

neocom software

TRBOnet
Digital Technologies

DISPATCHING, MONITORING AND ADMINISTERING
of digital radio systems

MOTOROLA
PROFESSIONAL RADIO
APPLICATION partner
MAKING SOLUTIONS WORK FOR YOU

Who is Neocom

- 2007 Foundation of Neocom Software Ltd
- TRBOnet is a trademark for software products
- Locations: Russia, USA
- 2008 Motorola Application Partner
- 2010 Best Dispatch Solution
- 2011 ConnectPlus solution provider
- 2012 Best Radio Application provider
- 2013 200+ dealers and 1800+ systems
- 2014 Strategic Motorola Application Partner



TRBOnet Team

- **Software Products**
  - 7 products
- **Custom Development**
  - Feature requests
  - Software integration
- **Support Team**
  - More than 2300 systems Installed
  - Remote Installation, Troubleshooting
  - Phone, Email, Skype



TRBOnet Solutions



TRBOnet Enterprise/Plus – Voice Dispatch & AVL Solution

- Single point of control and recording of all communications
- AVL Tracking with Geofencing



TRBOnet Watch – Diagnostic, Monitor, Control

- System Health
- Real-time monitoring





TRBOnet Hardware – Remote control, analog support, enhanced tracking

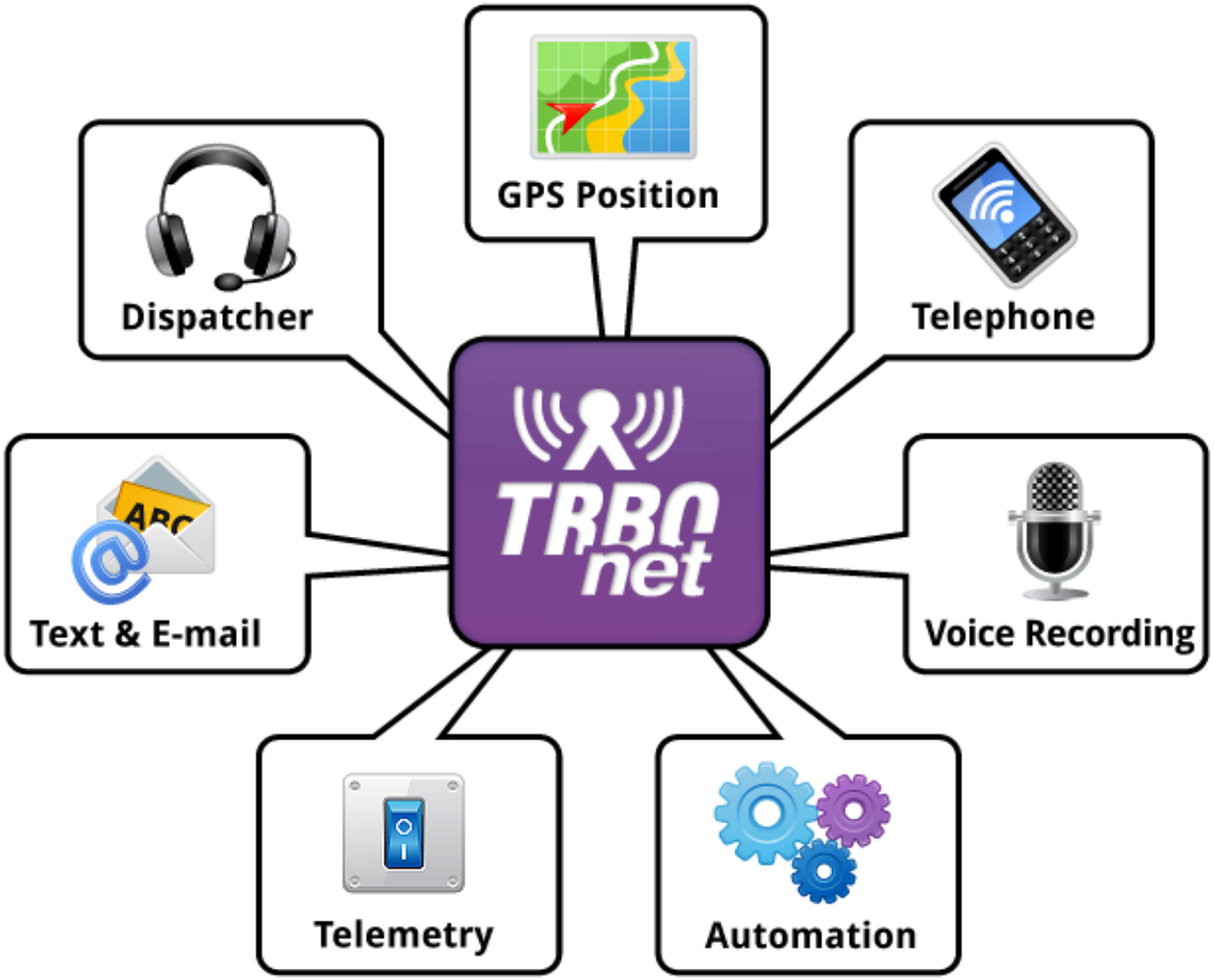
Neocom Software : Services

- Remote Installation, Troubleshooting
- Online support (Phone, Email, Skype, TeamViewer)
- Remote or on-site Sales & Technical trainings
- 3rd party software integration
- Custom development



TRBOnet:
Dispatch & AVL Solution

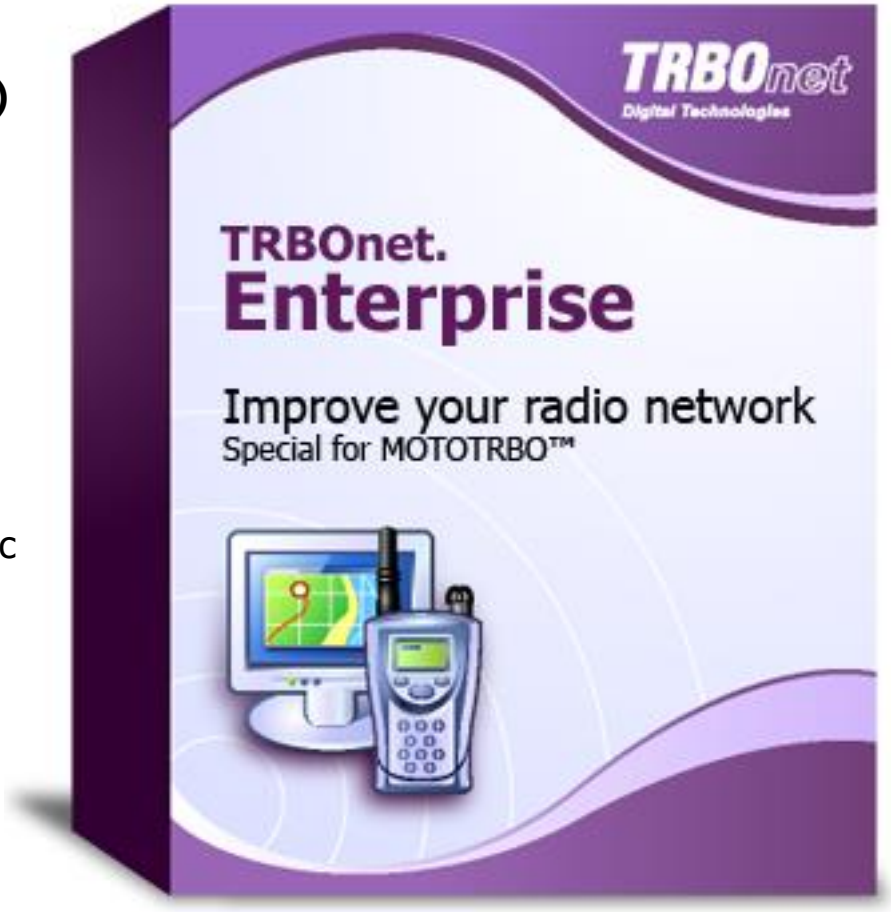
TRBOnet Enterprise: All in One



TRBOnet: Feature List

Feature List

- **Easy access to radio network via PC (Voice IP)**
- **Voice Capabilities. All type of calls.**
- **ISCP, Capacity Plus, Connect Plus**
- Remote Dispatcher
- Intercom
- **CrossPatch**
- **Voice Recording**
- **GPS Positioning**
- **GeoFencing**
- GPS Revert. Individual polling interval
- MapPoint 2009. Google Earth. ESRI. Raster Maps. etc
- ARS (online/offline)
- Event log
- Reporting
- **Lone Worker**
- **Radio Kill. Passive Mode**
- Text Messages
- **Email Gateway (SMTP/POP3 integration)**
- Telemetry
- Advanced Dispatcher's configuration
- **Telephone Interconnect**
- Canned Messages
- Evacuation Messages



Dispatcher Workbench



GPS Positioning

Radio Interface

Event Log



Radio Interface

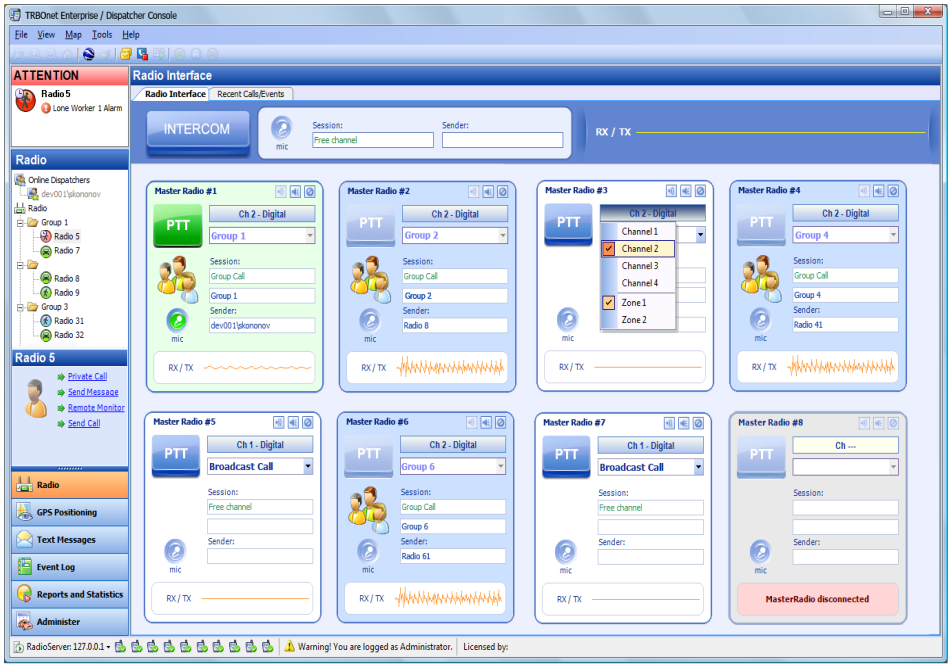


MOTOROLA Authorized Premier Dealer

Radio Interface Features

- **All type calls**: Broadcast, Group, Private, Remote Monitor, Emergency
- **Intercom**
- **Voice Recording**
- **Change Channel/Zone**
- **Cross Patch (Cross Band)**
- **TX Passive**
- **Phone Patch**
- **Voice Mail**
- **Evacuation Messages**





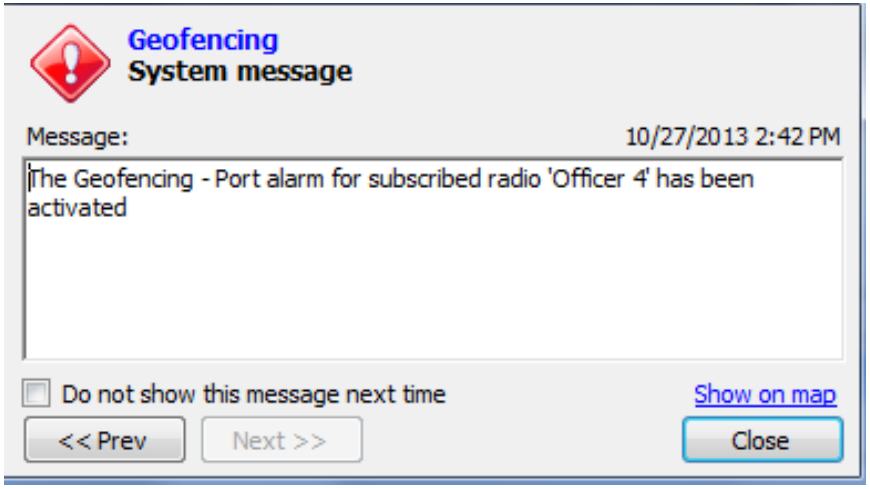
Channel Interface



- PTT
- RX/TX
- Change Channel
- Select Talk Group
- Call Type
- Callsign (PTT ID)
- Alarm Tone
- Mute, Solo

