

PROPOSED PRESENTATION FOR ITU-BDT REGIONAL SEMINAR
ON FIXED MOBILE CONVERGENCE

Topic

Impact of Operating Frequency and Radio Channel Variability on a Converged Wireless Access Network and Telecommunications Service Provision in Sub-Saharan Africa

Abstract

Wireless technologies are the most favored approach to achieve a cost effective converged network platform for telecommunications service provision in Sub-Saharan Africa. In addition to flexibility in bandwidth allocations to facilitate asymmetrical traffic, the network topology and capacity versus coverage provisions can be designed to meet specific user requirements.

However, the design challenge for wireless networks in Sub-Saharan Africa is how to maintain high throughput and high capacity access over a large geographical area. This pointed our research group to investigate effects of choice of operating frequency and impact of radio channel variability due to NLOS fading conditions on coverage and capacity designs using data obtained from our propagation measurements.

In this presentation, we summarize our research results on the robustness of different kinds of multiple access schemes due to radio channel variability.

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