Wireless Sensor Networks Project Proposal

**Introduction**

Wireless networks usually comprise of a “variety of stationary sensors spread across a geological area” (Barclay et al., 2008). These stationary sensors are commonly referred to as nodes, and each are commonly tasked with monitoring and recording specific data from the node’s current environment. The data each node collects is subsequently transmitted to a gateway, which in turn can be transmitted to some other area like a web server (Barclay et al., 2008).

There are a plethora of areas where the use of wireless sensor networks can be applicable. Such areas may consist of, but are not limited to air quality, humidity detection in deserts, forest fire detection, water quality, natural disaster prevention, machine health, etc. It is important to note that much of these applications are useful in bettering the general public health and/or lifestyle. Specifically speaking, these wireless networks can be used to prolong and save lives.

Why is this important? It is believed that these such networks can be used for military purposes. As written in the 2008 paper, *Theoretical and practical aspects of military wireless sensor networks*, “wireless sensor networks can be used by the military for a number of purposes such as monitoring militant activity in remote areas and force protection” (Barclay et al., 2008). The paper goes further by explaining that using the “appropriate sensors, these networks can enable detection of enemy movement, identification of enemy forces and analysis of movement and progress” (Barclay et al., 2008).

Imagine a scenario where some country’s military is planning the invasion of some strategic target. Rather than sacrificing soldiers to gather military intelligence by sending scouting parties, military command could opt for another route by sending unmanned vehicles. These vehicles can be equipped with multiple sensors that could be placed in secluded areas to monitor troop movement or even relay crucial data that may determine the outcome of the ensuing battle. Real time friend or foe identification also has the potential to greatly increase combat capability and cohesion. This would greatly decrease the number of deaths caused by friendly fire.

Sources

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