Enhanced Safety

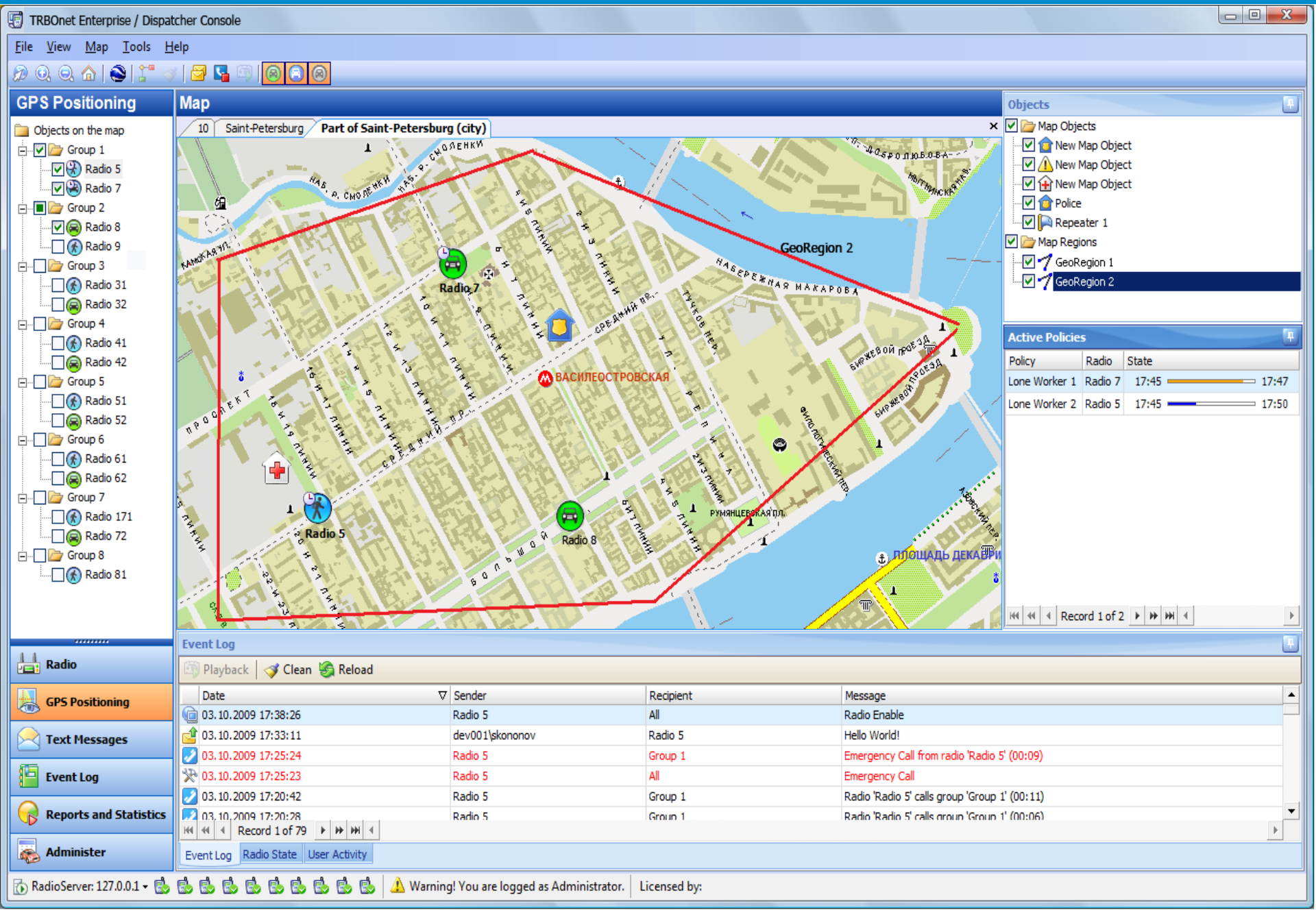
- Man-down alerts
- No-movement alert
- Lone worker
- Immediate alerting via sound, pop-up, emails or SMS







GPS Location Interface



GPS Location Features

- Current units location
- Preconfigured intervals, On demand by dispatcher
- Individual polling interval / Reset GPS trigger
- Location History and Routes



- Subscriber status (radio online/offline, GPS online/offline, alarm)
- Regions: GeoFencing and Speed Control Policies
- Additional objects on the map (check points, buildings)
- Enhanced GPS / CSBK GPS (7.5 sec Update)



- Vector, Raster, Online, Custom Maps (OpenStreetMap, Google Earth, MapPoint, Raster/Custom maps)

Web Access

TRBOnet Digital Technologies

TRBOnet™ Web Console

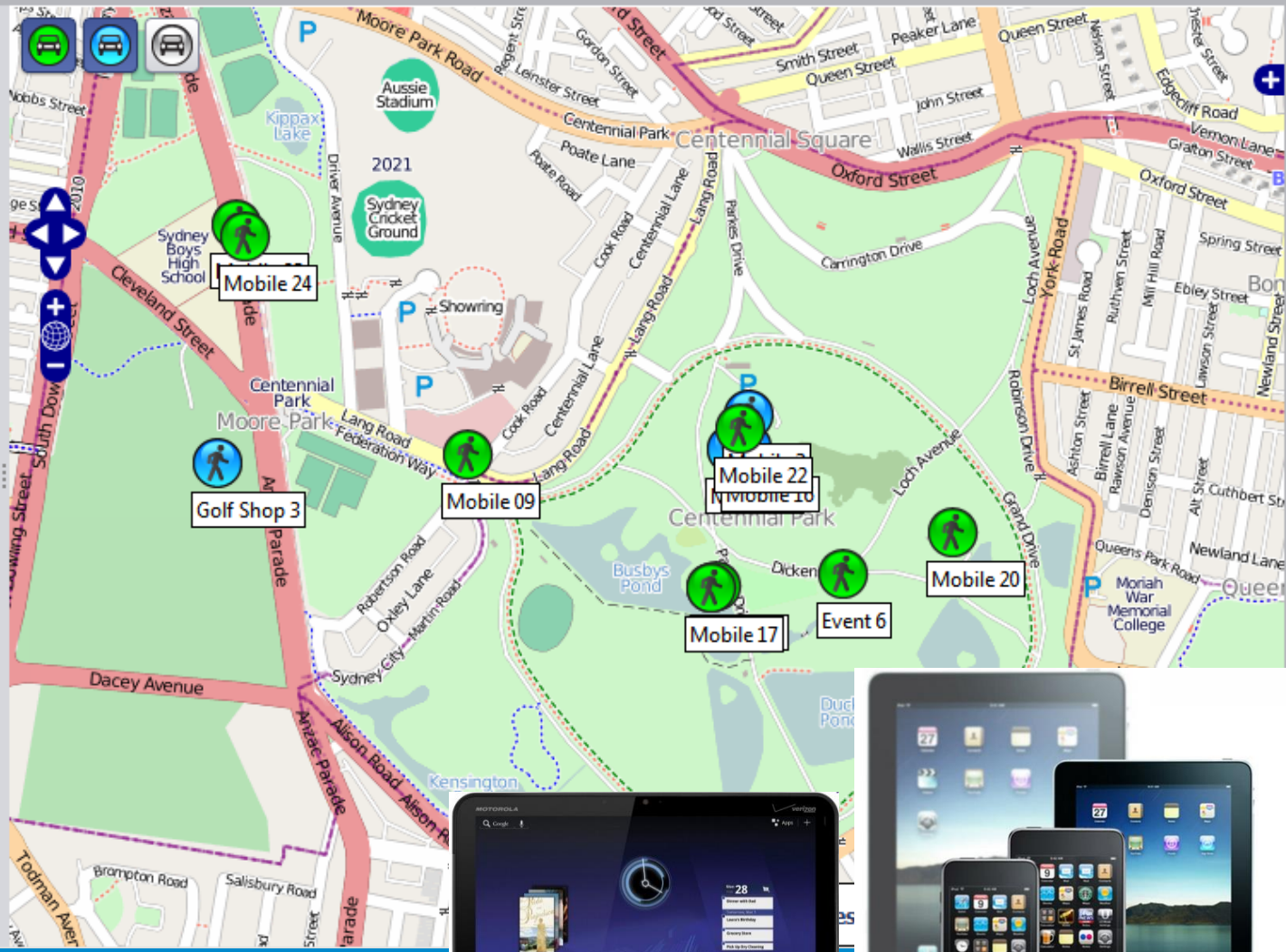
admin Logout

Send SMS: Alpha 1 Send

Map About

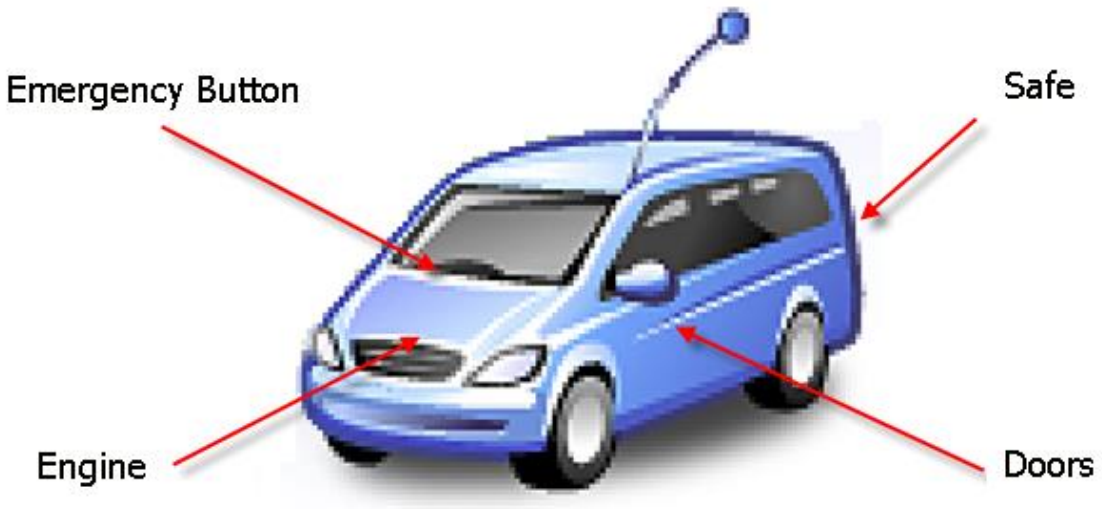
Radios

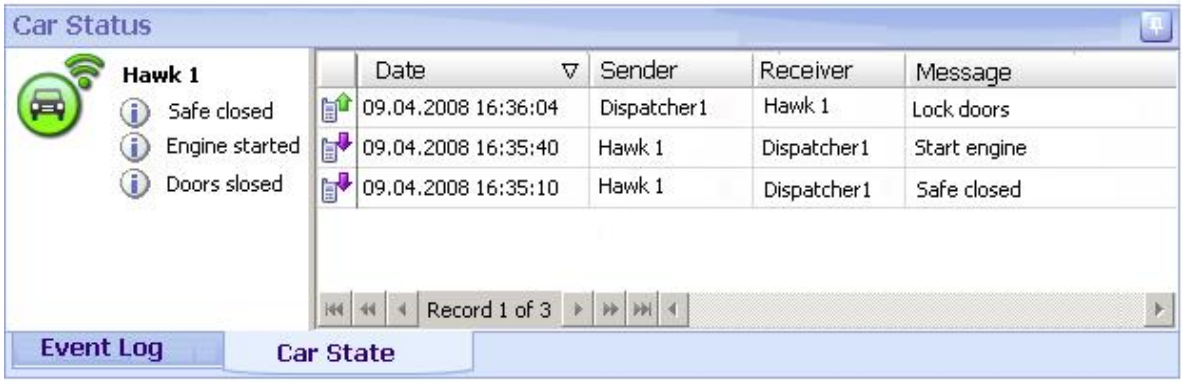
- Mobile 12
- Mobile 13
- Mobile 14
- Mobile 15
- Mobile 16
- Mobile 17
- Mobile 18
- Mobile 19
- Mobile 2
- Mobile 20
- mobile 21
- Mobile 22
- Mobile 23
- Mobile 24
- Mobile 25
- Mobile 3
- Mobile 4
- Mobile 5
- Mobile 6
- Operations 1



