

# TRACK ASSET MAPPING SYSTEM

## AN AFFORDABLE TOOL TO INVENTORY AND MAP TRACK ASSETS

### Build an Asset Management System from the Ground Up, or Enhance Existing Systems.

The Wayside Mapping System provides a portable, low cost, highly accurate tool for mapping and inventorying track centerlines, track elements and wayside assets. This technology is powered by the Geo-3D, Inc. TRIDENT-3D Mobile Mapping Solution—a georeferenced land videography system.

The system is designed for installation on high-rail or track inspection vehicles and consists of an integrated GPS, inertial and stereo camera system that captures images of track, and tags these images with GPS locations. The system uses automated processing routines to generate accurate track centerlines. End-user software replays the survey, and accurately maps track assets to sub-meter locations from the camera image, using a point and click approach.

The end user software provides an intuitive interface for attributing the assets to create and maintain a comprehensive track asset management database stored in the open Shareable Expandable Database (SED) model initiated by Amtrak.

Based on research funded by the Federal Railroad Administration, this breakthrough technology allows railroad maintenance personnel to affordably convert legacy paper records into a modern digital environment.

### Key Benefits

The Wayside Mapping System provides a low-cost approach to accurately inventorying and mapping track infrastructure for use in maintenance and financial planning as well as track inspection data overlays.



The Track Asset Mapping System provides georeferenced images and locations of your Track and Wayside assets.

### Accurate Inspection of Infrastructure

**Conditions:** During the inventory process, the system offers an inspection module to flag assets that are damaged or need replacement.

**Improved Record Keeping:** The Track Asset Mapping System converts updated paper records and source documentation such as track charts into a dynamic digital system.

**Cost-Efficiency:** The portable system can be easily installed on a high-rail or track inspection vehicle that is already in service. Data can be collected during routine maintenance operations and

requires minimal user interaction other than starting and ending the data collection software.

**Information Management System:** results from this product also offers a number of long-term benefits that further maximize the return on investment:

**Flexibility:** The Track Asset Mapping System is based on the SED data model and exports to standard GIS formats. It can easily be integrated with existing asset management and track inspection data management systems, such as

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ENSCO's Track/IT™.

**Seamless Information Flow Between Systems:** Information is easily integrated into existing work order and asset management systems, financial record keeping systems and track inspection analysis systems.

**Easy Access to Key Information:** Knowing what you own and where it exists on your properties helps facilitate maintenance planning.

### Options

- Lease or purchase options available
- Post-process your data in-house or have ENSCO data conversion specialists build your system



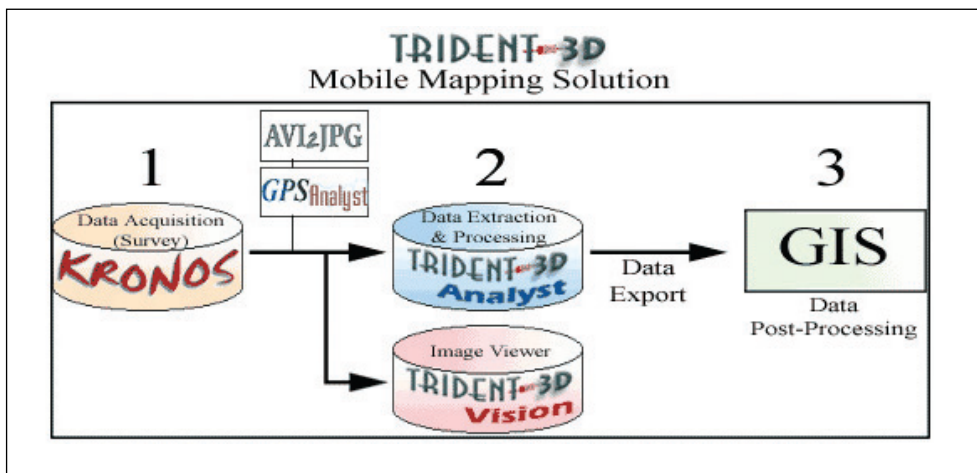
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The Track Asset Mapping System utilized on the Hy-Railer.

At your request, ENSCO will conduct a low-cost, limited risk, seven-step pilot project:

- **Step 1:** Source Document Review. Meet with ENSCO specialists to review your existing source documentation and determine what infrastructure is important to your organization to inventory and map.
- **Step 2:** Pilot Area Selection. Select a segment of your property to collect the data.
- **Step 3:** Collect the Data. Install portable system on a maintenance or inspection vehicle and operate over the pilot area.
- **Step 4:** Post-Process the Data. Allow ENSCO to map and attribute track centerlines and asset locations.
- **Step 5:** Create the Asset Management Database. Load the inventory data into the asset management model.
- **Step 6:** Create the Track Inspection Database. Load your most recent track inspection data into the inspection management model.
- **Step 7:** View and Analyze the Data. View your maps, track charts and inspection data for the pilot area using ENSCO's Web-based Track/IT™ data management tool served from ENSCO's data hosting facility.



**For more information,  
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