



RESEARCH PROJECT CAPSULE [17-6SS]

September 2017

TECHNOLOGY TRANSFER PROGRAM

Evaluation of HeadLight: An E-Construction Inspection Technology



Figure 1
HeadLight screenshot

JUST THE FACTS:

Start Date:

April 1, 2017

Duration:

18 months

End Date:

September 30, 2018

Funding:

TT-Fed/TT-Reg

Principal Investigator:

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Sponsored jointly by the Louisiana
Department of Transportation and
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University

POINTS OF INTEREST:

Problem Addressed / Objective of
Research / Methodology Used
Implementation Potential

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PROBLEM

Project delivery and inspection are challenging, resource-intensive jobs. The quality/accuracy of collected field data is crucial. The Louisiana Department of Transportation and Development (DOTD) still relies on a primarily paper-based process for field data collection. The electronic collection and utilization of this data from the beginning to end of a construction project may be more efficient and economical.

OBJECTIVE

The overall objective of this project is to understand impacts on DOTD when leveraging e-construction innovations, specifically a mobile project inspection system called HeadLight.

METHODOLOGY

The past performance of the HeadLight e-construction technology will be investigated, including, but not limited to, applications in Texas and Washington. Other e-construction technologies will also be reviewed and compared.

A minimum of 12 construction projects will be used for piloting HeadLight, their selection based on the research team's consultation with DOTD construction personnel. For purposes of this study, all equipment needed to conduct the field performance trials of HeadLight will be leased.

The leased equipment will be assembled by HeadLight personnel to match DOTD reporting requirements for materials and pay items. HeadLight personnel will also provide training on how to use the equipment.

The amount of time spent on the field inspection, the timeliness of daily report submissions, the quality of collected data, and the abatement of claims risk will each be evaluated. A preliminary assessment of HeadLight's adoptability by DOTD will be prepared.

IMPLEMENTATION POTENTIAL

The implementation of e-construction technology for project inspection will potentially benefit DOTD economically through increased quality/accuracy of inspection data, reduced claims risk, and increased field-inspection productivity. The results of this study will greatly assist DOTD in determining whether or not to implement the HeadLight e-construction technology.