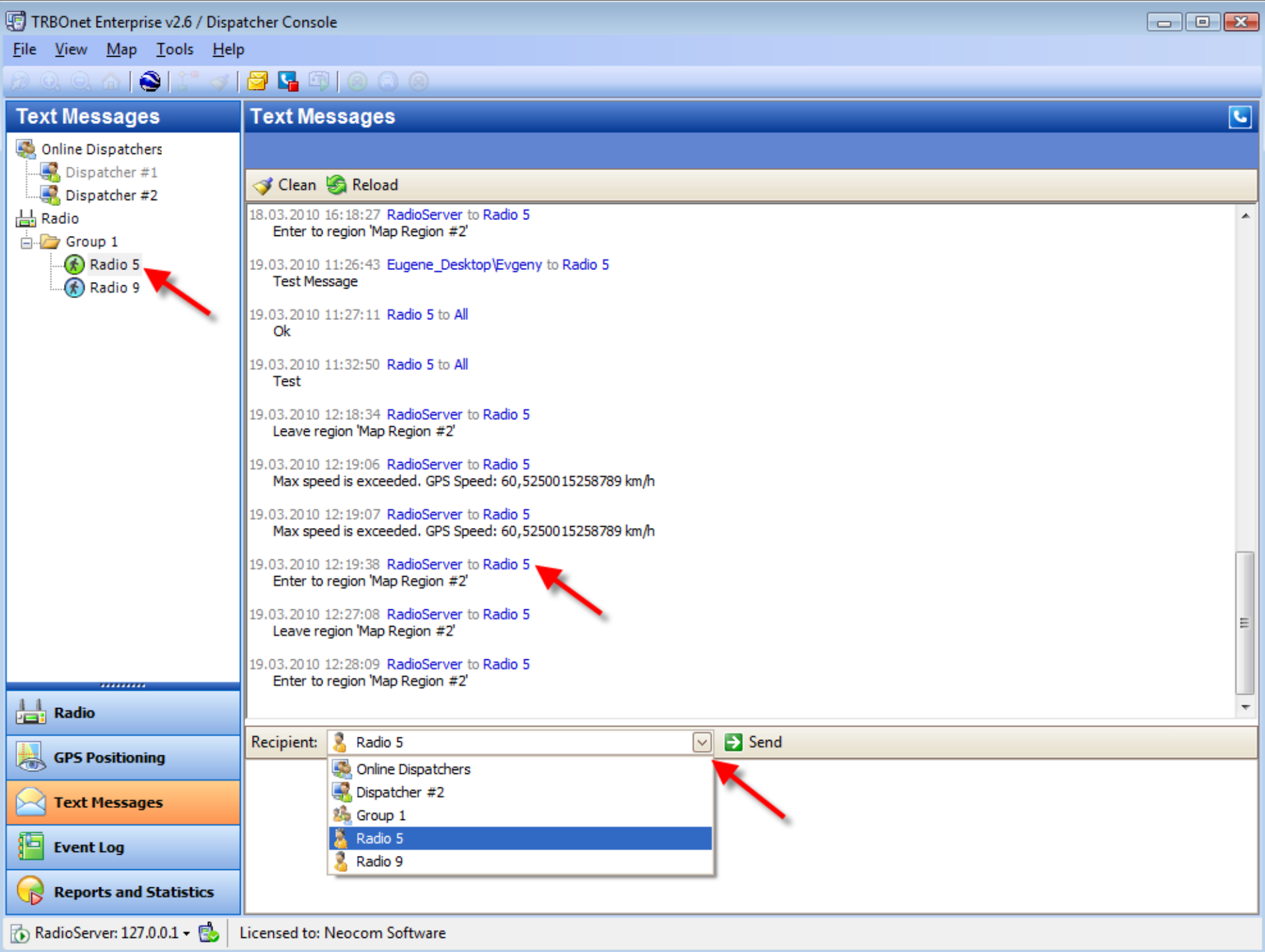
www.TRBOnet.com

Telemetry



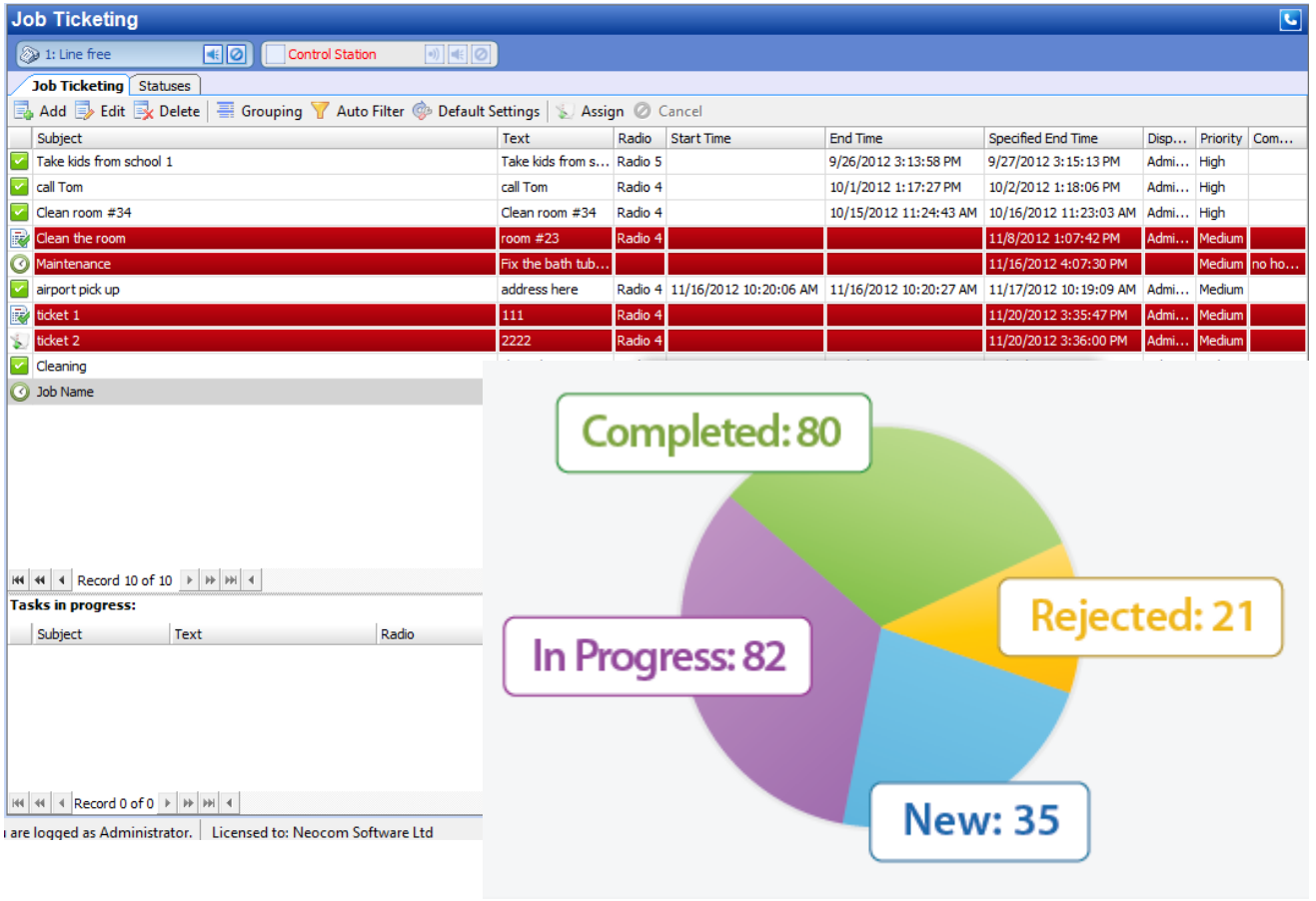


- Native MOTOTRBO Telemetry
- Utilizes rear accessory connector to connect to external sensors
- Acknowledgement
- State Changes History
- Configurable Schemas
- Two-way Telemetry


TRBOnet Enterprise v2.6 / Dispatcher Console
File View Map Tools Help
Text Messages
Online Dispatchers
Dispatcher #1
Dispatcher #2
Radio
Group 1
Radio 5
Radio 9
Text Messages
Clean Reload
18.03.2010 16:18:27 RadioServer to Radio 5
Enter to region 'Map Region #2'
19.03.2010 11:26:43 Eugene_Desktop\Evgeny to Radio 5
Test Message
19.03.2010 11:27:11 Radio 5 to All
Ok
19.03.2010 11:32:50 Radio 5 to All
Test
19.03.2010 12:18:34 RadioServer to Radio 5
Leave region 'Map Region #2'
19.03.2010 12:19:06 RadioServer to Radio 5
Max speed is exceeded. GPS Speed: 60,5250015258789 km/h
19.03.2010 12:19:07 RadioServer to Radio 5
Max speed is exceeded. GPS Speed: 60,5250015258789 km/h
19.03.2010 12:19:38 RadioServer to Radio 5
Enter to region 'Map Region #2'
19.03.2010 12:27:08 RadioServer to Radio 5
Leave region 'Map Region #2'
19.03.2010 12:28:09 RadioServer to Radio 5
Enter to region 'Map Region #2'
Recipient: Radio 5
Send
Online Dispatchers
Dispatcher #2
Group 1
Radio 5
Radio 9
Radio
GPS Positioning
Text Messages
Event Log
Reports and Statistics
RadioServer: 127.0.0.1
Licensed to: Neocom Software

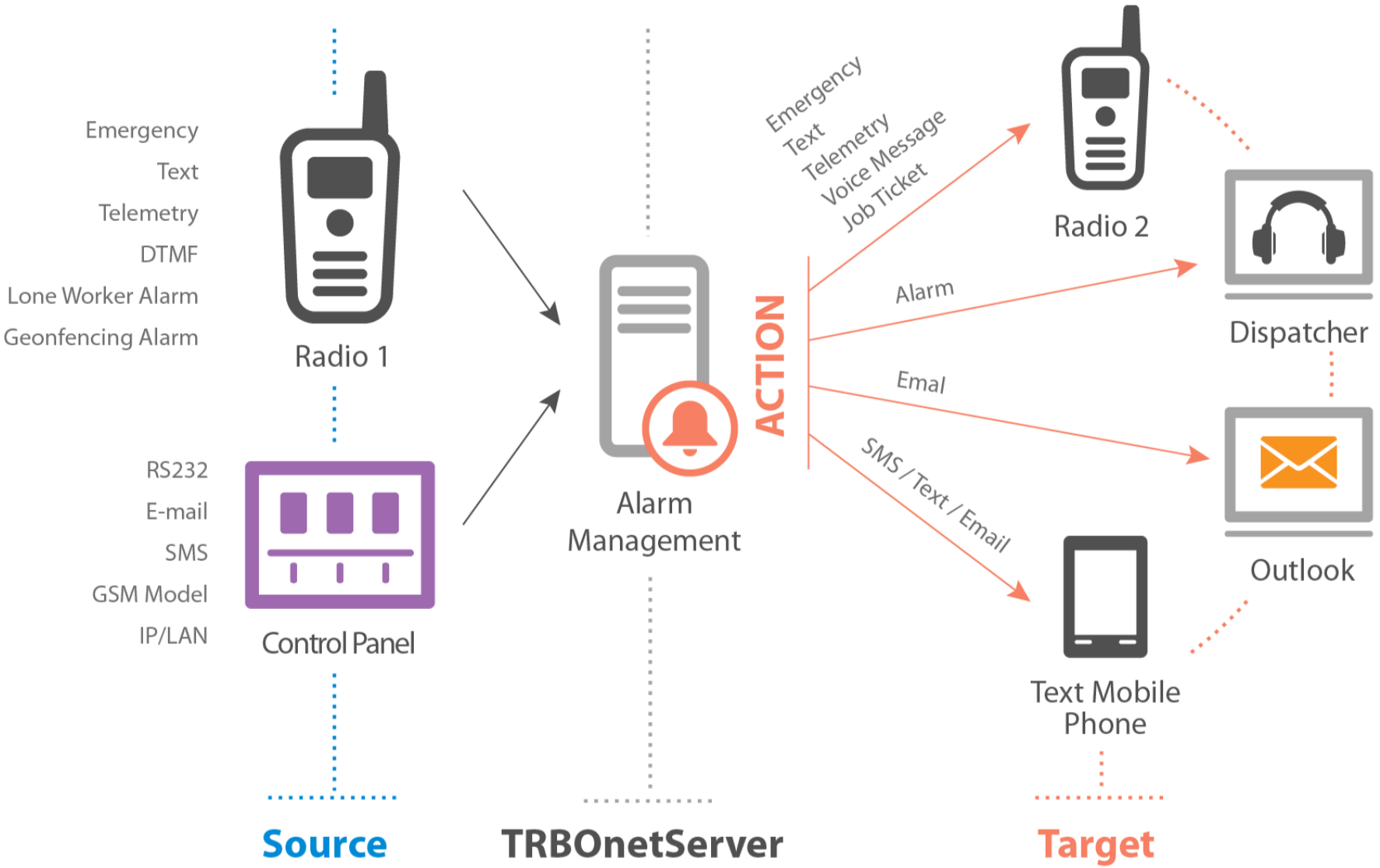
Job Management

- Integration with MOTOTRBO job ticketing
- Delivery Confirmation
- Remote status changes
- Flexible statuses
- Jobs tracking and alerting



