



A CLOUD-BASED CONNECTED VEHICLE SOLUTION FOR TOMORROW'S ROADWAYS

Connected and autonomous vehicle (CAV) applications are increasingly being implemented in state departments of transportation (DOTs) as well as smart cities. Why? CAV applications can solve many problems that exist on our roadways. However, the technology is cutting edge and full of challenges. To address these challenges, Trihydro developed a CAV solution called CORVUS® to help DOTs and smart cities harness this new technology with maximum efficiency.

THE PROMISE—AND CHALLENGE—OF CAV TECHNOLOGY

One of the most promising applications of CAV technology—with tremendous benefit to drivers—is the distribution of traveler information messages (TIMs). TIMs provide timely and accurate information to drivers and autonomous systems, improve traffic flow and routing, and even reduce weather-related fatalities.

It is easy to get excited about the possibilities of TIM distribution; however, as with any new technology, implementation comes with its own set of challenges, such as:

- Evolving standards for CAV technology make software development risky because developing applications for one format may not be compatible with the next generation format.
- The low density of connected vehicles on the road makes it difficult to justify the expense of deploying a CAV environment.
- Roadside units (RSUs) have a limited range, which means messages can only be delivered to small sections of the roadway, or DOTs must invest heavily in RSUs to cover large corridors.
- CAV technology implementation is complex and expensive.

CORVUS CAN HELP

CORVUS is a centralized, cloud-based platform for creating, managing, and distributing trusted connected vehicle TIMs. Using the technology and expertise we developed as part of the USDOT's Connected Vehicle Pilot Program, Trihydro created CORVUS to enable DOTs to easily integrate their systems into a CAV environment while avoiding most deployment challenges.

HOW IT WORKS

The software development, hardware, and expertise required to leverage CAV technology can be challenging and prohibitively expensive. This is where CORVUS shines. CORVUS simplifies CAV messaging by properly formatting, encoding, and integrating with the security credential management system so CAV messages are seamlessly integrated into an existing traffic management center software. Additionally, CORVUS manages all active messages by automatically removing, updating, and adding TIMs for given road segments.

Continued on back

WHAT CORVUS® DOES FOR DOTs

CORVUS provides a trusted source for traveler messages that originate from trusted infrastructure owners and operators without the need for costly custom software development and integration. In short, it drastically simplifies the CAV messaging process, which is otherwise complicated, time consuming, and ever changing. CORVUS can:

- Build time-critical CAV messages and deliver them to a wide range of vehicles
- Eliminate costs associated with gathering data from multiple sources and translating it into a useful format
- Provide a one-stop-shop for creating CAV traveler messages
- Dramatically reduce the time and expense of CAV deployment

Additionally, CORVUS's integration with the Trihydro Situation Data Exchange (SDX)® service allows DOTs to store and distribute messages through third-party messaging systems.

CORVUS simplifies the CAV messaging integration for DOTs and smart cities by eliminating the need for custom software development and providing a secure, reliable messaging system.



LEARN MORE



SHANE ZUMPF
Software Solutions Specialist
307-745-7474
szumpf@trihydro.com



1-800-359-0251 • trihydro.com