Section 1

APX N70 Portable Radio Solution Description

1.1 Overview

The APX N70 offers affordable, next generation communications for {{CustomerNameLong}}, without compromising P25 interoperability or voice and data quality. It offers a durable design with “pick-up-and-go” functionality, optimizing ease-of-use and focused communications in almost all environments.

Durable and Easy to Use

The APX N70 enhances operations with a full color transflective glass display with touch technology for easy operation with gloves on. The touchscreen includes a high velocity user interface with large touch targets, shallow menu hierarchy, home screen information at a glance, and access to integrated apps. Additionally, the N70 offers extended battery life, a shorter antenna, and Bluetooth compatibility with audio accessories, promoting efficient communications between first responders.

Mission-Critical Audio

For first responders in mission-critical situations, the APX N70 offers high dynamic range microphones and an adaptive sound engine that minimizes background noise and promotes clarity, amplifying intelligible voice communication between first responders.

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Essential and Secure P25 Communications

The APX N70 is certified compliant with P25 standards and supports digital and analog trunking, FDMA and TDMA, and Integrated Voice and Data. P25 communications over the N70 are safe and secure–it offers software and hardware encryption, single- and multi key encryption, and P25 Authentication, protecting communications during daily operations.

Reliable Connectivity

Using the APX N70 lets first responders stay connected across disparate networks. It can be equipped with LTE, Wi-Fi®, Bluetooth®, and GPS features, bringing future-ready applications, services, and best-in-class connectivity to everyday users. APX N70 radios support 7/800 MHz frequency bands across radio systems with minimal intervention by the radio user.

1.2 Managing and Provisioning Devices

APN N70 provides users greater awareness and faster radio management through Customer Programming Software (“CPS”), Radio Management (“RM”), or the Radio Central programming. These tools transform accurate data into smarter action by enabling dispatchers and network managers to keep radios in the field, make informed operational decisions, and, above all, protect first responders' focus and safety.

Customer Programming Service

CPS is a proprietary, Windows-based application used to configure APX subscriber radios in offline situations. The CPS application offers drag-and-drop, clone-wizard, and basic import/export functions that allow for the addition of new software and feature enhancements. APX N radios can be programmed one-at-a-time on a local PC, *via* secure USB port connection, with TLS-PSK based encryption. Once loaded, subscriber radios are read, and edited, and codeplugs and templates can be saved and duplicated to program other fleet radios.

Radio Management

Batch Programming is available through the RM software for simultaneous programming and upgrading throughout the radio fleet. With Batch Programming, up to 16 radios can be programmed at once over a Wi-Fi connection. This reduces programming time and ensures that the radio fleet is always up-to-date and ready-to-use in the field.

Device Management Services

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Device Management Services (“DMS”) packages provide programming, management, and maintenance services to maximize the effectiveness of this APX N70 solution, while reducing maintenance risk, workload, and total cost of ownership. DMS tackles a range of customer needs, whether the solution is self-maintained or managed by Motorola Solutions.

Using Motorola Solutions’ cloud-based Radio Central Programming, APX N70 supports faster provisioning and deployment to get devices in the hands of first responders and out into the field. Parameters such as talk groups, interface options, and security keys can be programmed remotely within minutes. The DMS package provides access to batch programming with Radio Central Programming or one-at-a-time basic programming with Customer Programming Service, described below.

Radio Central

Radio Central Programming streamlines the APX N70 out-of-the-box experience with a few simple steps. Users will power on the device and view a boot-up animation. Status bar icons on the front display indicate when a connection is made and an update download is initiated. If the APN N70 device is being started for the first time, a “peek-in” device management notification will indicate that the default configuration is detected. When the update download is complete, the device reboots and installs the update. When the install is complete, the device goes back to the full home screen and notifies the user that the update is complete. From power on to provisioning, the process takes less than a minute. For Encryption and Authentication users, a KVL needs to be connected to the radio to use those services.

APX N70 also features Touchless Key Provisioning (“TKP”), leveraging Radio Central and Key Management Facility to add encryption keys remotely. This streamlined, one-time process reduces the time and effort spent enabling encryption. TKP delivers the initial encryption keys to APN N70 radios.

Users can provision encryption on one radio or on batches of radios, further speeding up the encryption process for radio fleets.

The figure below illustrates APX N70's faster provisioning process.

