Envigilant Systems™

Envigilant Systems™ Provides Innovative Paratransit Fleet Monitoring For Santa Clara Valley Transportation Authority

Santa Clara Valley Transportation Authority (VTA) selects Envigilant Systems, a secure solutions and services company, to design, deploy and support a unique monitoring system for select Access Paratransit vehicles as part of an Innovation Project.

Challenge

VTA is based in San Jose, California, and is responsible for bus, light rail and paratransit operations throughout the area known as Silicon Valley. VTA provides sustainable, accessible and community-focused transportation options.

This independent district offers transportation that is both innovative and environmentally responsible. More than 40 million passengers move through its network of buses and light rail vehicles (LRV) every year.

Envigilant Systems first worked with VTA in 2011, providing a secure, upgraded network to support Clipper® cards, the all-in-one transit card for the Bay Area. More recently, VTA required a better customer experience and monitoring of their fleet of paratransit vehicles. These vehicles provide transport for eligible individuals who cannot use conventional public transit services such as bus or light rail. VTA's top priority was to ensure optimal passenger safety and experience throughout the entire journey.

Envigilant Systems was a straight-forward choice. Built from open technologies, Envigilant Systems offers field-proven transportation-focused solutions that are easy to use and shown to decrease operational costs—with no increase in IT resources. Solutions are available to monitor passenger safety, mitigate accident risk, improve rider experience and track assets. The secure IoT platform is scalable and will enable real-time analytics and machine learning applications, such as predictive maintenance, in the future.

For a free consultation, please visit www.envigilantsystems.com

VTA ACCESS

Solution

A diverse group of paratransit vehicles were fitted with an EtherGRID™ platform consisting of a ruggedized server, location-based router for GPS and internet backhaul, and various sensors including high-definition video cameras. These allow automatic video recording of passenger loading and unloading, and an ability for authorized safety personnel to monitor that safe handling practices are being followed. A web-based dashboard also records and monitors vehicle location, engine diagnostic data and G-force accelerometer information for useful vehicle safety and maintenance data.

Success

The Envigilant Systems mobile fleet solution VTA deployed has been in everyday use since the rollout. VTA now benefits from video coverage of all paratransit journeys in the select vehicles, providing enhanced transportation awareness and well-maintained vehicles to better assist dependent travelers.

Passengers can also connect to the internet with free wireless access and receive real-time messages via touchscreen tablets providing the ability for passenger feedback. This messaging system also allows VTA to send status updates, alerts, or publish notices about service changes.

Future Solutions

The Envigilant Systems secure mobile solution provides an ideal platform for expansion and will readily scale to support future requirements and ideas, such as:

- ⊙ On-board IoT edge compute capabilities for advanced video analytics in real-time and opportunities for machine learning/artificial intelligence applications.
- ⊙ Data acquisition from other existing on-board sensors to provide operational and maintenance data to identify optimum maintenance schedules.

About Us

Envigilant Systems is a business unit within Allied Telesis that has engineering capabilities to build security-focused IoT solutions for manufacturing, transportation, and smart building applications. Backed by 30+ years' experience building secure, reliable networks, Envigilant Systems is ideally placed to design, implement and provide services for tailored solutions to meet demanding requirements. With a global sales and support network, Envigilant Systems is solving challenging IT problems worldwide.

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