

## ABSTRACT

*Mobile terminals allow users to access services while on the move. This unique feature has driven the rapid growth in the mobile network industry, changing it from a new technology into a massive industry within less than two decades.*

*Handover is the essential functionality for dealing with the mobility of the mobile users. Compared with the conventional hard handover employed in the GSM mobile networks, the soft handover used in IS-95 and 3G has better performance on both link and system level.*

*In future mobile networks, the downlink is more likely to be the bottleneck of the system capacity because of the asymmetric nature of new services, such as Internet traffic.*

*The biggest (maximum) blocking probability taken when user quantity in both cell are 34 users, is 46.135 %; the biggest (maximum) dropping probability taken when user quantity in both cell are 34 users, is 25.53 %; when user is not in a handover state, where user quantity in both cell are 17 users, the interference taken by user in BS A and BS B are over 4 dBm, that is 4.785 dBm at BS A compare to 4.442 dBm at BS B (1 : 0.928); when user is in a handover state, where user quantity in both cell are 17 users, the interference taken by user at BS A is 2.71 dBm, meanwhile the interference taken by user at BS B is 2.4 dBm (1 : 0.886).*

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