Systems Integrated Connected Vehicle

Leading the way in Connected Vehicle Systems Integration:

*Systems Integrated specializes in integrating complex networking, wireless and control systems for Transit, Rail & Traffic Management, and National Security. *Systems Integrated develops custom solutions using commercial off the shelf (COTS) products that integrate into customers' existing systems to maximize re-use and reduce end-user cost and maintenance. *Systems Integrated deploys complex layer2 and 3 networking systems with wireless, fiber and modems and also develops custom software to support mobile video applications and design Custom I/O subsystems which eliminates product obsolescence.

- 5.9GHz Connected Vehicle
- V2V, V2I
- Intersection communications, copper, fiber, wireless
- Intra-city traffic signal coordination
- Adaptive Traffic Signal Control
- CAD/AVL

- Mobile Video Surveillance and wireless offload
- Mobile on-board CCTV access for transit vehicles
- Transit Signal Priority
- Traffic Signal Pre-emption
- License Plate Recognition

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SYSTEMS INTEGRATED

Providing Custom Design and Integration Services to Enhance Safety and Operations for ITS, Transit and Rail

ITS/Transit/Rail Systems Integration

Traffic Signal Management: LA County

Requirement: Communication network solution for a multi-jurisdictional Intelligent Transportation System (ITS) to support an Advanced Traffic Management System (ATMS): Existing Signal Controller products provided by multiple manufacturers for over 5000 signalized intersections; Video transport for over 500 cameras.

Solution: Systems Integrated provided a wireless system integrated with existing fiber and leased line communication services, design based on an intensive survey of terrain, and wireless studies. The system supports both serial and ethernet communication protocols with less than 100ms latency. The system has been in operation since 2006, and continues to grow as new intersection are added.

Connected Vehicle Infrastructure

Systems Integrated is providing Innovation with Connected Vehicle Infrastructure Systems.

Unique Fiberwire Wireless Units provide 3 services in a single, easy to install package:

¨ 5.9 GHz DSRC 802.11p RSU

¨ 300 Mbps LTE-U

¨ 2.4 GHz Wi-Fi Access

Systems Integrated is working to install Connected Vehicle systems while providing integration with ATMS, Transit, and Smart Cities networks.

Transit Signal Priority: San Francisco

Opportunity: Improve SFMTA bus commute times

Solution: Systems Integrated installed Proxim MP8200 Fiber capacity radios at 600 intersections throughout San Francisco providing a communication infrastructure for Transit Signal Priority and backhauling CCTV cameras at fixed locations.

GTT Opticom radios communicate GPS positioning information from the bus to the intersection to enable transit signal priority.

Result: Commute times improved by 10-20%

New Application: Expanding to support mobile access to Muni bus on-board CCTV cameras.

Platform Safety: Toronto Transit

Requirement: Automatically display platform camera images in the Train Engineer Cabin as train enters station.

Solution: Systems Integrated designed and installed a unique system with 5GHz radios on the platform and 5GHz mobile radios inside the train, the complete system included video encoders, fiber switches and a custom on board computer with custom software to read RFID tags as the train enters a station so the correct video is displayed.

The train Engineer is able to view all cameras on the station platform to ensure public safety prior to departing.