MyKnet.org: How Northern Ontario's First Nations Communities Made Themselves At Home On The World Wide Web

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Introduction

In 2000, one of Canada's leading Aboriginal community networks, K-Net, on the verge of expanding into broadband services (as part of Industry Canada's Smart Communities project), introduced MyKnet.org, a system of personal homepages intended for remote First Nations users in Northern Ontario. This free of charge, free of advertisements, locally-supported online social environment grew from a constituency base of remote First Nations in a region where numerous communities lived without adequate residential telecom service well into the millennium (Ramirez, Aitkin, Jamieson, & Richardson, 2003; Fiser, Clement, & Walmark, 2006). MyKnet.org now hosts over 30,000 registered user accounts, of which approximately 25,000 represent active homepages. This is particularly notable considering that the system primarily serves members of Northern Ontario's First Nations whose combined population is approximately 45,000 (occupying a geographic area comparable to the size of France). Equally significant is that over half of this population is under the age of 25, making MyKnet.org primarily a youth-driven online social environment.

This article reports on a study investigating the development of MyKnet.org and its embeddedness within the particular rural/remote First Nations context of Northern Ontario. We postulate that MyKnet.org has become a vibrant medium for Northern Ontario First Nations, in part due to its historical connections with K-Net's broader "computerization movement" and previous indigenous media practices in Northern Ontario. We explore both how MyKnet.org grew out of a drive for broadband telecommunications services in the region and how it currently plays an important socio-cultural role by enabling First Nations individuals and communities to shape the world wide web and extend their social ties

online. Thus, an understanding of the processes that shape and stabilize this "sociotechnology" is at the centre of this study (Bijker & Law, 1992).

Several scholars (e.g. Forte, 2006; Landzelius, 2006a; Srinivasan, 2006) have discussed the potential of new media technologies for indigenous peoples, particularly for them to share knowledge, construct identities, and communicate across distances and borders. According to Srinivasan (2006), the challenge for indigenous communities and their collaborators is to tailor new media and information systems to specific local cultural needs. We believe that MyKnet.org meets this challenge as an indigenous-controlled online medium. This noticeable challenge extends the observation made by Anderson (2006) and others of the role older media such as print and radio have played in the social construction of (imagined) communities and in the development of identity concepts such as indigenism, indigeneity, and nationhood.

First Nations People in Northern Ontario

In Canada, the term "Aboriginal" refers to three distinct and constitutionally recognized groups of indigenous inhabitants: First Nations, Inuit, and Métis. "First Nation" designates an Indian band registered with Indian and Northern Affairs Canada under the Indian Act, R.S. 1985. Each First Nation occupies its own reserve where its members participate in local governance through the auspices of a band office directed by an elected Chief and Council. According to the latest national census, there are 698,025 First Nations people (North American Indians) in Canada (Statistics Canada, 2006) and more than 615 First Nation communities (representing 52 distinct cultural-territorial groups such as Cree, Haida, Mohawk, Ojibway, etc.). In Ontario, where this study took place, there are 158,395 First Nations people (living in remote, rural, and urban environments) and 204 First Nation communities (i.e., remote and rural reserves and settlements).

MyKnet.org represents the lives of Aboriginal Peoples in Northern Ontario who occupy land apportioned by Treaties 9 and 5, which correspond to a political territory known as Nishnawbe Aski Nation (NAN), and is home to 49 First Nation communities, each with between 100 and 2,000 people. Communities in and around the NAN are remote, having no year-round road access, and being generally north of the 50° parallel and/or over 50km from the nearest service centre. Though most are fly-in communities, some have devised temporary winter roads (constructed across frozen lakes) to link into a southern supply corridor during the months of February and March. Without winter roads it costs from CAD\$400 to CAD\$4,000 for a one-way trip by scheduled aircraft to the nearest town, Sioux Lookout (Ont.), or the larger proximate cities of Thunder Bay (Ont.) and Winnipeg (Man.). Under such conditions, personal mobility is severely restricted for most of the region's inhabitants.

Research with First Nations Communities

Our research draws from three years of community-based research initiated with Northern Ontario First Nations under a partnership between Keewaytinook Okimakanak (the Tribal Council managing K-Net) and the Canadian Research Alliance on Community Innovation and Networking (CRACIN). With guidance from staff at K-Net and the Keewaytinook Okimakanak Research Institute (KORI), we designed our research plan to establish community participation and community control over data collection. Fiser and Budka visited more than 20 First Nation communities where numerous fieldwork activities were undertaken, including visits to schools and public internet-access points (such as ecentres¹), individual and group discussions with youth and adults (both offline and online), as well as researcher participation in youth training, employment programs, and videoconference discussions.²

In addition to this extensive fieldwork, online and telephone interviews were conducted with a specific focus on exploring the development, uses, and meanings of MyKnet.org. Initially, we sought the perspectives of administrators, early innovators, casual users, and non-users. Following community input, we broadened our scope to include respondents who could also help us compare MyKnet.org with other media in the First Nation communities

(particularly community radio and satellite television) and who could help us explore the traditional and popular cultural context of First Nations' media usage.

