

Frequently Asked Questions

Wireless Technology

Q: What is the difference between the phrases *Wireless Technology* and *WiFi*?

A: Both are similar and are used interchangeably.

Q: Why is DSBN installing WiFi in schools?

A: The Board's Instructional Technology Plan is designed to guide and support the expanding use of technology in our schools. The plan addresses the growing need to equip our students with the technological tools to develop the 21st century skills necessary in our modern society.

The Instructional Technology Plan improves access to technology for students and teachers. Through wireless technology, teachers and students can engage with the world in new and innovative learning environments, through modern classroom tools, that help students to grow and experience success.

Q: Is wireless technology new?

A: No. Wireless technology is commonplace and prevalent throughout society, within all aspects of modern life: places of work, schools, hospitals, libraries, cafés, and in many, many homes.

Similar wireless signals for AM/FM radio and television have been present everywhere in our school board jurisdiction for many years, as have cellular phone signals.

Q: Is wireless technology safe?

A: Yes. Health Canada, the World Health Organization, numerous international, provincial and local health authorities have all concluded that the use of wireless technology does not pose a public health risk.

Q: Do other school boards use wireless technology?

A: Yes. Wireless technology has been in place in school boards, universities and other public institutions, including hospitals, for years..

Q: What is Safety Code 6?

A: Safety Code 6 (2009) is Health Canada's established standards for protecting human health from radiofrequency electromagnetic energy. These safety guidelines have set limits for safe human exposure to electromagnetic energy from all radiofrequency (RF) devices, including the base stations used in wireless networking.

Health Canada states "there is at present no scientific basis for the premise of health risks from radiofrequency electromagnetic energy at levels below the limits within this safety code."

Q. How do the levels of electromagnetic energy within wireless classrooms compare to Safety Code 6 standards?

A. Health Canada's Safety Code 6 establishes 10 W/m² as the limit for all WiFi equipment.

The average readings we have tested within schools are 1,000 to 10,000 times lower than the Safety Code 6 threshold. With a concentration of 15 laptops streaming video at the same time, the highest reading recorded near an access point was 0.015 W/m² or 0.15% of the limit established by Health Canada.

For comparison, measurements taken from a cell phone streaming video were 0.0605 W/m² or 0.6% of the limit established by Health Canada. Measurements taken directly at a microwave oven set at high for 30 seconds resulted in readings of 0.956 W/m² or 9.56% of Health Canada's limit.

Q. Hasn't the World Health Organization recently raised concerns regarding the use of wireless technology?

A. No. On the basis of limited human studies and inadequate other studies the WHO/International Agency for Research on Cancer (IARC) classified radiofrequency electromagnetic fields, associated with cellphone use, as a Group 2B Agent and possibly carcinogenic. They are not saying it *does* cause cancer, or that it *probably* causes cancer, only that on the basis of very limited studies it is a possibility. It is almost impossible to prove a negative, and so this was placed in the same category with respect to their possible cancer risk as many other substances such as coffee, lead and pickled vegetables.

In the report, Dr. Jonathan Samet (University of Southern California, USA) Chairman of the Working Group, suggests that this conclusion "means that there could be some risk, and therefore we need to keep a close watch for a link between cell phones and cancer risk."

Q. Is wireless technology the same as using a cellular phone?

A. No. Wireless technology or WiFi is not the same as cell phones. WiFi in schools is 1,000 times less powerful than cell phone use and is used much, much farther away from the body.

Q. What is the precautionary principle? And how does that apply to use of wireless technology?

A. The precautionary principle implies avoidance when there is a real suspicion of harm to humans or the environment. In common with other health-related actions, it requires careful thought to determine if it is appropriate to each particular circumstance.

Q: What WiFi technology will KPR be using in its schools?

A: KPR has undergone an open and fair request for proposal (RFP) process and has selected Meru Networks as its standard. The Meru AP300 access point will be used in schools.

Q: Is the WiFi technology being used in KPR Schools the same as what is used in most homes today?

A: Yes, the WiFi technology used in KPR schools operates on similar frequencies and is subject to the same safety standards as the technology presently used in homes.

Q: Is there such thing as “industrial strength” WiFi?

A: No, all WiFi technology in Canada must abide to Health Canada Safety Code 6 standards. There are industrial wireless models that have special external enclosures to protect against the elements (heat, snow, ice), but these models are still subject to the same safety standards.

Q. Has the Board tested electromagnetic frequency in wireless classrooms?

A. Yes, our testing results have shown electromagnetic readings 1,000 to 10,000 times lower than national safety standards. We have established a testing protocol that will ensure that all WiFi equipment deployed within our buildings remains safe for our students and staff, and well within the standards established by Health Canada.

Q: When will WiFi be installed in KPR schools and available for teachers and students to use?

A: Work is underway in many schools now and the anticipated completion date for use is September 2011. Some schools may be operational before that time.

Useful General Information Links:

Peterborough County-City Health Unit - <http://www.pcchu.peterborough.on.ca/HH/hh-wifi.html>

Ontario Agency for Health Protection and Promotion - www.oahpp.ca

Ontario Ministry of Education - www.edu.gov.on.ca/eng

Public Health Protection and Prevention Branch, Ontario Ministry of Health and Long Term Care - www.health.gov.on.ca/en

World Health Organization (WHO) - www.who.int

Industry Canada - www.ic.gc.ca

International Commission on Non-Ionizing Radiation Protection (ICNIRP) - www.icnirp.de