



RIGHT NOW, WE ARE HELPING PEOPLE BE THEIR  
BEST IN THE MOMENTS THAT MATTER



**MOTOROLA SOLUTIONS**

**Mansour Karam**

Senior Territory Sales Manager

April, 2014

# MOTOROLA MOTOTRBO STRENGTHS



**150+**  
COUNTRIES

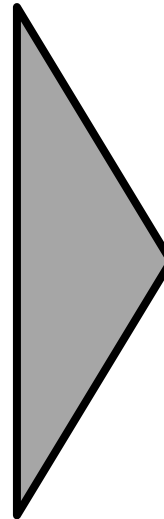
**3**  
MILLION+  
USERS

**30%**  
GROWTH

THOUSANDS  
OF  
CUSTOMERS

DMR  
MOU 2005  
- FIRST  
PRODUCT  
2007

**8**  
YEAR  
HERITAGE



## APPLICATIONS

PERSONNEL SAFETY  
TEXT MESSAGING  
GPS LOCATION TRACKING  
JOB TICKETING  
TELEPHONY  
MIGRATION AIDES  
SYSTEM MANAGEMENT  
WORK ORDER MANAGEMENT  
DISPATCH  
TELEMETRY & CONTROL



# EVOLVED MOTOTRBO PORTFOLIO

# MOTOTRBO™

## BETTER BASICS



**Better audio quality over greater range**



**Longer Battery Life**  
+40% extra



**Secure Communications**



**Double Call Capacity**



**Increased Robustness**  
Waterproof



**Smart Accessories**  
IMPRES, Wireless

## ADVANCE FEATURES



**Application Capable**



**GPS Integrated**



**Text Messaging**



**IP-Site Connect**



**Applications Ecosystem**



**Selective Calling**



**Capacity Plus**  
**Linked Capacity plus**

## FLEXIBLE MIGRATION



**Step by Step from Analogue to Digital**



**Low license cost and high reuse of license**

# EVOLVED MOTOTRBO™ PORTFOLIO: PORTABLES



## ENTRY



DP1400

VOICE

## MID



DP2400



DP2600

VOICE, BASIC  
SYSTEMS

## HIGH



SL4000  
SL4010



DP3441



DP4400  
DP4401



DP4600  
DP4601



DP4800  
DP4801

VOICE, ENHANCED DATA, SYSTEMS, APPS,  
FEATURES

## ATEX CERTIFIED



DP4401 EX



DP4801 EX

CERTIFIED FOR HAZARDOUS  
AREAS

# DP4000 SERIES PORTABLES



INTEGRATED DATA, YOUR CUSTOMERS' VOICE JUST GOT A LOT STRONGER.



DP4400 /  
DP4401

DP4600 /  
DP4601

DP4800 /  
DP4801

Full Keypad, Limited Keypad and Non-Display Models

- VHF (136-174 MHz)
- Wideband UHF (403-527 MHz)
- Integrated GPS and Bluetooth\*

\*) Models ending with "1"



# DP2000 SERIES PORTABLES



DIGITAL, NOW WITHIN REACH



DP 2400



DP 2600

When you equip your customers with industry-leading audio and the increased capacity of the world's most scalable digital radio – you remaster the way they collaborate



# SL4000 SERIES



Smallest, lightest professional radio

- Very easy to use
- Vibrate Call for DISCREET comms
- Security Officers or higher rankings

Rugged device

- Military specs 810G
- IP54 dust & water protection
- Accelerated Life Testing



# NEW COMPACT PORTABLE



**DP3441**



**32channels**

**4/5W RF power**

**VHF (136-174 MHz)**

**UHF (403-470 MHz & 450-512 MHz)**

**DP4000 MOTOTRBO™ features**

**Integrated Bluetooth & GPS**

**Option board-capable**

**IP67**



# DP4000 Ex SERIES: SAFE, RELIABLE, AND EFFECTIVE

## EXCEPTIONAL SAFETY FOR THE TOUGHEST ENVIRONMENTS



### SAFE

- ATEX and IECEx-certified
- Integrated Man Down and Lone Worker
- Builds on Motorola's ATEX experience

### RELIABLE

- Durable in the harshest environments
- MIL 810G (all 11 categories)
- IP67 rated dust and water protection
- Unique Motorola Accelerated Life Testing

### EFFECTIVE

- Superior audio quality
- Sophisticated functionality
- Easy to see, easy to hear, easy to use

# DP4000 Ex SERIES PORTABLES



DP4401 Ex



DP4801 Ex

DP4401 Ex – no display or keypad  
DP4801 Ex – colour display & full keypad

VHF (136-174 MHz)

UHF (403-470 MHz)

1000 channels, 5-line colour display and full keypad

32 channels, Non-display

Integrated GPS

Next-generation MOTOTRBO™ feature set

Integrated Man-Down (no option board required)

1W RF power (as analogue GP300 Ex)

