

# **LTE PERFORMANCE EVOLUTION OF SCHEDULING STRATEGY FOR MULTIPLE ANTENNA TECHNOLOGY**

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## **ABSTRACT**

Long Term Evolution (LTE) is aimed to deliver high speed data and multimedia services. Scheduling strategy and MIMO antenna technology are said to be the key elements in improving the performance of the LTE system. So, the suitable scheduler for each antenna technology by evaluation the performance using Vienna System Level LTE Simulator is presented. This research focuses on four type of scheduling strategy. There are Best CQI, Max Min, Proportional Fair and Round Robin. This paper addresses the scheduling strategy in SISO and MIMO antenna technology in two environments with specific size of users. Due to software limitation, only the downlink part of the LTE network will be considered.

*Keywords: Long Term Evolution (LTE), LTE simulator, scheduling strategy, antenna technology.*

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## CHAPTER 1.0

### INTRODUCTION

*Introduction section described the background of study, objective, and the scope of work and limitation of this research. The thesis organization explains the chapters included in this thesis.*

#### **1.1 Background of Study**

Mobile networks have become an important key element of Internet access recently, although these networks were primarily designed for voice transmission between two users. With the establishment of the 3<sup>rd</sup> generation of mobile networks and their upgrades, data rates have been continuously increasing but still have not reached those of fixed networks. At the same time, the amount of user data transferred and the number of mobile Internet users have also increased.

The increasing amount of transferred data and new applications such as mobile games and television, Web 2.0 and video streaming have motivated the 3GPP (*Third Generation Partnership Project*) organization to start the LTE project in the future.