**CS M117**

**Vahe Musinyan**

**LAB 2: Data Transmission over 802.11b Wireless LAN**

**Jan 31, 2012**

**OBSERVATIONS**

We did two experiments. For first experiment we measured a TCP and UDP throughput based on distance and signal noise. The second experiment included measuring TCP and UDP throughput based on microwave interference.

For the first experiment, it was hard to get clean testing because all the students were sharing the wifi bandwidth. We got similar results for 60 ft and 125 ft; even though, logically 125 ft should have had way more noise. Also for first two 25 ft measurements, I found that there was a lot of noise by the room 3732. The throughput difference with both 25 ft signals was like 1000Kbps.

The second experiment was close to an expectation. Although we did not get as much noise as I was expecting, but overall, the experiment seemed correct.

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| **#** | **Main goals** | **Results with error** |
| **1** | To give students the basic knowledge of various factors affecting data throughput in a wireless channel | This lab showed me all the noises that can change the affecting data throughput. |
| **2** | To expose students to the effect of sporadic losses on TCP throughput | During microwave “power on”, I observed some TCP and UDP data loss. |
| **3** | To familiarize students with basic performance measurement tools (Iperf) in computer networks | Because of presence of other students the measurements were not exactly what we expected. |