

Envision | Issue Statement Paper

Group Name

Area Fifty-Drone

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Issue and Topic

Drones are becoming more and more commercialized every day. This is clearly bound to cause some issues. We will be focusing on the security and privacy aspects of the problem.

Background on the Issue

The drone issue includes everything from commercial to civilian drones. Amazon has taken interest in drones, with the concept of their new Prime Air coming to reality. Prime Air primarily serves to use drones to cut shipping times down to as fast as 30 minutes. The customer chooses a location that the drone is to deliver the shipment, and then the drone leaves. However, this method of shipment has alarmed many, mainly due to the rate of which the drones are emerging and put into use. The PRPL Foundation's President, Art Swift, is now saying that Amazon's drone testing is a hazard to the public's safety because of the chance that the drones could be remotely hacked (rethinkresearch.biz). This is merely one of many examples that bring the problem to light.

Problem Statement

This brings us to the main situation: privacy and security. Specifically, we are going to focus on home privacy and security. In the summer of 2014, a Seattle woman noticed a drone hovering outside her apartment window after getting out of the shower. She quickly notified the concierge, who went outside and found 2 men controlling the drone, along with a tripod and video camera (BusinessInsider.org). This was in 2014 and with major advances in the range that drones can reach before losing connection, these two men could be a block away, instead of right outside the building. Of course, thousands of cases very similar to this have occurred all over the country since then, mainly in large cities like Dallas, which have parks specifically for flying drones. This has led to the banning of drones all across the country, which we don't believe is the answer.

Solution

We believe that the simplest, most effective answer is in the WiFi that you and I use every day. Drones work at 2.4 MHz and 5.8 MHz. We believe that if we install a frequency into the WiFi, we will be able to program it to disrupt radio waves on those frequencies, causing the drone to shut down when it comes within range of the router. Of course, we could not make the drone shut down completely, as when it falls, it could hit any bystander unlucky enough to be underneath it, severely injuring their head. That is why we will make it so that the drone's propeller's power will be lowered softly for a safe landing, not just for the Drone, but for the homeowners. To make this a reality, we would need to partner up with an internet supplier/carrier. As any project, we would have some challenges to overcome, including finding a programmer to help us perfect this design, and any possible legal issues that may occur with disruptors. With any luck, we would hope to have this project complete within 3-5 years from the time we get the resources needed to begin. We hope that this will have a major positive impact on the privacy and security of homeowners everywhere, all we ask from you is your support.

Research Sources

<http://www.businessinsider.com/privacy-issues-with-commercial-drones-2014-9>

<http://rethinkresearch.biz/articles/drones-making-progress-doubts-remain/>