

Searching the Lost Plane

Summary

We are discussing how to search the lost plane that may dropping in the ocean like Malaysia Airlines MH370. We divide our paper into three parts

First part, we will determine the circle of the possible crashed plane. By expansion and application of Markov Process, we will narrow the circle so that the searching power can be focused. It's the base of all searching works. Without predict the dropping position, searching work can't be started.

Second part, we will build an ocean current model to estimate the effects of ocean current to the black boxes or other plane parts. In this model we have two assumption and build two models. The first one is for the coastal sea and the other one is for the open sea. We are building this because the electronic devices like sonars have different searching area in these two situation. We will use the area find before and by connecting the Bayes Theorem and the area we get in the first part to create a grip map with possibility.

Third part, we have determined the area that need to be searched and by building a searching model based on the optimal search theory. We need to decide the arrangement and use of different search methods including planes, boats and radars. We will what is the most efficient combination of these methods to search in every small area is.