

Title: A Case Study of ISF 'Free' Hotspot Owners and Users

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Municipal and community wi-fi networks have been expanding in such a manner that even one of its leading innovators, Sasha Meinrath,¹ cannot reasonably estimate how many there are, where they are and/or how they all operate. There have been widespread municipal and community wi-fi initiatives in the United States and many parts of Europe, but less so in Canada. Canada has been slow in the uptake and implementation of a number of wireless communication technologies. A partial explanation for this lag is a long-standing government commitment to fair and accessible landline telecommunications and the geographical challenges posed by the Canadian landscape.

Today, we will be presenting one of the case studies from a research larger project CWIRP. CWIRP has been studying five sites that have developed and deliver wi-fi capabilities in a range of Canadian communities. These include a municipality, one of the first to implement a 'city-wide' wi-fi, Fredericton E-Zone (<http://www.fred-ezone.com/>), a volunteer-based group in Montreal, Île Sans Fil (<http://www.ilesansfil.org>), a corporation, Toronto Hydro Telecom (<http://www.thtelecom.ca/one-zone.html>), a community-based wireless internet service provider, Wireless Nomad (<http://www.wirelessnomad.com/>) in Toronto, and an Aboriginal Network, K-Net (<http://www.knet.ca/>), in Northern Ontario.

Much of the research on wi-fi initiatives has focused on what kind of technologies they use, the economic benefits of wireless networks, implementation and spectrum

¹ Sasha Meinrath made this comment at the Alternative Telecommunications Policy Conference, Ottawa, Ontario, October 19, 2006.

allocation, but few have examined how small businesses and users take up these networks. Our talk today will focus on Île Sans Fil (ISF) and provide some preliminary findings on our wi-fi network owners and users.

2) Île Sans Fil, ISF:

Montreal is the second largest city in Canada at 7 million. It is a culturally rich and bilingual province with the highest number of cultural producers in the country² with a median age for men at 37.8 and for women 39.8 with 82 per cent of its population over age 15. The majority of peoples are Canadian born and over 450,000 people have immigrated to Quebec since 1991, with average earnings per full year work \$39,217. French is the main language most often used in paid work place. Employment rates are at 59 per cent and the unemployment rate at 8.2 per cent. The predominant employers are manufacturing and construction industries followed by other services and health and education.³

Montreal's cultural richness has played a role in the development of ISF's community wi-fi network as well as its long history of engagement with sustainability issues and national independence. European colonial cultures, especially France, have also contributed to the architecture, design and Catholic heritage that influence the city. In particular, the high number of artists and self-employed individuals has partially sustained a strong public, café culture. ISF implemented its first free hotspot in July

² Findings released by Hill Strategies study, *Resources on the Arts*, found that Montreal has the highest average earnings of artists as a percentage of average local labour force earnings and the second highest population of artists after the city of Toronto, http://www.hillstrategies.com/resources_details.php?resUID=1000160.

³ Data retrieved from Statistics Canada. 2002. 2001 Community Profiles, Released June 27, 2002, <http://www12.statcan.ca/English/Profil01/CP01/Indedx.cfm?Lang=E>, accessed November 6, 2006.

2003 at Café Laika -- centrally located in what is considered to be a funky and hip neighbourhood, the Plateau. The Café serves as a beacon site and is one of ISF's most frequented and long standing free hotspots.

ISF is a group made up of almost 60 active volunteers and a mailing volunteer list of 550.⁴ As a non-profit group, they are committed to providing free public wireless internet access in public spaces in Montreal. They describe themselves as "computer hackers (the geeky-but-cool kind), system administrators, "hands-on" academics, web designers, idealists, engineers and more" (<http://www.ilesansfil.org/tiki-index.php?page=ImpliquezVous>). To date, they have implemented over 120 free hotspots and have registered 28,000 users. As one of its founders commented:

[I]t's more the importance of having decentralizing players offering access; offering it wirelessly, not getting stopped by regulations or other non-business obstacles. (Benoit Gregoire, interview, June 7, 2006).

Who offers wi-fi and how it is offered has been critical to ISF, particularly with their commitment to open source software and politics. In late 2005, there was some discussion that various levels of government and telecommunication companies might be interested in developing a city-wide municipal network in Montreal. As a result of this talk, ISF made a concerted effort to increase their number of hotspots. They felt that this increased presence could play a role in opening up discussions about public and free networks. To date, neither government nor telecommunication wi-fi networks have materialized.

⁴ Members of individuals contributing to ISF mailing lists, Board of Administration, 9; Board of Administration Archive, 1; Communications, 22; Discussions, 88; Mesh, 54; NagiosAlerts, 3; General Volunteers: 183; and WifiDog, 191. Mailing List totals: 551.

However, what makes this organization unique in the larger international context, and even in Canada, of community wi-fi networks, has been a commitment to make their network not only seamless and transparent, for example through use of open source software, but as a site for community.

We believe that technology can be used to bring people together and foster a sense of community. In pursuit of that goal, Île Sans Fil uses its free public access points to promote interaction between users, show new media art, and provide geographically- and community-relevant information.
<http://www.ilesansfil.org/tiki-index.php?bl=y>

ISF founding members have been committed to free public wireless and initially privileged the technical delivery of wi-fi.

[Our] main goal to start off with ... was free public wireless, free wireless in public spaces, and using the technology to create and support local community... (Michael Lenczner, interview, June 7, 2006.)

However, they soon realized that the maxim, "Build it and they will come," did not work and that their own political agendas, were not evident to those who used their services. It is important to acknowledge that there is a wide frame of engaging with wi-fi in this group. While other community wireless groups were fledging such as London Wireless and NYC Wireless, it has been ISF's contention that if they were to take up place and context more specifically through their technology that they could possibly increase citizenship and community involvement generally and more specifically to raise awareness about wi-fi.

