Name(s)	Project Number
Nate U. Cantu	**J1405**

Project Title

Effectiveness of Wi-Fi Blocking Paint

Abstract

Objectives/Goals
The purpose of my science project is to determine how well YShield Wifi blocking paint can block a Wifi signal. The reason I am doing this investigation is because this product can potentially prevent someone from hacking your wifi and the potential of identity theft.

Methods/Materials
I am using YShield EMR Protection paint to conduct my project, I also downloaded an app called, Dr. Wifi, that will allow me to see how many Mbps (Megabytes per second) there is. I will place both my phone and router at separate distances and test the data using the app. After I get all 20 signals from each test I will get the average to see how well the paint did.

Results
The results of my investigation on determining the effects of YShield EMR protection paint block a wifi signal indicates that it in fact does block a Wifi signal but not completely. When there was nothing on router at 16.1 ft it averaged 131.315 Mbps at best connection possible. When the box was on router at 16.1 ft (unpainted) it averaged 125.169 Mbps and killed signal by 4.91%. When I placed painted box on router at 16.1 ft (ungrounded) it averaged 126.828 Mbps and signal killed by 3.53%. When painted box was on router at 16.1 ft (Grounded) it averaged 87.8515 and killed signal by 33.1%

Conclusions/Discussion
After performing my tests, I found that my hypothesis was actually incorrect. I discovered that the painted box with the grounder did block a lot of the signal but not entirely all of it. Prior to any of my other tests I had taken a starting test with just the router. After I tested I compared my results and I was actually surprised that the painted box with no grounder had that high of a signal. After completing my testing I discovered that the router by itself had an average signal of 131.3155 Mbps, with just a box I got an average signal of 125.169 Mbps, with the painted box with no grounder I got an average signal of 126.828, and finally with a grounded and painted box I got an average of 87.8515. Before competing at the California State Science Fair I plan to retest my experiment using the grounder made by the YShield Company.

Summary Statement

The purpose of my project is to test the effectiveness of wifi blocking paint.

Help Received

Brianne Fidalgo-teacher; Richard Esqueda-brother