All radios and platforms are supported

Alarm Management



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Alarm Management

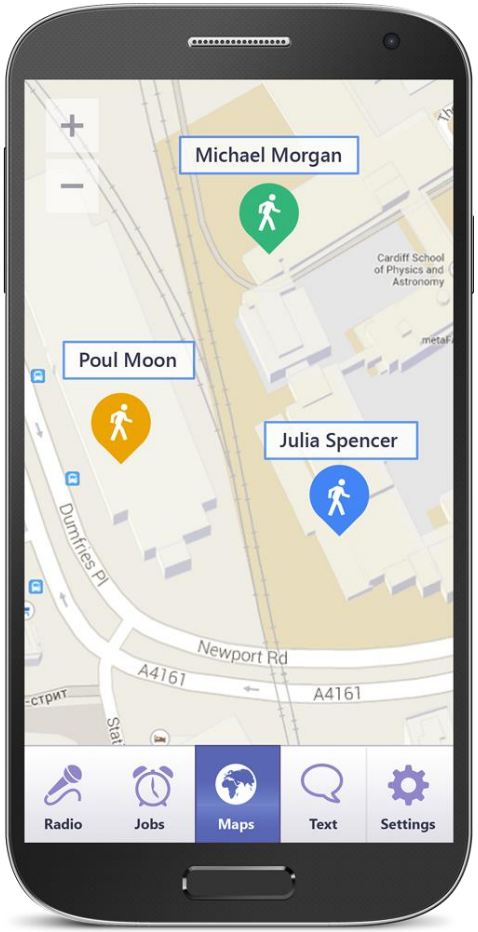
- Different sources
  - Radio state – Turn On \ Off
  - Radio activity – call, text, telemetry, DTMF
  - Radio alarms – Emergency, Geofencing, Safety alarms
  - External control panels

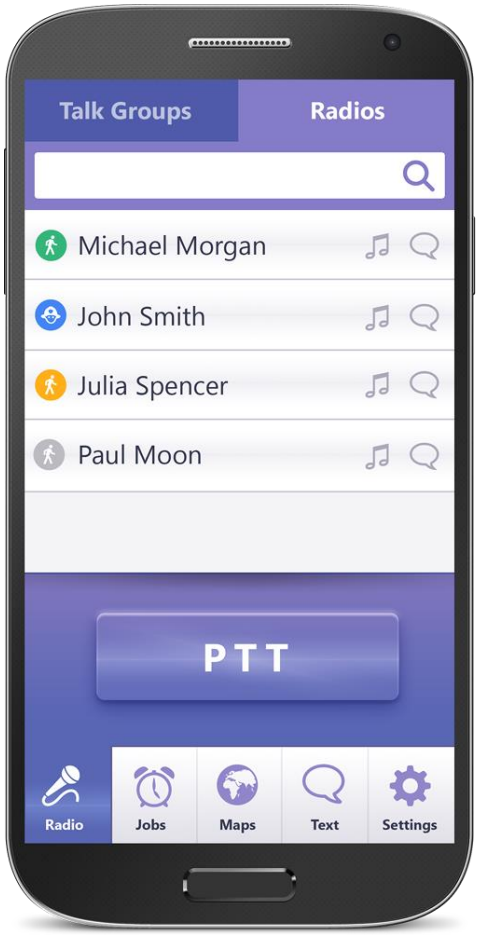


- Different actions
  - Alarming, pop-up notification for the dispatcher
  - Emails, SMS messages
  - Text message to radio or group
  - Automatic group \ private calls
  - Automatic phone calls
  - Telemetry

TRBOnet Mobile for Android

PTT, GPS, Text, Jobs





Available Now

Telephone Interconnect

- PBX with SIP or online SIP service
- No option board required
- Voice recording
- 6 lines per a dispatcher
- SIP Trunk
- Native MOTOTRBO phone system support









Automation

- Text and Voice Mail for Offline Units
- Evacuation Messages
- Scheduled Text or Telemetry Messages
- Lone Worker
- Geofencing
- Radio Kill Passive
- Export Data

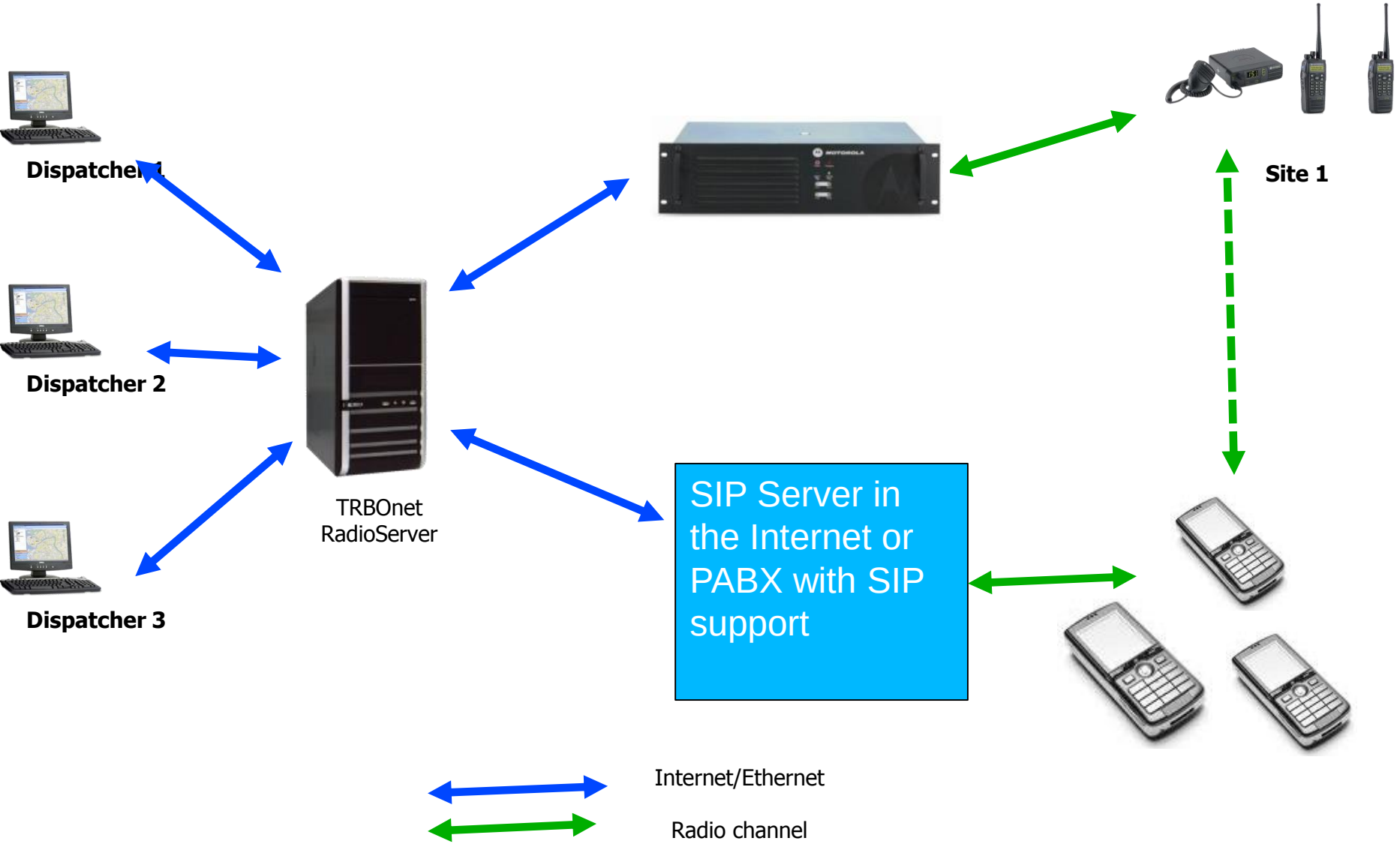


Voice and Data Logging

- All Information
  - Talk sessions (Voice Recording)
  - Text messages
  - Telemetry
  - ARS (online/offline status)
  - Dispatcher Activities
  - System events
- Group, Filter, Search
- Reporting



Telephone Interconnect

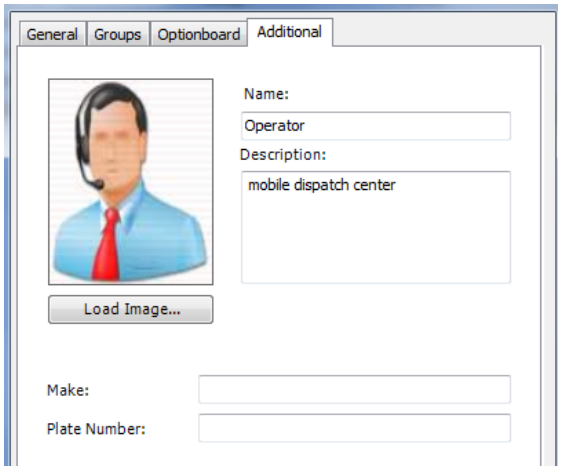


Personalization

- Custom display icons (more than 20)



