Engr 1202 ECE Lab Project

Microelectronic Mobile Antenna
Design Steps for Mask Fabrication

All decisions must be justified

1. Choose a frequency band (old cellular, PCS or Bluetooth).
2. Find the mid point of the frequency band.
3. Determine wavelength of frequency band mid-point.
4. Choose type of antenna (monopole, dipole, loop, full length). Read "Designing Antennas for Cellular Telephones" article.
5. Determine length of antenna (¼ wavelength, ½ wavelength, 2× ½ wavelength, full length).
6. Decide on a design for your antenna.
7. Create a dimension drawing showing all dimensions and fitting within a space no larger that 20mm × 20mm.
8. Create an Autocad pattern and array it so as to completely fill your substrate.
9. Print the array on a high quality laser printer with the transparency file provided.
10. Bring the laser printer mask to the clean room to be used to define your pattern on your substrates.