Our resulting sample for this particular research included ten interviews completed by teleconference and ten online encounters with users via email and an open online meeting platform. This sample is biased towards longstanding users with at least four years experience with MyKnet.org, and towards non-users who make use of computer-mediated communications and have participated in other K-Net initiatives. The mean age of our combined respondents (28 years) also exceeds the mean age of the communities serviced by MyKnet.org. The sample is not meant to be representative of the general population of MyKnet.org users or non-users, but is made up of "key informants" (Millen, 2000) who possess an *emic* understanding of their socio-cultural milieu, in this case K-Net/MyKnet.org and its embeddedness in the context of Northern Ontario First Nations life. To complement their expertise with a more representative portrait of MyKnet.org's current user population, we include selected results from an online survey of over 1000 users conducted in 2007 (Budka, 2008).

MyKnet.org as a Computerization Movement

As we set out to examine MyKnet.org we felt it was important to situate our work within a historical appreciation of Aboriginal and First Nations media. As our research proceeded, this grounding proved valuable in helping us explore MyKnet.org's embeddedness. While writings on Aboriginal media helped us understand the cultural aspects of MyKnet.org and its uses, as well as First Nation communities' desire to develop their own online social environment, the practicalities of such development were often left unexplained. In an effort to better understand how such an online social environment as MyKnet.org came to be within its specific contexts, we draw upon the notion of a "computerization movement".

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According to Kling and Iacono (1988), the concept of a "computerization movement" points to efforts to use "computer-based systems as instruments to bring about a new social order" (p. 228). They argue that "computerization movements are based upon collaborations of participants with diverse interests" (p. 229). We consider MyKnet.org's development to be part of such a computerization movement that connects local, regional, and national interests.

MyKnet.org emerged at a time when much of K-Net's core broadband network infrastructure was being built and the Canadian government was focused on "connecting Canadians" to the internet. K-Net's alliance of First Nation communities negotiated many funding opportunities and partnerships to develop their network infrastructure, benefiting from this government-lead computerization movement to implement computer technology as a means of bridging social and technological divides in Canada (Fiser et al. 2006).

A central component of any computerization movement concerns the many decisions made about control and use of technology during the development process (Kling & Iacono, 1988). At each step of K-Net and MyKnet.org's development, choices about appropriate investment and control over equipment and expertise were made within the communities. As such, on a local regional level, the development of K-Net and MyKnet.org can be seen as part of an indigenous computerization movement lead by local leaders in the First Nation communities. These leaders, from First Nations councils, economic development agencies, education and health authorities, and civic groups, collaborated with the intent to not only implement computer technology but to adopt and adapt that technology to the local needs of their communities. For example, as we shall discuss below, they focused youth training and education opportunities to complement the physical network infrastructure's development. Thus, counter to arguments that impute computerization to a simple market formula of "cost-effective computing tools", the experiences of these collaborators suggest that the acquisition, installation, and adoption of computers and information and communication technologies (ICTs) depend on an equally important array of non-economic choices and factors, such as culture, politics, education, health, etc.

MyKnet.org as a Community-driven Online Social Environment

While we interpret MyKnet.org's development as part of an indigenous computerization movement with strong ties to local and national interests, we also recognize that MyKnet.org is a unique online social environment that has been directly shaped by the interactions of its individual users who use it to extend their social ties online.

One of the common reasons for indigenous peoples, groups, and organizations to create an online presence "is to provide information from a viewpoint that may not have found a voice in the mainstream media" (Cisler, 1998, p. 20). Indigenous communities made early inroads on the world wide web. The Oneida First Nation of the State of New York, for instance, put the first indigenous-owned website online in Spring 1994, well before the homepage of the White House went online (Polly, 1998), and the Blackfeet Confederacy in Alberta established the first Aboriginal Canadian web presence one year later (Prins, 2002).

