NetworkFirst®

Harris VIDA® Solution

Reliable, Scalable, & Secure Interoperability

Whether you represent a public agency funded by taxpayers or a private enterprise that reports profitability to investors you need to maximize the return on every dollar you spend. In addition to ongoing budget pressures, today's IT (Information Technology) and communications managers are challenged with creating wireless networks that provide communications among users from various public agencies and private enterprises.

As an IT or communications decision maker, you may find yourself in one of the following scenarios:

Special Event Communications

The Director of Communications of a city police department has been notified of an upcoming VIP visit that will require communications between Federal, state and local security and law enforcement agencies. A similar event two years ago required borrowing equipment from the Federal agency providing security for the event and retraining city PD command staff on the new equipment. Coordination and communication between agencies was limited. The Director wants to find a permanent interoperability solution that will not require buying new radios and training users.

[you need to maximize every dollar you spend]

Regional Interoperability

A traffic accident on a rural state highway results in a critically injured driver who needs to be sent to the hospital immediately. The state police, county sheriff, the local volunteer fire department EMTs, state Department of Transportation and a medivac helicopter respond to the accident. Each of these agencies operate on separate radio systems, on different frequencies. While the driver does survive this accident, the state police troop commander wants to improve communications between agencies.

Dispatcher-to-Dispatcher Wireless Link

A severe storm has knocked out power and telephones across the state. Dispatchers at a large electric utility need to contact local police dispatchers to coordinate repair efforts but telephone service is down. The utility has an 800 MHz digital trunking system but police operate on analog VHF frequencies. With no communications between dispatchers, repair crews will assess the situation once they arrive on scene. Power is eventually restored across the grid but the Chief Technology Officer of the utility knows there must be an affordable, reliable way to communicate with police when phone and power are down.

Digital Migration

A county sheriff wants to join the state's P25 system, but to do so the county will have to replace all existing analog equipment with digital P25 equipment. The county's budget will not support this level of investment. The sheriff begins to think "out of the box" and realizes that he wants to communicate with the state police without needing a dispatcher to create a patch, and he wants to maintain control over his communications system. With those priorities, he begins researching commercially available solutions.

NetworkFirst®—The Revolutionary Approach

NetworkFirst® is a permanent Internet Protocol (IP) network solution that allows agencies to maintain autonomous control over assets while achieving interoperability among agencies that operate in different frequency bands using a variety of technologies. Because NetworkFirst® is a network-centric interoperability solution existing analog, single band radios can be used to communicate cross-band to new digital radios, thus extending the useful life of older equipment.

NetworkFirst®— The Interoperability Solution

NetworkFirst® includes Interoperability Gateways that connect the Harris VIDA (Voice, Interoperability, Data, Access) network to existing radio systems. The Interoperability Gateway converts incoming analog voice communication into digital IP packets, which are then sent over the VIDA network using an industry standard technology known as voice-over-IP (VoIP). The VoIP packets can be routed through the VIDA network directly to digital radio users without dispatcher intervention or they can be routed to a dispatcher. The existing radio system and new digital radios can operate in different frequency brands, creating a "crossband" interoperability network. By allowing interoperability among existing radio systems and new digital communication networks, NetworkFirst® enables multi-agency interoperability using current equipment, without the expense of replacing all existing radios.

NetworkFirst®—The Migration Solution

Using NetworkFirst® to achieve multi-agency interoperability can be a final solution or single step in a planned migration over a period of several budget cycles. NetworkFirst® can be used as the cornerstone of a gradual agency-by-agency migration from aging technology to digital networks, thereby reducing funding requirements in a single fiscal period.

A VIDA Network Component

NetworkFirst® can be deployed as a stand-alone interoperability solution for virtually any critical wireless communications system or as a fully supported application of an existing VIDA network solution. VIDA networks support multiple wireless technologies including:

NETWORKFIRST COMPONENTS

INTEROPERABILITY GATEWAY

- Converts analog signals to IP packets
- Connects existing analog equipment to the IP digital network

NETWORK MANAGEMENT SYSTEM

Manages the routing of voice and data messages across the VIDA Network to dispatch consoles or radios

DISPATCH CONSOLES

- Utilizes IP technology to facilitate dispatch communications
- Manages multi-agency incident response

- P25IP
- OpenSky®
- EDACS®
- Conventional
- VIDA Broadband
- Other manufacturers' systems

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