

# PUERTO RICO

"We were impressed with the EFJohnson solution because they are able to seamlessly integrate their equipment with any type of existing communication system, regardless of manufacturer or technology."

**Quintin Ramos | Puerto Rico Police Department**

"Shortly after the installation of our StarGate™ Dispatch system, there was a plane crash. The fire department was the first on the scene and we were able to relay that information not only to the Coast Guard, but also to emergency management, EMS and the police department. Previously, that capability was not possible."

**Edgardo Barreto | Puerto Rico Fire Department**

## EFJOHNSON SYSTEM DESCRIPTION

**PROJECT STARTED: Q2 2011 | PROJECT COMPLETED: Q3 2012**

- | Project 25 Island-Wide Trunked and Conventional
- | 800 MHz Hybrid Solution
- | 20 Sites (77 trunked repeaters, 41 conventional repeaters)
- | Gateway Connections
- | StarGate Dispatch Consoles
- | 4100 Portable/Mobile Radios
- | Serving a Population of Approximately 3.8 Million

Partnering with:



# SITUATION

## Natural Disasters

Puerto Rico is one of the most densely populated islands in the world, and its location is prone to hurricanes and other natural disasters. It is critical that Puerto Rico's emergency responders are able to communicate with each other to coordinate a rapid response. EFJohnson Technologies partnered with its integrator, Codecom, to build out the largest, most comprehensive P25-compliant radio communications system on the island.

## Multi-Agency Interoperability

Puerto Rico previously operated on three distinct, proprietary radio systems and several individual analog conventional systems, resulting in the lack of interoperability among the agencies serving the island's 78 municipalities. The Puerto Rico Police Department selected EFJohnson to design, manufacture and install its ATLAS® P25 system solution since it is capable of seamlessly integrating with any type of existing communication system. The solution provides island-wide coverage via a single network, allowing agencies to be more efficient when coordinating responses.

## Challenging Location

The successful implementation of the Puerto Rico system is another example of EFJohnson's experiences with the unique challenges associated with an island deployment. Even with a landscape consisting of high elevations in the central part of the island, flat coastal areas and a lush tropical rain forest, a well-planned design enabled EFJohnson to achieve 95% coverage.



# SOLUTION

In order to achieve interoperability among the Puerto Rico agencies, EFJohnson provided an ATLAS system solution that integrates with existing disparate Multi-Net®, SmartZone®, VHF Conventional and UHF Conventional systems. The hybrid P25 system consists of trunked and conventional 800 MHz channels. The unique patented distributed architecture is flexible and scalable to expand as coverage needs change and as other agencies join the system. The distributed switchless network eliminates the use of a central controller, which means there is no single point of failure, so the system will remain resilient in times of hurricanes or other natural disasters.

The basic configuration of the system included the following elements:

- | 20 Sites - Hybrid Mix of Trunked and Conventional Channels
- | Gateway Connections - Conventional Network Interfaces to Existing Analog Repeaters
- | StarGate® Dispatch Consoles - Seamless Operator Access to Entire Network
- | 4,100 Portable/Mobile Radios - Multi-Protocol Subscribers Supporting Both Legacy Analog and New Digital P25 Systems