The individual contributions that shape these online social environments may take a variety of forms. Landzelius (2003, 2006a) refers to the "self-authored engagements" of indigenous peoples online as "indigenous cyberactivism" and distinguishes between "outreach" and "inreach" activities. These two very broad and basic categories of indigenous internet practices must not be understood as exclusive and static areas, but rather as constantly overlapping and transforming fields of utilization. Indigenous *outreach* initiatives include public relations and tourism management, sovereignty campaigns, socio-political liberation movements, and common-cause partnerships between indigenous and non-indigenous groups and actors. In this case, cyberactivism may encompass but also transcends narrowly political communications. We have found that MyKnet.org focuses more heavily on indigenous *inreach* activities oriented towards an internal public and including activities such as public services (e.g., telemedicine and e-learning) as well as personal social networking practices such as communications directed between families and friends.

MyKnet.org as an Extension of Indigenous Media Production in Northern Ontario

The First Nations' use of internet technologies, although corresponding to new media and Landzelius' (2003, 2006a) concept of cyberactivism, resonates with older media practices within the broader context of indigenous media production. During the 1970s, several First Nations newspapers and newsletters came into existence across Canada following the release of a White Paper on Indian policy. In Northern Ontario, the multi-lingual *Wawatay News* was published for the first time in 1973, providing the First Nation communities of the region with news in English, Ojibway, Oji-Cree, and Cree syllabics.

At the time, most of the money for media production came from the federal Native Communication Program, which was also established in 1973 (e.g. Avison & Meadows, 2000). However, when the Canadian government cut funding in 1990, some newspapers were forced to cease publishing while others, such as *Wawatay News*, commercialized and now include advertisements at the cost of other content (Demay, 1993).

Together with *Wawatay News*, the Wawatay Native Communications Society established a community radio system for Ontario's northern First Nation communities. The first community radio station was established in 1974. In 1986, the Canadian Radio-Television and Telecommunications Commission (CRTC) licensed the Wawatay Radio Network, which provides programming in Oji-Cree and Cree language. Particularly in the northernmost communities where these Native languages continue to be spoken by a majority of residents, the radio network's programs have reached up to 80 percent of local populations (Karam & Zuckernick, 1992). However, community radio broadcasts now compete with predominantly English-language media such as satellite television and the internet and there are fears that audiences have diminished.

Following the launch of the Anik satellites at the end of the 1970s several Aboriginal television broadcasters, such as the Inuit Broadcasting Corporation, started to provide Native-language programming (e.g. Baltruschat, 2004; Roth, 2005). In 1983, the Northern Broadcasting Policy and the Northern Native Broadcast Program created the basis for a northern satellite distribution system, which eventually resulted in the launch of Television

Northern Canada (TVNC) in 1991. In 1999, the Aboriginal Peoples Television Network (APTN) was launched after TVNC was approved for a national broadcast license. APTN blends multi-lingual programming about Aboriginal cultures, lives, traditions, and histories with news and public affairs in a mainstream broadcasting style. It also depends on local and regional Aboriginal media producers, such as Wawatay, for content. Despite this vital network, the first of its kind in the world, approximately 35 percent of Aboriginal people living on reserve, particularly in the North, still do not receive APTN programming (Roth, 2005). In addition to this challenge, APTN, being Aboriginal-controlled and Aboriginal-focused, must attempt to represent Canada's vast Aboriginal experience, diluting the potential for locally-controlled and community-focused media.

Following the inroads of indigenous newsprint, radio, and television up to the mid-1990s, Canadian indigenous groups began to mobilize for improved access to telecommunications facilities and the establishment of internet infrastructure. In Northern Ontario, Wawatay and K-Net Services spearheaded a movement for improved telecom services that paved the way for K-Net's introduction of broadband services in 2000. First Nations across Northern Ontario had input in the regional campaign, and awareness was raised regarding the feasibility and usefulness of internet applications such as email and personal homepages. This legacy directly shaped MyKnet.org's online social environment when it appeared on the web in 2000.

The Development of MyKnet.org as Part of an Indigenous Computerization Movement

In 1994, staff members of Keewaytinook Okimakanak (KO), a Tribal Council representing seven (later to become six) remote fly-in First Nations⁵, organized an experimental Bulletin Board System (BBS) for their communities. This was the beginning of the Kuhkenah network, or K-Net, an amalgam of Oji-Cree and English meaning "everybody's network". As part of its nascent computerization movement, KO configured the K-Net BBS to support a "Stay in School" project in the First Nations. The goal of the movement was to create a computer-mediated communications link between the First Nations and their high-school-aged youth who, in seeking higher education, had to board in Pelican Falls, a residential school for First Nations near the town/service-hub of Sioux Lookout. The BBS presented an innovative solution to a serious telecommunications problem: Some communities only had one public payphone, placed outside the community's Band Office (Figure 1). Others had to rely on trail radio for communications. Few, if any, had previous access to computers.

