

KFUPM - COMPUTER ENGINEERING DEPARTMENT

COE-543 – Mobile Computing and Wireless Networking

Assignment 1 – Due May 3rd, 2009.

Problem 1: Describe briefly each of the following mobile systems: UMTS, LTE, and UMB. The description should include the main characteristics and the base technology and service features of the system. Not more than one page per system is required.

Problem 2: Rayleigh fading channels

The envelope of the received signal in a multipath channel can be modeled using a Rayleigh or Rician distributions. Specify each of the distributions and identify the corresponding parameters and their physical meaning. Show that the Rayleigh distribution is a special case of the Rician distribution.

Textbook Problems: 2.2, 2.4 (but for 90% coverage and 12 dB standard deviation), 2.7, 2.13, and 3.3.