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| Lab-12 |
| *12* | *Site Survey for LTE eNodeB* |
| **Advanced Wireless Lab** |
| TLEN 5830-AWL |
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**Goal:** Establish a baseline noise and interference characterization of the 2500 MHz EBS band and the 2.4 GHz ISM band in (1) DLC-1B20; and (2) Along the bus stops on Colorado between Folsom and 28th Street. This baseline information is a requirement prior to powering up the DLC-1B20 LTE eNodeB.

**Before turning on the eNodeB**

1.       Perform a narrow band spectrum capture of 2.5 before turning on the eNodeB

a. Take a snap shot in all DLC-1B20 quadrants of the indoor testing you need to do

b.  Perform the survey during peak activity time on campus (e.g., 0800-1200)

2.       Perform a wideband spectrum capture of the noise floor from 2.4 GHz to 2.59 GHz

a. Take a snap shot in all DLC-1B20 quadrants of the indoor testing you need to do

b.  Perform the survey during peak activity time on campus (e.g., 0800-1200)

3.       Perform an iperf throughput test of Wi-Fi at 2.4 GHz on UCB Wireless in DLC-1B20

a. Record and send the data to me

**While turning on the E-Node B**

1.      Configure the transmit power of the eNodeB as a low as possible (as low as 8 dBm if possible)

a.       Calculated ERP based on antenna gain

2.       Configure the LTE Tx/Rx channel to be on EBS C or D banks (the University owns spectrum on the EBS A and B bands)

3.       Perform a narrow band spectrum capture of 2.5 GHz

a. Take a snap shot in all DLC-1B20 quadrants of the indoor testing you need to do

b.  Perform the survey during peak activity time on campus (e.g., 0800-1200)

4.       Perform a wideband spectrum capture of the noise floor from 2.4 GHz to 2.59 GHz

a. Take a snap shot in all DLC-1B20 quadrants of the indoor testing you need to do

b.  Perform the survey during peak activity time on campus (e.g., 0800-1200)

5.       Perform an iperf throughput test of Wi-Fi at 2.4 GHz on UCB Wireless