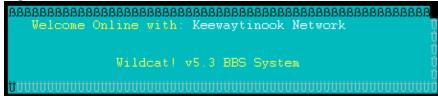


igure 1: North Spirit Lake's "phone booth" (circa 1999)

The KO communities are among over 50 First Nations in a territory that the CRTC designates as a High Cost Serving Area and market forces alone have failed to support their telecommunications needs (Fiser et al., 2006). Similarly, the diffusion of computers and related ICTs in the territory depends on grassroots initiatives and public-private sector partnerships. To establish the BBS as a communications link between the First Nations, Pelican Falls, and Sioux Lookout, KO Tribal Council had to build a computer-communications infrastructure from the ground up. They, thus, constituted a localized computerization movement focused on finding ways to use technology to support and meet the needs of the local communities.

The experiences of the KO Tribal Council and its collaborators reflect the argument that the acquisition, installation, and adoption of computers and ICTs depends on an array of noneconomic forces rather than simply cost-effectiveness (Kling & Iacono, 1988). With K-Net, a core group of community leaders worked with First Nations members and interested parties from local education, health, and community service fields to build a business case for internet access (and later broadband). As more and more local interests came to share their vision of an indigenous network, the KO Tribal Council and its allies brokered publicprivate sector partnerships to develop their network, built around the principles of a not-forprofit organization and cooperative enterprise. Notably, education has been a major component of the network. K-Net staff worked hard to impart a "technology curriculum" or culture-of-use in the communities (Beaton, Fiddler, & Rowlandson, 2004) by providing workshops for users to experiment with computers and by supporting individual community champions to manage and organize public computer access through local institutions such as Band Offices/e-centres and schools. By 1996, 730 users in 21 First Nations communities of Northwestern Ontario had access to the K-Net BBS. What was initially a "Stay in School" project rapidly became a regional communications medium for adults and youth alike, despite being limited by a text-based low-bandwidth device (Figure 2).

Figure 2: K-Net's text-based interface (circa 1996)



There was no access to the world wide web offered by K-Net during this period and all of the online connections went through dial-up. Despite slow download speeds, users were creating and linking personal profiles, sharing messages, writing stories and jokes, discussing current events, posting notices and ads, learning about computing, and more. Some of the very remote communities that participated, such as North Spirit Lake and Keewaywin, had no direct access to K-Net, but they acquired computers and KO periodically airmailed floppy disks between the communities and the BBS server to update the messages, demonstrating the commitment organizers had to serving local communities and using technology to facilitate community development and communication.

Reflecting the K-Net computerization movement as a broad-based initiative driven by community needs, and its connection to a broader national computerization movement, from 1997 to 2000, KO partnered with Industry Canada's First Nations SchoolNet, Telesat Canada, and the Stentor Alliance to install DirecPC technology in First Nations elementary schools and some off-reserve high schools (Fiser, 2004). In 1997, KO also began to receive support from Industry Canada's Community Access Program (CAP) to establish public access sites in K-Net communities across Northwestern Ontario. Coupled with the SchoolNet program and support from regional and provincial partners, CAP enabled K-Net communities to leverage school connectivity for public access and hire local coordinators. As KO facilitated the SchoolNet initiative and CAP-site developments in each community, its staff members travelled around Northern Ontario to deliver workshops on computing, webpage development, and basic internet skills (1997-1999), and provided ongoing online training and support over the K-Net BBS, building local capacities.

It was during this period that MyKnet.org's web-based precursors emerged. The web-based graphical interface of the BBS (1998) enabled K-Net to serve community portals and homepages. The earliest homepages were strictly HTML and service-oriented. KO staff created initial templates and embedded them within a tutorial designed to facilitate self-directed learning. Most learning was undertaken by community members on their own initiative online at the public access sites and to this end, KO staff dedicated much personal effort to build online support systems, chat rooms, tutorials, bulletin boards, listservs, etc.

In 2001, K-Net became one of Industry Canada's SMART Demonstration Projects (cf. Ramirez et al., 2003). This project would catalyze K-Net's evolution into a regional Wide Area Network and Internet Service Provider. Support leveraged from project partners, including Industry Canada, FedNor, and the Northern Ontario Heritage Fund enabled KO to order T1 services (1.544Mbps) for four of the KO communities and establish a shared, high-speed satellite service for its most remote community, Fort Severn. The K-Net BBS was retired, and MyKnet.org acquired its own domain name and dedicated server (Figure 3).

