



Keewaytinook Okimakanak ᑭᑦᓴᓄᓴᓄᓴ ᓴᓄᓴᓄᓴᓄᓴ

KUH-KE-NAH

Smart First Nations Demonstration Project



January, 2003 Update

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Report Card 2002
from Industry Canada

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North Spirit
Lake



Keewaywin



Fort Severn



Poplar Hill



McDowell Lake



Deer Lake

New Ways of Doing Business in First Nations - Being Smart

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SMART COMMUNITIES COLLECTIVITÉS INGÉNIEUSES

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Objectives/Proposed Services

To promote local investment in schools, economic development and improve communications for the project communities and surrounding region. Smart Services will include: Keewaytinook Internet High School, Community-based Telehealth Services, Community Information Technology Centres, Data Warehousing, Community portals linked to the K-Net portal, an open source caching router, a community-based hybrid (satellite, microwave, fibre) broadband network (K-Net) and IP telephony and video conferencing services.



Progress Against Objectives

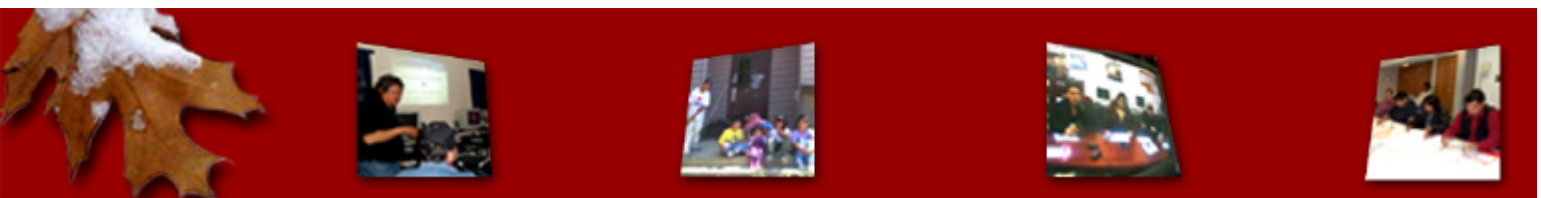
All aspects of the project are proceeding as scheduled, with some deliverables being achieved ahead of schedule.

The goal of the Kuh-ke-nah Smart First Nations project is to demonstrate how First Nation communities can collaboratively use Information and Communication Technologies (ICTs) to re-determine their relationship with Canada and the world. Smart services include:

- **Keewaytinook Internet High School (KiHS):** is supporting the development of on-line access to highschool programming for youth in the Keewaytinook Okimakanak communities and across the region.
- **Community Information Technology Centres (e-Centres):** E-Centres are now established in each of the Keewaytinook Okimakanak First Nations providing a hub for SMART service access and training.
- **Kuh-ke-nah Portal:** The K-Net Portal (<http://knet.ca>) is a community of communities - a high-speed WAN based gateway that reflects local character and priorities.
- **Data Warehouse:** facilitating the development of community and regional database projects including K-Net News, K-Net Network utilization and K-Net photo gallery.
- **Keewaytinook Okimakanak Telehealth:** The Kuh-ke-nah network supports the development of an integrated IP environment for dynamic (data / voice / video) health services delivery in partnership with the NORTH Network providing a secure VPN connecting each First Nation Health Centre to all the hospitals across Northern Ontario.
- **IP Telephony and Video Conferencing Services:** K-Net staff are now working in partnership with the Education Network of Ontario to deploy and support IP telephony services as a revenue generating stream for the Kuh-ke-nah Network.
- **Broadband Network Deployment:** The IP broadband network is now operational in each of the Keewaytinook Okimakanak First Nations including the "last mile" cable solution. Other First Nation communities and their organizations across the province are now joining the network.
- **Smart Management and Organization:** Keewaytinook Okimakanak is integrating ICT and broadband applications throughout all its programs and services to better meet the needs of the member First Nations.