- Radio display name, custom information



- Radio allocation, personal password
- Reports on radio usage

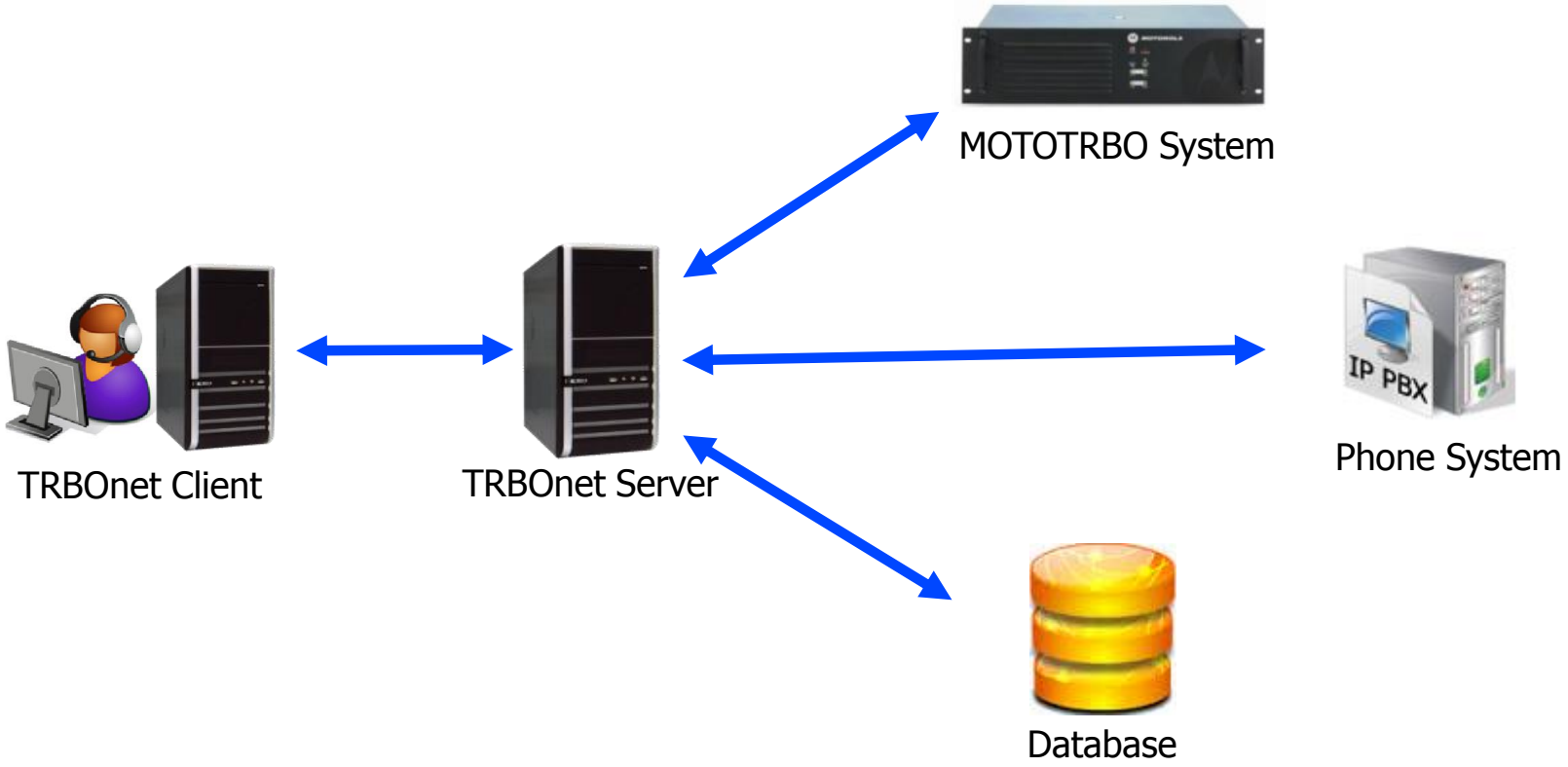


TRBOnet Enterprise - Architecture

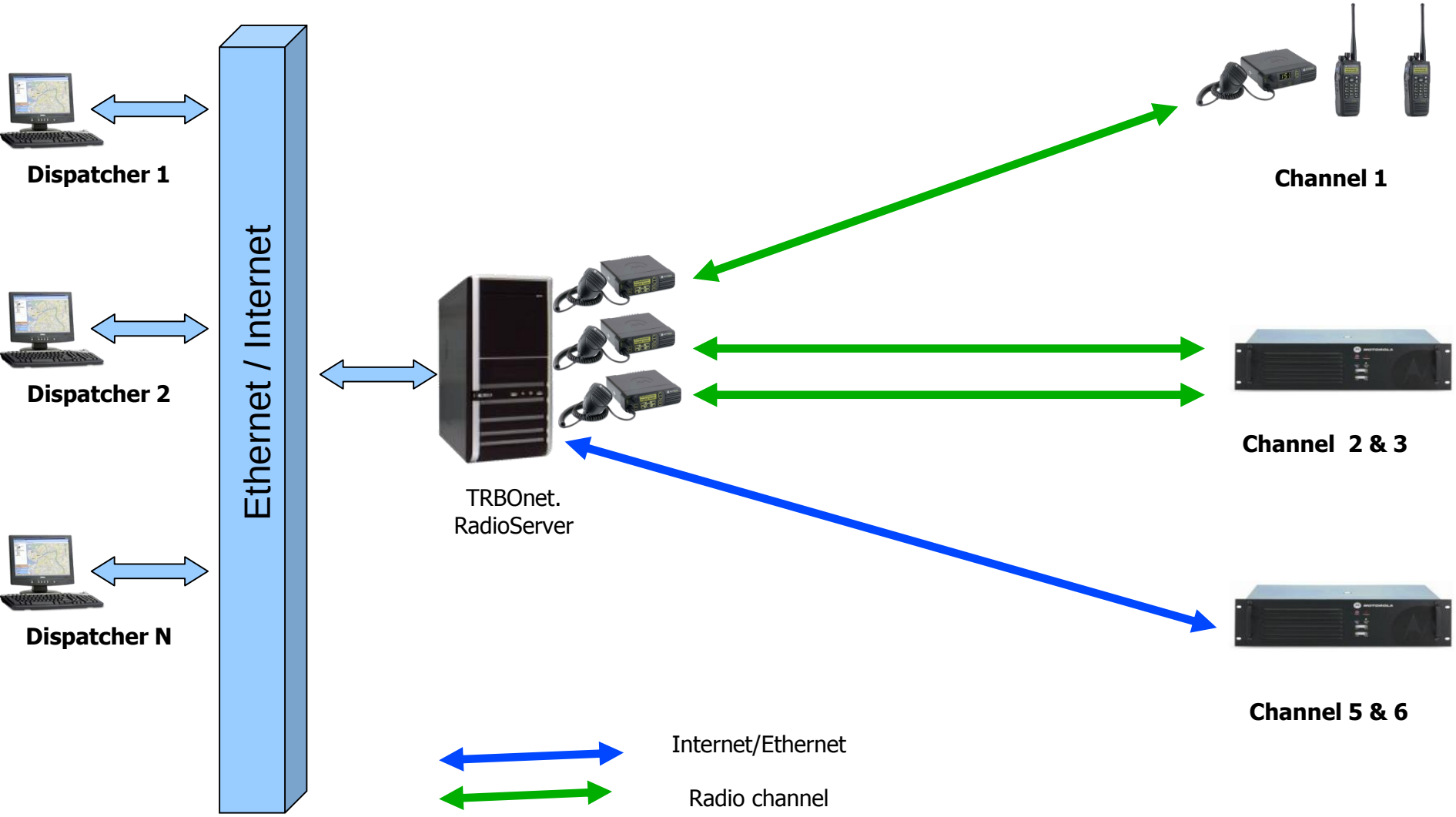
TRBOnet Enterprise: Architecture

- Classic Client-Server Architecture
- Three parts:
  - RadioServer
  - Client (DispatcherConsole)
  - Agent (RadioGateway)
- The best for Distributed Systems

