Iowa Interstate 100% Violet

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You won't find different shades of information technology on Iowa Interstate Railroad (IAIS) locomotives. That's because Wi-Tronix, LLC has equipped the entire IAIS fleet with Violet™.

Violet™ is described as "a real-time, streaming event recorder and advanced video analytics solution that railroads use to manage their fleets through the Wi-Tronix website, offered as a cloud-based Software as a Service (SaaS), from anywhere in world on any device." The Violet™ hardware platform consists of an event recorder (ER), digital video recorder (DVR), Locomotive Data Acquisition Recording System (LDARS), and Crash-Hardened Memory Module (CHMM) in a single compact device.

"The key difference between Violet™ and other products is its streaming, real-time data capabilities," Wi-Tronix said. "Data

Erik Rasmussen, IAIS

from the locomotive like speed, Positive Train Control (PTC) data, GPS location, throttle notch, and dozens of other signals are sent to the railroad via a cloud-based website. Information is accessible to railroad management to monitor efficiency of operations and location and safety of fleet. The solution enables railroads to comply with federal regulations and to improve operational efficiency and safety procedures."

IAIS's installation of Violet™ on its entire fleet "allows the railroad to realize the fullest benefits of the system by connecting its assets to a digital network," Wi-Tronix noted. "IAIS has found many additional applications of Violet™, especially in advanced video analytics. Violet™ aggregates petabytes* of video data in an Internet of Things approach to create actionable information from the locomotive video."

IAIS is the first railroad to complete milepost geo-mapping video surveys using Violet's artificial intelligence-based video analytics. Violet's high-definition cameras and video analytics software analyzed the milepost signage and compiled data to create an automated survey and database of all mileposts. "This saves the railroad significant time, cost, and resources by completing a geo-mapping survey during normal locomotive operation," Wi-Tronix said.

According to IAIS Chief Mechanical Officer of Locomotives Andrew Reid, IAIS uses real-time streaming alerts from Violet™ to monitor its AESS (automatic engine start/stop) systems. The AESS data provides important information "to ensure these systems are functioning properly for locomotives to realize maximum fuel savings," Wi-Tronix pointed out. "IAIS also has the opportunity, like all Wi-Tronix customers, to contribute feedback and requests for future software features. These features become available in software releases that are pushed through over-the-air updates to the locomotive hardware. In essence, the solution continuously advances and grows with the railroad to deliver lasting value."

The Violet™ system also meets federal requirements for recording PTC data. PTC generates many event logs, including PTC banner messages and prompts. These messages appear on the in-cab monitor, prompting the engineer to take action. Violet™ displays these messages within the Violet View webpage and fuses data including PTC message, speed, location, maps and real-time images. The real-time information creates a historical log of PTC data "to simplify troubleshooting system issues and investigating incidents," Wi-Tronix said.

"We truly appreciate Wi-Tronix in the way they listened to what we needed and got it done," said IAIS Executive Vice President and Chief Operating Officer Joe Parsons. "They are a true partner, which is refreshing as that is an extremely uncommon attribute for most vendors. We look forward to a continued, successful partnership with Wi-Tronix."

http://www.railwayage.com/index.php/communications/iowa-interstate-100-violet.html