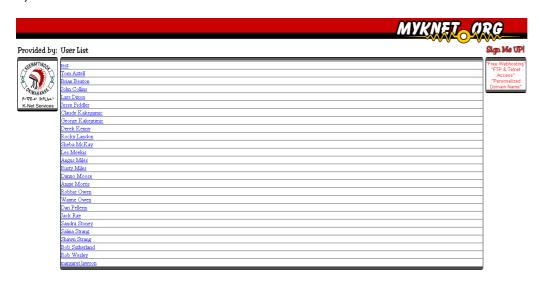


Figure 3: MyKnet.org User List (circa 2001)

A year later, the Fort Severn satellite initiative led KO to partner with Telesat Canada R&D and Industry Canada to initiate the C-Band Public Benefits Transponder agreement (Keewaytinook Okimakanak Research Institute, 2005). A logical complement to the SMART initiative, the C-Band satellite service would help deliver broadband applications in 12 remote First Nations that could not otherwise acquire network services in Northern Ontario. With broadband, residential internet access finally became a feasible project in the region, although public access e-centres and schools continue to be the primary access points for MyKnet.org end-users in the region. The ensuing years to the present have seen K-Net expand broadband services in partnership with 40 other remote communities.

Due to the high cost of network services in remote areas, limited bandwidth is an ongoing management issue, especially for users over K-Net's satellite network, which services 44 communities. As part of a community-based network, MyKnet.org users have to negotiate uptime with regularly scheduled high-capacity applications such as videoconferencing and telemedicine. The increasing use of audio/video on MyKnet.org homepages led to a 2006 decision by K-Net staff to institute a daily quota to manage community bandwidth. Other than to support higher-capacity community-based applications, K-Net does not regulate the type of content created on the MyKnet.org server, however, to ensure that MyKnet.org does not disrupt services such as videoconferencing and telemedicine, especially in the K-Net satellite communities, staff evaluate pages and disk usage and temporarily suspend high bandwidth consuming pages until services are rendered.

That MyKnet.org emerged out of a national computerization movement on the part of the Canadian government, which provided programs and funding for much of the technological implementation in the region, is key. It is its development within a *local* computerization movement in the region, that was (and remains) focused on local education, local ownership/control of media, and development of local capacities (particularly among youth), that is central to its understanding by users and community members, however. MyKnet.org is seen as belonging to the community and, as the discussion of MyKnet.org uses below highlights, the network is used in various ways as a means of supporting local communication and community-building.

Community-based & Community-focused Technology

In the remote First Nations of Northern Ontario, media services develop more slowly, and, as our respondents stated, any new medium that is made available will be used if community members have enough control to make it work for their purposes. Results of a recently conducted online survey amongst 1006 MyKnet.org users indicate that the internet is the most important communication medium for survey respondents, followed by cable and satellite television, telephone and community radio (Budka, 2008). Taking into consideration the web-based implementation of the survey, as well as the age of survey participants (57 % are younger than 26 years), these results are hardly surprising.

MyKnet.org is taking its place among other community media in the region, in some ways acting as a substitute for the telephone, which was, due to a lack of infrastructure, never widely used within the communities. In other ways, MyKnet.org is functioning like community radio (present in the region since the 1970s), but with a younger audience and user group at the helm. Community radio broadcasts mainly in the native languages (Cree, Oji-Cree, and Ojibway) and is used primarily by older community members (those over 40 years of age), while younger people in many of the communities do not speak these languages as fluently as their elders and find English-language media more accessible. Some interviewees compared MyKnet.org to community radio, particularly as both are locally-driven and locally-operated initiatives and both allow individual community members to participate and make their voices heard. While access and language issues caused some interviewees to be cautious about claiming that MyKnet.org is as broadly accessible in the First Nations as community radio, they made it clear that both media are important to community members specifically because they are considered to be owned and shaped by the communities themselves (unlike satellite television, for example).

Like community radio, MyKnet.org connects individuals within communities, but it also enables connections across communities. We heard a number of stories about the possibilities for communication amongst frequent MyKnet.org users. We were told particularly of parents who use MyKnet.org to locate their children when they travel abroad, or even within the local communities. In one story, parents asked their older daughter where her sister was going to be that night, and the older daughter went onto the girl's MyKnet.org homepage to find her location. Our respondents told us that these were not uncommon patterns of use.

Such purposeful searches of MyKnet.org are facilitated by daily patterns of homepage use (updating and reading), supported by a K-Net policy that requires MyKnet.org users to register accounts under their surname and given names. Coupled with this policy, the uniqueness of surnames in Northern Ontario First Nations turns MyKnet.org into a dynamic map of kinship ties in the region. We were told that Aboriginal users who understand the correspondences between surnames, territories, and communities can use MyKnet.org to follow the movements of their peers and relations across the region. We heard stories about distant family relations becoming reunited through MyKnet.org, including estranged family members scattered across provinces and remote-urban divides. As Arnold and Plymire (2004) have argued, Aboriginal online activities can be important means for cultural communities to keep in touch and to maintain a sense of community despite changing geographic locations. In its uses by community members, MyKnet.org is playing such a role as homepages are used extensively to keep in touch with friends, family, and colleagues. Almost 78 percent of web survey respondents state that they use MyKnet.org to keep in touch with family and friends (N=1006, cf. Budka, 2008).

