



CASE STUDY Johnson County, KS Fleetmapping and Interoperability

CUSTOMER PROFILE

Johnson County, Kansas is located in the Kansas City, Missouri metropolitan area. Within the county, 17 cities either share a common radio communications system or interoperate with county public safety agencies. Johnson County also borders the Kansas/Missouri state line, requiring interstate interoperability, and is a member of the Mid-America Regional Council (MARC) responsible for coordinating public safety communications and other services within the area.

TECHNOLOGIES

The fleetmap design involved a solution that facilitated the migration of Johnson County's legacy Motorola SmartNet radio trunking system to a new Motorola Astro P25 radio network. Other technologies requiring interoperability solutions included conventional radio channels on multiple frequency bands and interface to MA/Com EDACS and other Motorola SmartNet Systems.

CONTEXT OF ASSIGNMENT

The new Johnson County P25 radio system replacement is one of several planned for the region requiring wide-area planning. The project required documentation of the existing Motorola SmartNet radio system fleetmap by reading existing subscriber radio templates, and then conversion of the existing fleetmap to a new P25 format. Once this was complete, Commdex conducted workshops and conference calls to refine the new fleetmap for enhanced interoperability within the county.

Other requirements addressed a number of jurisdictions within the county that also shared the original Motorola SmartNet system and were migrating to the new platform. A migration plan from an EDACS platform to Motorola P25 was required for three cities. The fire department was moving from a conventional radio system onto the new P25 network, a transition requiring new fleetmapping for interoperation between law enforcement and fireground communications. The assignment also required interoperability solutions for regional (MARC), intrastate, and interstate communications.

The assignment started in April, 2008, and concluded April, 2009.

COMMDEX SOLUTION

First, Commdex documented the existing fleetmap by reading the Customer Programming Software (CPS) from sample, existing radios. Once this was complete, presentations and workshops were held with county Emergency Communications Center (ECC) and fire personnel to refine the fleetmap. Results were circulated to all county agencies operating on the system for review and comment.

Three jurisdictions planned to migrate from an EDACS system to the Motorola P25 network. Commdex documented the existing Talkgroup plan for these entities by transcribing existing system data from the system manager into a format that could be translated into a P25 format.

Commdex worked with county representatives and a consultant representing MARC to develop a vendor independent Talkgroup naming convention that could be used throughout the region as additional systems joined. Additionally, subscriber radio templates were designed that standardized mapping for local, regional, intrastate, and interstate communications and interoperability.

The final package included a fleetmap master plan for the P25 radio network that defined all Talkgroups on the system and conventional resources requiring interfaces for interoperability. It also included master radio subscriber definitions for Johnson County Sheriff, Fire, and EMS as well as master definitions for jurisdictions migrating to the new system. Regional and state interoperability were defined by "zones" within the subscriber radio map where Talkgroups and conventional channels could be assigned as agreements and mutual radio resources were developed for mutual aid.

COMMDEX ROLES

Commdex served as project lead for the fleetmapping effort, working closely with the Motorola project team and Johnson County representatives. Commdex designed wide-area solutions, negotiated interoperability between all necessary entities, communicated proactively with representatives and clients, promoted active review between all parties, and created a technical foundation to support both current and future needs and additions.