FN communities, in building and maintaining their own infrastructure. This type of

“grass-roots” infrastructure development work. They create jobs. They keep the communities and schools healthy.

- Acquired video-conferencing equipment for three sites – and the expertise to use it.
 - Unfortunately, don't have the bandwidth in most schools to make use of it.
 - Even with the proposed upgrades to PLNet, bandwidth is not sufficient. At best we will be linking Ashcroft to our neighbouring district, Kamloops, to provide those courses. Lillooet, Clinton, and Lytton will not be able to participate.
- True broadband is needed just to maintain the schools and communities in our district.

Message to the PTC:

- There is a need to provide instructional equity in the province
 - Currently, there is no instructional vision in the province
- There is lack of professional development opportunities for teachers
- Access to broadband is needed to maintain the schools and communities
- There is a general distrust between First Nations and non-First Nations communities

**CARIBOO CHILCOTIN REGIONAL HOSPITAL DISTRICT
Al Richmond**

Telehealth - what it means to rural communities:

- access to quality healthcare services that wouldn't otherwise be available in rural communities
- assistance in recruitment and retention of physicians in rural communities by ensuring timely access to specialist services

Principles

- Provincial standard - technology should be compatible for uses other than health services: education, economic development initiative
- Utilization of existing infrastructure to avoid duplication and maximize current infrastructure
 - PLNet implementation is done with little input from the community
- Access to rural communities
- Professional development: continuing education for nurses, physician conferences, patient support groups
- Partnerships
 - With users: health authorities, federal, provincial and local governments, school districts etc.
 - With funding sources: federal government, provincial government, health authorities, regional hospital districts, service providers and business
 - Support initiatives such as broadband proposal by Interior Science Innovation Council
- Avoid centralization - once standards have been established, decisions should be made locally
- Building on Successes
 - telehealth coordination efforts between Interior Health Authority (IHA) and Northern Health Authority are proving useful
 - The IHA has been successful in negotiating attractive rates from service providers

Conclusion

- The technology is available to provide quality health care to rural and remote communities
- The technology is available to assist in sustaining vibrant and economic communities across the province

- The majority of the provincial resources are located in the rural and remote areas, and the residents in these areas expect quality health care services.

Message to the PTC:

- Broadband access to rural communities is required
- There is a need to provide professional development to healthcare personnel to allow them use telehealth applications
- There is a need to develop partnerships with users and funding resources
- There is a need to support initiatives such as broadband proposal by the Interior Science Innovation Council

KAMLOOPS COMMUNITY NETWORK

Frank Mayhood

- To make e-learning and e-health a reality - need the infrastructure - private sector can not deliver alone. The City of Kamloops is in the process of developing a community owned fibre optic telecommunications infrastructure - called Kamloops Community Network (KCN).
- Construction is divided into three self-supporting phases:
 - Phase I - connects public sector buildings. Funding comes from redirecting present and future expenditures that stakeholders currently commit to the incumbent carriers (\$742K).
 - Phase II - will connect businesses. Participating clients paid monthly fees.
 - Phase III - will connect residential consumers. This should open up economic possibilities in health, education, entertainment, and improve life style choices for Kamloops citizens.
- The KCN project is designed to take advantage of existing support structures to lower costs and minimize disruption of traffic during construction.
 - TELUS has the most suitable support structures.
 - TELUS has estimated large make-ready costs – which are higher than originally expected. KCN is attempting to get the costs lowered and is also looking at alternatives such as using BC Hydro poles.
- The Provincial Government agreed to participate in the development of the KCN:
 - included this community network as one of four pilots being investigated across the Province.
 - the Province has agreed to fund up to \$10,000 for the engineering of additional 5 sites
- Problems:
 - Access to support structures: need access to information design, need ability to inspect, need control of costs of permitting
 - Provincial "Pilot": need active participation, need committed resources, need willingness to take a risk

Message to the PTC:

- Network infrastructure is fundamental to development of information economy
- Clear statement of support for community investment in physical infrastructure
- Encourage public sector investment in these types of projects - CITS to actively participate in terms of real resource and leadership
- Provincial assistance in getting access to support structures at a reasonable cost
- The Province needs to actively participate and provide real commitment in its pilot projects

VILLAGE OF LYTTON

Christopher di Armani

Two technical issues that must be addressed for the residents of the Fraser Canyon: cellular phone and broadband internet service.