IP67

# EVOLVED MOTOTRBO™ PORTFOLIO: MOBILES



## ENTRY



DM1600



DM1400

VOICE

## MID



DM2600

VOICE, DATA, SYSTEMS,  
APPS

## HIGH



DM4600  
DM4601



DM4400  
DM4401

VOICE, ENHANCED DATA,  
SYSTEMS, APPS,  
FEATURES

# DM4600/1 COLOUR DISPLAY



4-line  
transmissive display



Soft buttons

Day/night mode



Easy menu navigation



# MTR3000 REPEATER



## Analogue and MOTOTRBO digital

- Supports single-site, IP Site Connect and Capacity Plus
- Supports Dynamic Mixed Mode (analogue and digital)

## UHF and VHF

## High performance:

- 8-100W continuous duty
- 16 frequencies
- High RX specifications



# EVOLVED MOTOTRBO™ PORTFOLIO: REPEATERS, ACCESSORIES AND APPLICATIONS



## REPEATERS



**MTR3000**



**DR3000**

**SYSTEMS**

## ACCESSORIES



**CHARGERS**



**BATTERIES**



**CARRY CASES**



**AUDIO**

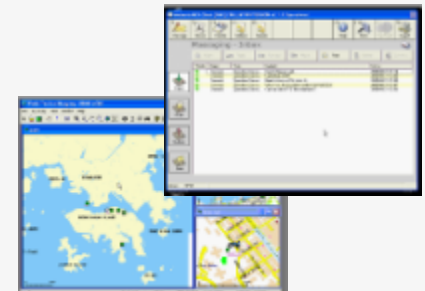


**WIRELESS**



**ENERGY, VOICE, MOBILITY**

## APPLICATIONS



**APPLICATION  
DEVELOPMENT PARTNER  
CATALOGUE**

**ADDED FEATURES**

# MOTOTRBO APPLICATION DEVELOPMENT PARTNER



## MOTOTRBO™ ADP APPLICATIONS CATALOGUE



THE LARGEST PORTFOLIO OF APPLICATIONS FOR DIGITAL TWO-WAY RADIO  
POWERED BY THE MOTOTRBO™ APPLICATION DEVELOPER PROGRAMME  
CHANNEL PARTNER VERSION | OCTOBER 2013



### CONTROL ROOMS



### SECURITY



### ALARM MANAGEMENT



### WORKFLOW MANAGEMENT



### REMOTE CONTROL



### TELEMETRY



### NETWORK MANAGEMENT



### ANALOGUE TO DIGITAL



Working with >400 ADP partners  
Accreditation process  
Dedicated engineering team  
Berlin test laboratory





