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 as 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.

Ragil Putro Wicaksono (B.Eng’06-M.Eng’11) had been working with NSN as network planning engineer for 2.5 years before received the degrees of Master in Electronic and Electrical Engineering from Tokyo Institute of Technology (東京工業大学), Japan, on September, 2011. Afterwards he works in MOTIV Research Co. Ltd, as a cellular network consultant. His research interest are mainly related with mobility and radio resource management in cellular network (WCDMA, LTE, and LTE-A).

Seiji Kunishige (B.Eng’97) had worked at Couei as customer service engineer for first launch of CDMA network (CDMA-one) in Japan for 4 years after graduated Kansai University. He has worked at Nokia Siemens Networks since 2001 and joined Network Planning and Optimization team. He led technical consulting team of WCDMA/HSPA networks as Solution Architect manager. He co-founded MOTIV Research Co., Ltd with Kwangrok Chang as CTO at 2011 and he is currently in charge of the general management of technical issues.

Noriteru Takagaki had been with NSN for a decade mainly focusing on network key performance indicator analysis and its data processing to identify the root causes of the abnormal network call performances. In 2011, he joined MOTIV Research Co., Ltd. as the field test team manager maintaining the quality of field tests and improving the efficiency of the network data collections.