MyKnet.org homepages cover the entire community lifecycle, announcing births, graduations, marriages, separations, and deaths. MyKnet.org communities post their own homepages to advertise local events (e.g., http://sandylakerecreation.myknet.org/) and local programs, associations, and sports teams create pages to keep the public informed about their activities (e.g., http://sandylakefiredept.myknet.org/, http://sandylakefiredept.myknet.org/, http://sandylakefiredept.myknet.org/). Aside from personal miscellany, individuals use homepages to promote business, arts, spiritual beliefs, and teachings from the land (e.g.,

http://ronniebeaver.myknet.org/, http://josephsutherland.myknet.org/,

http://calkenny.myknet.org, http://dokodesigns.myknet.org).



igure 4: An artist's homepage on MyKnet.org, ringofiddler.myknet.org

Unforeseen events also become woven into the fabric of MyKnet.org. One of our respondents told us of the time she learnt of a fire in a neighbouring community by reading a friend's homepage. News of the fire spread across MyKnet.org and within a few days there was a movement (coordinated largely over MyKnet.org) to provide the community with relief. Other disasters such as teen suicide have led to memorials and public information bulletins on MyKnet.org. Respondents told us that some community members have been known to monitor their local youths' homepages for signs of depression, and have staged interventions on a number of occasions. In such ways MyKnet.org fulfils an important role in strengthening not only familial and friendship ties, but also in facilitating inter-community communication, civic action, and other interpersonal connections. These uses of MyKnet.org that focus on connecting communities and community members through advertising events or providing information on local organizations, for example, reflect the important inreach activities described by Landzelius (2003, 2006a).

Another part of the community-based and community-focused aspect of MyKnet.org is its non-commercial nature. While mainstream online social network sites, such as Facebook, Beebo, and MySpace, have seen increasing amounts of marketing and advertising on their pages, from marketers gleaning information from profiles to bands and celebrities using the networks for promotion (Barnes, 2006), MyKnet.org remains non-commercial and locally-focused. There is no fear of marketers seeking users online and the promotion that does take place is by local artisans, musicians, or organizations through their respective homepages.

In the remote First Nations of Northwestern Ontario, an internet users' first experiences with the world wide web usually consists of Knet.ca and MyKnet.org. As a community-based and community-focused medium, MyKnet.org provides an alternative to mainstream commercial online social network sites. The uniqueness of its users, the kinship and community ties they represent, provides MyKnet.org with an advantage that any competing commercial network would not presently be able to meet. MyKnet.org users are intimately enveloped by the cultural experience of a computerization movement in the Northwestern Ontario First Nations such that there is more to MyKnet.org's appeal than simply communications.

Respondents told us that they identify K-Net and MyKnet.org as part of their community experience, in contrast to other websites and online social environments that they may visit and use. Web survey respondents repeatedly expressed their affection for MyKnet.org, stating that they appreciate "[...] knowing native people have a place to visit on the www" and create their own homepages "[...] to have a native web page [...] for the whole world to see, i guess... LOL [laugh out loud]" (Budka 2009).

Conclusion

This study of MyKnet.org aims to draw a preliminary map of this rich and fascinating online environment, focusing particularly on the importance of the community-based nature of the network's development and uses. We encountered much that is worth celebrating in terms of the vitality of Northern Ontario's remote First Nations and discovered some particular areas of caution and uncertainty. While there are many other stories to be told about MyKnet.org, this particular account drew its interpretations from a selected group of key informants: administrators, early innovators, casual users, and non-users who have been actively thinking about what makes MyKnet.org a social networking environment and cultural milieu. Their stories, together with selected results of an online survey, reveal the many ways in which the service is used to build and maintain familial, friendship, and community relationships, and how these are structured within and through the realities of the geographical location and demographic make-up of the Northern Ontario First Nations and particularly the peoples of the Nishnawbe Aski Nation.

Within the framework of Aboriginal media, MyKnet.org stands out in many ways. Those we spoke to suggest that MyKnet.org is a vibrant social networking site, not by virtue of a narrowly configured web server, but by virtue of the practices of its users. No one knows who created the first "shout out" or the first interactive guest book on MyKnet.org; nor can our respondents say for certain who started the first daily blog or listing of community events, or who created the first tribute to a deceased loved one, and so forth. What they know is that these functions are now integral to their MyKnet.org experience and contribute to their community life. For observers of MyKnet.org it is clear that local experiences of life in the First Nations contribute to creating, shaping and connecting the MyKnet.org homepages (cf. Miller & Slater, 2002).