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Success Stories

- **January 2002:** Keewaytinook Okimakanak becomes the Helpdesk for First Nation schools across Ontario.
- **January 2002:** Keewaytinook Okimakanak becomes Industry Canada's agent to support the utilization of the public benefit C-Band transponder space provided by Telesat Canada.
- **February 2002:** Construction of the local cable infrastructure in each Keewaytinook Okimakanak First Nation is now complete, providing high speed connections to every building in each KO community.
- **February 2002:** Keewaytinook Okimakanak in partnership with Nishnawbe Aski Nation hosts the First Nations Connect Conference in Thunder Bay showcasing the ICT developments in the Keewaytinook Okimakanak communities.
- **February 2002:** FedNor funds several broadband connectivity projects with First Nations and their organizations working in partnership with K-Net to get onto the Kuh-ke-nah Network.
- **February 2002:** FedNor funds Keewaytinook Okimakanak to construct a fibre optic loop in Sioux Lookout connecting First Nation organizations to K-Net to expand services for the remote First Nations in Northwestern Ontario.
- **February 2002:** With the support of a Trillium Foundation grant, Keewaytinook Okimakanak is further developing the Turning Point web site.
- **March 2002:** Keewaytinook Okimakanak's Telehealth Initiative is officially launched in partnership with NORTH Network.
- **March 2002:** Computers-for-school project delivers 400 computers for distribution to Keewaytinook Okimakanak First Nation schools and homes.
- **April 2002:** Keewaytinook Okimakanak hosts a national gathering in Winnipeg of organizations interested in utilizing Industry Canada's Public Benefit C-Band Transponder.
- **May 2002:** Representatives from KO First Nation e-Centres participate in the Ontario Library Services North (OLSN) First Nations Public Library conference in Sudbury to identify strategies for establishing and operating local public libraries.
- **June 2002:** KO's Telehealth team coordinates the development of a regional migration strategy that includes a presentation / demonstration at a regional Chiefs' Meeting in Thunder Bay along with the production of a comprehensive business case for a regional telehealth service.



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• **June 2002:** K-Net hosts a National First Nations SchoolNet Helpdesk gathering in Sioux Lookout that includes demonstrations, community visits and presentations with other helpdesk representatives from across Canada. Visitors included Telesat Canada VP (Paul Bush) and Industry Canada ADM (David Fransen).

• **June 2002:** Keewaytinook Internet High School celebrates its second year of operation with local graduation special events and on-line awards.

• **July 2002:** Science and Technology Camps are hosted in each KO First Nation in partnership with local Smart team introducing and supporting on-line research and activities for local youth.

• **July 2002:** New open source e-learning software tool (nicknamed Zed) piloted with on-line workshop for new teaching staff hired to teach in each of the thirteen KiHS partner First Nation classrooms.

• **August 2002:** Other First Nations and First Nation organizations begin to establish their local broadband connections that provide video conferencing services and high speed Internet connections. This development includes a local loop involving a number of First Nation agencies in Thunder Bay that decide to establish a broadband wireless solution connecting all the different groups to the Kuh-ke-nah Network.

• **August 2002:** The Keewaytinook Internet High School (KiHS) hosts two workshops in Balmertown for new staff members. The first week provided training for First Nation Classroom Assistants who returned to their communities to set up the KiHS classrooms. The second week long workshop was for all the KiHS teaching staff that included an intensive training and planning session for the delivery of the on-line high school courses using the new web-based Zed e-learning tool.

• **August 2002:** Keewaytinook Okimakanak celebrates its tenth year of operations with all its partners and member First Nations participating both in person and virtually.

• **September 2002:** The Broadband Network Technician employment and training project funded in partnership with Sioux Lookout Aboriginal Area Management Board starts with participants from sixteen remote First Nations using the new Keewaytinook Okimakanak On-line Training Centre.

• **September 2002:** Six additional satellite served First Nations begin constructing and establishing C-Band earth stations that will utilize the C-Band Public Benefit transponder to access broadband connectivity and application



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- **October 2002:** The local Sioux Lookout fibre optic loop is constructed connecting 24 agencies delivering service to the remote northern First Nations to the Kuh-ke-nah Network for IP video conferencing, IP telephony and high speed data.

- **October 2002:** The KO Telehealth Initiative hosts a regional workshop in Sioux Lookout for health representatives from twenty-eight remote First Nations to identify priorities for the regional telehealth business case being submitted to Health Canada.



