LIST OF FIGURES

Figure 2.1 Propagation Component between base Station and Mobile Station 10
Figure 2.2 Approximate timeline fo the mobile 15
Figure 2.3 Frequency time represetaion of an OFDM 16
Figure 2.4 Defference between channel allocation using OFDM and OFDMA scheme 17
Figure 2.5 Comparison of how OFDMA and SC-FDMA transmit a sequence of QPSK data symbols 19
Figure 2.6 Multiple Antenna Access scheme 22
Figure 2.7 A 2x2 MIMO configuration with two transmitting antennas 24
Figure 3.1 Phnom Penh Map 28
Figure 4.1 Cambodia Map 44
Figure 4.2 Cambodia Map in Atoll Software 45
Figure 4.3 Position Site map table in Phnom Penh 46
Figure 4.4 Position Site of GSM and LTE 46
Figure 4.5 Prediction Types of GSM and LTE 47
Figure 4.6 Coverage by signal level 48
Figure 4.7 Diagram of Coverage by signal level in Area 49
Figure 4.8 Diagram of Coverage by signal level in Percentage 49
Figure 4.9 Coverage by C/(I+N) level 50
Figure 4.10 Coverage by C/(I+N) level in Area 50
Figure 4.11 Coverage by C/(I+N) level in Percentage 51

Figure 4.12 Coverage by throughput 51
Figure 4.13 Coverage by throughput in Area 52
Figure 4.14 Coverage by throughput in Percentage 52
Figure 4.15 Coverage by overlapping zones 53
Figure 4.16 Coverage by overlapping zone in Area 53
Figure 4.17 Coverage by overlapping zone in Percentage 54
Figure 4.18 Computation Zone area in Atoll 54
Figure 4.19 Formula of the Propagation in Atoll Software 55
Figure 4.20 Overlapping Zone show in Google Earth 55
Figure 4.21 The real Antenna and the Antenna from Atoll 56