



## 2014 ITS Project of the Year Award

The ITS Project of the Year 2014 is:

**Kentucky Automated Truck Screening (KATS)**

Fact sheet by Charles Sikaras, Communication Committee Chair, ITS Midwest - from ITS Midwest Newsletter Vol. 9, Iss. 1 (Mar. 2015)

The Kentucky Automated Truck Screening (KATS) project was selected as the ITS Midwest 2014 Project of the Year. The Department of Vehicle Regulation (DVR) within the Kentucky Transportation Cabinet (KYTC), KSP-CVE, and the Kentucky Transportation Center (KTC) worked together to implement this technology. The first installation occurred on South-bound Interstate 71 at the Boone County weigh station and was operational by the fall of 2011. To date, seven systems are operational and two more are being deployed at weigh stations, and will be fully operational by mid-2015.

KATS utilizes a license plate reader (LPR), USDOT/KYU number reader, and scene camera technology to collect and process identifying information from the vehicle. When used on a weigh station ramp, KATS is also integrated with the ramp weigh-in-motion (WIM) scale and sorting system. As a truck enters the weigh station, data collection begins. A complete record contains the date and time, weight of the vehicle, the license plate number and jurisdiction (with image), the USDOT and KYU numbers (with image), and an overview image. The data is correlated into a single record and the identifying information is used to screen the vehicle and create an observation.

The record is checked against Kentucky's Commercial Vehicle Information Exchange Window (CVIEW), which houses data from the Federal Motor Carrier Safety Administration's (FMCSA) Safety and Fitness Electronic Records (SAFER) system, and several state systems. Most checks occur on the motor carrier level but when data is available, some checks occur at the vehicle level (i.e., registration, prorated, and registered weight) as well. Weigh station personnel may choose to screen on safety, registration, and/or credentials utilizing the KATS system. In all, there are 16 tests run on every vehicle identified by KATS. KSP-CVE staff can designate which of these tests will result in the vehicle being automatically stopped.

All vehicle records are displayed on the KATS user interface in the scale house for use by staff.

If all tests are run and no problem is identified, the vehicle is coded with green and is directed to the bypass lane where it will exit the facility, unless some visible problem is identified as the vehicle passes the scale house. If there is insufficient information to make a screen-ing decision, the vehicle is coded as blue and proceeds to the bypass lane. A commercial vehicle identified as having some sort of potential problem is coded with either yellow or red. Both colors indicate that the vehicle failed at least one test, but a red code indicates that the vehicle will be automatically stopped by KATS. In the automatic stop scenario, the driver is directed to the static scale by the first sorter sign where enforcement further investigates the issue prior to initiating an inspection. If the screening is not com-pleted prior to the first sorter sign or the driver ignores the message, the truck can still be directed to pull into the parking lot before it exits the weigh station. In this situation, personnel investigate the problem once the driver comes into the scale house.

KATS is also being deployed on rural roadways at two Kentucky locations. These locations do not have a permanent facility but have enough commercial vehicle traffic that enforcement is necessary. KATS works in a similar fashion, capturing identifying information from the vehicle and running checks based on Kentucky's CVIEW. At these locations, officers sit downstream from the site and log into the KATS system from their laptop computer. They are able to monitor the traffic coming toward them and intercept vehicles that have potential problems.

Research has shown that inspections initiated from KATS tend to have more violations and are also more likely to result in increased revenue for Kentucky. KATS also automatically identifies motor carriers that are under a Federal Out-of-Service (FOOS) order which indicates a significant safety concern by FMCSA.

These systems not only assist enforcement in their duties, but they also assist the KYTC, Division of Audits by creating millions of observations of commercial vehicles. The images and data from the KATS system are fed directly into Kentucky's observation database and used by the Division of Audits to ensure appropriate taxes are being paid.

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