- **October 2002:** KO secures the First Nations SchoolNet Regional Management Organization contract to support all First Nation schools across Ontario to access the resources required to access broadband connectivity and on-line services.

- **October 2002:** KO staff work with other First Nation organizations to prepare letters of intent to develop business cases for broadband connectivity in their member communities.

- **November 2002:** K-Net staff complete C-Band earth stations conversions to the Public Benefit Transponder in 8 remote First Nations in Northwestern Ontario.

- **November 2002:** Health Canada officials travel to Poplar Hill First Nation to learn first hand about the importance and benefits of having broadband connectivity and telehealth applications available in the community.

- **November 2002:** The number of hits on the K-Net servers pass the 6.8 million mark in one month.

- **November 2002:** K-Net staff meet with various partners and program people in Ottawa to discuss partnerships and development strategies while attending the meeting of the First Nations SchoolNet Regional Management Organizations.

- **December 2002:** Keewaytinook Okimakanak Health Team traveled to Ottawa to meet with Health Canada officials to discuss the sustainability of the KO Telehealth Initiative and to discuss the application to HC's Aboriginal Primary Care Health Transition Fund.



- **December 2002:** Keewaytinook Okimakanak's Smart Team traveled to Winnipeg to host the Annual Chiefs' Meeting that included displays, webcasting of the meeting, on-line presentations and exchanges.





Positive Impacts on the Community

The Keewaytinook Okimakanak First Nations are benefiting from the help, support and planning of “everyone, everywhere” including local and regional partners, government and private sector interests. The Kuh-ke-nah initiative has been successful in developing working relationships with many partners across a broad spectrum of projects. It has introduced a functional model for integrating the interests and capacities of First Nations in determining their local and regional telecommunications environment.

- **First Nation ICT Related Career Opportunities** - Three new full-time positions (e-Centre Manager, Computer Technician and Multi-Media Producer) are now in place in each First Nation under the Smart Communities initiative. Employees are developing local strategies and work plans to sustain these positions within their community.
- **Affordable Network Access** - K-Net's negotiations with Bell Canada are substantially reducing the cost of regional access to broadband services. Access to the Public Benefit C-Band transponder will ensure satellite-served remote communities have equitable and affordable access to broadband services
- **Growth in Digital Service for First Nations** - In 1998, none of the 52 Nishnawbe Aski Nation (NAN) communities had full access digital broadband services. By August 2002, 18 NAN First Nations will be connected to the broadband Kuh-ke-nah Network.
- **Local Area (LAN) and Municipal Area Networking (MAN)** - K-Net developed and implemented various ethernet LAN / wireless and cable MAN solutions.
- **Capacity Building** - K-Net is managing different regional on-line networking and training programs. In addition, K-Net has provided technology support and training for the institutions and organizations delivering training for First Nations.
- **Community Access to the Internet and other Broadband services**-Public computer facilities (referred to as e-Centres) where people can access high speed internet services are now also offering additional broadband services including video conferencing.

Helpdesk Services-The K-Net SchoolNet helpdesk service has seen a steady increase in the number of support calls since it began in 1996. A Service Level Agreement for the telehealth hardware and network services between K-Net and NORTH Network is being put in place.

- **K-Net e-Mail Account Penetration- 1998**, there were approximately 1200 active K-Net accounts. In June 2002, this number has increased to over 9,000 accounts.



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- **Network Design and Strategy Development** - K-Net is assisting different First Nation organizations and communities with the development of various technical strategies and more than 20 networking and broadband development proposals.
- **Website Utilization** - in 1998, no NAN First Nations and few First Nations organizations maintained their own web sites. Today, more than a thousand First Nations youth maintain web pages on the K-Net MYKNET.ORG server. Most First Nation communities now have and maintain their own web site. Many First Nations organizations use K-Net to research, host and develop their web sites.
- **On-line Activity** - The K-Net portal is providing a point of regional access for First Nations users. Between September 1999 and October 2000, the number of daily visits almost tripled (growing from 199 to 755). Since May 2002, there have been over two million hits each month recorded on the K-Net web server alone (in September 2002 there were over 6.5 million hits on the five main K-Net servers hosting a variety of on-line applications).

