Wireless Network Simulator

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The goal of this project is to create a lightweight wireless network simulator. When designing new wireless network protocols, such as a protocol for a radio frequency mesh network, engineer must create physical networks to test their protocols. This project does away with that by simulating the network, including the node placement, noise generators, signal attenuation, multipathing, and node response. The use of this simulator lowers the cost of protocol design and testing, and also simplifies the task of debugging a protocol. Furthermore, automated usage of the simulator allows for things such as genetic protocol designing algorithms.

Awards Won: