The 5G Frontier; Millimeter Waves

Abstract:

With the deployment of fourth generation (4G) wireless equipment almost complete, the focus of the research community has now switched to the fifth generation (5G), targeted for commercialisation in 2020. Increased data rates, a renewed focus on the internet-of-things and the scarcity of spectrum will force operators into higher frequency bands despite deteriorating performance in terms of coverage. The new mm-wave bands under consideration offer both the opportunity for wider bandwidths and the challenge of providing the coverage. International research organisations are doing measurements to better understand the behavior of mm-wave signals in different wireless access environments. This presentation will describe the mm-wave measurement program, currently underway at Victoria University, which aims to identify performance issues under local conditions. The results have been used by Ericsson and Telstra as inputs to international standardization bodies, 3GPP and ITU.

Michael Faulkner

Professor
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Professor Michael Faulkner received a B.Sc.(Eng) from London University, UK, and a Ph.D. (1993) from the University of Technology, Sydney, Australia. He is professor in Telecommunications at Victoria University, Australia. His original research interest was in the application of (digital) signal processing techniques to the correction of the non-ideal characteristics of practical RF components; for example, quadrature modulators and power amplifiers. He has given tutorials, seminars, and invited papers on this topic. Since then his interests have broadened to encompass all physical layer aspects of wireless systems, with an emphasis on implementation. He has supervised research projects in radio propagation measurements (wideband channel sounding, direction of arrival etc.), multiple antenna systems, transceiver algorithms, architectures and circuits. His research interests cover all areas of wireless system design and his current activities are focused on fifth generation wireless technologies. He has authored or co-authored over 100 publications and is regularly involved with industry sponsored research.

Time and Date:

1:30 pm – 3:00 pm, Tuesday, October 17, 2017

Venue:

Room A432, Building A, Victoria University (Footscray Park Campus), Ballarat Road

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Refreshments will be served at 1.30 PM

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