Moreover, within the context of global indigenous internet usage, MyKnet.org and its many creators/users demonstrate that "historically marginalized peoples are not only taking roles, but in certain respects taking the lead, as savvy, technoscientific actors themselves 'colonizing' global media channels and converting them into fertile habitats for the exercise of identity and voice across distance" (Landzelius, 2006b, p. 300). The passion of local leaders and their ability to develop a local computerization movement within a national movement to "connect Canadians" drove the implementation of computer technology in the region and helped to shape the uses of the technology – uses that continue to facilitate inter-community communication as well as personal development.

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References

Anderson, B. (2006). *Imagined communities: reflections on the origins and spread of nationalism* (3rd ed.). London, England: Verso.

Arnold, E., Plymire, D. (2004). Continuity within change: The Cherokee Indians and the Internet. In D. Gauntlett & R. Horsley (Eds.), *WebStudies* (pp. 254–264). London, England: Arnold.

Avison, S., & Meadows, M. (2000). Speaking and hearing: Aboriginal newspapers and the public sphere in Canada and Australia, *Canadian Journal of Communication*, 25(3). Retrieved May 15, 2009 from http://www.cic-online.ca/index.php/journal/article/view/1163/1082

Baltruschat, D. (2004). Television and Canada's Aboriginal communities: Seeking opportunities through traditional storytelling and digital technologies, *Canadian Journal of Communication*, 29(1). Retrieved May 15, 2009 from http://www.cjc-online.ca/index.php/journal/article/view/1403/1495

Barnes, S. B. (2006). A privacy paradox: Social networking in the United States, *First Monday,* 11(9). Retrieved February 19, 2009 from

http://firstmonday.org/htbin/cgiwrap/bin/ois/index.php/fm/article/view/1394/1312

Beaton, B., Fiddler, J., & Rowlandson, J. (2004). Living smart in two worlds: Maintaining and protecting First Nation culture for future generations. In M. Moll & L. Shade (Eds.), *Seeking convergence* (pp. 283–298). Ottawa, Canada: Canadian Centre for Policy Alternatives.

Bijker, W. E., & Law, J. (1992a). General introduction. In W. E. Bijker & J. Law (Eds.), *Shaping technology / building society: Studies in sociotechnical change* (pp. 1–14). Cambridge, MA: MIT Press.

Bijker, W. E. & Law, J. (Eds.) (1992b). Shaping technology / building society: Studies in sociotechnical change. Cambridge, MA: MIT Press

Budka, P. (2008). Report on the MyKnet.org online survey, Aug.-Nov. 2007. Retrieved May 26, 2009 from http://meeting.knet.ca/mp19/course/view.php?id=7

Budka, P. 2009. Indigenous media technology production in Northern Ontario, Canada. In K.-D. Ertler & H. Lutz (Eds.), *Canada in Grainau / Le Canada à Grainau: A multidisciplinary survey of Canadian Studies after 30 years* (pp. 63–74). Frankfurt am Main, Germany: Peter Lang.

Castells, M. (1996). The information age: Economy, society and culture Vol. 1: The rise of the network society. Malden, MA: Blackwell.

Castells, M. (1997). The information age: Economy, society and culture Vol. 2: The power of identity. Malden, MA: Blackwell.

Castells, M. (1998). The information age: Economy, society and culture Vol. 3: End of the millennium. Malden, MA: Blackwell.

Cisler, S. (1998). The Internet and indigenous groups: An introduction. *Cultural Survival Quarterly*, 21(4), 20–22. Retrieved February 19, 2009 from http://www.culturalsurvival.org/publications/cultural-survival-quarterly/cisler/introduction-internet-and-indigenous-groups

Demay, J. (1993). The persistence and creativity of Canadian Aboriginal newspapers, *Canadian Journal of Communication*, 18(1), Retrieved May 15, 2009 from http://www.cjc-online.ca/index.php/journal/article/view/720/626

Fiser, A. (2004). First Nations SchoolNet RMO backgrounder, *CRACIN Working Paper No.1*. Retrieved February 21, 2009 from

http://www3.fis.utoronto.ca/research/iprp/cracin/publications/workingpapersseries.htm

Fiser, A., Clement, A., & Walmark B. (2006). The K-Net development process: A model for First Nations broadband community networks, *CRACIN Working Paper No.12*. Retrieved February 21, 2009 from http://www3.fis.utoronto.ca/research/iprp/cracin/publications/workingpapersseries.htm

Forsythe, D.E. (1999). "It's just a matter of common sense": Ethnography as invisible work. *Computer Supported Cooperative Work*, 8, 127–145.