# MOTOTRBO SYSTEM EVOLUTION



CONVENTIONAL  
SINGLE SITE



Up to 200  
Users/Site

IP SITE CONNECT  
MULTI-SITE



Up to 200  
Users/Site

CAPACITY PLUS  
SINGLE SITE



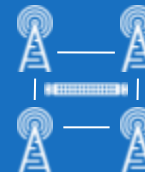
Up to 1200  
Users/Site

LINKED CAPACITY  
PLUS  
MULTI-SITE



Up to 1200  
Users/Site

CONNECT PLUS  
MULTI-SITE



Up to 2900  
Users/Site

**+RADIOS**

**+COVERAGE**

**+CAPACITY**

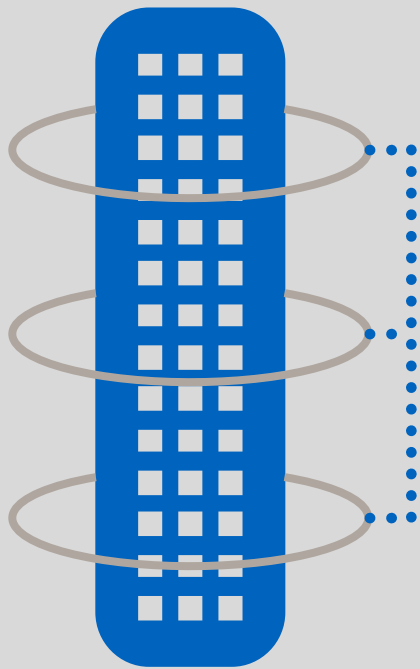
**+CAPABILITY**

ON SITE  
LOW TRAFFIC

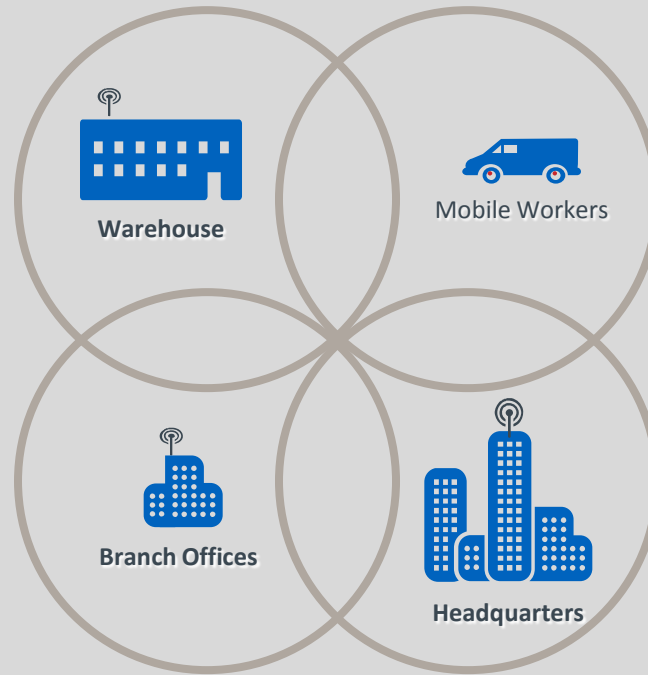
WIDE AREA  
HIGH TRAFFIC

*Investment*

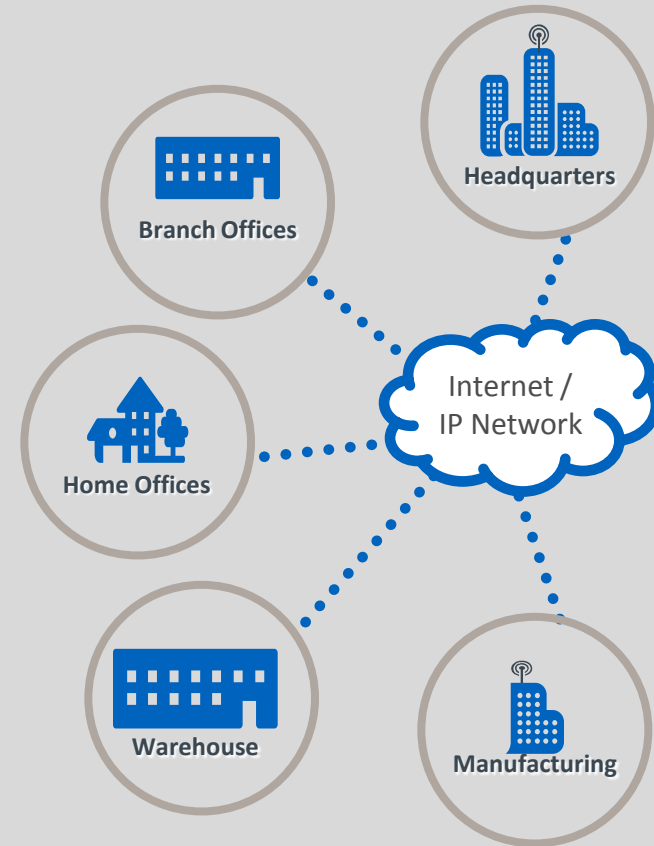
# MOTOTRBO IP SITE CONNECT



**HIGH BUILDING**



**LARGE FACILITY OR CAMPUS**



**DISPERSED LOCATIONS**

# MOTOTRBO CAPACITY PLUS OPERATION

- Single-site trunking solution
- Expands system capacity to 1200 users on a single site
- Digital voice / data communications
- Up to 16 voice / data channels (8 repeaters)
- Total of 24 channels (12 repeaters) including dedicated data channels
- Software upgrade to existing hardware



16 DYNAMIC VOICE / DATA CHANNELS



24 INCL. DEDICATED DATA CHANNELS



# MOTOTRBO LINKED CAPACITY PLUS



COVERAGE OF IP SITE CONNECT  
+  
CAPACITY OF CAPACITY PLUS

COST-EFFECTIVE TRUNKING SOLUTION

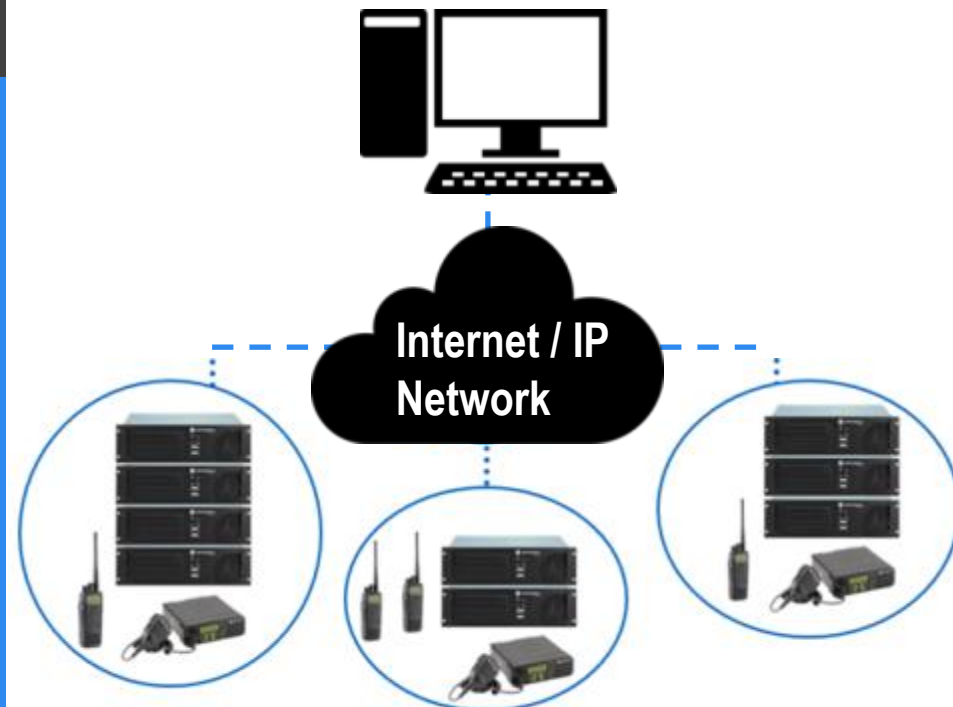
FULL MOTOTRBO™ FEATURE SUPPORT

SOFTWARE-ONLY SOLUTION:

