

# THE IDLE MODE OPTIMIZATION IMPROVING END USER EXPERIENCES

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**Abstract**— This paper presents the methodology of defining the measurement trigger conditions and evaluation conditions of LTE cell reselection for release 9 capable UEs. In the proposal of cell reselection parameters, the RSRQ measurement quantity is considered to account for the increase of packet traffic in LTE networks. In addition, the proposal is designed to improve the end user experiences such the LTE camp-on ratio, the avoidance of unnecessary cell reselection measurements causing the battery drain and the ping-pong effect between LTE and WCDMA inter-RAT cell reselection or redirection. The cell reselection parameter proposal is made based on the field test data collected in Tokyo metropolitan area.

**Keyword**— LTE release 9, cell reselection, RSRQ, idle mode parameters



**Kwangrok Chang** (B.E.'93-M.E.'95-Ph.D.'98) received the degrees of Master and Ph.D in Electronic and Electrical Engineering from POSTECH (Pohang University of Science and Technology) in 1995 and 1998, respectively. Since 2000, he has been with Nokia Siemens Networks Ltd. (NSN), where he led the Network Planning and Optimization Group of Japan and Korea as the NPO head. He left NSN at 2011 and co-founded MOTiV Research Co., Ltd with Seiji Kunishige aiming for providing communication service providers and system vendors with the mobile network planning strategy and optimization services and the development of the advanced network performance enhancement methodology based on the big network data. His present interests are the enhancement of end user performances in high speed data networks, such as HSPA and LTE and the innovation of network performance data collection and its processing.



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