Presentations

- Ontario First Nations Technical Services Corporation, Sixth Annual Conference, August 22, 2001
- Emerging Technologies 2001 - "Enhancing Business, Education and Health Care Through Broadband Wireless Technologies", Thunder Bay, Oct 3-5
- Aboriginal Business Canada - Conference of External Delivery Organizations (XDOs), Toronto, Nov 13-15, 2001
- Aboriginal Economic Renewal Secretariat Information Technologies Forum, Toronto, Oct 25, 2001
- Headwaters Project Learning Technologies Forum, La Ronge, Saskatchewan, Nov 20-22, 2001
- Broadband Canada Conference, Ottawa, Dec 2-4, 2001
- Information & Communications Technology (ICT) & Nation Rebuilding Roundtable, Atlantic Policy Congress, December 11, 2001 (via video)
- ICT conference hosted by Société de Communication Atkamekw-Montagnais (SOCAM) in Quebec City, Jan 30 to 31, 2002
- Health Canada, Ontario Region User Conference (FNHIS), Thunder Bay, March 5 to 6, 2002
- National Connecting Aboriginal Canadians Forum, Ottawa, March 11 to 13, 2002
- First Nations Social Development Conference, Assembly of Manitoba Chiefs, Winnipeg, March 12-14, 2002
- Minister Nault meeting with KO Chiefs in Balmertown, March 23, 2002 (via video)
- Smart City Summit Conference, Ottawa, April 23, 2002 (via video)
- E-World 2002: Transforming Saskatchewan's Culture and Communities, Regina, April 25-26, 2002
- First Nations Public Library Conference, Sudbury, May 21-23, 2002
- Sioux Lookout Zone Chiefs' meeting in Thunder Bay, June 5, 2002
- Industry Canada's Innovations Consultation Workshops in Thunder Bay and Portage la Prairie, June 6-7, 2002



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- Ontario First Nations Technical Services Corp Conference, Niagara Falls, October 6-8, 2002
- Global Community Network Conference, Montreal, October 10-12, 2002
- NORTH Network Strategic Planning Workshop, Toronto, October 20, 2002
- Access 2002 International Libraries Conference, Windsor, October 21, 2002
- Sioux Lookout Health Zone Telehealth Workshop, Sioux Lookout, October 22-23, 2002
- SmartLabrador's Northern Solutions Conference, Goose Bay, November 6, 2002
- Tech2002 Conference, Smart Manitoba event, Brandon, November 27, 2002
- First Nations SchoolNet Workshop, Ottawa, November 30, 2002
- Keewatinook Okimakanak Annual Chiefs' Meeting, Winnipeg, December 17, 18, 19, 2002
- Industry Canada's First Nations SchoolNet Program Annual Workshop, Sioux Lookout, June 16, 2002
- Sioux Lookout Chamber of Commerce presentation, Sioux Lookout, July 6, 2002
- Sandy Lake First Nation Telehealth presentation, Sandy Lake, August 20, 2002
- Keewatinook Okimakanak Tenth Anniversary Celebration, Balmertown, August 22, 2002
- Cisco Systems Network Academy meeting, Sioux Lookout, September 30, 2002
- Canadian Society of Telehealth Conference, October 3-5, 2002

Promotional Events

Publications

- OECD publication (Information and Communication Technologies and Rural Development, 2001) profiles the ICT work of Keewatinook Okimakanak - <http://knews.knet.ca/article.php?sid=73>
- Telecommunications Policy 25 (2001) 315-330 by Ricardo Ramirez, "A Model for Rural and Remote Information and Communication Technologies: A Canadian Exploration" [http://authors.elsevier.com/JournalDetail.html?PubID=30471 &Precis=ABS&isso=&volo=&vol=25&iss=5&art=S0308596101000076](http://authors.elsevier.com/JournalDetail.html?PubID=30471&Precis=ABS&isso=&volo=&vol=25&iss=5&art=S0308596101000076)
- Harvard research paper by Robin McKinnon, Technology and Indigenous Peoples - Implications for Policy profiles the ICT work of Keewatinook Okimakanak - <http://knet.ca/documents/Harvard-Research-paper.pdf>
- Telemangement - The Angus Report on Business Telecommunications in Canada - June 2002 story - "K-Net: Bringing Broadband to Northwestern Ontario - First Nation communities wire themselves up" - <http://photos.knet.ca/telemangement>
- Newspaper coverage that we become aware of is captured and archived at <http://photos.knet.ca/kuhkenah11>