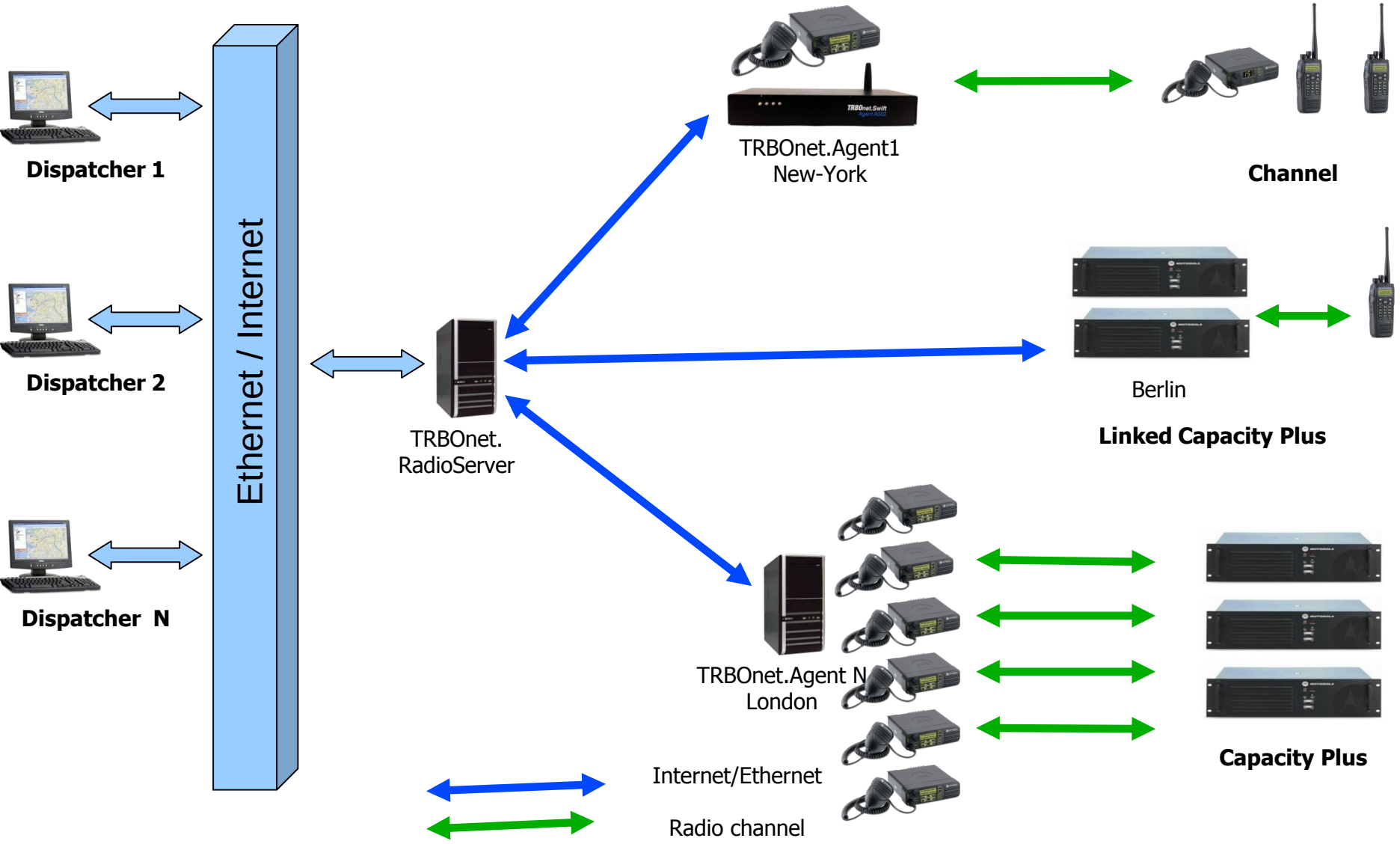
Client – Server Application



Single Site, Example



Multi Site System, Example



MOTOROLA
Authorized Premier Dealer

Master Radios / Control Stations



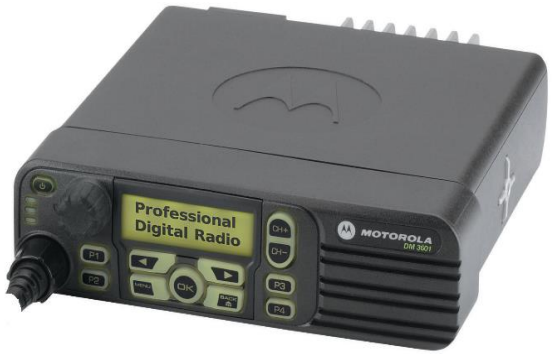
PC with

TRBOnet RadioServer Software

USB Cable

Analog Audio IN

Analog Audio OUT



Mobile radio as Master Radio

Swift Agent

MOTOTRBO



2,4 GHz

Voice + Data



Analogue Radio



Cable



- PTT
- SQL
- Audio out
- Mic In
- GND

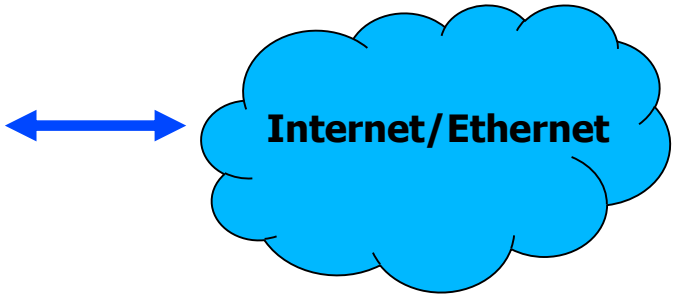
Direct IP Connect to CapPlus and LCP

Voice and Data over IP



PC with

TRBOnet RadioServer Software





Capacity Plus / LCP

Direct IP Connect to Repeaters

Voice and Data over IP



PC with

TRBOnet RadioServer Software



MOTORBO Site 2



TimeSlot 1

Internet/Ethernet



MOTORBO Site 1

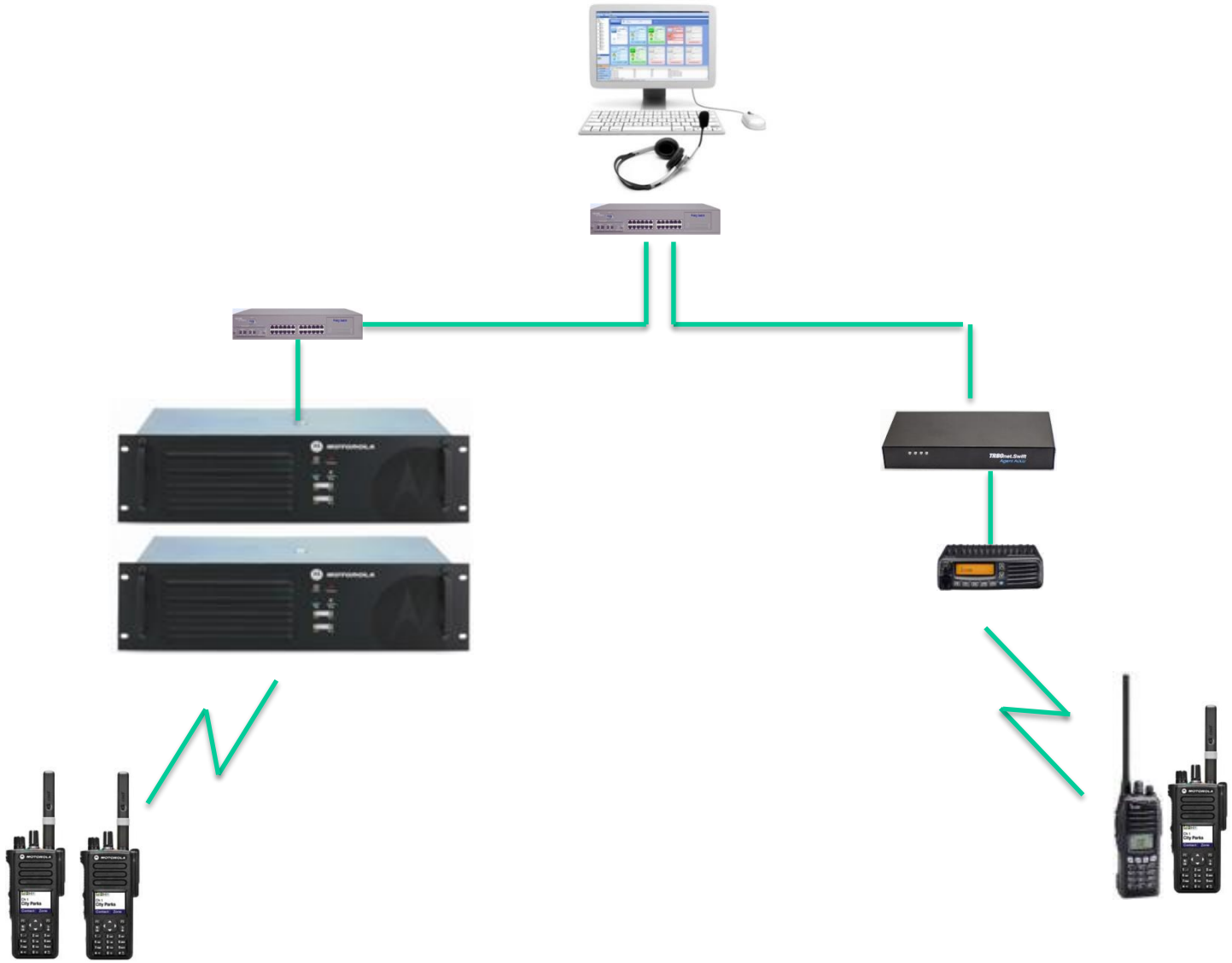


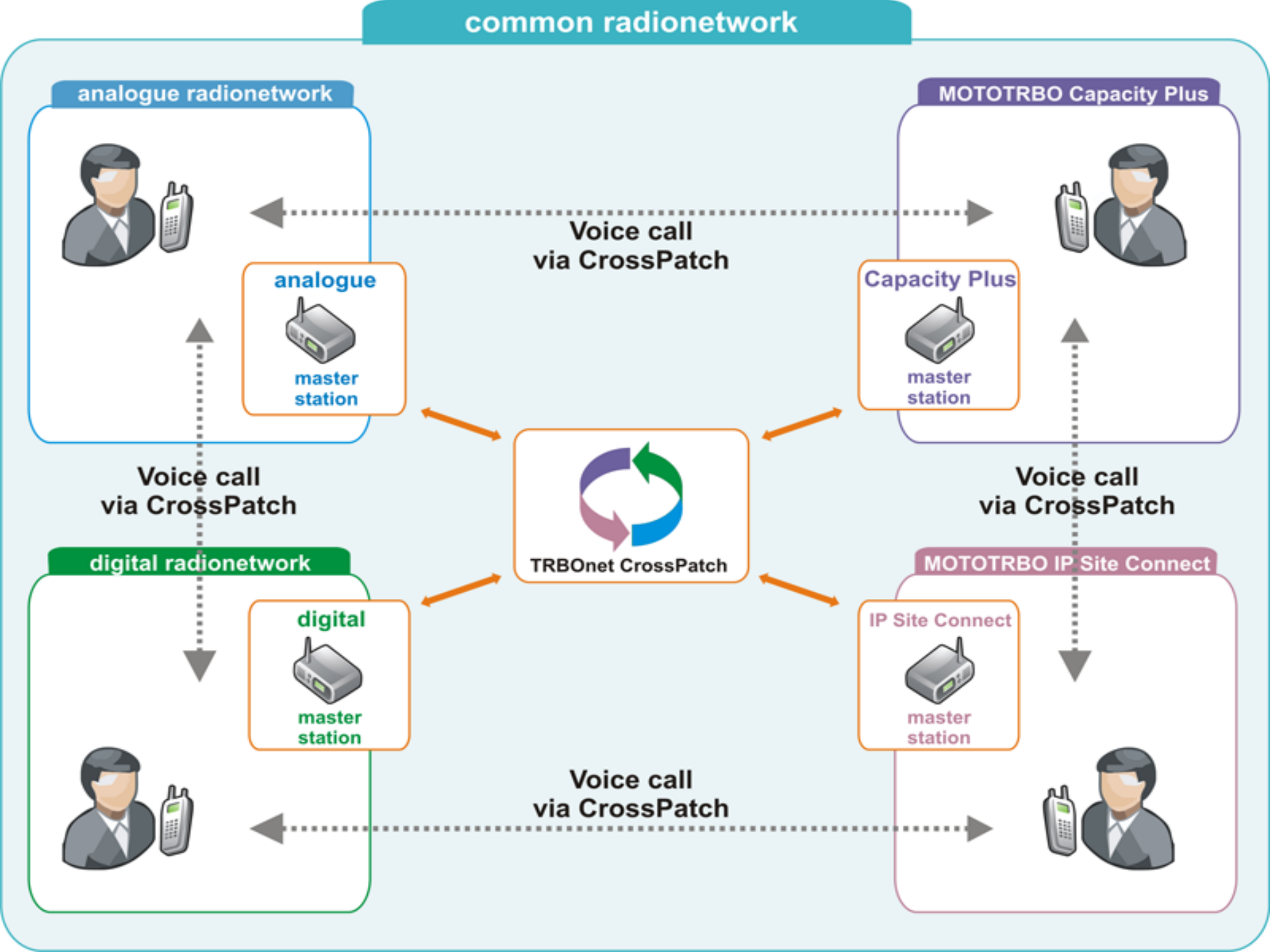
TimeSlot 2



MOTORBO Site 3

Interoperability



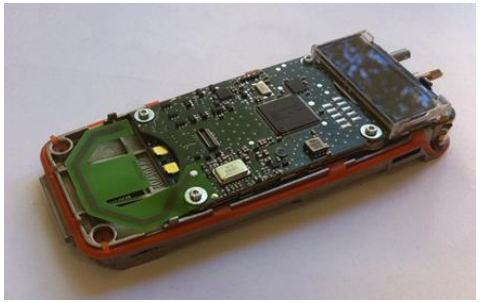

common radionetwork
analogue radionetwork
MOTOTRBO Capacity Plus
Voice call
via CrossPatch
analogue
master
station
Capacity Plus
master
station
Voice call
via CrossPatch
Voice call
via CrossPatch
TRBOnet CrossPatch
digital radionetwork
MOTOTRBO IP Site Connect
digital
master
station
IP Site Connect
master
station
Voice call
via CrossPatch

TRBOnet.InDoor



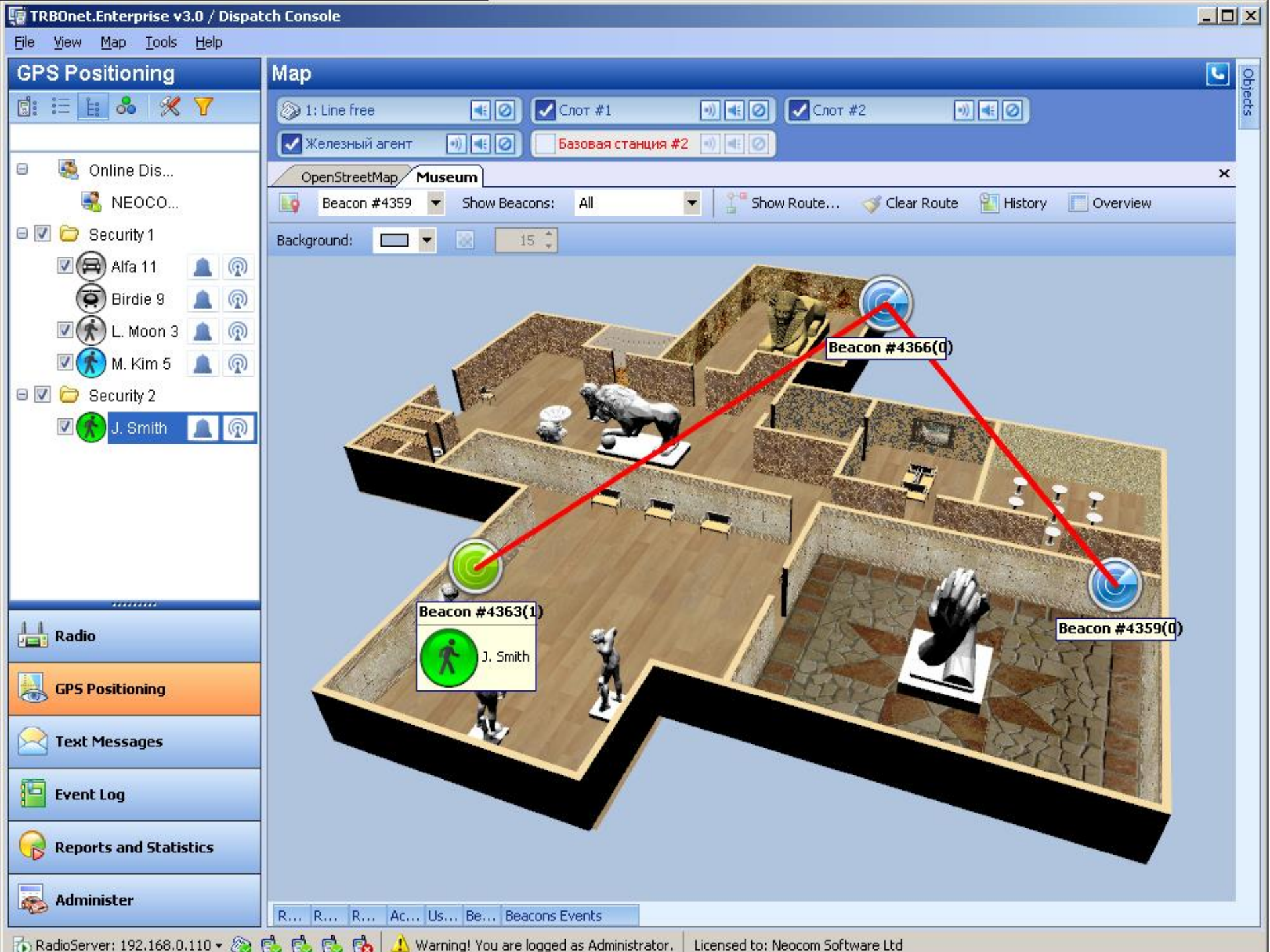
TRBOnet Indoor

- TRBOnet Enterprise 3.0 or higher
- Hardware: Option Board + Beacon
- Beacon Battery: 2-3 years
- Beacon Range: from 0,5 meter to 25 meters
- Indoor & Outdoor solution
- 2D and 3D maps
- Two solutions:
  - Indoor Positioning
  - Guard Tour (October 2011)
- Availability: August 2011








TRBOnet.Enterprise v3.0 / Dispatch Console
File View Map Tools Help
GPS Positioning
Online Dis...
NEOCO...
Security 1
Alfa 11
Birdie 9
L. Moon 3
M. Kim 5
Security 2
J. Smith
Radio
GPS Positioning
Text Messages
Event Log
Reports and Statistics
Administer
Map
1: Line free
Слот #1
Слот #2
Железный агент
Базовая станция #2
OpenStreetMap
Museum
Beacon #4359
Show Beacons:
All
Show Route...
Clear Route
History
Overview
Background:
15
Beacon #4366(0)
Beacon #4363(1)
J. Smith
Beacon #4359(0)
Objects
R... R... R... Ac... Us... Be... Beacons Events
RadioServer: 192.168.0.110
Warning! You are logged as Administrator.
Licensed to: Neocom Software Ltd

