

# **A Combined Handover Scheme for LTE-Advanced System**

Yang Lee a, Jihong Zhao ab, HuaQu b

a Department of Communications Engineering, Xi'an University of Posts and  
Telecommunications, China

bSchool of Electronic Information, Xi'an Jiaotong University, China

*babyface5425@sina.com, eeleeg@gmail.com, qh@mail.xjtu.edu.cn*

*Abstract*—On the progress of researching for key technology and standard of LTE-Advanced, enhanced mobility control and Carrier Aggregation (CA) are kept to be researching points. Injection of CA brings new challenge to handover procedure for one thing, for another it could be used to support handover mechanism to overcome outage probability of user plane from handover of R10. In this paper we propose a handover scheme under CA mode called Combined Handover Scheme, which makes use of data supporting from Secondary Cell (SCell) during handover execution to overcome outage probability of handover in R10. We make supplement to handover procedure of R10 in order to accommodate the proposed scheme.

*Keywords*—LTE-Advanced, Handover, Combined handover, Handover negotiation, Carrier aggregation