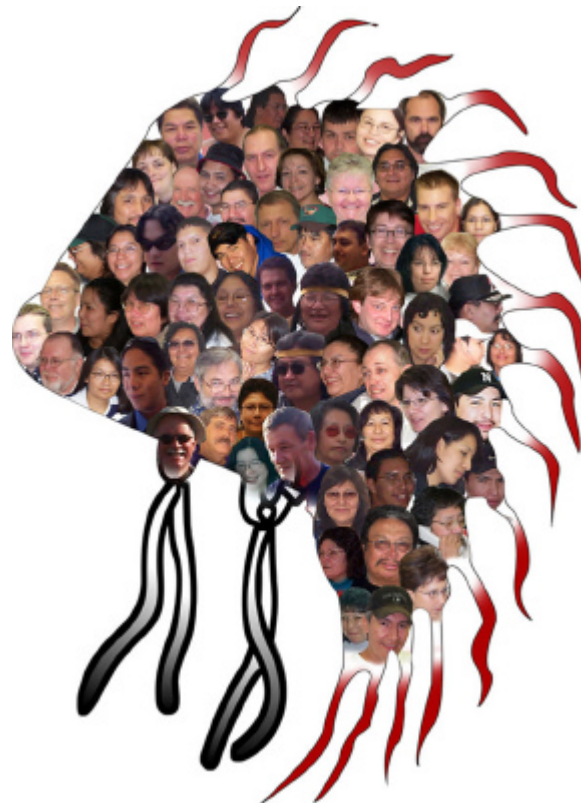
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Keewaytinook Okimakanak Sponsored Smart Events (past)

- **January 19, 2001:** Grand opening of the Keewaytinook Internet High School
- **July 6, 2001:** Launch of the Kuh-ke-nah Smart First Nations Demonstration project
- **February 11 to 14, 2002:** Keewaytinook Okimakanak in partnership with Nishnawbe Aski Nation hosts the First Nations Connect Conference in Thunder Bay
- **April 23, 24, 2002** - Meeting of interested parties from across Canada hosted in Winnipeg to develop strategies on the deployment and utilization of the C-Band transponder Public Benefit made available to Keewaytinook Okimakanak
- **June 16 to 19, 2002** - Industry Canada's First Nations SchoolNet program held their annual Helpdesk meeting in Sioux Lookout with all the Helpdesks represented from across Canada
- **August 19-21, 2002** – KiHS hosts Classroom Assistance Training Workshop
- **August 22, 2002** - Keewaytinook Okimakanak's holds Tenth Anniversary celebrations in Balmertown
- **August 26-30, 2002** – KiHS hosts Teacher Training Workshop
- **October, 2002** – Keewaytinook Okimakanak Telehealth Conference
- **December, 2002** - Keewaytinook Okimakanak Annual Chiefs' Meeting



The Smart Project Team at Keewaytinook Okimakanak





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 Menowayin Health Centre
 Ministry of Education and Training
 Municipalities of Sioux Lookout and Red Lake
 Matawa First Nations Management
 Nishnawbe Aski Nation

Northern Nishnawbe Education Council
 Northern Ontario Heritage Fund, MNDM
 Office of Learning Technologies, HRDC
 Ontario Library Association
 Oshki-Pimache-O-Win
 SchoolNet, Industry Canada
 Sioux Lookout Area Aboriginal Management Board
 Sioux Lookout Zone First Nations and organizations
 Sioux Lookout Aboriginal Health Authority
 Shibogama First Nations Council
 SSI Micro
 Telecom Development Group, TDG
 Telesat Canada
 Wawatay Native Communications Society
 Windigo First Nation Council
 Other Local, regional, national and international
 organization and businesses