

ITS Field Operational Test Summary

Idaho Out-Of-Service

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Introduction

The Idaho Out-Of-Service ITS Field Operational Test is a Commercial Vehicle Operations test that evaluates an electronic enforcement tool for “out-of-service” orders. The system operates by electronically registering trucks placed out of service (OOS) by entering both the vehicle’s license plate image and its transponder identification in a database. As trucks leave a weigh station, the test equipment checks if the truck has been registered as OOS. If it has been registered as OOS, the system sounds an alarm and notifies the State Police.

Test components have been in operation since early 1997 at the East Boise Port-of-Entry and the evaluation of the entire system commenced in October 1997.

Project Description

The test aims to improve highway safety and trucking operations by demonstrating and evaluating technology to monitor commercial vehicles taken out of service and to aid in efficiently clearing violations. To fulfill a congressional mandate of ensuring the safe operation of commercial vehicles, the Motor Carrier Safety Assistance Program (MCSAP) inspects commercial vehicles at weigh or inspection stations. A truck is identified as “out-of-service” if it fails an inspection. It remains out-of-service until the inspection item has been rectified. Because many inspection stations, however, are not staffed 24 hours per day, some vehicles have the opportunity to resume traveling without correcting the OOS violation (“running”) after the station has closed. Other vehicles may correct the reason for the violation but be unable to have the OOS order cleared while the station is closed. The technology being demonstrated in the test can help address both situations. One of the goals of the field operational test is to deter “running,” thereby increasing road safety. Another goal is to provide a method for truck operators to tentatively clear an OOS order when an inspector is not available.

The OOS system operates as follows. When a truck is placed out-of-service, the inspector registers a report of the violation in a database at the weigh station and issues a transponder to the driver. The system captures an image of the vehicle’s license plate and registers the transponder number associated with the violation. When the violation has been corrected (for example, the brakes are repaired or the driver is sufficiently rested), the operator can tentatively clear the violation by interacting with a kiosk at the weigh station.

To prevent trucks from leaving the facility before correcting the violation, the system again reads the vehicle’s license plate on the way out of the weigh station. The system then compares this image to the one taken previously. If the image matches that of a truck that had been placed out-of-service and whose violations have not been cleared, the system triggers an alarm and sends a fax to the Idaho State Police. The fax sent to the police includes the image of the license plate as well as additional information so that the police can apprehend the vehicle.

Figure 1 presents a schematic of a weigh station in the test.

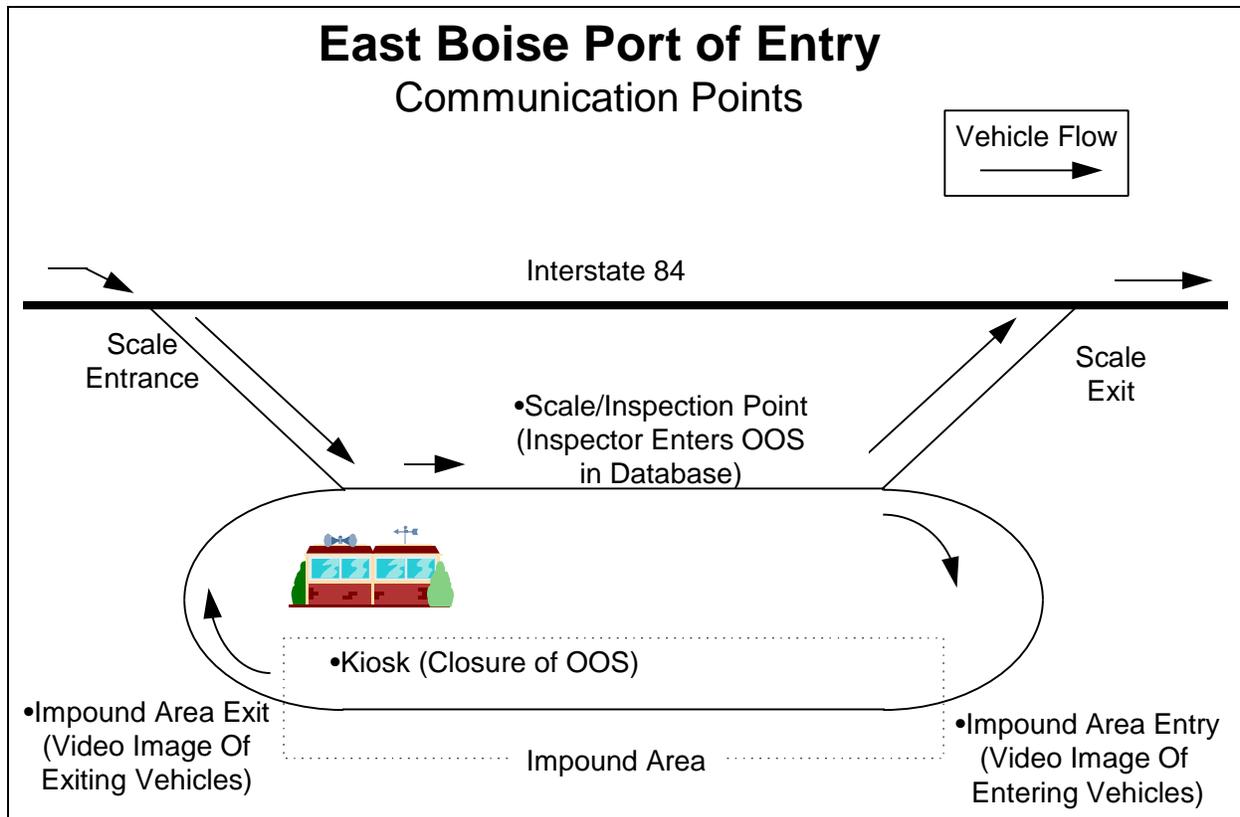


Figure 1: Schematic View of Idaho Out-Of-Service Weigh Station

The evaluation of the test will focus on the reliability, maintainability and accuracy of the components of the system. It will also estimate productivity improvements of enforcement personnel, overall cost, and the level of acceptance by motor carriers, drivers, and the police.

Test Status

System testing began in October 1997 at Idaho National Engineering and Environmental Laboratory (INEEL). Beginning in January 1998, the components that were tested at INEEL were transferred to the Port of Boise Port of Entry (POE) for assembly. The complete system should be operational by spring 1998. Detailed test results are not expected before summer of 1998.

Test Partners

- 3M Company
- Federal Highway Administration
- Hughes Missile Systems Company
- Idaho National Engineering and Environmental Laboratory
- Idaho State Police/Motor Carrier Safety Assistance Program
- Idaho Transportation Department

References

Idaho National Engineering Laboratory, INEEL Transportation: ITS Field Operational Test (<http://www.inel.gov/capabilities/transportation/oos.html>), "Out-Of-Service Vehicle Field Operational Test At The East Boise, Idaho, Port Of Entry," December 1997.