

<b>THESIS TITLE</b>	THE DEVELOPING ROUTING ALGORITHM IN STOCHASTIC MULTI-DEPOT TRANSPORTATION WITH UNPREDICTABLE TIME FRAME FOR WATER DISASTER MANAGEMENT
<b>KEY WORDS</b>	DISASTER, INPUT CRITERIA, SHELTERS SELECTION, DEA, DATA MINING
<b>STUDENT</b>	JIRAPONG TONGPANG
<b>THESIS ADVISOR</b>	DR.NIVET CHIRAWICHITTHAI
<b>THESIS CO-ADVISOR</b>	ASSOC.PROF.DR.PRASONG PRANEETPOLGRANG
<b>LEVEL OF STUDY</b>	DOCTOR OF PHILOSOPHY PROGRAM IN INFORMATION TECHNOLOGY
<b>FACULTY</b>	SCHOOL OF INFORMATION TECHNOLOGY SRIPATUM UNIVERSITY
<b>YEAR</b>	2014

### ABSTRACT

The natural disaster problems with case study Thailand flood in 2011, present their needs as the basic necessary supporting for daily life such as food, medicine, cloth and residence. The government has to distribute the rescue bags for supporting the basic necessary in daily life for them. Besides, the government will set up the temporary shelters for the immigrants that need to manage the usage of each shelter. The hybrid recommendation technique selection the shelters are deemed to be one of challenging problems that can be used to imply the management competency due to the fact that it is a difficult and complicated task in logistics supplier function.

This article aims to introduce an approach to measuring the shelters performance with a set of technique of Data Evaluation Analysis, which called DEA and Genetic algorithm to find the solution (1) To arrange a transportation routes with multiple warehouses, with a tentative time frame for disaster management (2) To present format of the transport problems under water disaster (3) To present the solutions in order to respond effectively. The proposed technique has the special performance improvement due to the researcher includes four quantitative parameters

in Genetic Algorithm (1) expense in delivering (2) ability to deliver (3) a timely manner and in accordance with the required quantity (4) distance. The result illustrates how to apply the technique by using the data collected from the person in each shelter, which can be used to create a negotiation strategy's performance for sending rescue bags from the inefficient donation centers by using the value of reference time, weights. Specifically, the inefficient donation centers will have to reduce the value of the input criteria by the proportion of reference weights in order that the inferior donation centers could be attained to the benchmark points of relative efficiency. It applied to find the solution of the efficiency Shelter selection easily and efficiency.