- 32MB repeater required

DEPLOYMENT:

- 15 sites
- 12 trunked channels per site
- 6 data revert channels per site



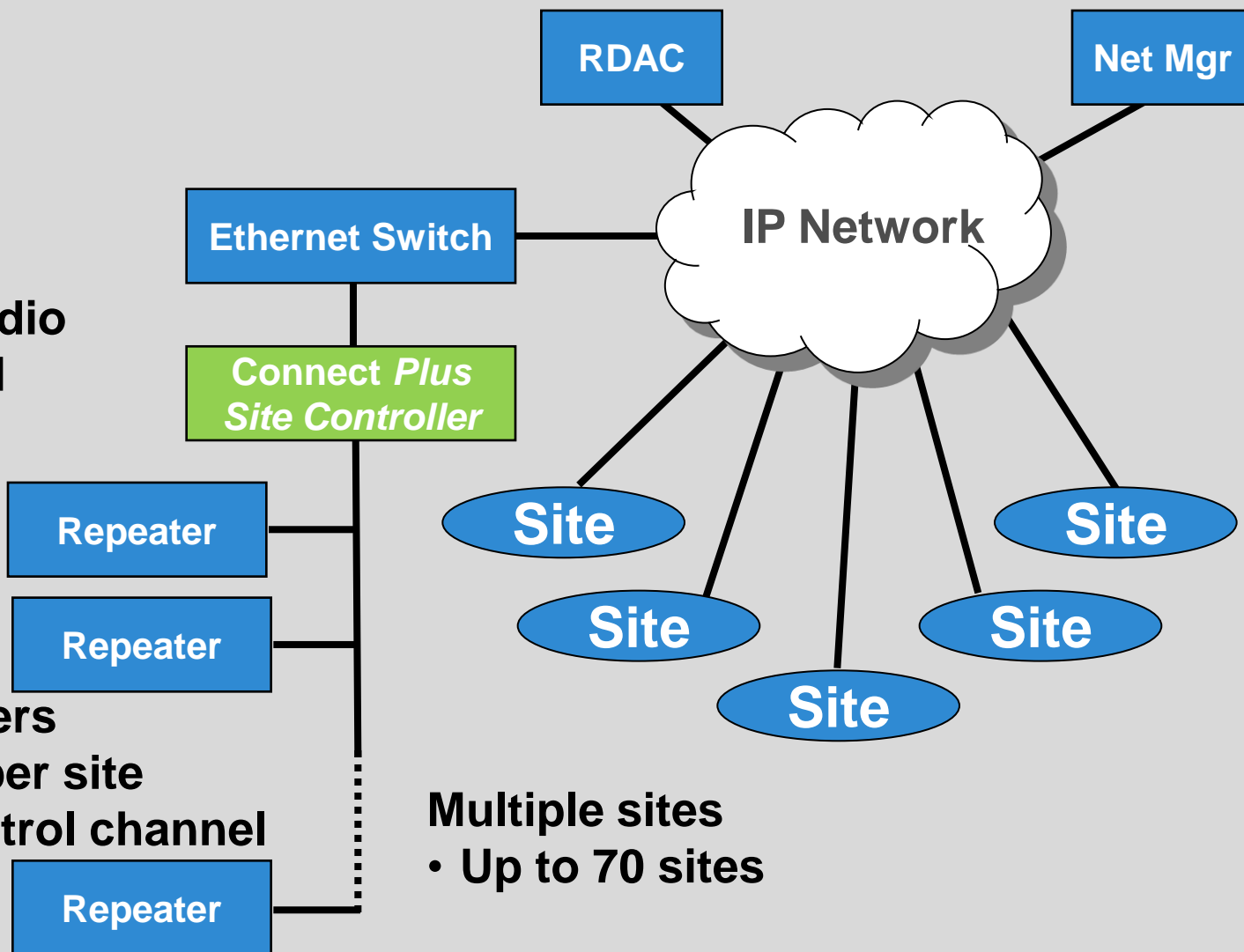
# MOTOTRBO CONNECT PLUS



**MOTOTRBO radio  
+ Option Board  
+ License**

**Up to 15 repeaters**

- 29 talk paths per site
- Dedicated control channel



**Multiple sites**

- Up to 70 sites



**MOTOTRBO ANYWHERE**

# MOTOTRBO ANYWHERE OVERVIEW

- Enterprise-grade mobile device solution that connects to MOTOTRBO radios
- Works over multiple wireless technologies like 3G, 4G LTE and Wi-Fi
- Available on Android and iOS platforms.
- Any device (Smartphones , tablets etc) that runs Android 2.3.4 and higher
- Any device ( Smartphones, tablets etc) that runs iOS5 and higher
- Wireline interface to the MOTOTRBO System.
- No Donor Radios