- Cellular service is vital for the safety of the Canyon residents and the visitors traveling through the Canyon. When an accident happens along the highway, eye witness has to get help by driving to the nearest town.
- Broadband internet service is vital for the education, health and economic development of the area.

Our hospital, the only one in the Fraser Canyon, was recently closed. This means our residents have to travel a minimum of 160 kilometres in order to get medical care.

Fibre optic cable is running through our communities, both via the railroads and TELUS. But we can not access that fibre. There is a need for broadband connectivity to improve:

- Access to Education
There is no post-secondary institution in the community. People must leave the community to access higher education. With no broadband, distance education via the Internet is not possible.
- Business and Economic Development
A major employer in the community, Lytton Lumber, has heavy reporting commitments to the provincial government. As of 2005, the Ministry of Forests will no longer accept paper submissions from forest licensees. Companies like Lytton Lumber are at a huge disadvantage compared to companies with access to broadband.
- Access to Quality Health Care
The Interior Health Authority is investing more and more in video-conferencing equipment to deliver healthcare services. The proposed new health facility for Lytton will have an x-ray machine that creates only a digital image. The image can be transmitted to Kamloops, Kelowna or Vancouver where specialists can then advise local medical practitioners on treatment options. All these sounds great – however with no broadband – this would not work.
- Access to Government Services
Increasingly, government publications are only available electronically. Add to this the fact all government services have been pulled from communities, there is no alternative but to access those services electronically. The simple process of filling out an EI form can take hours.

First Nations

The City of Lytton is 85% First Nations - services to First Nations communities is less than acceptable.

Culture and aboriginal language loss are major issues - we have no technical ability to help save them. The First Voices program (www.firstvoices.ca) is one of many excellent programs available, but they are only accessible and functional with broadband internet access.

Message to the PTC:

There is a need for broadband connectivity for accessing education, quality health care services, government services and improving business and economic conditions. There is also a need for cellular service in the Fraser Canyon area.

ON CALL INTERNET SERVICES (OCIS)

Cindy Hanghofer

- OCIS is the only local ISP in the community (Kamloops, Merritt, Logan Lake and area)
- Employ 15 full-time and various contract employees
- Over the past 3 years OCIS has built a high-speed wireless network that now provides coverage to over 90% of Kamloops, Merritt and Logan Lake.
- OCIS is a stakeholder in Kamloops Community Network and are currently developing a mobile wireless Internet service that could be offered in conjunction with the network.
- TELUS and Shaw are dominant in certain segments of the marketplace, however, OCIS remains competitive specializing in services that they cannot.

Our challenge is connecting rural communities - financial barriers were simply too high:

- The Interior Science and Innovation Council in Kamloops posted an RFP that offered “Federal Government Matched Dollar Funding for un-serviced communities” for the Cariboo Chilcotin area
- GTONS in Ashcroft also posted a similar RFP for the Gold Trail Region.
- OCIS responded to both and was successful on both applications.
 - Combined Cariboo Chilcotin and Gold Trail Region into one proposal to eliminate unnecessary overlaps in costs.
 - OCIS, GTONS and ISIC along with TELUS have been working together
- Key in the plan:
 - An opportunity for OCIS to combine its wireless technology with TELUS Wholesale Ethernet-Fibre Services.
 - To optimize the network, OCIS proposed wireless expansion in some locations and fibre in others depending on: estimated build costs, size of the region, and terrain. OCIS's wireless engineer and TELUS worked together to develop the optimal network.
 - OCIS also proposed to service schools and municipal locations in each area – to help ensure sustainability of the network and allow OCIS to make a return on investment.
 - Our proposal also demonstrated a community focus.
 - o For example, we have already established the Siska Indian Band as the proposed ISP for the Lytton Area. Similar discussions have occurred in other regions such as Whispering Pines and Little Shuswap.
- OCIS's relationship with TELUS is somewhat unique. We recognize that we specialize in different areas and through our partnership we ultimately compliment each other.
 - To TELUS, OCIS is a full service local Internet Service Provider with the wireless expertise to build highly capable last mile networks.
 - To OCIS, TELUS is a reliable, scalable and fully redundant Upstream Provider who can also offer a full range of services for ISP resale.

The importance of this discussion:

- Key factor for rural broadband development is collaboration between: the community, the ISP's, and their Upstream Providers. The ISP's can play a key role in broadband development and become the glue that binds the communities with the Incumbent Carriers.
- In the case of the BC Interior, OCIS, an independent wireless ISP, with ISIC championing the cause, became the intermediary that brought TELUS and the broadband challenged communities together.