Forte, M. C. (2006). Amerindian@Caribbean: Internet indigeneity in the electronic generation of Carib and Taino identities. In K. Landzelius (Ed.), *Native on the net: Indigenous and diasporic peoples in the virtual age* (pp. 132–151). London, England: Routledge.

Indian Act. (1985). Revised statutes, chapters 1-6, sections 1-123.

Karam, R., and Zuckernick, A. (1992). A Study of audiences for Aboriginal community radio: A profile of four Northern Ontario communities. Toronto, Canada: Queen's Printer for Ontario.

Kling R., & lacono S. (1988). The mobilization of support for computerization: The role of computerization movements. *Social Problems*, 35(3), 226-243.

Keewaytinook Okimakanak Research Institute (2005). Assisting remote communities across Canada to access and use C-Band public benefit. Draft Report. Thunder Bay, Canada: Keewaytinook Okimakanak.

Landzelius, K. (2003). Paths of indigenous cyber-activism. Indigenous Affairs, 2/03, 6-13.

Landzelius, K. (2006a). Introduction: Native on the net. In K. Landzelius (Ed.), *Native on the net: Indigenous and diasporic peoples in the virtual age* (pp. 1–42). London, England: Routledge.

Landzelius, K. (2006b). Postscript: *Vox populi* for the margins? In K. Landzelius (Ed.), *Native on the net: Indigenous and diasporic peoples in the virtual age* (pp. 292–304). London, England: Routledge.

- McCaughey, M., & Ayers, M. D. (Eds.) (2003). *Cyberactivism: Online activism in theory and practice*. London, England: Routledge.
- Millen, D. (2000). Rapid ethnography: time deepening strategies for HCI field research. In *Proceedings* of the conference on Designing interactive systems: processes, practices, methods, and techniques (pp. 280–286). New York City, NY: ACM Press.
- Miller, D., & Slater, D. (2002). Ethnography and the extreme Internet. In T. H. Eriksen (Ed.), *Globalisation: Studies in anthropology* (pp. 39–57). London, England: Pluto Press.
- Polly, J. A. (1998). Standing stones in cyberspace: The Oneida Indian Nation's territory on the web, *Cultural Survival Quarterly*, 21(4), 37–41. Retrieved February 21, 2009 from http://www.culturalsurvival.org/publications/cultural-survival-quarterly/polly/standing-stones-cyberspace-oneida-indian-nations-terr
- Prins, H. E. L. (2002). Visual media and primitivist perplex: Colonial fantasies, indigenous imagination, and advocacy in North America. In F. D. Ginsburg, L. Abu-Lughod, & B. Larkin (Eds.), *Media worlds: Anthropology on new terrain* (pp. 58–74). Berkeley, CA: University of California Press.
- Ramirez, R., Aitkin, H., Jamieson, R., & Richardson, D. (2003) Harnessing ICTs: A Canadian First Nations Experience Introduction to K-Net, *Institute for Connectivity in the Americas*. Ottawa, Canada: IDRC. Retrieved February 21, 2009 from http://www.comminit.com/en/node/116045/307
- Roth, L. (2005). Something new in the air: The story of First Peoples television broadcasting in Canada. Montreal, Canada: McGill-Queen's University Press.
- Srinivasan, R. (2006). Indigenous, ethnic and cultural articulations of new media. *International Journal of Cultural Studies*, 9(4), 497–518.
- Statistics Canada (2006). Aboriginal Peoples in Canada 2006: Inuit, Métis and First Nations, 2006 Census, Ottawa: Statistics Canada. Retrieved March 30, 2008 from http://www12.statcan.gc.ca/census-recensement/2006/rt-td/ap-pa-eng.cfm
- 1 E-centres are local public-access facilities, usually housed in or near a community Band Office or school, that provide multimedia PCs and internet access free of charge to residents and visitors. Periodically staff offer relevant workshops.
- 2 Fiser did his fieldwork between 2004 and 2007 while Budka collected his data between 2006 and 2008.
- 3 In respect of our participants' privacy, we have chosen to anonymize our discussions.
- 4 We use this concept while aware that there are several other approaches which could be used to understand information and communication technology and social change(e.g. Bijker & Law 1992; Castells, 1996, 1997, 1998; McCaughey & Ayers, 2003).
- 5 The communities are Deer Lake, Fort Severn, Kasabonika, Keewaywin, North Spirit Lake, and Poplar Hill. A seventh community, McDowell Lake (population 51) is a seasonal settlement without a school. Kasabonika left the tribal council in 1998.