# CLIENT FEATURES



Unique Profile for Every User



Private Calls



Group Calls



Visual Activity Indication



Call History



Secure Communications



Visual Indication of Network Connection





# USE CASES



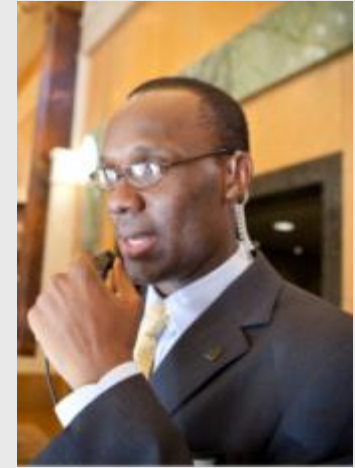
## CHOICE

The Operations Director of a **manufacturing** company carries a smartphone for calls and emails. Now he can use the same device to access MOTOTRBO voice communications in his plant.



## REACH

A plant supervisor would like to be able to monitor **plant operations** on the evening shift. Now he can use his smartphone to connect to the MOTOTRBO radios from home.



## FLEXIBILITY

A VIP wedding is scheduled at a **resort**. With MOTOTRBO Anywhere, the florist, the caterer and the wedding planner can work closely with the hotel staff for a successful event.

# SOLUTION COMPONENTS



## DEVICE

Android or iOS App



FREE from App Store,  
unlimited number of  
users



## INFRASTRUCTURE

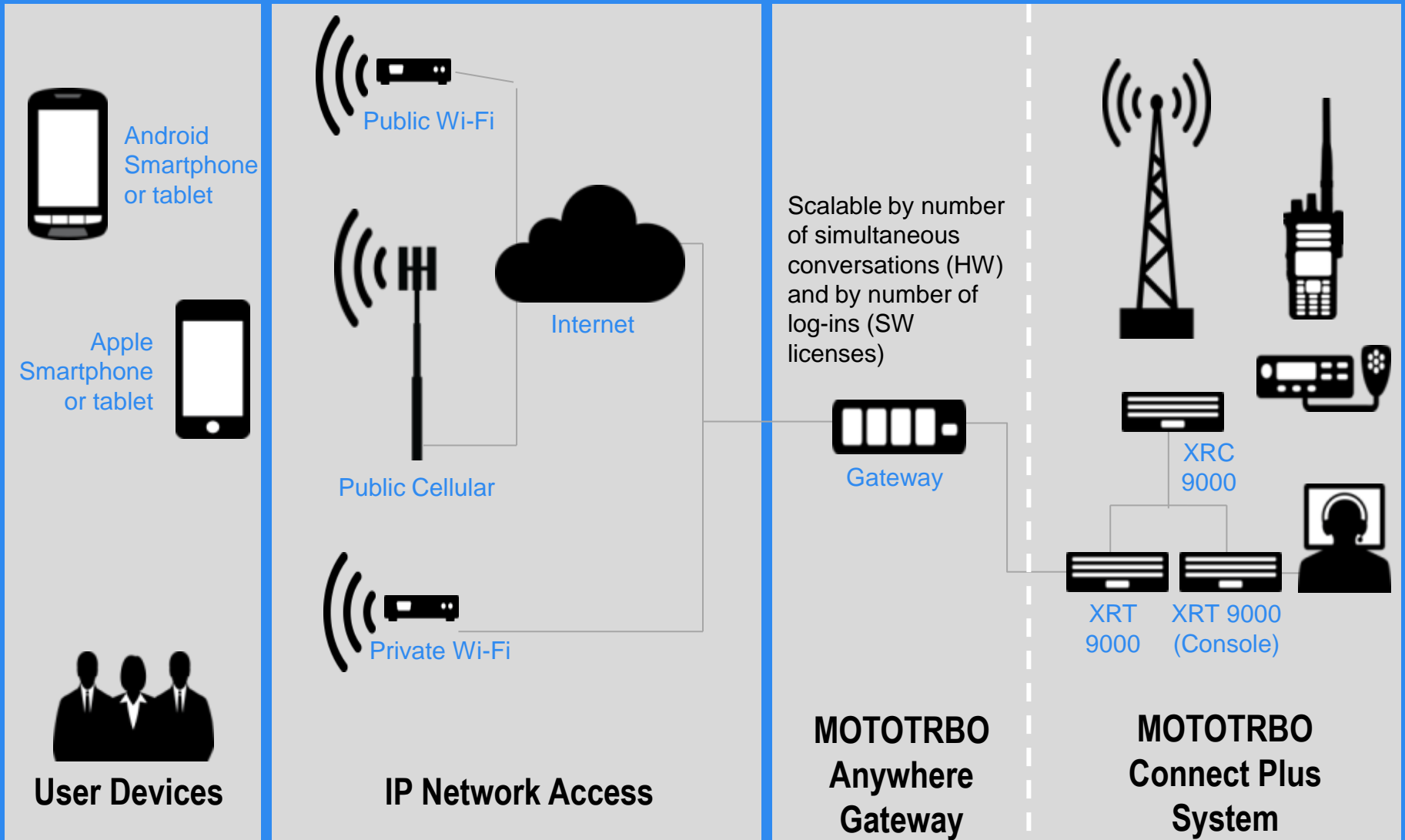
Gateway (MTAG)