Message to the PTC:

In conclusion, if the goal is truly to bring broadband to Rural BC, then we encourage other ISP's, and their community Champions, to look at what we have done. The future of rural broadband could be effectively changed, but it will take unselfish and collaborative effort on behalf of all players involved.

GOLD TRAIL OPEN NETWORK SOCIETY

Pache Denis

- Established in August 2002
- Partners: SD 74, Thompson Nicola Regional Districts, Cariboo Regional District. First Nations Education Council, Copper Valley Cablevision Ltd., On Call Internet Services Ltd., Interior Science Innovation Council and Open Learning Agency.
- Achievements to date: broadband connectivity from Vancouver to Ashcroft; continuation of fiber optic line to Cache Creek; high speed wireless internet connection to Bonaparte; set up a training lab complete with video conference facilities in Ashcroft; developed a broadband planning, installation and maintenance program on CD and online: www.gtnet.ca; completed a broadband network development plan to cover all of the TNRD and the southern part of the CRD communities
- Funding support to date: Industry Canada (Community Access Program, Broadband for Rural and Northern Development), HRDC (Office of Learning Technologies, Youth Employment Program), CANARIE Inc, Province of BC.

Message to the PTC:

Need to promote and support the society by providing:

- small grant to provide training
- larger grant to allow partnering with bigger organizations for projects

THOMPSON-NICOLA REGIONAL DISTRICT - LIBRARY SYSTEM

Kevin Kierans

- Provides library service to 130,000 people; employ 50 FTE – 115 people
- Headquarters in Kamloops, 13 branches and a bookmobile which travels 25,000 km a year to visit an additional 20 communities. Have 50 public access terminals connected to the Internet.
- Providing library service is 4B: Buildings, Bodies, Books and Bytes.
- Connectivity alone is not sufficient. New skills are required.
 - Our skills development program is successful –the library is perceived as a friendly and non-threatening place. The courses are also free. Last year, 1,200 people attended the Computer and Internet Basic Course in Kamloops. In a smaller lab in Merritt: 200 people attended
 - Summer students sponsored by provincial Youth@BC program introduced 250 people per year to computers and Internet. It is unfortunate that the Youth@BC program has been cancelled.
- E-learning: last consultations: a speaker said that “distance learning courses have a miserable completion records. More opportunities for failure is not success.”
- To run the library: \$5 million per year (mostly from local govt); \$350,000 from the province. The province can be more influential than just the 7% funding. The influence would come from the Public Library Services Branch – it has and can continue to be a provincial champion.

- Marketing BC: Blue River is a world class destination for helicopter skiing. A library in Blue River provides access to all sorts of books, video, music CD's, DVD. Many American and European tourists have an image of BC as a place of both natural splendor and dynamism and innovation.

Message to the PTC:

Public libraries can be a great help in bridging the digital divide, in making lifelong learning a reality, in promoting hi-tech career paths to youth and in marketing BC as an innovative and dynamic place to invest in and live in.

WHISPERING PINES CLINTON BAND

Chief LeBourdais, Sandra LeBourdais (including written submission)

Broadband access is needed for:

- Education: currently, there is limited access to education for our children
- Economic Development: need to look at joint venture with oil/forest/softwood companies to employ people in the region
- Safety
- Communications: government agencies, First Nations initiatives, municipalities

Q'wemtsin Health Society

- Has been actively involved in the Health Canada imposed Health Information Systems since 2002 and is now known as E-Health Solutions.
- January 2004 – began to include Home and Community Care Statistical Information which is sent directly to Ottawa on-line on a monthly basis.
- Benefits: able to effectively track immunization records for children and minimize the time it takes to locate records from different health offices for those families who move frequently.
- Complications with the systems:
 - Request for changes in the sub-systems take up to 6 months
 - E-Health is not connected to the PHIS (Provincial Health Information System) which separates the health care systems for First Nations and the rest of the Province.
 - The data dump from Health Canada to E-Health omitted many clients and resulted in a massive amount of people that need to be added and is time consuming in tracking client core information to put them in.
 - There are subsystems that are not easily accessed or used at the present time which are the Chronic Illness and Psychosocial sub-systems which require specific and very confidential information

Message to the PTC:

- Continue fibre optic lines from Black Pines north 4 miles to Whispering pines
- The E-Health solutions needs to be connected to PHIS

