

Mobile Phones Near Field Levels in the 2nd and 3rd Generation of Communication Standards

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Abstract

By using a non-standardized procedure, the work describes the possibility to obtain complementary information on the human exposure level when mobile phones are transmitting by using the 2nd or the 3rd generation (2G and 3G) of wireless communication standards. The time-evolution of the radiated field in the first 25 seconds of a call initiation is analyzed, together with the map of the relative field strength very near to the phone. There is a characteristic footprint of 2G phones' field level variation in time during call initiation, which is not the case for the 3G phones. Generally the E-field strength near to 3G handsets is lower and more constant during the calling period, in comparison with the GSM handsets. The near-field distribution next to the handset's body is dynamic and highly dependent on the distance where the measurement is made.

Biography

Antoniu MICLĂUȘ is a student in the 2nd year at the Faculty of Electronics, Telecommunications and Information Technology - Technical University of Cluj Napoca, Romania. His interests are presently focused on wireless systems and antenna & propagation.

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Manuscript received on July 17, revised on September 7, 2014