



PERFORMANCE OF THREE DIFFERENT POWER CONTROL
SCHEMES IN LTE-A FEMTOCELL DEPLOYMENT

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MASTER OF SCIENCE
IN TELECOMMUNICATION AND INFORMATION ENGINEERING

SEPT 2014

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Dissertation submitted in partial fulfilment of the requirements for the
degree of
**Master of Science in Telecommunication and Information
Engineering**

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اَللّٰهُمَّ صَلِّ وَسَلِّمْ وَبَارِكْ عَلَى سَيِّدِنَا مُحَمَّدٍ
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SEPT 2014

ACKNOWLEDGEMENT

Alhamdulillah, thanks to Allah SWT the Almighty for His blessing made this effort of completing this final year project successful and completed just on time.

Special gratitude to my supervisor, Dr. Azita Laily binti Yusof for her nice guidance, reading the draft and making a number of helpful discussions until this study was completed successfully. Thousand of thanks go to Dr. Norsuzila Binti Ya'acob as the coordinator of this subject.

Also a very grateful goes to all lecturers and group mates for their grant support and cooperation, whose time and effort were very much appreciated. Last but not least, I would like to thank my beloved family especially to my wife for their emotional support and encouragement. Without all of these supports, this project would not have been possible to be accomplished.

ABSTRACT

Femtocell deployment is considered to be the most efficient way to improve the capacity of cell and performance of mobile service especially in high traffic user at urban area. However, the radio signal interferences were occurs in Macrocell that cause the capacity degradation in Long Term Evolution-Advanced (LTE-A) Femtocell. Therefore, minimizing the interference in LTE-A Femtocell using power control technology is necessary. Femto-to-femto interference is the main focus in this paper. The main objective of this paper is to analyze the performance of three different power control scheme which are open loop power scheme, closed loop power scheme and hybrid power scheme. In order to achieve the main objective, this study developed macrocell topology with random femtocells consists of random femto users using simulation software which is MATLAB. Based on the analyses, the proposed hybrid power control scheme is the best technique to mitigate the interference and at the same time will fully optimize the transmitted power.

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