To do this, they have developed an application called 'Wifidog' (replacing 'NoCat') and have made meaningful contact with cultural producers in Montreal to provide content for community portals. Wifidog is both a "a gateway per hotspot running a client process and a Web-based central server." As a captive portal all users are

required to login and are taken to an ISF webpage (or redirected to portal page where site is located). This application allows hotspots to create and manage their own location-specific content. They have also extended features allowing users to upload and download text, images, and sound through HAL.⁵ They also have a user profile section allowing users to see who is on-line, where they may be located and information (disclosed solely by the user) about particular users currently on-line.⁶ Finally, ISF has also collaborated with the artists who worked with the Mobile Digital Commons Network (MDCN) and other local artists to display their work.⁷

While this description represents the ideological intentions of ISF, how do owners and users use and perceive these intentions of ISF hotspots?

Research Methods:

We employed a number of research strategies to assess how users and owners use ISF hotspots. These included: the development of a survey (in consultation with ISF) and implementation of interviews with owners and users of hotspots, observations and descriptions of hotspots sites, netstumbler data on surrounding open and closed wi-fi networks in surrounding areas, ISF administrator's data, and forthcoming use of GIS data to possibly explore relationship of demographics and wi-fi networks.

We were able to interview 22 owners and survey 13 users. We conducted this research, May 8 to 11 -- and they were three of the warmest days to date in the city and

⁵ Hubs des Artistes Locaux, HAL, <http://www.ilesansfil.org/tiki-index.php?page=HAL&bl=y> and <http://www.halproject.net/>

⁶ To date, this application has been taken up in four continents and by over 30 groups.

⁷ See Alison Powell, "Île Sans Fil as a Digital Formation," LABCMO, École des Medias, University du Quebec a Montreal, July 20, 2006 and the "Last Mile? or Local Innovation? Canadian Perspectives on Community Wireless Networking as Civic Participation," Presented at TPRC annual conference, September 2006, Washington, DC, <http://www.tprc.org/TPRC06/Sat410Sess06.htm#MuniWireless>.

many Montrealers were outside and not using the ISF networks -- hence our small user sample.

ISF was interested in content pertaining to owner satisfaction with their services and what the owners thought about the portal pages. They were also keen to know how the recent implementation of their network was being taken up in a partnership they had entered into with SDC (Business Association of the Gay Village in Montreal located on St. Catherine East - East of rue Berrie to Ave Papineau). We selected our research sites on the basis of ISF's needs (a local business association, St. Catherine St. E.) and we also visited the 10 top sites that have logged the most users. These sites included mostly cafes and restaurants - although we also visited a laundry mat, a funeral home, and a florist.

So, what are some of our preliminary findings? First, we will discuss the owner data and this will be followed by the user data.

Owners

ISF continues to be committed to providing 'free' hotspots throughout the city. In the top 10 sites and some other ones we researched as well, we noticed that there seemed to be a better integration of the network ISF had courted or for small businesses that came to them to implement their network. Overwhelmingly, most of the sites were very supportive of the ISF network. However, they were concerned about what to do when the network went down. The majority of these sites said that it was difficult to contact ISF when their networks went down. While many of the owners tried simple strategies like turning the router/server off and on, many wanted a more immediate service from ISF or at a minimum some kind of instruction manual on what they could do when the network went down.

For the sites where ISF went into partnership overtly with a local business association, there was less enthusiasm. Many of the owners were not aware if the network was up or down -- and admittedly we have to address some sampling issues.⁸ Not one of these sites had an ISF sticker indicating that they had a hotspot -- there was even one café that had made their own -- most of the business owners were interested in the network for what possible revenue it could bring to their area, but only one of the businesses - a café - had integrated it into their business profile. Most of these owners were not aware of how the network operated, how they could or whether they would want to integrate into their business offerings, and were not aware of the portal pages. This suggests that how ISF enters into partnerships may affect how the network gets taken up.

Users

In terms of users, as the weather was quite nice, there was not a lot of activity on the sites we visited, moreover, some of the data suggests that individuals are accessing the network from other than its designated site. For example, for the sites we visited there were a total of 34 laptop connections -- however -- over the course of the four days there were over 224 separate logins to these sites. As many of you know, if you do not password protect a wif-fe network, and depending on the technology you are working with, the network signal can broadcast up to 300 metres. ISF is not concerned about this bleeding, but it also raises some other interesting research questions about how to measure use and other uses and economies that may be served by these sites/nodes.

⁸ Please note that we visited ISF sites that were nodes for the network. These were individual small businesses that agreed to set up a node in their place of business to facilitate ISF coverage. Hence, some of our sample was committed to the business plan, but not necessarily how the network could increase their revenues.

While we did not find a direct correlation with users and our site visits, there are a couple of generalizations we can make -- almost all of the users we interviewed were young white males who work in a freelance capacity as designers, photojournalists with laptops. We saw very few women with laptops and the one site where we saw the most female users, was a site in an emerging, thriving, but poor neighbourhood, where there were three women using desktop computers supplied by the café. While we need to do more observations of the sites and visit more hotspots, at least in the urban core, just as ISF is largely supported by young white male professionals, so too is this the dominant population of network users.

Overall, ISF has been a tremendous success in the development and deployment of community wi-fi. They have set new standards for user integration through their social software applications and have been generous in transferring their skills and knowledge to other community wi-fi groups around the world. However, our preliminary findings suggest a number of items ISF may want to ponder -- who really needs these networks? - how does securing more business from regular customers who spend more time in your place of business enhance profits? -- how do these regular customers who spend more time and take up more space change patterns of use in your establishment? -- why aren't women using these networks? - how will this group of young white freelance workers shape our expectations, design and delivery of other wi-fi networks?