

Disaster Relief Simulation

DATA 604: Simulation & Modeling

Daniel Dittenhafer & Jashan Narham

April 26, 2016

1 Abstract

2 Keywords

3 Literature Review

4 Methodology

4.1 Structure

4.1.1 Supply Chain Partner

We included a Supply Chain Partner which reliably provided Relief Supplies. The time to deliver a shipment of supplies was made variable through the Reference Property *SupplierPartnerTravelTimeToWarehouse*.

The delivery vehicle, *PartnerVehicle*, was set to require a full load prior to departing for the Warehouse.

4.1.2 Warehouse

A warehouse was added to stage disaster relief supplies.

The delivery vehicle, *WarehouseVehicle*, was set to require a full load prior to departing for the distribution site.

Selection Weight on the Paths from the Warehouse to the Distribution Sites was set to dynamically adjust based on the number of Disaster Victims waiting for Relief Supplies.

4.1.3 Disaster Victims

Initially, the “Disaster” is set to begin 6 hours (0.25 days) into the simulation. This gives some time to prime the pump and prestage relief supplies through the warehouse.

TBD We may need to adjust this. . .

5 Results

6 Summary

7 Appendix: Raw Code