PROJECT DESCRIPTION

PROJECT NUMBER:
03413

PROJECT TITLE:
Non-Traffic Related Messages on Dynamic Message Signs

PRINCIPLE INVESTIGATOR:
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OBJECTIVE
This project will assess professional opinions regarding Dynamic message sign (DMS) usage during normal traffic conditions. The research is preliminary and is intended to form the basis for a larger effort to assess professional and public perceptions of ITS technologies as they are deployed in Alabama. The work consists of a literature review and a limited email survey distributed to ITS professionals currently working with DMS.

PROJECT ABSTRACT
DMSs, also referred to as changeable message signs and variable message signs, have been used for over 30 years to provide traffic information to motorists and have become a prominent component of intelligent transportation systems (ITS), especially for advanced traveler information and traffic management systems. DMSs allow dissemination of real-time traffic information to motorists and are generally deployed in urban areas to inform motorists of traffic conditions (e.g., expected delays, estimated travel times, diversion routes, lane closures). DMSs have become an important source of motorist information during incidents, special events, and work zone traffic control. The value of DMS, or any traffic information source, is dependent on two items:

- The accuracy and usefulness of the information disseminated.
- Motorists’ willingness and ability to understand and utilize the information.

The latter point involves the public perception of traffic information technologies. The quality of traffic-related messages as well as the overall presence of DMS affect public perception. Traffic management agencies must understand that DMSs affect public perception even when they are not actively conveying traffic-related information. Motorists may perceive blank signs as inoperable or may question the allocation of resources to technologies that seem to be (from their perspective) underutilized. On the other hand, displaying information not germane to real-time
traffic conditions may erode the credibility of DMS and reduce their effectiveness as a traffic management tool.

The project is being conducted at the request of the Alabama Department of Transportation (ALDOT) Multimodal Bureau in preparation for deploying several DMS on the interstates in and around Birmingham. Birmingham is an ozone non-attainment area and uses “ozone alerts” as one of its traffic control measures (TCM) during ozone season. Ozone alerts are announced in local news venues, and red “ozone alert” flags are placed on municipal buildings and local transit buses. As Birmingham approached the deployment of DMS as part of its regional ITS, an interest has been expressed in using the DMS as a TCM tool to communicate air quality status to motorists. Proponents suggest that this would be an appropriate use of DMS technology, especially as the ITS program in Birmingham was funded primarily through the Congestion Mitigation/ Air Quality (CMAQ) funds. Opponents maintain that messages unrelated to specific traffic management objectives would erode the credibility, and ultimately, the effectiveness of the devices, and regional traffic management goals.

TASK DESCRIPTIONS
1. Conduct a literature review.
2. Conduct an e-mail-based survey of ITS professionals in all fifty States.
3. Summarize all project efforts in a final report.

TIME SCHEDULE AND MILESTONES:
Task 1: June 1 – July 30, 2001
Task 2: Aug 1 – Oct 31, 2001

BUDGET
This is a six-month project that did not encumber any UTC funds.

STUDENT INVOLVEMENT
The work will be a portion of a graduate student’s non-thesis activity.

RELATIONSHIP TO OTHER RESEARCH PROJECTS
The project is not directly related to any other UTCA project.

TECHNOLOGY TRANSFER
The results of the project will appear in the Compendium of Technical Papers for the Institute of Transportation Engineers Spring Conference in Palm Harbor, Florida in March 2002.

POTENTIAL BENEFITS OF THE PROJECT
The results of the project are intended for ALDOT’s use when establishing DMS operating policies and guidelines.

TRB KEYWORDS:
ITS, ATIS, traffic information, dynamic message signs, variable message signs