Measurement and Analysis for 3.5GHz Smallcell Environment with Time and Spatial Ratio

Jinhyung Oh, Byungjin Lee**, Kyungseok Kim** and Young Jun Chong

Radio Technology Research Division, Electronic Telecommunications Research Institute (ETRI), Daejeon, South Korea

Radio Communications Engineering, Chungbuk National University, Cheongju, Chungbuk, South Korea**

E-mail: jinhyung@etri.re.kr, byung2487@naver.com**, kseokkim@cbnu.ac.kr**, yjchong@etri.re.kr

Abstract— Recently, researches regarding spectrum sharing has been underway due to the insufficiency of spectrum resources. Basically, it is necessary to solve the temporal or spatial environment in order to share the frequency. In this paper, we will introduce to our own channel sounder and we use this system to generate path loss modelling based on time and space ratio.

Keywords— Channel sounder, small-cell, time and spatial ratio



Jinhyung Oh received his B.S degree in Electrical Communications Engineering from Korea Advanced Institute Science and Technology (KAIST), Daejeon, in 2008 and M.S. degree in Electrical and Electronic Engineering from Korea Advanced Institute Science and Technology (KAIST), Daejeon, in 2010. In 2010, he joined the Electronic and Telecommunications Research Institute (ETRI) where he is a researcher of the Radio Technology Department. His research interests include wireless communications, interference analysis and digital beamforming.



Byung Jin Lee received the BS degree in information and communication engineering form Chungbuk National University, Korea, in 2013. He is currently working towards the MS degree with the school of wireless communication engineering of Chungbuk National University. His research interests include visible light communication, radio propagation.



Kyung Seok Kim received the PhD degree in electrical and electronics engineering from the University of Surrey, the United Kingdom, in 2002. He worked for ETRI from 1989 to 1998 and from 2002 to 2004. He is currently working as a professor in Chungbuk National University, Korea. His research interests include SDR, cognitive radio, power line communication, digital radio and MIMO wireless channel (*corresponding author, phone: +82-10-8802-5823; e-mail: kseokkim@cbnu.ac.kr).



Young-Jun Chung received the B.S. degree from the Jeju University, Jeju Island, Korea, in 1992, and the M.S. degree in electronics engineering from Sogang University, Seoul, Korea in 1994, and Ph.D degree in Electronic Engineering from Chungnam National University, Daejeon, Korea in 2005.

Since 1994, he has been with ETRI, Daejeon, Korea, where he is a leader of spectrum engineering research and section principle member of the research staff of the Radio Technology Department. His research interests include RF circuit, RF systems, and spectrum engineering.