

STC Research Project Description

Project Title: Transportation Risk Assessment & Crisis Management: A New Paradigm
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Project Start Date: February 1, 2002 **End Date:** March 15, 2002

Other Milestones, Dates:

White paper due on March 15, 2002

Project Objective:

- 1) Review current transportation risk assessment and crisis management methods and practices
 - 2) Introduce security issues into this framework
 - 3) Identify priority initiatives that should be undertaken in order to successfully integrate security considerations into the decision-making process.
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Project Abstract:

Over the past two decades, risk assessment and crisis management have evolved into core business practices in government and industry. These programs have been implemented with a single, overarching objective: *to reduce the likelihood and consequences of natural and man-made disasters so as to protect human health, quality of life and the environment.*

In the transportation sector, this objective has taken the form of reducing accident likelihood and severity. In the case of hazardous materials shipments, it extends to spill prevention and mitigating the consequences when a release occurs.

Until recently, the approach to transportation risk assessment and crisis management assumed that when man-made disasters occurred, they were accidental in nature and not due to malicious intent. Terrorist activities, culminating with the tragic events of September 11, have dramatically changed this landscape. In particular, transportation risk assessments must be performed with a much more expanded scope to accommodate terrorism scenarios that heretofore would have been considered so unlikely that they did not warrant risk management attention. Similarly, crisis management must be able to handle impacts far beyond what was previously imaginable in terms of number of victims, deployment of response resources and agency coordination.

Given these circumstances, it is apparent that a new paradigm for transportation risk assessment and crisis management needs to be developed. In particular, this paradigm must: 1) more explicitly consider security threat and vulnerability, and 2) integrate security considerations into the overall framework for addressing natural and man-made disasters, be they accidental or planned.

The purpose of this white paper is to: 1) review current transportation risk assessment and crisis management methods and practices, 2) introduce security issues into this framework and 3) identify priority initiatives that should be undertaken in order to successfully integrate security considerations into the decision-making process.

Task Description:

- 1) Develop application scenarios
 - 2) Discuss impacts of recent events
 - 3) Identify affected parties
 - 4) Identify decision-support needs
 - 5) Discuss priority initiatives
 - 6) Summarize findings and recommendations
 - 7) Prepare white paper
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Total Budget: \$ 5,000

Student Involvement (Thesis, Assistantships, Paid Employment): n/a

Relationship to Other Projects: This project is part of a series of studies being sponsored by the Southeastern Transportation Center (STC) to improve safety by including issues related to transportation security.

Technology Transfer Activities: The project results will be disseminated through preparation of a white paper and presentation at a regional or national conference.

Potential Benefits of Project: This “big picture” conceptual view is an important initial step in the development of a research program that will enable responsible agencies to devote resources where the overall impact is most beneficial in terms of reducing risk, be it through enhanced security or other management strategies.

TRB Keywords:

Risk assessment, risk analysis, risk management, preparedness, response, recovery, mitigation, counter terrorism, safety, security.