TRBOnet
Digital Technologies

THE FUTURE OF DIGITAL COMMUNICATION

TRBOnet.Watch

The Best Dispatch Solution 2010

MOTOROLA
PROFESSIONAL RADIO
APPLICATION provider

Solution for administering digital radio systems



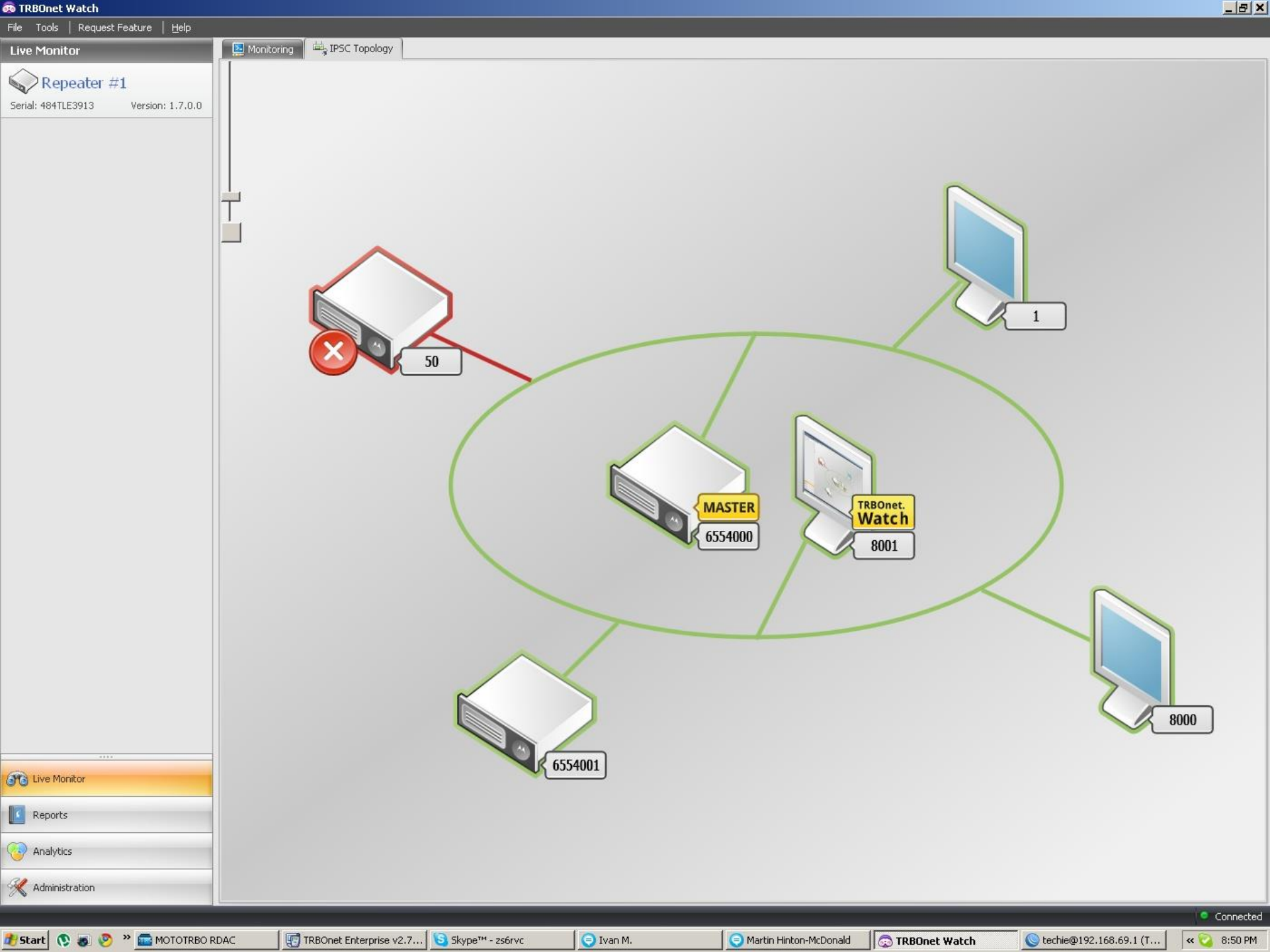
TRBOnet Watch

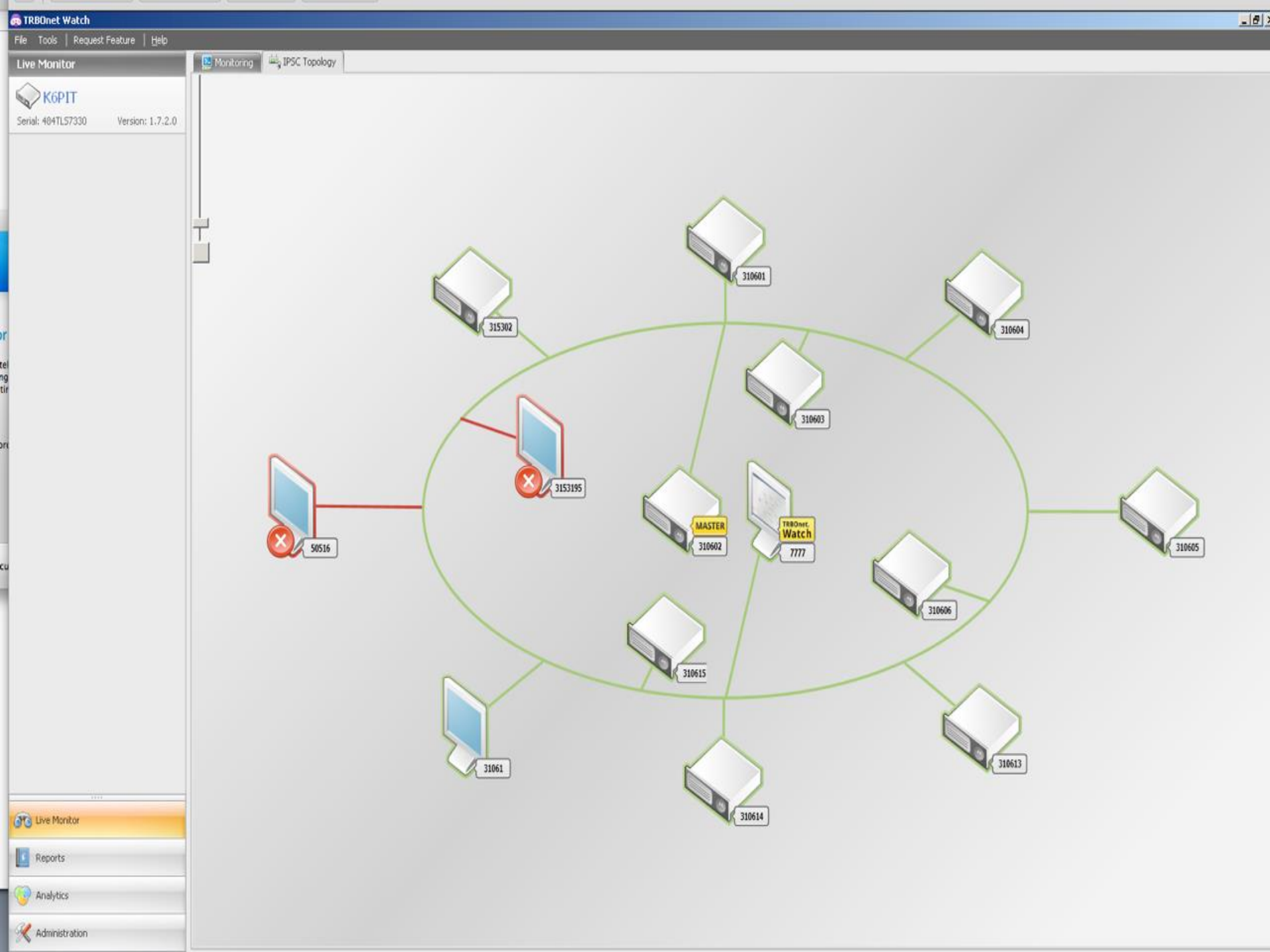
- Diagnostic and monitoring tool for MOTOTRBO
- Support: single repeaters, IPSC, Cap +

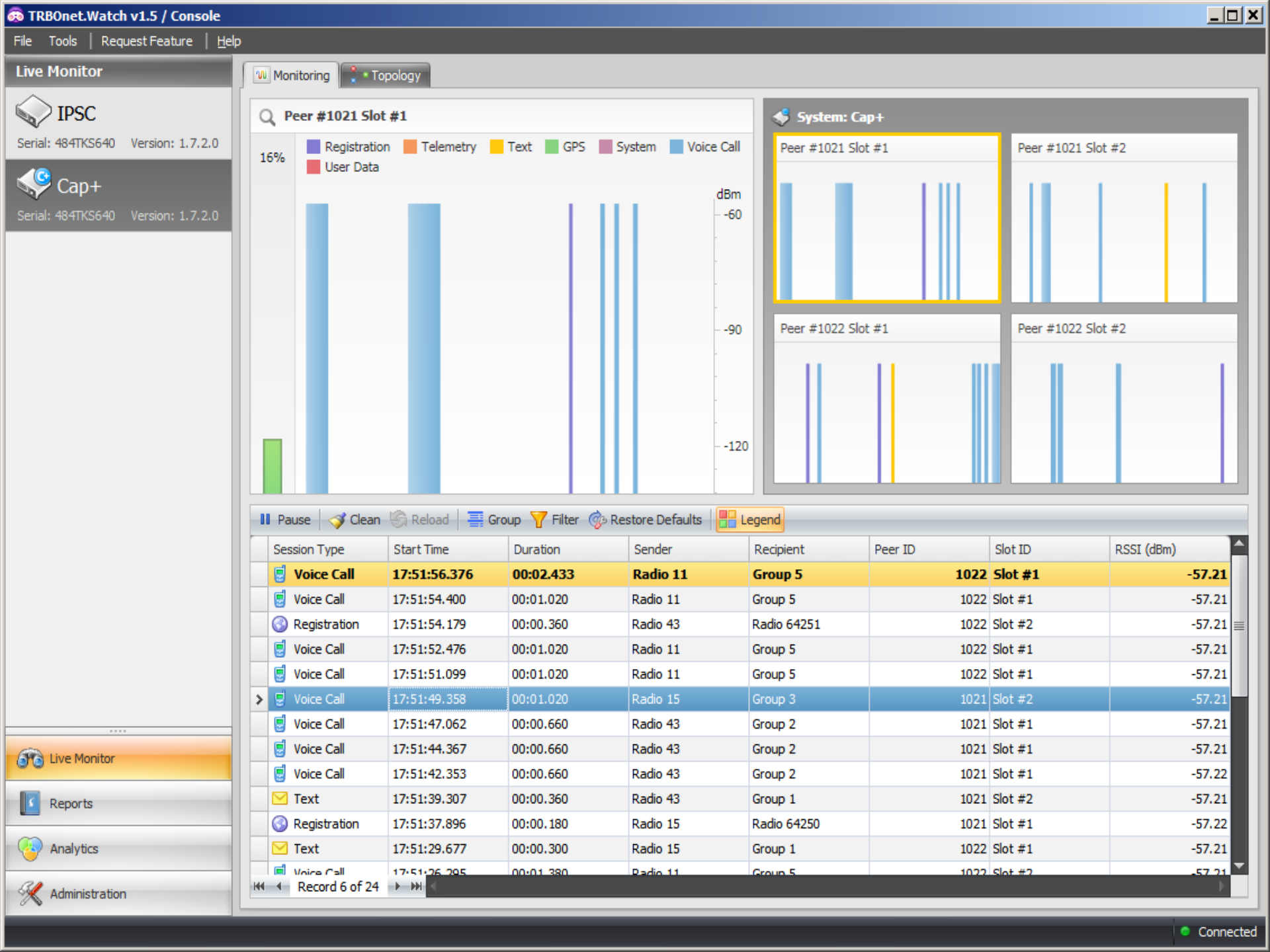
When to use:

