METHODOLOGY OF PERFORMANCE MEASUREMENT OF LTE-A NETWORKS BASED ON RSRP COVERAGE USING A MOBILE APPLICATION FOR TEACHING LAB ACTIVITIES

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ABSTRACT

This study presents the methodology, a description of the resources and results of an LTE-A coverage measurement campaign developed in an academic campus, as part of the teaching laboratory activities of a mobile communications course at the Bolivian Private University in Bolivia. As a first stage, a topographical survey of the campus and a definition of measurement routes were carried out. Second, RSRP key performance indicators were identified in Network Cell Signal & Wi-Fi info Lite, the tool that was used to collect data. As a third step, measurements were made along the selected routes. After analyzing the results obtained, it is possible to conclude that the measurement methodology is constructive for academic purposes and teaching in a Telecommunications Engineering program. Besides, a general optimization for the availability of service on campus can be proposed and better levels of coverage of one of the mobile operators were observed with respect to that of a second operator.

Keywords: Mobile Communication, LTE-A, RSRP, KPI, Coverage.

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