

case study



Digital Optical Reading Agent (**dora™**)

A U.S. chemical producer employs a large number of inbound and outbound rail cars at a manufacturing facility in Charleston, Tennessee, a major component of the nation's critical infrastructure and key chemical sector. Rail cars must be inspected for safety and structural integrity at regular intervals, and the results verifiably documented.

CHEMICAL PLANT RAIL CAR VOICR SYSTEM, CHARLESTON, TN

CHALLENGE

Each rail car traversing the facility is stenciled on the car sides and car ends with a unique identification number, and the date of last inspection is also stenciled on each side. Present methodology involves manual checking and recording of the ID number and inspection date with subsequent input into a company SAP system. As with any manual methodology, human error is a possibility and the resulting safety issues and potential cost significant.

SOLUTION

Deployment of the **Digital Optical Reading Agent (dora™)**, Duos Technologies proprietary video optical character recognition (VOICR) system for the rail industry. **dora™** automatically scans inbound and outbound rail cars traversing a rail facility at speed to provide OCR identification. Any time a train enters the facility, smart software activates the system. **dora™** captures live, streaming video of the car identification number, the date of last inspection and an image of the car. **dora™** then decodes these numbers, which are subsequently digitally recorded, bundled, time stamped, and stored as a single record into a Duos **rvspro™** system SQL database for later retrieval. The facility subsequently extracts this information and cross references it to their inventory tracking systems. Real-time local and remote monitoring and data retrieval is accomplished using a customized browser based Graphical User Interface (GUI), and the Duos **Linear Panorama Generator (LPG™)** generates full linear train panoramas for archival or higher level post-processing to permit a more detailed examination of individual images.

BENEFIT

The **Digital Optical Reading Agent (dora™)** significantly increases the ease and accuracy with which rail cars are identified, tracked, inspected, and the results documented regardless of car quantity or inclement weather.

