CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY

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Project Number
J1224

Project Title
Which Building Material Disrupts a Wireless Connection the Least?

Abstract

Objectives/Goals
The purpose of my project is to discover which commonly used building material will disrupt a wireless internet signal the least. This is important to know if you are downloading a file from the internet and need the top speed.

Methods/Materials
Procedures:
1. Construct boxes made of sheetrock, cement, wood, and cardboard.
2. Lay a wireless b router down and roll out a measuring tape starting at the router and ending at 25 meters.
3. Place the sheetrock box over the router and lay the laptop computer at one meter.
4. Record the percentage of reception that the computer is recieving from the router.
5. Repeat this action at 2 meters and so on until at 25 meters.
6. Repeat steps 2-5 for the cement box, wood box, cardboard box, a metal bucket, and with no material over the router.
7.Repeat steps 2-6 again and average the two results for every meter .

Results
At 25 meters, with the metal bucket over the router, the computer recorded an average of 17%, which was the lowest percentage recorded. The highest percentage recorded at 25 meters was produced by the cardboard box, it recorded an average of 30%.

Conclusions/Discussion
After completing my investigation on the disruption of a wireless connection from building materials, I conclude that cardboard will disrupt your signal the least while metal will disrupt it the most.

Summary Statement
Which commonly used building material will disrupt a wireless connection the least.

Help Received