

RESEARCH PROBLEM STATEMENT

I. PROBLEM TITLE

Development of Standard Data Format for Pavement Surface Condition and Transverse Profile

II. RESEARCH PROBLEM STATEMENT

Highway agencies and technology suppliers do not have a common and interchangeable data format for pavement condition and transverse profile. In order to facilitate workable protocols for condition surveys, improve implementation of new technologies, and accelerate the development potential of analysis tools for pavement condition including transverse profile, this research project establishes a recommendation of data format for both highway agencies and equipment suppliers.

Tasks: The research will include the following tasks:

1. Collect information on the current practices of highway agencies and suppliers in terms of data format and needs.
2. Evaluate data items and determine the inclusion of data items into the common data format.
3. Develop metadata (header) contents, including vendor information, route, time, position (GPS, DMI, lane location, et al), speed, data resolution (x y spacing, and vertical range), equipment parameters and settings, calibration information, intended purpose, et al.
4. Evaluate and incorporate industry standard lossy and lossless compression algorithms that are best fit for pavement surface data for condition and transverse profile evaluations.
5. As part of the implementation of the funded research, develop a data viewer that is robust, inclusive and flexible.

Final Product:

The final product of the research is a proposed standard to be submitted to standardization organizations, such as AASHTO or ASTM for consideration of developing a standard. A data viewer similar in concept to ProVal.

III. RESEARCH OBJECTIVE

The primary objective of this research is to provide a common and interchangeable data format for pavement condition survey, including transverse profile.

IV. ESTIMATE OF PROBLEM FUNDING AND RESEARCH PERIOD

Estimated Budget: \$500,000
Estimated Project Duration: 24 months