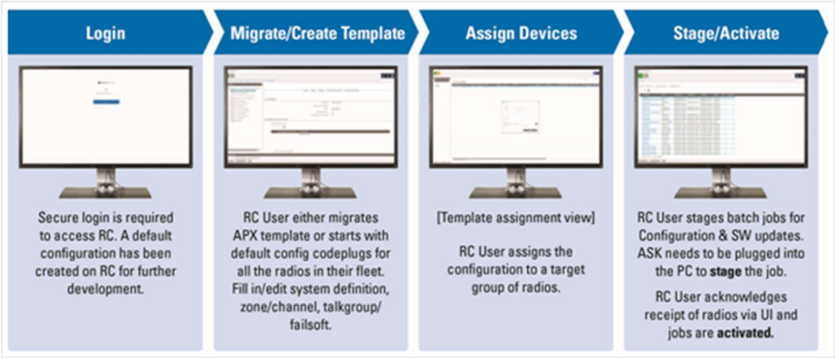

Figure 1-1: APX N70 Provisioning via Radio Central

1.3 Evolving with Application Services

APX N70 gives first responders access to mobile features through the following set of application services.

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1.3.1 ViQi Virtual Partner

APX N70 maintains situational awareness and first responder safety through natural operation. This outcome is achieved through ViQi™ Virtual Partner—a cloud-based service that provides public safety information via voice. With a single button press and audio prompt, first responders can use natural language to access a variety of actions, from changing channels, zones, profiles and device volume, to scanning and canceling commands.

Virtual Partner uses artificial intelligence to interpret voice queries and deliver results in an audible format. This empowers users to submit queries with the radio without the risk of losing situational awareness while typing a manual query. This also allows first responders to receive critical information faster than relaying a query to dispatchers. The APX N70 radio will leverage either Land Mobile Radio ("LMR") or supported broadband networks to send queries and return responses.

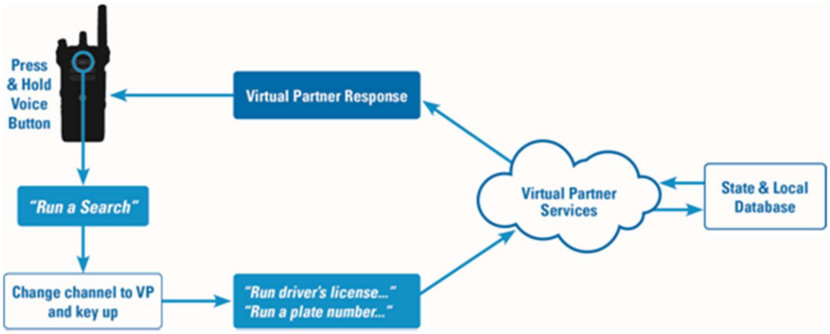

Figure 1-2: ViQi Virtual Partner Voice Control Process

1.3.2 SmartConnect Application Services

SmartConnect allows first responders to access critical intelligence no matter where the mission takes them. It keeps first responders connected and maintains critical LMR features through a broadband connection. By seamlessly switching between P25 LMR and LTE cellular networks, SmartConnect extends reliable Push-to-talk ("PTT") communications as users roam onto supported broadband networks. Authentication, status, talkgroups, and encryption are all preserved automatically, without interruptions or resets to ensure that first responders continue to have access to the critical features they need in dangerous situations.

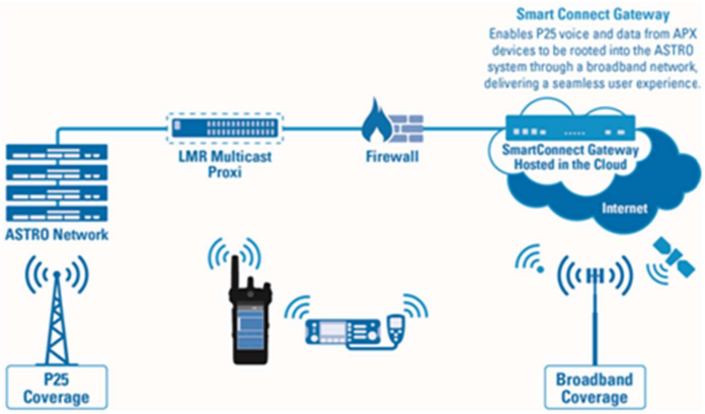

Figure 1-3: APX N70 SmartConnect Network Elements

1.3.3 SmartLocate Application Service

The SmartLocate application sends GPS location information of first responders over a broadband network. This enables dispatchers to track field units more frequently and improve resource deployment. With Dynamic Mode, SmartLocate can dynamically switch from LTE to P25 to continue sending location reports, without requiring the user to change inputs. This fallback capability provides an extra layer of reliability and enhances location tracking to build an effective operating picture as situations evolve. The use of broadband increases the frequency of location reporting beyond an LMR system to allow for a higher number of users without LMR infrastructure capacity limitations.

