**Paper Proposal Lloyd Jones**

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For my proposal, I would like to examine the use of game theory to analyze anti-jamming techniques for 802.11 wireless. This study will focus on the physical and MAC layers of the OSI model and will look into security implications of using a shared medium. In this scenario, jamming can be viewed as a game where a legitimate sender competes against a malicious user who is jamming the communication channel. The sender seeks to minimize their usage of the physical channel and the jammer seeks to maximize theirs. The domain of users for this proposal will be a single sender and jammer, multiple senders and one jammer, and multiple senders and multiple jammers. I will seek to find a saddle point for each of these examples and identify how different wireless technologies such as MIMO and frequency hopping can help mitigate this threat. I’ve always been interested in wireless communications and delving further into this topic will definitely be a learning experience for me.