Heartland Communications Facility Authority of El Cajon, California, is a secondary PSAP (Public Safety Access Point) serving the 911 emergency dispatch needs of the Southern California cities of El Cajon, La Mesa and Lemon Grove. Also commonly referred to as Heartland Fire and Rescue, in 2012 the 911 dispatcher called on Carousel Industries to help upgrade their call center to an IP-based platform that would support new state NG9-1-1 technology requirements.

**CHALLENGE**
- Update 911 dispatch platform to new IP-based system supporting NG9-1-1 feature set
- Customer required advanced call reporting, incident management and reconstruction features
- Redundant, 24/7/365 technical support availability required for all 911 call center activities
- Price point required at or below capital allotment from State of California

**SOLUTION**
- Upgraded existing 911 call taking platform to Cassidian VESTA 4.0 dispatch infrastructure
- Cassidian Sentinel Patriot 911 workstations installed for NG9-1-1 feature integration
- Complex data management capabilities provided by Cassidian Aurora 2.1 MIS server application
- Robust NOC-based monitoring and support provided by Carousel Industries Maintenance

**PRODUCT LIST**

**911 Call Center Dispatch**
- Cassidian Communications VESTA 4.0 Call Processing System
- Cassidian Communications Sentinel Patriot 911 Workstations
- Cassidian Communications Aurora MIS

**Data Networking**
- Cisco Catalyst 2960 Series Switches

**IP-Based Telephony**
- Audiocodes Mediant 1000 VoIP Media Gateway
CHALLENGE

Formed in 1987 to coordinate the 911 emergency dispatching services of eight San Diego County fire departments, Heartland was mandated by a State of California grant to upgrade their call dispatching platform in 2012. To better serve the 180,000 residents within their coverage area, Heartland’s new IP-based call architecture would require robust support for Next Generation 9-1-1 (NG9-1-1) specifications in order to comply with state requirements. Among others, these features would include SMS/text message integration, multimedia processing, cell phone geolocation and other modern Internet-based telecommunications features.

Heartland sought a solution that would provide redundancy and flexibility, arming their first responders with tools that would include digital mapping, incident management, advanced logging and reporting, and sophisticated but easy-to-use CAD (computer-aided dispatch) workstation implementations. In addition, they needed the reliability of an absolutely ironclad monitoring and support team that could ensure dependable uptime and technical service in even the most challenging conditions.

Based on Carousel Industries’ strengths in the worlds of public safety and IP-based telephony, Heartland consulted with our Public Safety division for an option that would meet their needs within the cost limitations put into place by the State of California.

SOLUTION

Cassidian Communications VESTA Call Processing System. The core of this public safety implementation was the NENA i3-compliant VESTA emergency call system from Cassidian Communications. Hosted on redundant HP Proliant DL380 servers, this state of the art NG911 architecture would provide a powerful centralized implementation of the latest IP-based 911 dispatching technology standards. These tools would include computer-aided dispatch (CAD), mapping, incident tracking, radio, digital logging and seamless integration with third-party applications.

Cassidian Communications Sentinel Patriot 911 Workstations. In combination with the VESTA 4.0 system, five Sentinel Patriot 911 call dispatcher workstations would be installed to incorporate features such as SIP-based call handling, ACD (Automated Call Distribution), dynamic conferencing and fast one-button transfer. These terminals would be hosted on HP Z220 SFF workstations and would include remote site survivability and Instant Recall Recorders (IRRs) functionality.

Cassidian Communications Aurora MIS. An Aurora 2.1 MIS (Management Information System) reporting platform would centralize the incoming data from Heartland’s call center and integrate it into an automated intelligence resource. This system would allow Heartland personnel to quickly retrieve related events and detailed log reconstructions, as well as perform complex searches of the data archive directly from their Patriot workstations.

Cisco Data Networking. The data networking backbone of the new Heartland dispatch center would be implemented with Cisco Catalyst 2960 Series Ethernet switches. Selected for their quiet operation and network threat defense strengths, the 2960s would be ideal switches for the open space deployments planned for Heartland.

AudioCodes Mediant VoIP Media Gateway. The call center’s underlying VoIP telephony architecture would be based on the AudioCodes Mediant 1000 gateway, a converged wireline VoIP system designed to seamlessly connect modern IP-based telephony to legacy PBX and IP networks. Additional FXS and FXO modules would enable easy integration of analog phones, fax machines and central office PBX services.

Aggressive Price Offerings. Heartland needed the cost of their new 911 call center platform to be fully covered by the firm and limited budget mandated by the State of California. By leveraging our close relationships with Cassidian Communications and other vendor partners, the Carousel team was able to aggressively structure a comprehensive price offering that made the upgrade an attractive proposition.

Supported By Carousel Maintenance. Heartland’s technology platform would be fully monitored and supported on a 24/7/365 by the Carousel Network Operations Center in Rhode Island, with backup support operations in North Carolina, California and New York. Fully staffed by Tier 2, 3 and 4 engineers, these hardened centers would provide full time remote managed services for Heartland’s VESTA system in a dedicated and highly responsive manner.