SmartLocate also enhances location information accuracy using nearby cell-towers and Wi-Fi access points. This leads to more accurate device tracking and improved location performance when a user moves indoors or enters marginal conditions (such as deep street canyons or forested areas).

SmartLocate integrates with CommandCentral Aware to provide location triggers such as time, distance, PTT, emergency, and accelerated cadence during emergency.

The SmartLocate Application Service is proposed as a subscription-based model that optimizes budget and scales to meet evolving needs. SmartLocate provides enhanced capabilities to existing investments in CommandCentral Aware. Access to CommandCentral Aware is not included with the SmartLocate subscription.

Note - Dynamic Mode requires IMW and a cloud connector on the P25 system.

1.3.4 SmartProgramming Application Service

Leveraging DMS and Radio Central provisioning capabilities, the SmartProgramming application allows radios to be updated anywhere within an agency's local LTE network coverage area. APX N70 devices do not need to be tied to a computer via USB cable, limited to Wi-Fi network coverage, or gated by Land Mobile Radio (LMR) bandwidth. SmartProgramming allows the APX N70 device to take advantage of LTE broadband data speeds to pull programming jobs from Radio Central Programming devices in minutes.

The SmartProgramming Application Service is proposed as a subscription-based model to optimize budget and scale to meet evolving needs.

1.3.5 SmartMapping Application Service

The SmartMapping application provides precise and accessible location information of field units to inform response and improve situational awareness. The application displays this data on the APX N70's modernized map interface. Users can see their own location and the location/status of other crew members at a glance and immediately tap to communicate with them. Users can access SmartMapping directly from the APX N70 home screen, making it easier to leverage the map display in fast-paced situations.

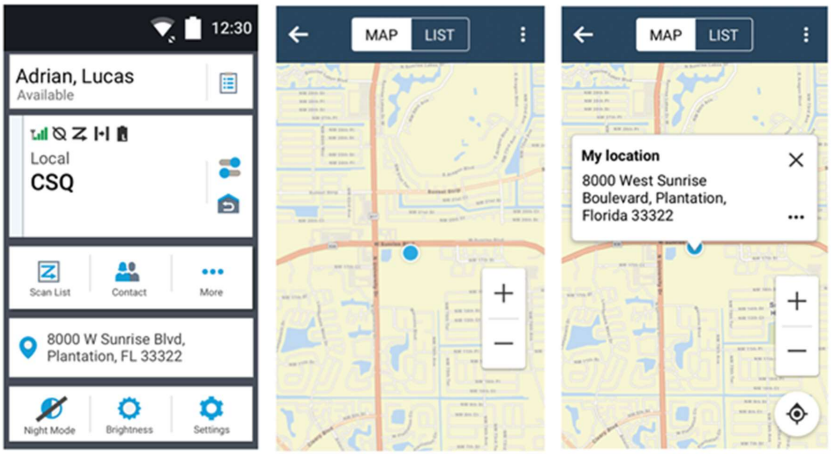

Figure 1-4: SmartMapping Widget, Map View, and Location Pop-Up Display (Left to Right)

SmartMapping also provides the following capabilities for APX N70 first responders:

- Search for specific users to communicate with using accessible, on-screen navigation and search tools.
- Select map layers to get a different area view, including Street View, Terrain, or Satellite Image.
- Adapt to changing agency needs as new integrations and capabilities are introduced for the SmartMapping application.

1.3.6 SmartMessaging Application Service

SmartMessaging is an application service that allows APX N70 first responders to seamlessly and discreetly share multimedia communications over a Broadband connection. This helps offload traffic from mission-critical LMR networks while enhancing public safety capabilities. From the APX N70 home screen, users can send more detailed multimedia messages, with image, video, or audio file attachments, to enhance situational awareness and improve response success. An enhanced search and history functionality is available for users to easily access previous messages by name, content, and time range, helping them find specific information when needed.

SmartMessaging also supports the following capabilities:

- Receive “Be On the Lookout” (“BOLO”) images or first-on-scene images, videos, locations, and audio from a WAVE dispatch application sent to an APX N70 first responders or predefined groups.
- Send text messages to an individual or group of contacts to provide all necessary users with updated intelligence.
- Secure communications with encrypted messaging data from an APX N70 device to the server.
- Adapt to changing agency needs as new integrations and collaboration tools become available for the SmartMessaging application.