## Innovative Dispatch Solution

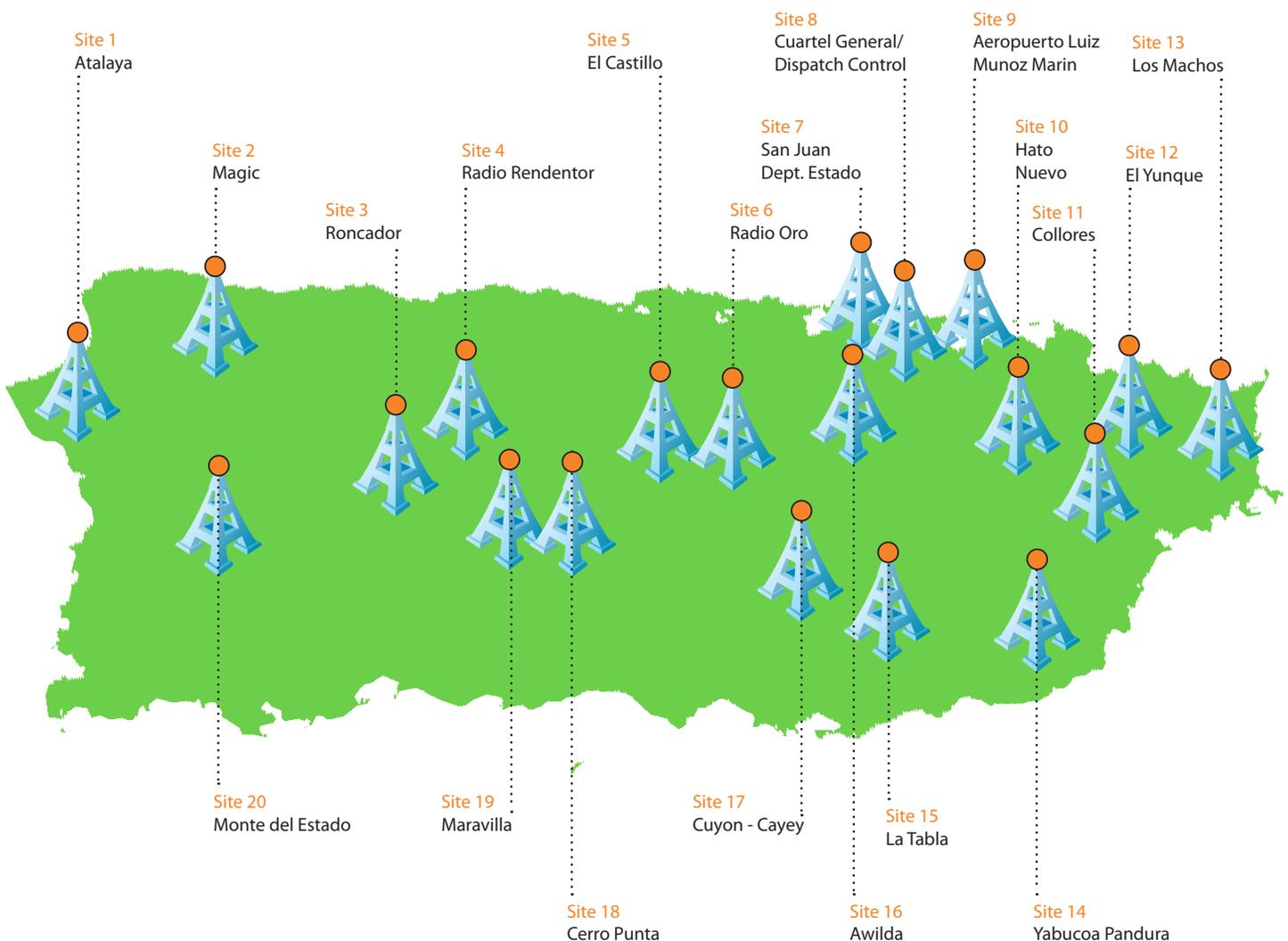
In conjunction with the installation of the hybrid P25 system, EFJohnson installed a StarGate dispatch console system at the Puerto Rico Fire Department (PRFD). Covering more than 3,000 square miles, the PRFD is divided into six regions, twelve districts and 94 fire stations. The new dispatch system allows them to operate command control from one location. The PRFD can also dispatch any fire apparatus throughout the island and maintain interoperable communication with the police department, emergency management agency and emergency medical services.

# BENEFITS

The primary benefits of the EFJohnson hybrid P25 system solution for Puerto Rico's island-wide system include:

- | Interoperability among public safety agencies throughout the island - police, fire and EMS can now seamlessly communicate
- | Reliable system with no single point of failure - resilient to natural disasters or localized failures
- | 95% coverage on the island
- | Significant cost savings through use of hybrid architecture that combines trunked and conventional sites
- | Additional cost savings through reuse of existing sites, IT facilities, and interface capabilities to legacy systems
- | Easy access to service support through local partner, Codecom

# SITE LOCATIONS





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