PROJECT DESCRIPTION

PROJECT NUMBER:
99462

PROJECT TITLE:
Systems Analysis of ALDOT Traffic Safety Computer Programs

PRINCIPAL INVESTIGATORS:
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PROJECT OBJECTIVE:
This project will analyze all computer programs currently utilized in the Alabama Department of Transportation (ALDOT) traffic safety program, to develop a plan and a set of design requirements to upgrade all of them to client-server or WWW-based technologies.

PROJECT ABSTRACT:
Safety is one of the primary concerns of ALDOT, which has been a major leader over the past 20 years in allocating its safety-construction-maintenance budgets using the most advanced methods available. ALDOT’s “Cost/Benefit for the Optimization of Reduction of Roadway-Environment-Caused Tragedies” (CORRECT) program was the first in the nation to use a dynamic programming optimization routine to allocate funds, and the results were superior to any other method in use at the time.

As both hardware and software have evolved, ALDOT has moved toward client-server, relational database design, graphical user interfaces, and data replication technology. Applying these concepts to existing safety programs and software could enhance ALDOT’s safety system. This project proposes to begin that process.
PROJECT TASK DESCRIPTIONS:
1. Perform traffic safety systems analysis
2. Identify computer system requirements/redesigns
3. Develop priorities based upon cost/benefit and ALDOT needs

MILESTONES AND DATES:
• Dec 1, 1998 – initiate Task 1.
• Apr 1, 1999 – conclude Task 1 and initiate Task 2.
• Sept 1, 1999 – conclude Task 2 and initiate Task 3.
• Nov 30, 1999 – conclude project.

TOTAL BUDGET:
One-year project: Alabama Department of Transportation $117,041; University of Alabama $22,511; total budget $139,552.

STUDENT INVOLVEMENT:
One undergraduate and one graduate research assistant will be employed throughout the life of the project.

RELATIONSHIP TO OTHER RESEARCH PROJECTS:
This project is not directly related to any UTCA project.

TECHNOLOGY TRANSFER ACTIVITIES:
There are no technology transfer activities associated with this project.

POTENTIAL BENEFITS OF THE PROJECT:
This project is the foundation upon which a proposed series of projects will be conducted to upgrade the software and systems used to conduct the ALDOT traffic safety program. The successful completion of this project will identify exact needs, define system requirements and projects, and set priorities. In other words, it will maximize safety software performance in the working environment of ALDOT.

TRB KEYWORDS:
Traffic safety software, traffic safety systems analysis, safety optimization, client-server software, Internet-based software.