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Team 4552

November 15, 2013

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1 Problem Restatement

Given a fictitious district made up of six separate zones, and average travel times between zones, create a model to optimize the placement of n ambulances in order to maximize the number of civilians reached in an eight minute period. Consider the scenarios where $n = 3$, $n = 2$, and $n = 1$, respectively, and for each scenario, keep track of how many people are not being reached with each possible solution.

Then, consider a scenario in which a large scale disaster affects a single location (i.e. 9/11), and discuss how an Emergency Service Coordinator would cover the situation. Examine how a real-world city or county would prepare for such a disaster. Finally, write a two page memo detailing the model and its analysis for the Emergency Service Coordinator.

2 Assumptions and Justifications

3 The Model

3.1 Model Approach

3.2 Part 1?

3.3 Part 2?

4 Model Analysis

4.1 3 Ambulance Cover

4.2 2 Ambulance Cover

4.3 1 Ambulance Cover

4.4 Catastrophic Cover

5 Strengths and Weaknesses

6 Extensions

7 Non-Technical Memo

A Code