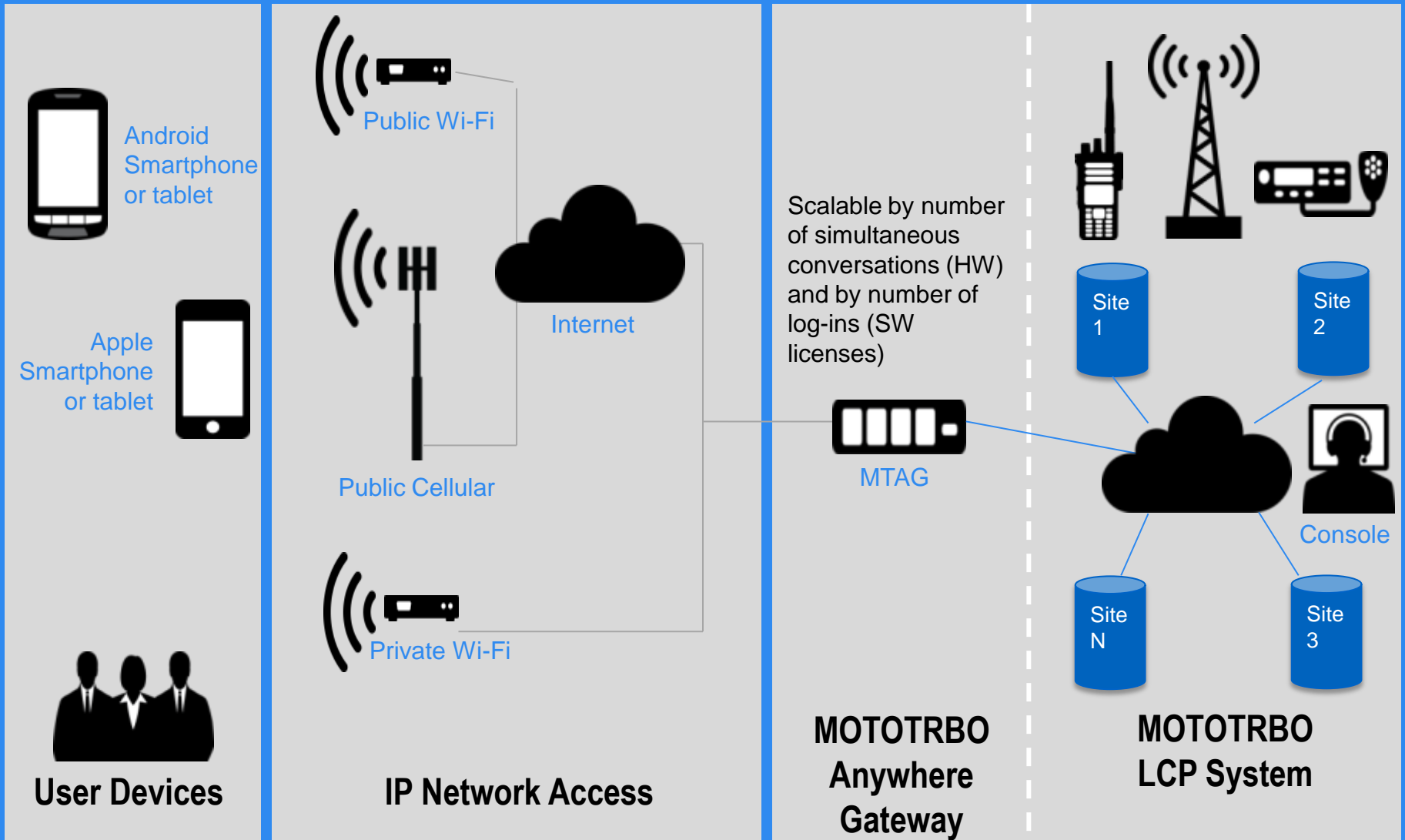
(HW + SW Licenses)

Scalable by number of  
simultaneous conversations  
(HW) and by number of log-ins  
(SW licenses)

# CONNECT PLUS DEPLOYMENT (Q2 – 2014)



# IPSC/LCP/CAPACITY PLUS DEPLOYMENT (Q4 – 2014)



# MOTOTRBO ANYWHERE GATEWAY FEATURES

- Secure, Centralized Web Based Provisioning
- Flexible Licensing Management
- Call Logging for 7 days
- Simple Upgrades
- Built-in Diagnostic Capabilities



## MOTOTRBO ANYWHERE GATEWAY:

- Runs embedded windows.
- Hosts 400 simultaneous user logins.
- Has voice modules that convert radio audio to broadband audio.
- Up to 3 voice modules per MTAG



## VOICE MODULE:

- Each module performs audio processing between radio and broadband side.
- Each module supports 50 simultaneous calls with the radio system.



