# Strength and Weakness

**Strengths:**

* **Our model is practical and reliable.**

We take into account the possible effects of various real-world factors when modeling. For example, due to the power outage caused by the hurricane, we believe that the drone cannot be charged; the H tethered drone is used to transmit signals; the route of the drone is limited by altitude, etc.

When it comes to performing specific tasks, we consider the performance of the drone in all aspects to choose the best one and maximize utilization.

* **Sensitivity analysis.** We do sensitivity analysis to test the accuracy of our model. Based on the outcomes, we safely draw the conclusion that the simulation in our model fits the actual situations.
* **Good flexibility.** According to our analysis, our model can always find the optimum solution under various kinds of conditions.

**Weaknesses：**

* **Inaccuracy.** When planning the reconnaissance path, we used the grid method to handle the major highways and roads. Since the path is continuous, such a method will lose part of the information. In addition, it is difficult for this method to take into account the performance of the drone, such as the maximum turning radius, resulting in biased results.
* **Local optimum.** When planning the drone cruise path, we use the greedy algorithm to optimize. Although the greedy algorithm greatly improves the efficiency of the solution, sometimes the greedy algorithm cannot find the global optimal solution because they do not consider all the data.
* **The data we obtained is limited.** For the lack of data, we have to simulate the models abstracted from the reality to obtain the data we need which may be different from the real data.
* **Simplifying assumptions.** To simplify the model, we make a few assumptions which may affect the result of our model.