Gateway Green Light Program St Charles County, MO

Integration and Troubleshooting

Technical White Paper



System & Master Planning | Network Design & Architecture | Infrastructure Design | Network Operations & Maintenance (NOM) | **Integration & Troubleshooting** | Training

Our team was selected by St Charles County, Missouri to provide daily communication and technology systems monitoring and troubleshooting assistance for the Gateway Green Light transportation program. This countywide intelligent traffic system operates and manages over 300 signalized intersections in the western suburban region of metropolitan St. Louis.

Situation



Since 2011, St Charles County (SCC) has been implementing a multi-jurisdictional approach to traffic and transportation management across the suburban reaches of the county. In partnership with the eight (8) county cities and the Missouri Department of Transportation (MoDOT), St Charles County has build a fiber optic, point-to-point radio, and cellular up-link communication network that connects all traffic signals in the county to a central Advanced Transportation Management Software (ATMS) housed on servers co-located at MoDOT's regional transportation operations center (TOC).

Our team team has been designing and working with the SCC transportation management staff since the earliest phases of this multi-year program and are responsible for monitoring and assisting with operational and maintenance issues as needed.

Solution

On-going and Continuous Support

Our staff is responsible for the routine and continuous monitoring and troubleshooting of the communication issues and failures, network wide. Since network reliability is crucial to daily operations, we perform remote and onsite network monitoring diagnostics and preventive maintenance to ensure that the network operates with maximum up-time, reliability, scalability, security, and operates at peak performance.

Our comprehensive portfolio of computer and networking knowledge, excellent troubleshooting skills with networking concepts and protocols are designed to protect this network operation environment. Our dedicated network support engineers are responsible for assisting Clients with the daily maintenance, installation, testing, and troubleshooting tasks to support the network operating systems.

Results

Real-Time Network Monitoring



The St Charles County Gateway Green Light Program has engaged our team to coordinate and manage it core network infrastructure. We work daily to ensure that the regional traffic signal and intelligent transportation systems (ITS) devices in-place and deployed across the county perform at their full design capability.

Our team coordinates with GGL and the partner city/state agencies to maintain the communication system underlying the deployed technology at levels exceeding the systems requirement, ensuring that each of the sub-systems function optimally. Network problems are identified and resolved quickly by using a real-time network monitoring software.

Conclusion

Improved Operations

Network monitoring and management is critical for all modern computer controller systems and technology programs. Ongoing monitoring of the network infrastructure and devices ensures that all portions of the traffic signal system is functioning as intended and providing safe, secure transportation for all roadway users.



By utilizing remote access, our team and partner GGL members can operate and resolve network communication and operational concerns promptly and minimize significant network downtime outages.

The very first traffic lights were a manually operated and gas-lit. They were installed in 1868 outside the Houses of Parliament in Westminster (London, England)

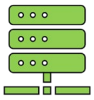
Tekniam Engineering - your friend in specialty technology



System & Master Planning – This is the first step in understanding and developing a modern communications and system management network. Without a plan, it just a parade of projects that may or may not work together in harmony and provide the results intended.



Network Design & Architecture – "The Intelligent application of the newest technologies and procedures to make you system operate efficiently". If only it was that easy – continued operation and support of legacy systems and hardwares, while taking advantage of new technologies, make the design of the network architecture the most critical link in the development of your system.



Infrastructure Design – Creating design plans that meet the requirements of funding agencies and provide the needed information for the proper installation of physical assets is a fundamental component of all wide area management and communication networks. Our licensed professional engineers understand how to make this happen efficiently.



Network Operations & Maintenance (NOM) – "Technology installed but not maintained in misplaced technology." Just because you built a great communication and management system, doesn't mean it will always work as intended or when needed. The ongoing monitoring and review of any operational management system is critical if you intend to utilize said network when it's really needed.



Field Integration & Troubleshooting – The best installed and maintained system will eventually meet with unintended issues. Have a plan on how to mitigate and respond to periodic breakages and device failures – our trained and certified staff can help.



Training – Experience has taught that most technologies are not utilized to anywhere near their capabilities or capacities. This is often due to the fact that system operators don't know what the new systems are capable of doing. Trained staff can maximize the benefit of any technology or system.

Communications & Technology

by Design