RESEARCH PROJECT CAPSULE [15-1PF]

January 2016

TECHNOLOGY TRANSFER PROGRAM

Prep-ME Software Implementation and Enhancement

JUST THE FACTS:

Start Date:
August 1, 2015

Duration:
15 months

End Date:
September 30, 2016

Funding:
SPR: Pooled Fund: TT-Fed

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Sponsored jointly by the Louisiana Department of Transportation and Development and Louisiana State University

POINTS OF INTEREST:

Problem Addressed / Objective of Research / Methodology Used Implementation Potential

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PROBLEM

Prep-ME software complies with the FHWA Traffic Monitoring Guide (TMG) and Travel Monitoring Analysis System (TMAS) for quality assurance and quality control (QA/QC) of traffic data. The software can be used to import, pre-process, and check the quality of raw Weigh-In-Motion (WIM) traffic data, ultimately generating three levels of traffic data input for Pavement ME Design (former MEPDG/DARWin-ME). Pavement ME Design is a significant advancement for pavement design, but requires much more input from various sources.

OBJECTIVE

The objective of this pooled-fund research project is to assist participating state DOTs (Louisiana, Michigan, North Carolina, Wisconsin, Kentucky, New Hampshire, Hawaii, Maryland, and Nevada) to fully implement the Prep-ME software for traffic data collection and pavement design, and to deliver a new version of the software with enhanced and customized features for each individual state.

METHODOLOGY

The states participating in this pooled-fund research have expressed interest in on-site software training. The research team will provide this training, and will also develop webinars for each state's users. Real data sets from participating states will be used for the training to demonstrate the functionality of the software and how it may be used in pavement design and traffic data collection operations for improved productivity.

The current version of the Prep-ME software comprehensively checks traffic data from permanent WIM stations. Due to the high construction and maintenance costs for these continuous WIM systems, portable WIM stations and short-term count programs are used by many state DOTs. Development of a Prep-ME version that can immediately identify data issues in the field may allow for real-time/on-site correction activities. This effort will potentially save time and money, assuring collection of high quality traffic data that can be used for WIM calibration and Pavement ME Design.

The research team will continue improving the Prep-ME software based on feedback from users during the implementation process. New desired features will be added to enhance existing capabilities. Desired enhancements will be developed with close consultation from participating states.

IMPLEMENTATION POTENTIAL

Upon completion of this pooled-fund project, participating states will have a database tool set that can be used to prepare inputs for Pavement ME Design, and used to collect more robust traffic data for other potential applications.

Figure 1
Prep-ME QA/QC Interface

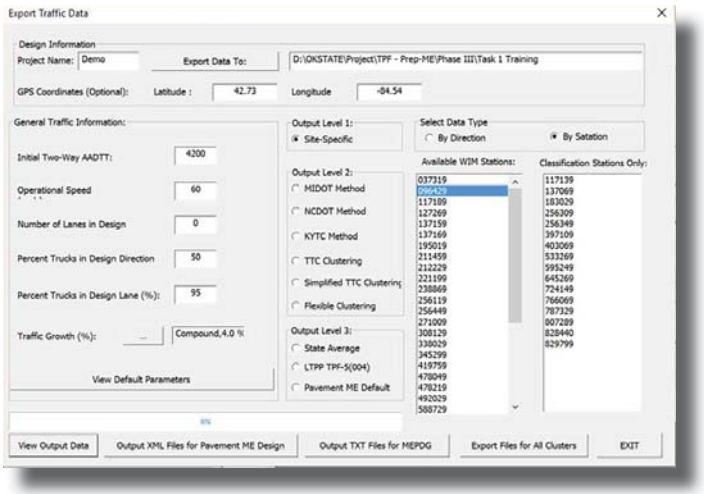

Figure 2
Prep-ME Traffic Output Interface

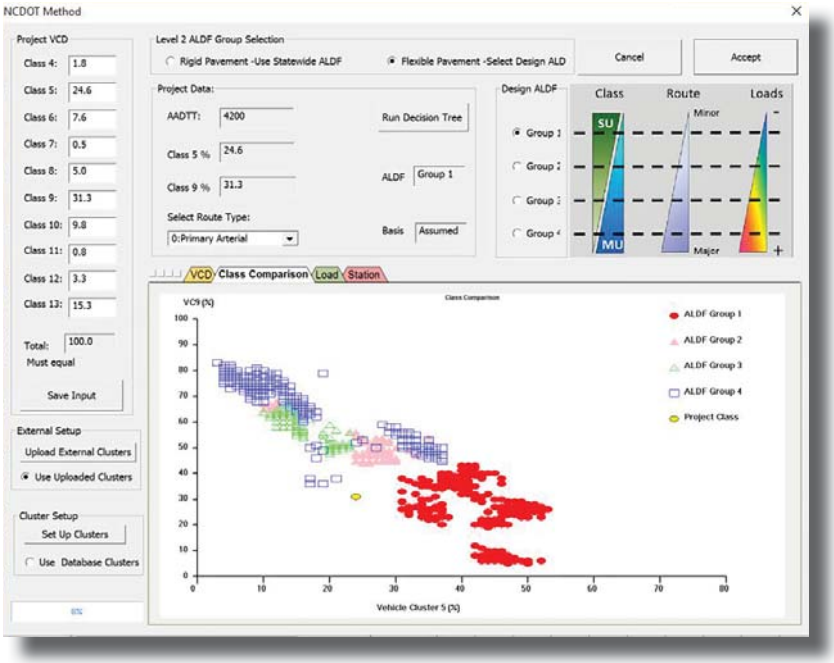

Figure 3
Prep-ME Level 2 Clustering Analysis Interface