

1 Test Sites

We intend to use 3 different test sites all in the vicinity of the Engineering Sciences Building on campus. The 3 locations are desired to test the system for short, medium and long ranges. Figure 1 shows the test sites on an enlarged campus map. In Figures 2, 3 and 4, plan and elevation views of the 3 test sites are shown. The figures also present the power density at the sensor nodes and the maximum power densities on humans standing in the main lobe or on a side-lobe of the antenna (refer to Exhibit Radio_Emissions.pdf for detailed calculations). Note also that the peak and average power densities are the same for this system. It can be seen that power densities are below the $1 \text{ mW}/\text{cm}^2$ legally permissible limit for human exposure in all 3 sites even for humans on the main lobe of the antenna. We would also like to assure the FCC that we would take care to cordon off the experimental areas or perform experiments during weekends as far as possible to further reduce the exposure to humans in the area. Figures 5,6 and 7 are pictures of the 3 sites looking from the ‘eye’ marked on figures 2, 3 and 4.



Figure 1: Reference schematic for emission specification for different transmitter locations

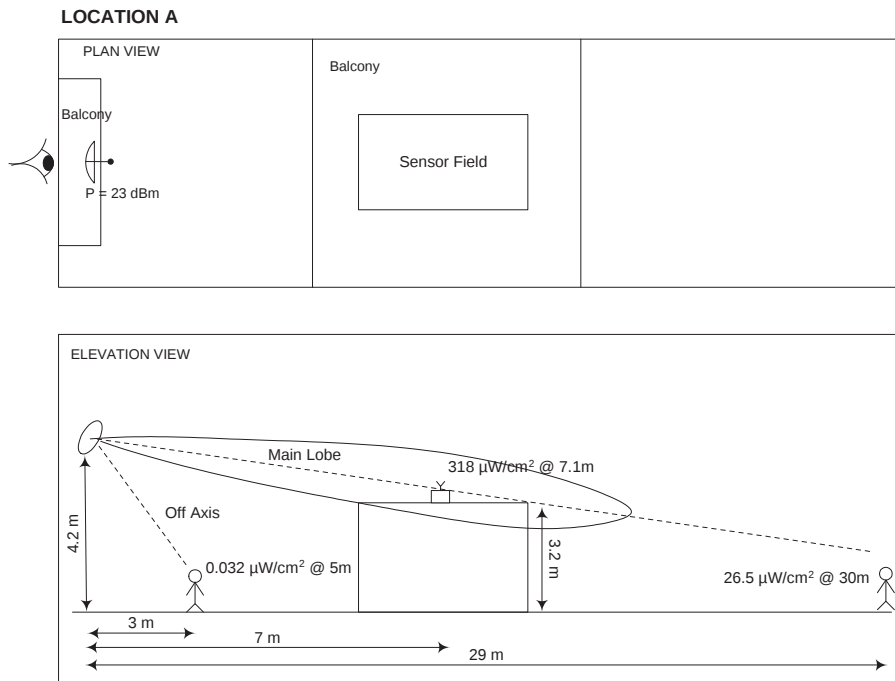


Figure 2: Site A for short range testing

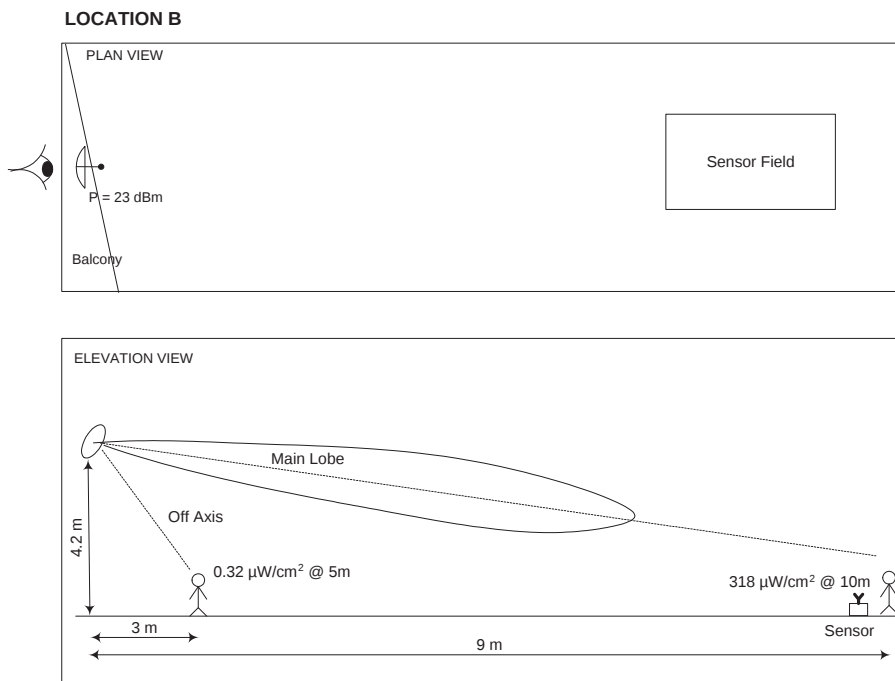


Figure 3: Site B for medium range testing

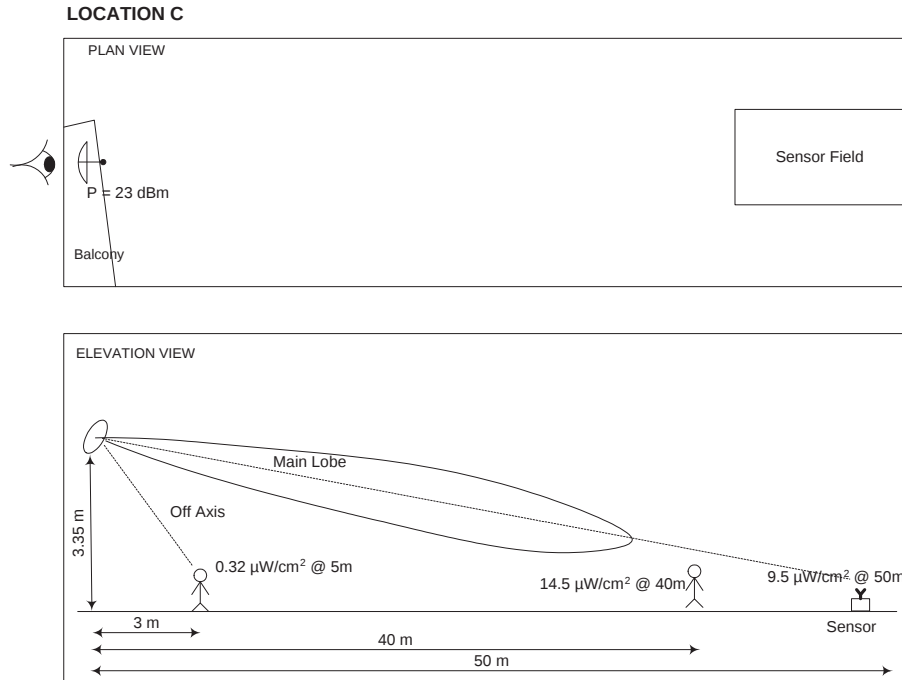


Figure 4: Site C for long range testing

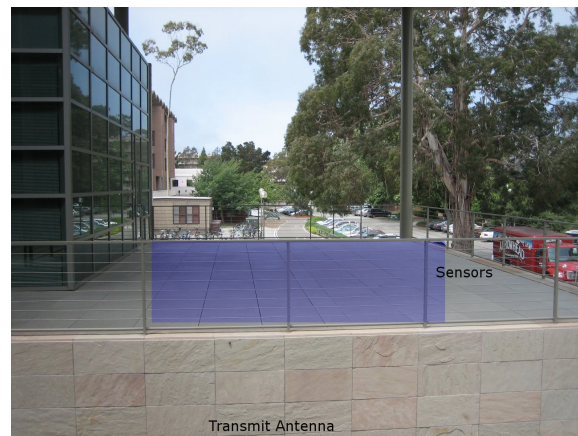


Figure 5: Site A for short range testing (looking from the 'eye' in the plan view of site A)

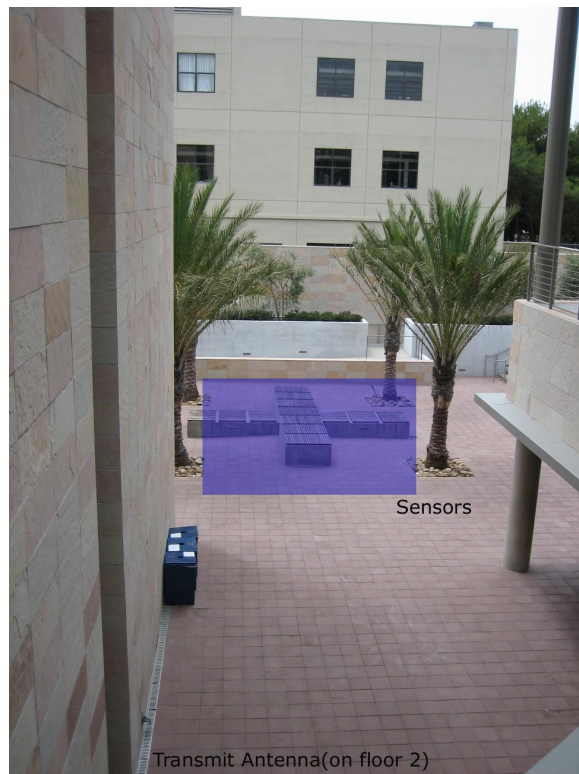


Figure 6: Site B for medium range testing (looking from the ‘eye’ in the plan view of site B)



Figure 7: Site C for long range testing (looking from the 'eye' in the plan view of site C)