NICOLA VALLEY INSTITUTE OF TECHNOLOGY

Dr. Gerry William

Aboriginal E-learning and E-Health Training Issues

- With limited resources, to emphasize one area (eg., e-learning) is often to reduce the funding and resources in another area (like health or housing)
- Hardware and software purchase and maintenance are only part of the battle

- In aboriginal communities, as soon as someone obtains the specialized training needed in e-technology, he or she is hired away from the community – therefore relying on only one person to be the e-champion or the e-specialist is not the answer
- The digital revolution still requires face-to-face communication and leads to centralization of function and plans (distance education has a high failure rate, especially when there is no human interaction)
- Aboriginal communities lack the infrastructure to compete on equal basis with the urban digital revolution
- Addressing technology needs, including training needs, is not cheap

Conclusion

- Within each aboriginal community, an advisory process can be set up to determine the technology needs, developments and priorities within that community
- Long-term program and financial resources must be provided to support the technology priorities identified within each aboriginal community
- Solutions to e-learning and e-health must come from within the community, not imposed by an external force or processes

Message to the PTC:

- Each aboriginal community must establish its own e-learning and e-health needs and goals
- To make it work long-term goals and support must occur, and more than one champion must be developed, encouraged and supported within each Aboriginal community
- Participation and involvement must include the elders of the community
- Metis and urban Aboriginal communities must not be lost in this process – their needs are unique and strategies to address those needs must come from within those communities
- Public access is key – computer technophobia is as prevalent, if not more so, in Aboriginal communities as it is in general public
- Aboriginal communities can partner with local public school systems and public post secondary institutions, keeping resources local, providing greater access and flexibility to training, and encouraging the use of technology

DIGITAL VALLEY ASSOCIATION

Arjun Singh

- Formed in 2001, Digital Valley is Kamloops' Technology Industry Association – used to be called BC Interior Technology Network (BCITN)
- It has been actively trying to find ways to grow IT industry in the region. The issue of regional high tech industry development has important tie-ins with e-learning initiatives and digital divide.
- Accomplishment in Digital Valley:
 - Networking -the association provides a structure to allow local high tech companies to find out/network with other high tech companies.
 - Education - need to provide educational opportunities to entrepreneurs/owners of companies. In 2002, Digital Valley embarked on a monthly lunch seminar program with speakers on different topics of interest to our members.
 - Technology Strengths locally. Kamloops has a really interesting group of New Media companies. A leading company in that group is MediaWeb Solutions. Kamloops-based leading company in e-health is e-Optimize.

- Challenges faced by the association and local industry
 - Access to More Skilled Professionals / Employees:
The local university provides extremely well trained entry level technical employees.
The issues are attracting more experienced, skilled people, especially in sales and marketing
 - Financing - Venture Capital, Angels, etc...
Many local tech firms do not know how to interface with financing opportunities that may arise. There is a need for better education in this area.
 - Time
We find it hard sometimes to contribute as effectively as we might to the overall development of the technology industry when our own companies must take priority.
 - Organizational Capacity
Digital Valley is a young association. We are learning how to implement our vision better.

Message to the PTC:

- It is difficult to attract experienced, skilled people, especially in sales and marketing
- There is a need for better education for local companies on how to interface with financing opportunities that may arise.
- There is a need to support the region's technology association (eg., Digital Valley)
- Support community broadband initiatives, such as the Kamloops Community Network and On Call Internet Services.

MEDIAWEB SOLUTIONS

Rob Stocks

- Started MediaWeb Solutions Inc. in 1995 with the help of local CFDC (Community Futures Development Corporation).
- Head office in Kamloops, branch in Vancouver since 1999. Has been successful by exporting the technological talent of local programmers to customers across the country.
- Access to human capital
 - is essential to develop world-class companies in British Columbia.
 - It is imperative that we create innovative, exciting institutions that can retain and attract not only leading students, but leading thinkers.
 - The Research Chair initiative is a tremendous step in the right direction, but we also need a university.
- Attracting senior talent
 - MediaWeb is one of several companies that have remote or virtual offices so that we can attract and retain key talent. Many people are unwilling to relocate to what they perceive is an isolated location. There is no clear solution to the leadership issue and I am not sure if it is even the government's role to find one.
- Access to Financial Resources
 - The province needs to market angel and venture capital investments to successful leaders in the communities. Most communities lack an identifiable group of angels.

