FOR THE RECORD

April 15, 2020

5th GENERATION WIRELESS COMMUNICATION

Wireless technology has made extraordinary advances in just four decades, to the point where we are now on the verge of 5G or the fifth generation of wireless communications.

The first generation or 1G in the early 1980's introduced us to wireless telephones. These phones were only for talking and had almost no capacity to transmit data. They existed alongside other wireless technologies, but these technologies weren't able to connect or "talk" to each other.

Along came 2G or the second generation, which was launched in the early 1990's. 2G had better sound quality, better security and more capacity for our mobile phones. We were able to send email and text messages, and even pagers began to be replaced by mobile phones, allowing people to communicate directly.

The advent of 3G allowed higher speed transmissions, multimedia access and global roaming – now we could stay connected in more places and over greater distances. 4G allowed new apps and services, connectivity to the internet became faster and cheaper. 4G allowed us to send data, surf the internet, watch, post and send videos, as well as listen to live streamed music.

Experts are saying that 5G or the fifth generation, will be a game changer in wireless telecommunications - although with it comes many questions, theories and concerns, which have recently been directed at the City of Nelson. It is important to understand, the City does NOT provide services such as this to the community. In fact, the City of Nelson has only layed what is known as 'dark fibre.' Dark fibre requires a service provider to make optical connections among the different locations and was constructed to service City assets and the business community.

TELUS is in the process of a major fibre build, both within and outside the City of Nelson. We have however received written confirmation that the construction activity by TELUS is strictly related to the deployment of the PureFibre Network to homes and businesses. The vehicles and crews the public sees in and around Nelson are installing the infrastructure needed to upgrade broadband capacity for the City of Nelson and are not placing any wireless technology.

With respect to some high level information on 5G and TELUS' wireless network, the spectrum auction that would allow TELUS to deploy 5G small cells has not yet occurred. 5G small cells are not likely to be 5G-enabled prior to 2021 and would initially be targeted at high density urban centers. Any small cells that may be deployed before then will strictly be 4G-enabled small cells. These small cells transmit a fraction of the power that a traditional cell site transmits and are meant for short range service. TELUS' license as an operator is contingent on following Safety Code 6: Health Canada's Radio Frequency Exposure Guidelines. All TELUS sites are built and maintained to the latest revisions of this code.

For further information on 5G or other safety enquiries please use the following Health Canada link: https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11467.html.