# CONTROL ROOM SOLUTIONS

# FUNCTIONAL MODULES



## CORE



**VOICE  
DISPATCH**



**FLEET  
ADMINISTRATION**



**EVENT  
LOGGING**



**ALARM &  
LONE WORKER**



**JOB TICKETING**



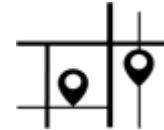
**TEXT MESSAGES  
& EMAIL**



**TELEMETRY**



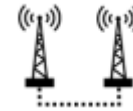
## OPTIONAL



**GPS TRACKING**



**VOICE  
RECORDING**



**IP SYSTEM  
BRIDGE**



**RF COVERAGE  
MONITORING\***



**PHONE  
INTERCONNECT\***



**ADDITIONAL  
DISPATCHER**



**ADDITIONAL  
RADIO SERVER**

\* AVAILABLE FROM MOTOTRBO R2.3a

# VOICE DISPATCH (core)



**OVER-IP VOICE DISPATCH PROVIDES COMMUNICATIONS BETWEEN THE DISPATCHER AND REMOTE RADIOS.**

- **Subscriber types - MOTOTRBO radios, analogue radios, telephone subscribers and other dispatch applications**
- **Calls types - broadcast, group, private, remote monitor, emergency**
- **Transmit interrupt**
- **Voice cross-patch – temporarily patch talk groups, channels, sites and systems**
- **Hot Keys for quick calls**



# FLEET ADMINISTRATION (core)



## EFFICIENTLY MANAGE FLEET OPERATIONS AND REMOTELY CONTROL RADIOS.

- Live status updates, radio check
- Remote monitoring: mute/un-mute, radio activation and radio kill, passive mode
- Radio configured to send online/offline status to server
- Radio set with unique ID & picture
- Report: location, radio status, calls
- Flexible list of subscriber status

# EVENT LOGGING (core)



**LOGS ALL SYSTEM EVENTS: VOICE CALLS, TEXT MESSAGES, STATUS CHANGE, RADIO KILL...**

- **All system events can be stored in database in Radio Server & Dispatcher**
- **Customised rules for events logging**
- **Event viewer in Dispatcher**
- **Operator can filter and group events**
- **Generation of reports detailing location, radio status, calls...**

# ALARM & LONE WORKER (core)



## IMPROVE THE SAFETY OF PERSONNEL WITH AUTOMATIC ALARMS & LONE WORKER PROTECTION.

- **Supports native MOTOTRBO Emergency Call**
- **Alarm can also be sent as an automated message, email or SMS**
- **Lone worker mode for automatic alarm dispatch**
- **When used in conjunction with optional GPS Tracking module:**
  - Geofencing
  - Indication of radio location with alarm label

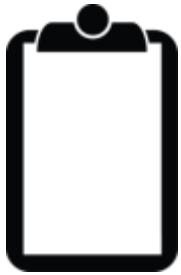
# TEXT MESSAGES & EMAIL (core)



**TEXT MESSAGES & EMAILS ENABLE EASY COMMUNICATION WITH OTHER DEVICES WHEN VOICE COMMUNICATION IS NOT OPTIMAL.**

- **Broadcast, group and private text messages**
- **Pre-defined and automated text messages**
- **Subscribers can text back to the dispatcher**
- **Emails can be sent to an individual radio or a group**
- **Text messages may be received as emails**

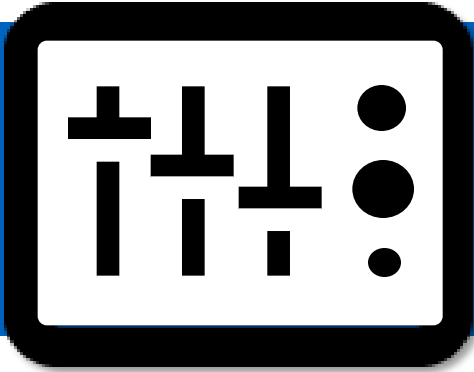
# JOB TICKETING (core)



**CREATE, ASSIGN AND MONITOR JOB TICKETS THROUGH THE RADIO NETWORK TO DELIVER ROUTINE TASKS MORE EFFICIENTLY.**

- **The subscriber can either accept or decline the job ticket by the push of a button or send the dispatcher a pre-defined or new message with the job status.**
- **The status message view can be adapted and set up for specific subscriber requirements.**

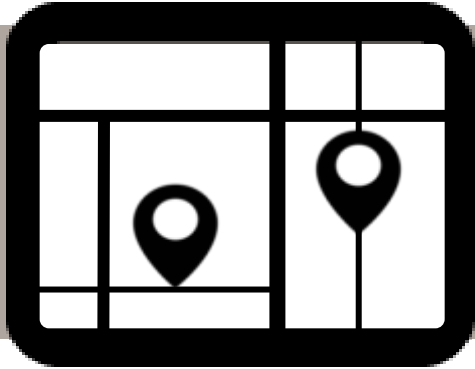
# TELEMETRY (core)



## MANAGE REMOTE EQUIPMENT FROM YOUR CONTROL ROOM.

- **Native MOTOTRBO telemetry supported**
- **Telemetry inputs to inform (or alarm) on specific sensor status**
- **Telemetry outputs to operate switches, manage alarm systems, etc.**
- **Multiple telemetry profiles supported for different devices**
- **Complete event recording and analytics**