- One possible solution to some of the issues is to encourage regional high tech associations. Our technology association is an industry initiative, always struggled with the commitments of the local leaders, most of whom are in early stage companies requiring lots of time, attention, and travel. The effectiveness of the organization has been greatly hampered because of lack of continuity and coordination. Digital Valley is a vital part of our high tech community and a staff person, full or part time, would be an excellent resource to further the development of a critical mass and effective networks will ensure the viability of all of our companies.

Message to the PTC:

- There is limited access to human capital, especially senior talent to rural communities
- Lack of access to financial resources and education to local people about the opportunities and benefits of investing in local early stage companies
- Support regional high tech association

FOUNTAINVIEW ACADEMY

Olaf Clausen

- The issue of content development is another key challenge in addition to the hardware issue
- We have an Integrated Resource Package (IRP) to guide content development, however, there is no standardization process to implement/develop content. Many courses developed for online learning do not qualify to get credit. The Ministry of Education is a bit behind in getting teacher certified for online learning: very few teachers are qualified to teach online.
- IRP does not cover learning outcomes:
 - there's a wide variety of text books for one course
 - it will be beneficial if we can encourage the publisher to create textbooks that follow learning outcomes
- There is a need to provide professional development training for teachers
- Currently there is no broadband to allow students in rural areas effectively participate in online learning.

Message to the PTC:

- There is an issue of content development (no standard, and how to align e-learning materials to the achievement curriculum)
- There is a lack of professional development for teachers
- Currently there is no broadband to allow students in rural areas effectively participate in online learning.

INTERIOR SCIENCE INNOVATION COUNCIL (ISIC)

Bill McQuarrie - Written Submission

The BRAND Partnership between ISIC, Telus and On Call Internet Service

- ISIC concluded that the potential for success of the community business plan would, to a great extent, be determined by the degree of community engagement, stakeholder involvement and private sector commitment.

- This decision led to Telus, On Call Internet Service (OCIS) and ISIC joining with regional and local governments, the University College of the Cariboo, School Districts, First Nations and many other community organizations, to prepare and submit a community driven broadband proposal.
- Spring 2003 - ISIC issued an RFP that among other items, would also require a service provider to:
 - Include a "resellers" model that would allow local communities to establish their own ISP's.
 - Include a training program that would teach the technical and office skills necessary to run a successful small ISP business and provide a continuing educational resource.
 - Ensure that the resellers' business model (pricing) was sufficient and designed in a way that would help ensure the continued success of the new business.
 - Be open to involving a major Telco in the proposed project.
- This is done to encourage a local service provider to respond and in doing so to fully engage local communities, provide local economic development opportunities, transfer technology skills to communities and be committed to the long term business development of the region.
- ISIC felt that the service provider must be able to achieve certain profit levels to remain viable. We encouraged respondents (by asking for a minimum 5 year financial plan) to consider the long term implications of their pricing structure. A healthy, viable and fiscally responsible service provider was a key ingredient to our plans and their expectation of a reasonable profit was a certain necessity.
- Upon closing of the RFP, OCIS was selected as the service provider.
- TELUS involvement came as a result of community meetings, surveys and discussions with Industry Canada and business leaders
- A meeting among stakeholders (OCIS, TELUS, ISIC the Thompson Nicola Regional District (TNRD), SD 74, Gold Trail Open Network Society (GTONS) and Creekstone Consultants) worked out the following:
 - TELUS would contribute sunk costs, valued at approximate \$325,000 and agree to the possibility of having to extend some fibre runs.
 - GTONS would contribute their fibre run between Ashcroft and Cache Creek and other wireless assets in the area.
 - OCIS would contribute their existing wireless infrastructure in Kamloops, Merritt and Logan Lake.
 - The TNRD would make their library system available as possible POP sites.
 - SD 74 would make their school buildings available as possible POP sites.
 - ISIC would continue to act as community champion and committed an additional \$45,000 for preparation of the business plan.
 - TELUS would provide fibre access and service to OCIS based on the Carrier Wide AN model.
 - OCIS and TELUS would design a hybrid fibre/wireless network for the region.
 - OCIS and TELUS would meet all Industry Canada requirements including the need for an open access community network.
- Total value of the OCIS, TELUS, GTONS contributions to the partnership was \$1,500,000.
- OCIS had agreed to sign a five year service contract with TELUS and a unique private/public partnership began. A partnership that recognized the business needs and commercial imperatives of free enterprise and matched those to the social and economic requirements of numerous rural communities.