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Design and simulation of LTE radio system for broadband wireless access in central Phnom Penh (Conference Paper)

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Abstract

The most up-to-date application and many numbers of users need higher access speeds and lower latency of wireless communication. As a result, mobile companies need more capacity and higher efficiency to give the high quality service to the customers. LTE has been designed to get broader channels up to 20MHz, with low latency and packet optimized radio access technology. The peak data rate envisaged for LTE is 100 Mbps in downlink and 50 Mbps in the uplink. To support the simultaneous use of legacy and new systems, mobile companies need to give a better radio system, especially in central Phnom Penh city of Cambodia. The purpose of this study aims to designs, simulates, analyzes and expose the state of the art of map planning LTE radio system. Special focus is laid on radio link budget along with broad coverage area and capacity. The outcomes cover the interference limited coverage calculation, the traffic capacity calculation and radio frequency assignment. The implementation is attained on the software platform for the LTE Radio Planning and also can see the simulation antenna in Google Earth. The study will show a detailed LTE radio dimensioning procedure such as coverage area and capacity in Phnom Penh city. The simulation and analysis of the coverage by signal level and overlapping zone also a part of this work. © 2015 IEEE.

SciVal Topic Prominence 

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