

Connection Conundrum

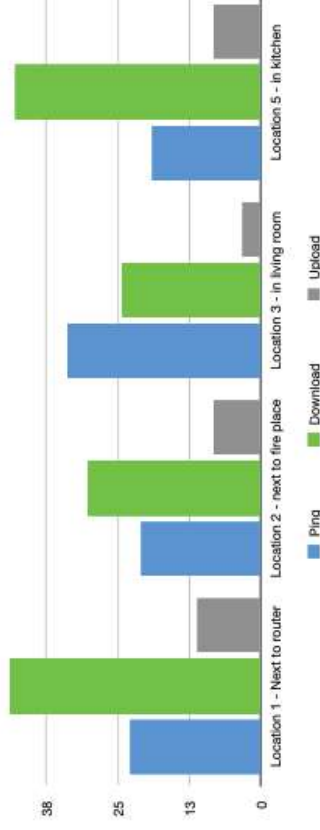
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Project ID#

Q1: Research Question/Engineering Goal

This project was based on the slow wifi speeds in my house. We were paying for blazing fast speeds but we only got a fraction of what we paid for. This needed to be solved for optimal speeds. I made a trip down to Best Buy and got a wifi extender to try to extend the speeds thorough the house!

Q3: Data Analysis & Results



Table

Problem Solvers Project	Ping	Download	Upload
Location 1 - Next to router	23	44	11
Location 2 - next to fire place	21	30	8
Location 3 - in living room	34	24	3
Location 5 - in kitchen	19	43	8

Ping is measured in (ms) and download/
upload is measured in (MBPS)
Low ping is BETTER!

Q2: Methodology/Project Design

Procedure 1:

1. I connected the extender to the wifi and wrote down a list of various spots I could place the extender.
2. I went through the list and collected the results on a graph
3. I analyzed the results and came upon a conclusion that would result in the best speed

Procedure 2

1. Walked to Lowes to purchase a COAX cord
2. Drilled a hole along the boarder of the house to run into the living room
3. Threaded the cord through the wall and set up the box for testing
4. Ran the tests with excellent results

Q4: Interpretation & Conclusions

Ping was lowest when it was in the kitchen. The download and upload speeds are fastest right next to the router. This means the extender is more powerful at sending out signals than the actual WiFi box. After I got under the house and tirelessly ran wires everywhere, I was very thankful. I had soaring high speeds of Ping:21 Download: 345.18 Upload: 11.98. I realized that the location of the router really matters to get the most efficient speeds!