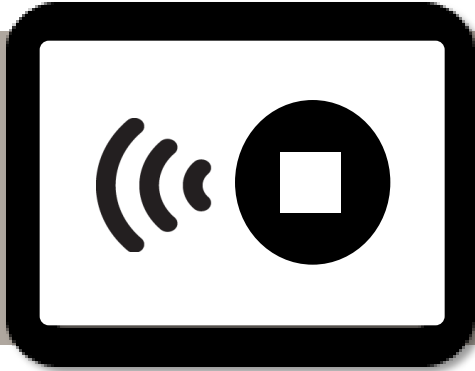
# GPS TRACKING (optional)



**FOLLOW WORKERS, VEHICLES, AND BUSINESS ASSETS IN REAL-TIME TO ENHANCE SAFETY & PRODUCTIVITY.**

- **View subscriber routes**
- **Implement geofencing and speed management policy**
- **Log subscribers movements via a configurable set of rules**
- **Easily retrieve location history**
- **View maps in separate windows**
- **Add custom objects and regions on the map**

# VOICE RECORDING (optional)



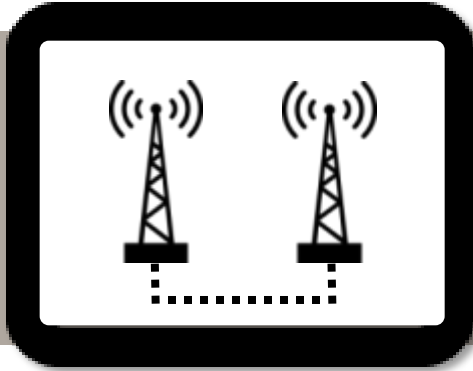
CONTINUOUS VOICE RECORDING OF ALL CALLS WITH PLAYBACK FOR ANALYSIS, REPORTING OR TRAINING PURPOSES.

- All calls recorded, even individual calls
- Audio files stored in MP3 format on Radio Server and Dispatcher
- Files can be played back from the Dispatcher console event viewer or any standard sound player





# IP SYSTEM BRIDGE (optional)



ENABLES PERMANENT  
COMMUNICATION BETWEEN RADIOS  
LOCATED ON DIFFERENT  
NETWORKS.

- **Interconnection of geographically distributed systems**
- **Permanent and dynamic bridging of voice and data calls**
- **Bridging rules are defined using the dispatch console**
- **Intelligent routing of private and group calls**
- **Facilitates seamless migration from analogue to digital technology**

# RF COVERAGE MONITORING (optional)



AVAILABLE FROM MOTOTRBO RELEASE R2.3a



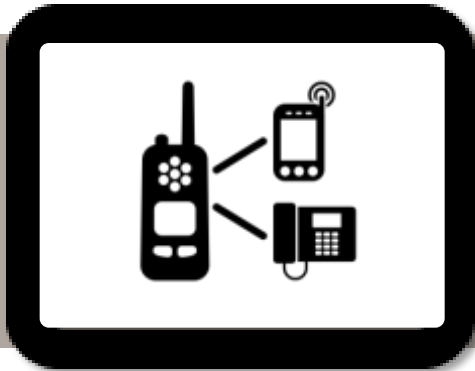
**MAXIMISE YOUR SYSTEM PERFORMANCE AND MAKE SURE EVERYONE IS CONNECTED WITH RF COVERAGE MAPS.**

- **Coverage maps provide a graphical representation of the network coverage area based on RSSI level of the received signals from GPS-enabled MOTOTRBO radios**
- **Information provided include: RSSI levels, traffic sources, coverage, data review.**
- **GPS Positioning module must also be purchased**

# PHONE INTERCONNECT (optional)



AVAILABLE FROM MOTOTRBO RELEASE R2.3a



**INTEGRATES WITH PHONE SYSTEMS TO MAKE PHONE CALLS WHERE CELLULAR COVERAGE IS NOT AVAILABLE.**

- **Allows a dispatcher to make/receive telephone calls via console**
- **Private and group calls from regular phones**
- **Full duplex calls between telephone and dispatcher**
- **Calls to/from MOTOTRBO radios to telephones**
- **Voice calls recorded in MP3 (in conjunction with Voice Recording)**
- **Analogue and SIP telephony supported**

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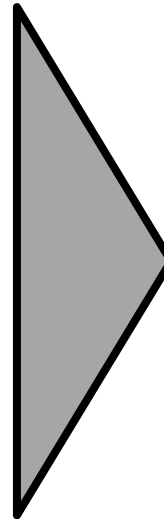
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**8**  
YEAR  
HERITAGE



## APPLICATIONS

PERSONNEL SAFETY  
TEXT MESSAGING  
GPS LOCATION TRACKING  
JOB TICKETING  
TELEPHONY  
MIGRATION AIDES  
SYSTEM MANAGEMENT  
WORK ORDER MANAGEMENT  
DISPATCH  
TELEMETRY & CONTROL

Q&A

