5G Technology coming to University of Waterloo soon

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The latest generation of cellular wireless network, 5G, is expected to be accessible in the university of Waterloo campus likely in the first half of 2020. 5G promises to bring astonishingly faster speeds owing to the shift toward the new Radio Access Network (RAN) system, which will have significantly higher bandwidth but at the expense of much more limited range.

Sanjeev Gill, the University of Waterloo's associate vice-president of innovation, said discussions are ongoing with the Rogers to determine where the small cell stations will be set up for the transmission of 5G signal in the university. This is in contrast with the larger, more powerful cell stations used for 4G network. With the small cell configuration for 5G, users will experience a significant improvement in performance but only within close proximity.

Rogers communications and University of Waterloo agreed to form a partnership to implement the 5G and subsequently carry out advanced research in engineering, medical imaging and artificial intelligence. In addition to the partnership with the university, Rogers has also become the first wireless provider to work with ENCQOR, a $400-million partnership led by the governments of Canada, Ontario and Quebec. ENCQOR has established the first pre-commercial 5G telecommunications corridor in Canada. This research initiative focusses on brining a multitude of companies together to leverage the full potential of 5G.

"Initially, the availability of 5G will be confined to research and innovation hub in the campus where the technology will be deployed and tested intensively before making it available for wider audience across the campus in the second half of the year. This strategy will help Rogers understand more about the logistics and challenges associated with the 5G and come up with best practices and methodologies for future deployment all over Canada.", Dr. Gill said.

"To address health risks, the technology will be deployed in pilot phase in compliance with the health and safety regulatory policies and assess the radiation levels emanating from the 5G network", Dr. Gill said.

Interestingly, Rogers communication is the first telecommunication carrier in Canada that is actively involved in an actual research in the transformational technology with a Canadian university without any reliance on the external vendors for the underlying software and hardware support.

Dr. Gill believes that in order to ensure that students and faculty members get the maximum out of 5G, it is imperative that Rogers and the university of Waterloo research team define use-cases, which outlines the ways in which 5G will benefit the targeted group. For instance, students working on data intensive projects which involves highly sophisticated computations are much more likely to get benefitted from the new cutting-edge technology.

In summary, experts are predicting that 5G revolution is going to play a pivotal role in shaping the day to day tasks of vast number of industries and consumers. Furthermore, the maiden collaboration between Rogers communications and the University of Waterloo will result in "made-in-Canada" innovations which will propel Canada's digital economy in the near future.