

## Wi-Fi worry

### While some are concerned wireless access to the Internet will lead to health woes, a Thorold company that installs the technology insists it is safe

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When white boxes started appearing on lampposts throughout Stephanie Soccio-Marandola's Thorold neighbourhood this spring, red flags immediately went up.

"There was an eeriness of what is that?" Soccio-Marandola said.

Turns out, they're transmitters of wireless fidelity (Wi-Fi) technology that Thorold council voted to have installed for at least a year in Confederation Heights.

It's the kind of feature that could make the techno-savvy living there log on to the Internet with glee -- and do it anywhere in their home, no cables attached.

But the very sight of those boxes still makes Soccio-Marandola uneasy and leaves her wondering if wireless access to the information superhighway is only going to lead to health problems down the road for her family and neighbours.

She is concerned that with every byte of information transmitted between the nodes and computers, dangerous radiation is being emitted, adding another ingredient to the electromagnetic soup we're exposed to each day.

Hydro tower corridors, radio and television signal towers, cellphone antennas, the wiring in our homes and all those seemingly benign gadgets we use, including cordless telephones, all emit electromagnetic radiation. It's a form of energy that some scientists say can interfere with normal biological processes in our body and create discomfort and disease.

Given the number of radiation sources out there, Soccio-Marandola calls it a "constant invasion" and Wi-Fi is just one more invader.

Some in the scientific and medical community say it causes electrohypersensitivity, a condition that can cause cognitive dysfunction, vertigo, skin rash, chest pressure, rapid heart rate, depression, anxiety, poor sleep, body aches and headaches in people using or near devices emanating electromagnetic fields.

"What council decided to do was add another layer to what we're already environmentally combatting," Soccio-Marandola said. "Residential areas should be places where people can seek solace in their homes.

"People should have a choice if they want these things or not."

That's why, last month, Soccio-Marandola and two other women, neither of whom lives in Thorold, went to council armed with numbers and studies backing up their concerns and asked it to reconsider its decision to make Confederation Heights wireless.

That makes Thorold yet another community experiencing a backlash from its citizens for either going or considering becoming wireless.

San Francisco, which eventually opted against a municipal Wi-Fi project because of public pressure, and Santa Fe, N. M., are others. Even the German government has warned its citizens to avoid using Wi-Fi whenever possible.

"Thorold has a decision to make about the technology and it decided to bring the technology closer to people," she said. "Ideally, I would love for them to get the boxes out of the area."

Michael Somerville wouldn't move next door to a radiation-emitting cellphone tower or hydro corridor.

"Would I want to be living next to those? No. I do believe people can get sick from radiation. There are studies to prove it," Somerville said.

But the ambitious president of Relia-Clear Canada Inc., the company that installed Wi-Fi technology in Confederation Heights, would have no qualms being a neighbour to one of his transmitters.

"I feel it's a lot of misunderstanding about what the technology is and what equipment we're using," Somerville said about Soccio-Marandola's concerns.

Studies on the effects of exposure to the technology have yet to be done.

People with concerns are likely confusing Wi-Fi with the infamous fervor about cellphones, and their links to cancer, Somerville said.

But the technology is safe, he asserted, pointing to product literature that quotes scientists saying Wi-Fi poses no health risks and emits less intense radiation than cellphones.

His transmitters, he noted, are also only one

small piece of the electromagnetic field that is Confederation Heights.

There are 896 wireless access points that ReliaClear, through its own assessment, detected at street level in the neighbourhood. Only 45 of those are ReliaClear's.

Compared with what we expose ourselves to in our homes, the maximum four watts of radiation coming off those lampposts is minuscule, Somerville said.

"If you picture a microwave, a microwave is 1,500 watts," he said.

Even the World Health Organization has said "there is no convincing scientific evidence that the weak radiofrequency signals from base stations and wireless networks cause adverse health effects," Somerville noted, referring to a report penned in May 2006.

That's who Health Canada takes its cues from when it comes to formulating regulations about wireless technology use, said Paul Spendlove, the federal agency's media relations officer.

"Health Canada has no scientific reason to consider the use of wireless products and supporting infrastructure harmful to the health of Canadians," he said.

But Magda Havas, an environmental toxicologist and professor at Trent University in Peterborough, said the federal agency is considering only one aspect of radio frequency exposure: short-term thermal effects. As long as the radiation emitted doesn't raise body temperature one degree Celsius in six minutes, it's considered safe.

