Your Vision is our Mission

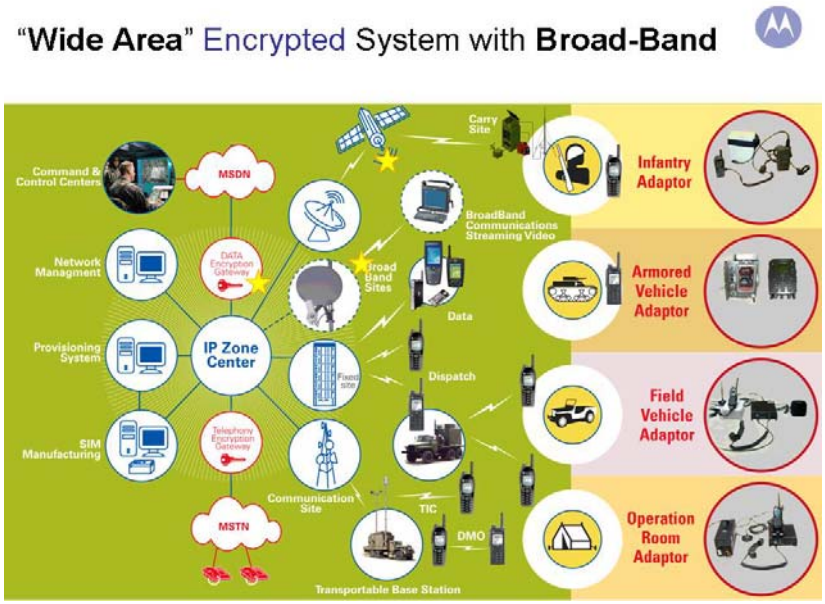
Motorola Israel Ltd.

Defense Solutions Department (DSD)

Wide Area Military Voice & Data Infrastructure Solutions based on COTS technology

The IDF (Israeli Defense Forces) is using a modern sophisticated Communications system for Encrypted Voice and Data called “Mountain Rose”.
About 18 years ago the Military communication operations and technical departments took the challenge to identify the next generation Wireless Personal Mobile Communications system that enables subscribers in the field to communicate both with each other and with the fixed wireline infrastructure system.
The IDF evaluated several existing technologies and systems, such as iDEN, GSM, and CDMA. After in-depth analysis, the IDF found that Motorola solution based on TETRA was by far superior.
The contract with Motorola for the “Mountain Rose“ system was signed on July 2000 and on July 2004 the IDF announced that the system is fully operational!
The system is based on about 80% COTS and about 20% modifications to meet the special IDF requirements.
It is a Country Wide system, supports End to End military encryption - Secure Voice and Data services, possesses build-in immunity against hostile jammers, installed in a wide range of armored vehicles and integrated with intercom systems, have a suitable solution for transportable communications sites facilitating fast deployment of sites in rural areas for fast extending coverage and more.

The Mobile Units deliver Direct Mode Operation (DMO), which means they can talk directly with each other without the need for underlying infrastructure.
Dispatch Operation combined with emergency and priority access features enables very reliable rapid call implementation for both Point-to-Point and Point-to-MultiPoint (Group calls), another critical feature for military applications.
The Air Interface, the BS (base station) and MS (mobile station) enable to cover extremely large distances, delivering better coverage and offering a superior cost/performance solution.
The scope of the system is up to 100,000 subscriber units.
The IDF system is based on Tetra but the APCO standard is providing similar features as described in the following diagram.



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WASS - Wide Area Surveillance System

The purpose of this radar based system is to monitor and protect the perimeter of sensitive areas in order to provide early warning of any intrusion.

The radar technology is inherently suited for wide area surveillance. It can quickly sweep a full 360 degrees, analyzing the return signals to determine if there is any movement in the area. It operates in all weather and lighting conditions, and can be designed to have an extremely low false alarm rate. It can work over land and water, and detect a variety of targets: crawling, walking and running people, vehicles, boats and swimmers.

