AASHTO Technology Implementation Group

Nomination of Technology Ready for Implementation

2005 NOMINATIONS DUE BY FRIDAY, SEPTEMBER 9, 2005

Sponsoring DOT	1. Sponsoring DOT (State): Utah Department of Transportation
Primary Technical Contact	2. Name: Michelle Page Organization: Utah Department of Transportation Address: 4501 South 2700 West City: Salt Lake City State: Utah Zip Code: 84114-8410 E-mail: michellepage@utah.gov Phone: (801) 965-4333 Fax: (801) 965-4564
Technology Description	3. Name of Technology: **The Development and Evaluation of High-fidelity Simulator Training for Snowplow Operators**
	4. Briefly describe the technology. *This is a collaborative research project between the Utah Department of Transportation (UDOT), the University of Utah, and ShipAnalytics (formerly GE Driver Development). The training project incorporated high-fidelity simulation specifically developed for snowplow operators. Ratings of UDOT snowplow driver's acceptance of the training were very high, with drivers of all levels of age and experience indicating that the training helped them prepare for several issues critical to the safe and efficient operation of a snowplow. In the 6-month period following training, the odds of getting in an accident were lower for the group of drivers who received training compared with a matched control group who did not receive. In addition, the data indicate that fuel efficiency was greater for the trained drivers than for the control group.*
	5. Briefly describe the history of its development. *The project consisted of four key phases. The first phase involved performing a detailed task analysis that identified the major components to include in training for snowplow operators. The second phase involved developing high-fidelity driving scenarios and PowerPoint slides that focused on the key components identified in the task analysis. The third phase involved the delivery of training to the 40 UDOT drivers in the study group. The fourth phase of the project involved collecting and analyzing driver performance measures for the study and control groups over a 6-month interval following the training.*
State of Development	6. For how long and in approximately how many applications has your organization used this technology? *100 UDOT snowplow operators have gone through the simulator training program, which became operational in the Winter 2003. UDOT now plans to systematically train all snowplow operators in their fleet.*
	7. What additional development is necessary to enable routine deployment of the technology? *The technology is now available in one of two forms. Training can be outsourced ShipAnalytics (the manufacturer of the driving simulator see http://www.shipanalytics.com/SYS), or the simulator can be leased or purchased from ShipAnalytics for training in-house.*
	8. Have other organizations used this technology? If so, please list organization names and contacts. Organization — Name — Phone — E-mail AZ DOT — Erika Martinez — (602) 712-4252 NM DOT — John Keene — (505) 606-0282 IA DOT — John Hass — (515) 239-1040 MT DOT (considering) — Ray Eby — (406) 444-7673
Potential for Payoff	9. What benefits has your organization realized from using this technology? Include cost savings, safety improvements, transportation efficiency or effectiveness, environmental benefits, or other advantages over other existing technologies. *A formal evaluation of the technology by the University of Utah found that drivers who received the simulator training had fewer accidents than a matched control group (1 vs. 4 accidents, respectively) and fuel efficiency increased by 6.2% for drivers who underwent training.*

Implementation Potential	10. Please describe what actions another transportation agency would need to take to adopt this technology. *The training program can be outsourced via ShipAnalytics (see http://www.shipanalytics.com/STS). Alternatively, the simulator can be leased or purchased from ShipAnalytics for in-house training using the modules developed in this project.*
	11. What is the estimated cost, effort, and length of time required for procurement or adoption by another transportation agency? *Costs must be negotiated with ShipAnalytics. Outsourcing is based on a fee/driver basis, whereas purchase/lease of the simulator is based on the cost of the simulator.*
	12. What organization(s) currently supply and provide technical support for this technology? ShipAnalytics University of Utah
	13. Please describe any legal, regulatory, social, intellectual property, or other issues that could affect ease of implementation. None
Willingness to Champion	14. Is the sponsoring DOT willing to promote this technology to other states, if partially supported by the AASHTO Task Force on Technology Implementation? ☒ Yes ☐ No
Date Submitted	15. Date: September 1, 2005

