ENSOCO’s autonomous Vehicle/Track Interaction (V/TI) Monitor provides unattended condition-based monitoring of the interactions that take place between the rail vehicle and the track. The V/TI Monitor applies a “train path free” approach by utilizing compact sensors, GPS and wireless communication devices. It does not require the use of dedicated measurement vehicles with specialized personnel. This approach facilitates cost-effective and frequent condition based monitoring of track infrastructure with round the clock, real-time reporting of safety critical conditions. It is used in conjunction with office based automated analysis and reporting tools for longer range degradation monitoring and maintenance planning.

Frequent measuring and reporting without the data overload for optimized maintenance planning

Track conditions are reported via wireless communication to your office where data management applications provide powerful reporting capabilities for leveraging the use of the results. Such capabilities include

- Linear and georeferencing of location detections to track assets
- Automated distribution of notifications to MOW personnel
- Simple to use, enterprise web-based reporting system with GIS and tabular-based reporting tools for data analysis.

The technology platform can be adjusted to local operating conditions to ensure appropriate thresholds are in place so that only meaningful and manageable results are distributed in near real time to prevent data overload.

Well-supported user community

Today, there are more than 250 V/TI Monitors operating throughout the world on all facets of passenger and freight operations, including high-speed, inter-city passenger, metro transit, and heavy haul railways. ENSCO hosts an annual V/TI user day for rail personnel from around the world to share experiences, discuss best practice strategies, and collaborate on technology improvements.
High value condition based detections with minimal personnel and equipment investment

V/TI sensors continuously measure track conditions. When a value exceeds a predetermined threshold, a notification is sent. Information transmitted includes the time, GPS coordinates, sensor reading, and a snapshot in time of the continuous sampled sensor data.

The V/TI Monitor platform can be configured and expanded to monitor many track and vehicle conditions. The four most commonly monitored track conditions

1. Lateral track irregularities
2. Short-wavelength vertical track irregularities
3. Long-wavelength vertical track irregularities
4. Wheel/Rail impact

V/TI Monitor Highlights
- 4 Countries Operating
- 15+ Railways Using
- 250+ Systems Operating
- 1,000+ Sensors Deployed
- 1,000+ Track Maintainers Receiving Results
- 64,000 Kilometers Monitored

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800-ENSCO-VA
rail@ensco.com
www.enscorail.com

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