

'Virtual inspections' of trucks tested in state

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From more than a half-mile away, officers at the Interstate 40 weigh station saw a problem with a tractor-trailer rig using wireless technology.

And before the truck had pulled to a stop, they'd already checked its brakes using their laptops.

The problems were contrived, but the technology was real Wednesday in a demonstration of what someday could lead to nonstop weigh-ins for big rigs or even "virtual inspection stations."

The demonstration showed the results of a \$350,000 research project by the University of Tennessee, the Knoxville-based National Transportation Research Center and Volvo Technology of America, the Greensboro, N.C.-based research arm of the Swedish automaker.

At the heart of the system is a shoebox-sized case onboard the truck. Using off-the-shelf electronics and specially designed software, it collects data from various monitors on the truck and transmits it.

Weigh station officers don't have to leave their chairs.

"I think it is great. The prospects for the future of this are tremendous," said U.S. Rep. John J. "Jimmy" Duncan Jr., chairman of a House Transportation and Infrastructure subcommittee.

"They are starting with the brakes, but this has all kinds of possibilities," the Knoxville Republican said. "It certainly can make tractor-trailers and big trucks on the highways much safer."

The researchers say it is part of the Department of Transportation and Federal Highway Administration's "trusted truck" initiative to improve commercial vehicle safety, security and efficiency.

The demonstration at the I-40 weigh station was no coincidence. Some 12 million trucks a year pass by here, or about one every five seconds. Checking trucks can be hit or miss.

Doing a manual brake inspection can take an officer 45 minutes.

Wednesday, researchers determined their big rig's brake linings were 7 percent worn on one side and 8.4 percent worn on the other before the truck reached the scales.

"I am impressed," said Capt. J.R. Bridgeman, who commands the Department of Safety station. "I am excited just thinking about the things it will be able to detect in the future. I think it is very workable."