16. Please include image(s) of sketches or photographs, if available ☒Image(s) are attached.*

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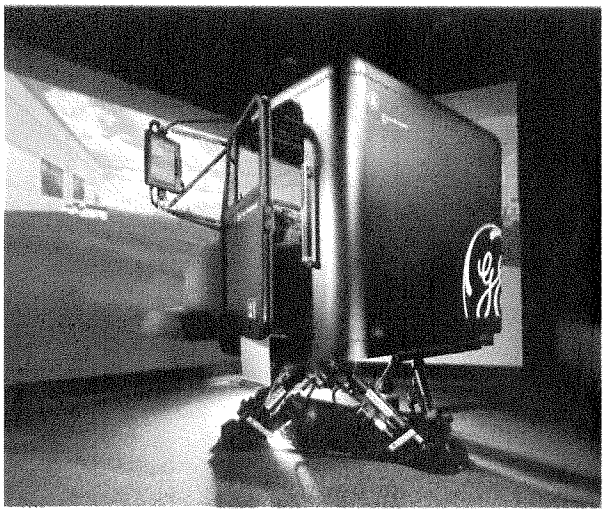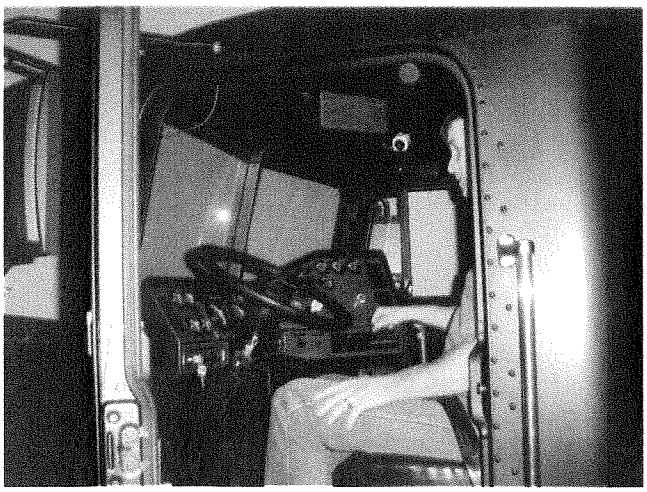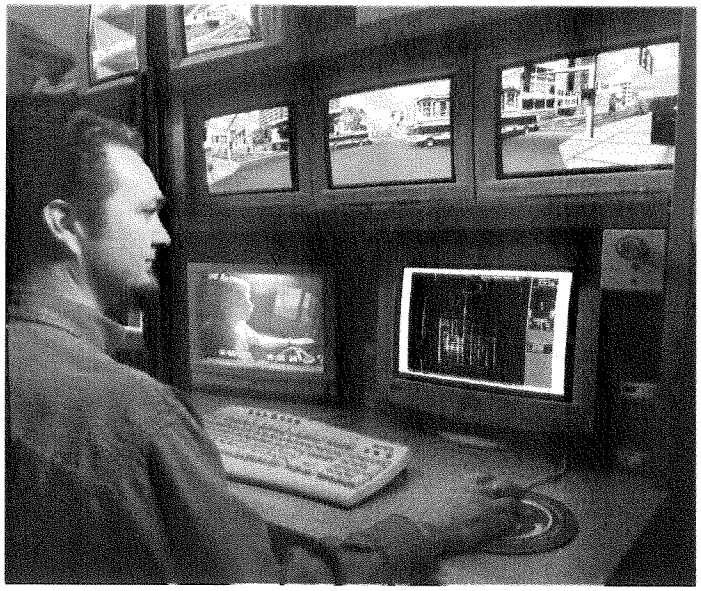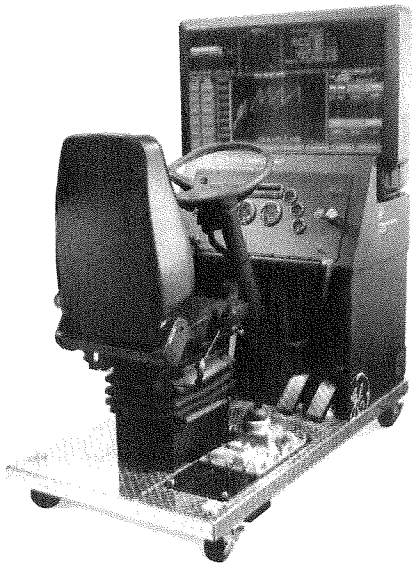
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