

MOTER Technologies: Unlocking Advanced Driver Risk Analysis Through VSS



COVESA

Accelerating the future of connected vehicles

Company Profile

MOTER Technologies is a software and data science company focused on bridging the gap between the automotive and insurance ecosystems. MOTER's mission is to enable smarter, data-driven decisions for automotive and insurance businesses by leveraging comprehensive driving behavior and vehicle sensor data analytics. MOTER is transforming the vast amount of data modern vehicles produce into actionable insights that drive the next generation of insurance products and services in collaboration with original equipment manufacturers (OEMs), Tier 1 suppliers, insurance leaders, and cutting-edge mobility services. For more information, visit www.moter.ai.

Situation

- Vehicle data varies widely across OEMs, making it hard for insurers and fleets to assess risk consistently.
- MOTER uses COVESA's VSS to standardize vehicle signals, enabling scalable, OEM-agnostic risk analytics.
- As vehicles shift to software-defined platforms, consistent, privacy-compliant data access becomes essential for real-time insurance and fleet solutions.



COVESA

"Standardized vehicle data is the foundation for delivering scalable, insurance-ready insights. COVESA's VSS helps us simplify integration across OEMs and accelerate how quickly we can bring data-driven risk intelligence to market."

Shankar Yoganathan
VP of Engineering, Device & Data Science
MOTER Technologies, Inc.

Overview



MOTER Technologies Inc. (MOTER) is at the forefront of transforming vehicle data into actionable insights for insurance risk analytics and fleet management. By aligning with the Connected Vehicle Systems Alliance (COVESA), MOTER is strategically positioned to leverage standardized vehicle data to enhance risk assessment and insurance pricing models. This case study explores MOTER's integration with COVESA, highlighting the company's objectives, technical integration, use cases, and potential business impact within the connected vehicle ecosystem.

Integration with COVESA

MOTER actively contributes to COVESA with a focus on advancing data standardization, data sharing frameworks, and data privacy management within the connected vehicle ecosystem. Since the insurance industry relies on data from vehicles manufactured by multiple OEMs, MOTER is committed to ensuring uniform vehicle data standards across all makes and models to enable consistent risk assessment and risk pricing.

Key Objectives of Integration

Vehicle Data Standardization: MOTER aims to facilitate the adoption of uniform vehicle data standards across all OEMs. This initiative is critical for achieving consistent risk assessments and insurance pricing based on vehicle data, regardless of vehicle make or model.



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Standardized vehicle data is essential for scaling MOTER's solution across OEMs. By aligning with the Vehicle Signal Specification (VSS), MOTER eliminates the need for custom data integrations, enabling rapid deployment of its SDK across both software-defined and connected vehicle platforms. This consistency supports efficient productization, streamlined engineering, and accelerated delivery of real-time insurance analytics.

Data Sharing Network: MOTER is working towards establishing a standardized data communication framework between vehicle systems, insurance applications, and risk management solutions. This framework ensures secure data sharing, minimizes data transportation costs, and supports seamless communication between various OEMs and insurance and fleet management providers.

Data Privacy and Consent Management: Recognizing that vehicle data originates in the vehicle itself, MOTER is dedicated to implementing robust data privacy and consent management practices to secure data throughout its entire lifecycle.

Use Cases and Applications

MOTER is leveraging COVESA standards to transform data from the vehicle into actionable insights for insurance risk analytics and fleet risk management solutions. The integration of standardized vehicle data through VSS enables MOTER to effectively utilize vehicle data across various insurance and fleet management solutions.

MOTER has developed an Insurance Risk Analytics model that leverages telematics, ADAS, and DMS vehicle signals to assess driver behavior and produce a risk score suitable for insurance pricing. The model has been approved in 27 states in the US, with further expansion ongoing. By leveraging standardized vehicle data, MOTER aims to:

- Improve risk scoring accuracy
- Reduce data processing and storage costs
- Enable seamless OEM-insurer data flow
- Support fair insurance pricing
- Enhance driver coaching
- Optimize insurance fleet risk management solutions
- Deliver advanced crash analysis

