

Proposal for Antenna Design

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Introduction

For my Propagation and Radiation project, I purpose to build an antenna to solve a real world problem. The problem is that I live approximately 16.1 miles from the college, and I would like to try to connect from my house to the college wireless network. In order to do this, I am going to need a very high gain antenna. Since the best directional antenna for high gain is a dish antenna, I purpose to convert a TVRO dish into a WIFI dish. To do this I will acquire a satellite dish, and build a new emitter for the it that operates on the 2.4 GHz range. After simulating and testing, I plan to mount the dish at my house and thereby receive Internet.

Time-line

As of 1/10/04, I have decided on a design and am ready for the simulation phase. I plan to simulate on the lab days of 1/12, 1/19, 1,26. This will give me the 2/2, 2/9, 2/16, and 2/23 to create the actual antenna. Lastly, on 3/1 and 3/8 I can test the antenna and see how the actual model and the theoretical model agree.

Summary

I am building a parabolic dish antenna for 802.11b from an old TVRO dish. I hope to simulate the dish in January, build it in February, and test it in March. This will complete my lab portion of Prop and Rad.