Those guidelines are "woefully inadequate," she said.

What Havas, who used cellphone research to pen a report on health and environmental effects of the proposed San Francisco wireless network, and other scientists studying the issue say is missing are guidelines for non-thermal or biological effects. There also aren't guidelines governing long-term exposure.

What's emitted from Wi-Fi, she said, is among the lowest forms of radiation but we also live close to it, with equipment in our homes and offices.

"You're exposed two ways: you're exposed from your computer, and that's going to be the highest exposure, and you're exposed because of the antenna that that computer is talking to," she said. "The two concerns are the people who use the technology. They're obviously going to get the highest dose of radiation. The next concern is people who live in close proximity to the antennas. Even though they're not using this technology, they're being exposed to it 24/7."

Havas is used to detractors and those who say there's no conclusive evidence of Wi-Fi's health risks.

"The question of whether it's conclusive or not is a judgment call, and your judgment and my judgment and some-one's judgment who works for the cellphone industry are going to be quite different," Havas said.

"What you've got to ask is, is there any evidence of harm? When you ask that question, the answer is a definite yes. There is harm. The next question you ask is, has every study showed harm? And the answer is no, but that's normal in science."

That's when those scrutinizing the data need to look at how thorough the studies are and who's funding them, she said.

Between 60 and 70 per cent of those not funded by the wireless industry show adverse health effects, such as cancer and electrohypersensitivity, Havas said. But so do about 30 per cent of those funded by the industry. The problem is, those results are down-played in study abstracts, the part that laypeople are most likely to read, she said.

In communities like Thorold that have gone ahead with the technology, issuing warnings about possible adverse health effects should be "absolutely mandatory," Havas said. Ditto for antenna locations.

More than 100 Canadian cities and towns have Wi-Fi-equipped facilities or neighbourhoods.

Cities should also offer monitoring to those who are concerned about exposure, Havas said. "Once you find out what you're exposed to, you can do certain things to protect yourself."

But any expenses incurred by residents to do so, such as buying protective window film, should be subsidized by the municipality, she said.

Cities that subscribe to this technology without taking those measures are leaving themselves vulnerable to lawsuits, Havas said.

"The research is just growing by leaps and bounds," Havas said. "As we begin to get more of these studies out, we're going to look at this technology and say, 'My God, why did we let it grow to the degree it has?'"

Soccio-Marandola and crew's presentation at Thorold council in May sparked a two-hour debate with some councillors accusing them of using scare tactics to get what they want. Council opted to get the input of Health Canada on the issue before making any further decisions.

But, Spendlove said, that likely won't happen.

"The time and staff resources required to participate is beyond what can be reasonably spared without affecting our ability to carry out our broader range of activities, such as the research and effort to remain current with the science related to the emissions from radio-communication and broadcast towers and power lines," Spendlove wrote in an e-mail.

Somerville invited anyone with concerns about the technology to contact ReliaClear.

"We're open as a company and I'd like to talk to anyone with questions or concerns," he said.

...re opened a company, and refuse to talk to anyone with questions or concerns, he said.

Soccio-Marandola just hopes that council keeps one thing in mind as it makes a decision about how to handle her concerns.

"This isn't about winning an argument," she said. "It's about doing what's right."

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President of ReliaClear

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What is Wi-Fi?

the issue.health concerns.msomerville@reliaclear.com<http://www.biointiative.org/report/index.htm>Wi-Fi stands for Wireless Fidelity. It is a way of connecting to the Internet without having to plug your computer directly into a modem.

Wi-Fi-free zones

San Francisco decided last year not to forge ahead with converting the city into a wireless community after public outcry from residents concerned about exposure to radiation and possible adverse health effects.

In April, France's National Library opted to go from wireless to wired, giving up Wi-Fi when trade unions expressed concerns about health effects discussed in a report written by 14 international scientists studying

In 2006, Lakehead University in Thunder Bay kiboshed plans to provide wireless Internet access amid

It's not Wi-Fi free, but in Germany, the federal government has warned its citizens to avoid using the technology wherever possible because of the health risks it may pose.

Where to go for more information about Wi-Fi technology:

ReliaClear Canada, Inc.

1-877-858-8647 or e-mail president Michael Somerville at

Log on to:

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