About COVESA Specification

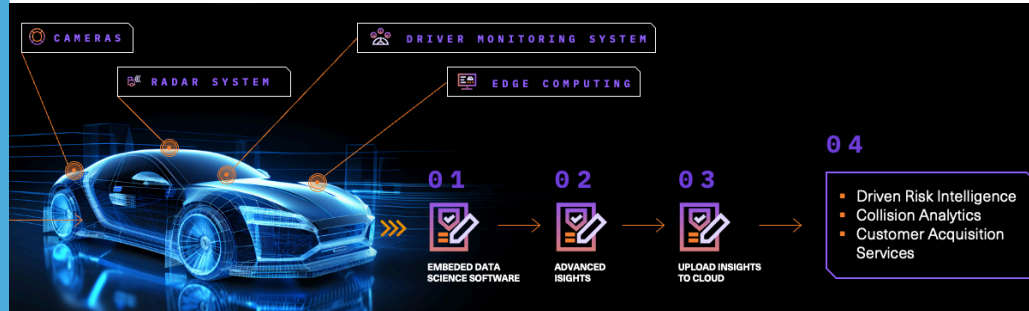
The Vehicle Signal Specification (VSS) is COVESA's open standard for structuring vehicle data. It provides a consistent format for interpreting signals across different OEMs, reducing integration complexity and enabling scalable, cross-platform applications. MOTER uses VSS to streamline on-vehicle data processing, accelerate development cycles, and ensure privacy-first, insurance-ready insights regardless of vehicle make or model.



TECHNICAL INTEGRATION



MOTER's technical architecture uses an edge-to-cloud infrastructure to ingest vehicle signals via the COVESA VSS, process them with AI-powered risk models, and deliver real-time insights for software-defined and connected vehicle platforms. The four-step integration process is as follows:



Step 1: Embedded Data Science Software

MOTER's SDK is deployed directly in the vehicle, enabling the reception of vehicle data using VSS. The SDK collects and processes vehicle signals related to telematics, ADAS, and DMS data. By utilizing VSS, the SDK ensures uniform data formatting and compatibility across multiple OEMs, streamlining the data acquisition process.

Step 2: Advanced Insights Generation

The data collected through the SDK is processed on the edge to generate advanced risk insights. These insights include driver risk intelligence, collision analytics, and scoring metrics for insurance risk assessment and fleet risk management.

Step 3: Upload to Cloud Infrastructure

The generated insights are then uploaded to MOTER's cloud infrastructure. Because the vehicle signals are processed on the edge, MOTER minimizes data transmission volume and reduces latency. Transmitting only the essential risk analytics and insights reduces the volume of raw data transferred and ensures data privacy compliance.

Step 4: Data Monetization and Productization

MOTER leverages the uploaded insights to create data products and services for insurance carriers, MGAs, and fleet operators. These products include monthly insurance premium analysis, risk management dashboards, and real-time driver coaching modules.



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Technical Challenges

- Harmonizing VHAL and VSS specifications as OEMs begin deploying Android Automotive OS.
- Implementing driver identification across multiple vehicles to maintain data privacy and track consent when the same driver operates different vehicles within a family or business insurance plan.

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Operational Challenges

- As vehicle OEMs transition towards software-defined vehicle architectures, the time is now for integrating solutions that support future insurance and fleet management needs. Implementation with VSS now will ensure that new features are compatible with other technologies as they're incorporated. With this priority in mind, ensuring OEM adoption of VSS and demonstrating the value of standardized data remain critical concerns.

MOTER's integration with COVESA represents a significant step forward in standardizing vehicle data to support the insurance and fleet management sectors. By aligning its SDK with VSS, MOTER is laying the groundwork for seamless data communication across multiple OEMs, ensuring uniform data formats for risk assessment and insurance pricing.

Through its focus on data standardization, data sharing frameworks, and data privacy management, MOTER is poised to lead the transformation of vehicle data analytics for insurance applications. As vehicle OEMs adopt software-defined vehicle architectures, the timing is optimal for further integrating VSS into MOTER's risk analytics solutions, positioning MOTER as a pivotal player in the evolving connected vehicle ecosystem.

LOOKING AHEAD

MOTER remains committed to advancing data-driven insurance analytics, fostering industry collaboration through COVESA, and expanding the reach of its SDK to new platforms and markets. The successful integration of VSS data not only enhances risk scoring accuracy but also provides a scalable framework for future insurance and fleet management applications, reinforcing MOTER's mission to harness connected vehicle data for impactful risk management solutions.



The Connected Vehicle Systems Alliance (COVESA) is an open, member-driven global technology alliance accelerating the full potential of connected vehicles. By developing common approaches and technologies, COVESA provides a collaborative platform that empowers automotive software stakeholders and world-class developers to address challenges and opportunities in connected mobility and navigate the digital transformation of the automotive industry. Learn more about COVESA or join our community at www.covesa.global.