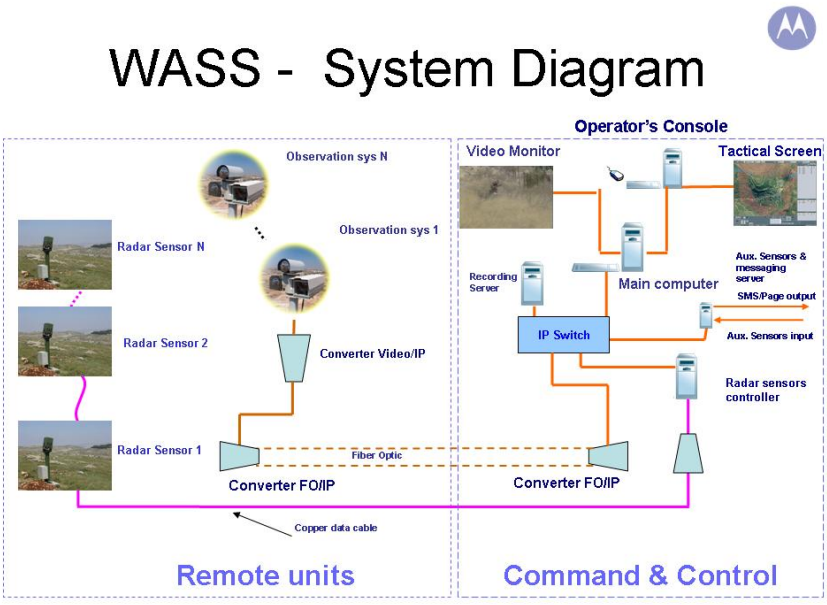
A typical deployment includes 10 Radar Sensors and 4-5 day /night cameras all connected to a Command and Control center .

The connections between the radars and the cameras to the Command and Control center are fiber optic and copper data cables and\or wireless IP point to point links

The System capabilities are :

- To observe beyond the site's fence in order to detect potential intruders and respond accordingly.
- To track and determine intruders location, number and route.
- To survey a 360 degree circle, in order to provide continuous tracking of the intrusion, even after penetration of the protected perimeter.
- Operator can take control of any camera at any time to investigate potential targets.
- To maintain high reliability in all environmental and weather conditions with very low false alarms.

This WASS surveillance systems are deployed by the Israeli Defense Forces in several sensitive areas and locations in the country.



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MotoBridge IP Switch for interoperability between Military , Defense Organizations and Public Safety.

Interoperability has been identified by first responders as one of the most important outcome from the 11/9 event and as a key factor in the success of any coordinated response .
Interoperability is defined by the Association of Public-Safety Communications Officials (APCO) as the ability of different government agencies or first responders (such as Army , law enforcement, EMS, fire fighters) to communicate within and across departmental and jurisdictional boundaries.
The MotoBridge system allows new and legacy systems to interoperate.
The system facilitates phased migration of a system to new technology by enabling communication between the old and new parts of the system during the migration. It also enables instant communication between distant dispatch centers.
The MotoBridge system provides interoperability between various communications networks with a radio over IP system.
The system utilizes a distributed architecture of soft-switching VoIP units (also referred to as gateway units) with session initiation protocol (SIP) signaling technology and peer-to-peer IP connections to handle the voice communication in the system.
Central management of the system is provided by dual-redundant management servers.
MotoBridge Transportable IP Switch designed to enable interoperability between Military , Defense Organizations and Public Safety Forces acting in a defined operational arena .

The main features are :

- Ability to connect analog, digital, trunked, ,Army tactical systems and more .
- Connects to IP networks
- Passes advanced signaling/IDs
- Instant Audio Recall
- Firewall for network security
- Encryption to avoid hacking/add privacy
- No Central Point of Failure
- Intuitive Interfaces

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MotoBridge Architecture