

SUCCESS STORY

Santa Clara Valley
Transportation Authority



Envigilant Systems Implements Cutting-Edge Passenger Information System For Santa Clara Valley Transportation Authority



Santa Clara Valley Transport Authority (VTA) selects Envigilant Systems, a secure IoT solutions and services company, to design, deploy and support a Passenger Information Monitor System (PIMS) for its light rail vehicle fleet throughout Santa Clara County.

The Challenge

Santa Clara Valley Transportation Authority (VTA), based in San Jose, California is responsible for bus, light rail and paratransit operations throughout the Santa Clara county area.

VTA undertakes countywide transportation planning, including congestion management issues, specific highway improvement projects, pedestrian and bicycle improvement projects. VTA continually builds partnerships to deliver transportation solutions that meet the evolving mobility needs of Santa Clara County.

In 2011 Envigilant Systems worked with VTA to provide a secure, upgraded network to accept Clipper® cards, the all-in-one transit card for the Bay Area. So, when the time came for VTA to improve the Passenger Information Monitor System (PIMS) throughout its light rail network, Envigilant Systems was the obvious choice.

The light rail network consisted of 42 miles of track and more than 100 platforms. VTA's primary requirement was to capture data that would allow them to improve the customer experience—and in turn increase public transportation usage and reduce traffic congestion in the Santa Clara region.

For a free consultation, visit www.envigilantsystems.com

Solution



To meet VTA's requirements, a PIMS was deployed on each light rail platform to deliver real-time arrival information, notification of service changes, and public safety announcements. Ruggedized large-screen displays and a hardened industrial-grade server—a miniaturized data center server called EtherGRID™—were deployed on each platform to cache content and drive the displays. A customer feedback station was installed on each light rail vehicle (LRV) to measure passenger satisfaction.

At the VTA data center, a fully-featured Content Management System was deployed to enable VTA staff to manage PIMS content and view the status of the network in real time. A dashboard application also shows a real-time, map-based visualization of the location of each vehicle in the fleet. Other functions include live look-in video and safety incident reporting with heat maps to show long-term trends.

Success

Since the Envigilant Systems secure IoT transportation solution was implemented at VTA, it has been in everyday use on the VTA network, providing real-time LRV arrival information across all light rail stations.

VTA passengers enjoy up-to-the-minute travel information on platform displays, along with emergency alerts and notifications to make their journeys easier and safer, thanks to the new PIM system. Since deployment, ridership numbers and customer satisfaction have both improved, and VTA has better visibility of their assets.



Future Solutions

The Envigilant Systems secure IoT 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 existing on-board sensors for propulsion, braking, HVAC, and door systems to provide operational and maintenance data to identify optimum maintenance schedules.



Integration with other safety-related sensors, such as smoke and fire detectors, explosives sensors and on-board gunshot detection, to further enhance passenger safety.



Secure IoT Solutions & Services

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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.