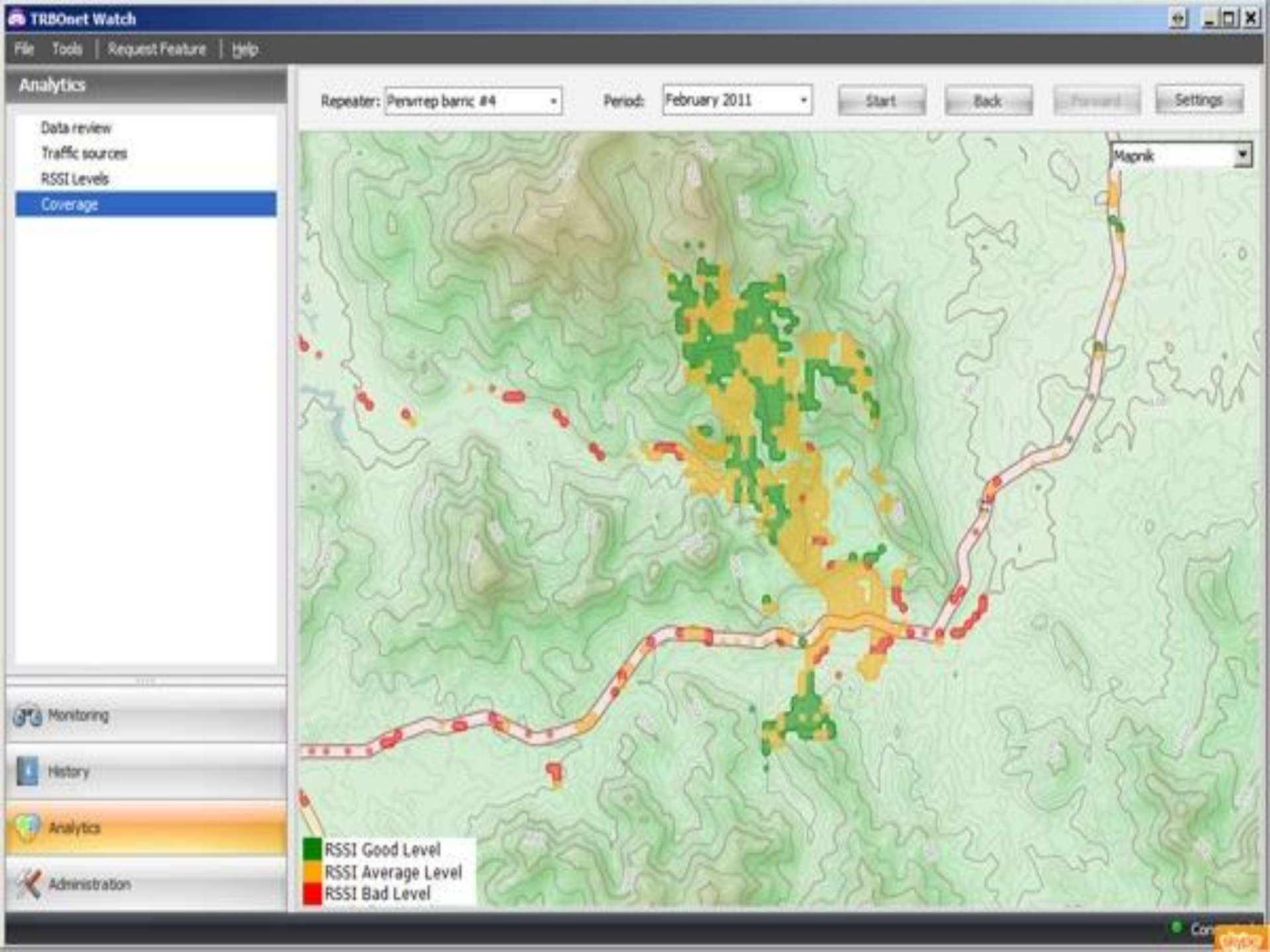
- System installation, radio programming
- Troubleshooting
- System Monitor

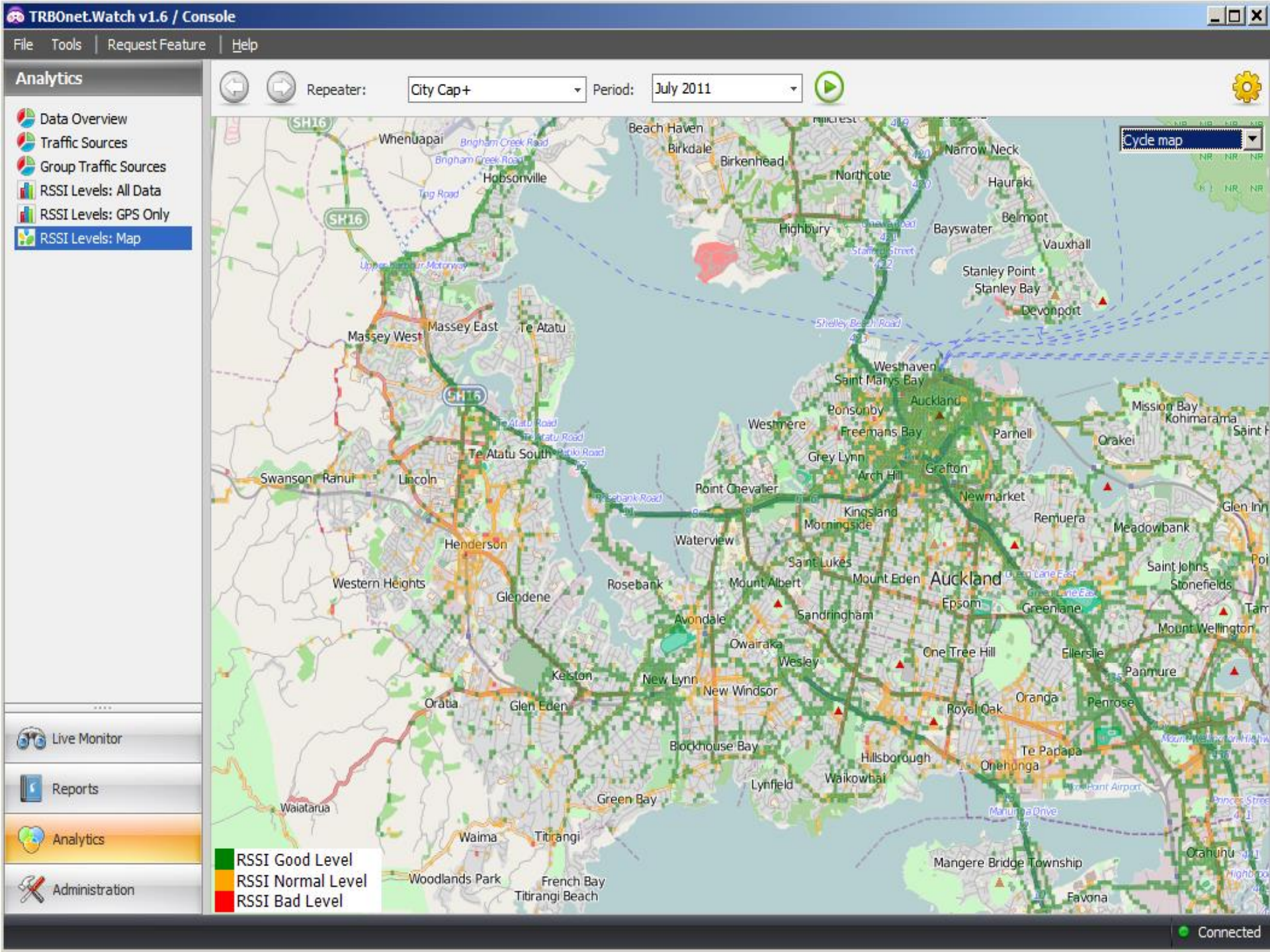


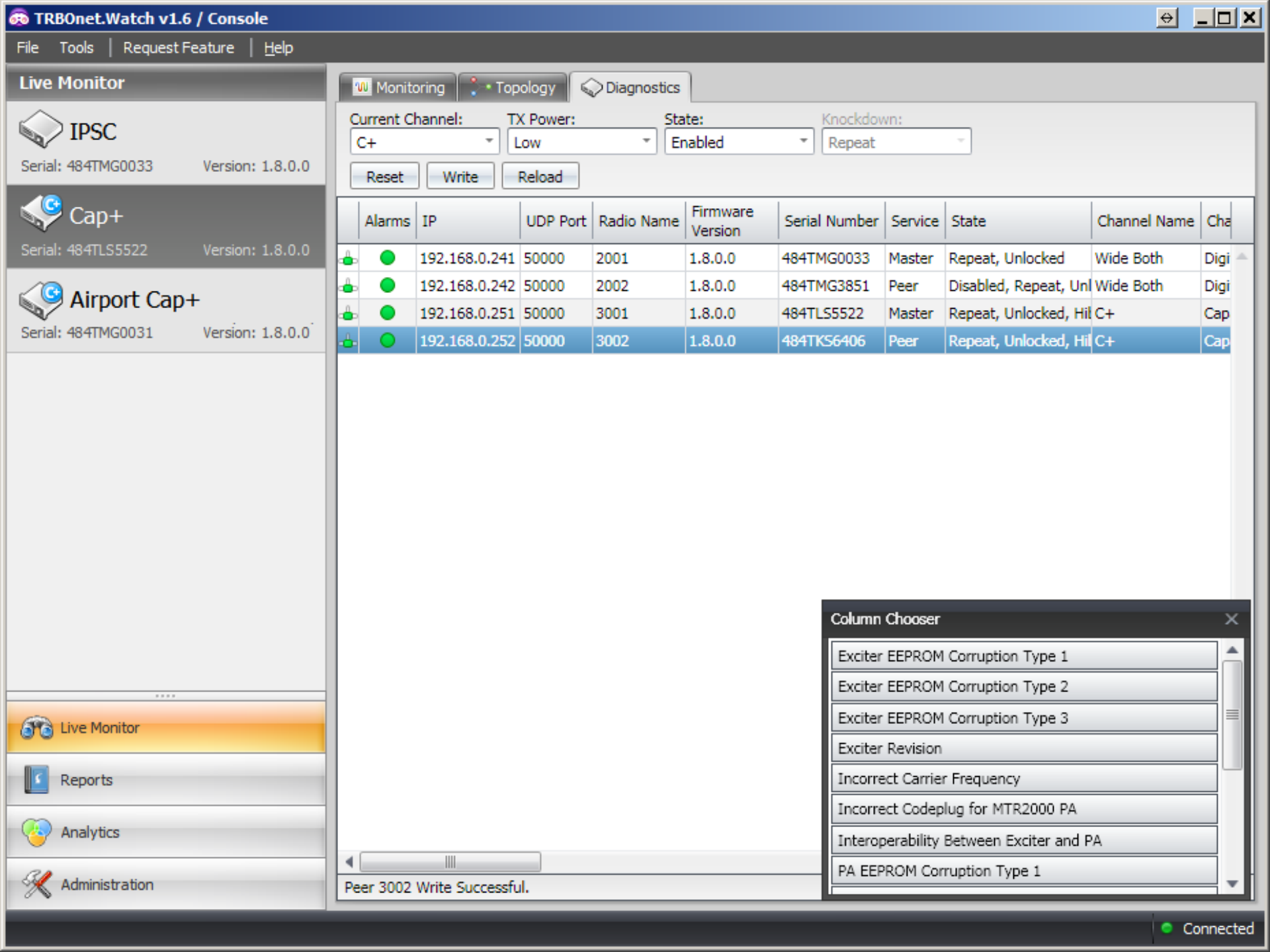

TRBOnet Watch
File
Tools
Request Feature
Help
Live Monitor
Repeater #1
Serial: 484TLE3913
Version: 1.7.0.0
Monitoring
IPSC Topology
50
1
MASTER
6554000
TRBOnet.
Watch
8001
6554001
8000
Live Monitor
Reports
Analytics
Administration
Connected
Start
MOTOTRBO RDAC
TRBOnet Enterprise v2.7...
Skype™ - zs6rvc
Ivan M.
Martin Hinton-McDonald
TRBOnet Watch
techie@192.168.69.1 (T...
8:50 PM


TRBOnet Watch
File
Tools
Request Feature
Help
Live Monitor
K6PIT
Serial: 404TL57330
Version: 1.7.2.0
Monitoring
IPSC Topology
315302
310601
310604
310603
3153195
50516
MASTER
310602
TRBOnet Watch
7777
310605
310606
310615
31061
310613
310614
Live Monitor
Reports
Analytics
Administration


TRBOnet.Watch v1.5 / Console
File
Tools
Request Feature
Help
Live Monitor
IPSC
Serial: 484TKS640
Version: 1.7.2.0
Cap+
Serial: 484TKS640
Version: 1.7.2.0
Monitoring
Topology
Peer #1021 Slot #1
16%
Registration
Telemetry
Text
GPS
System
Voice Call
User Data
dBm
-60
-90
-120
System: Cap+
Peer #1021 Slot #1
Peer #1021 Slot #2
Peer #1022 Slot #1
Peer #1022 Slot #2
Pause
Clean
Reload
Group
Filter
Restore Defaults
Legend
Session Type
Start Time
Duration
Sender
Recipient
Peer ID
Slot ID
RSSI (dBm)
Voice Call 17:51:56.376 00:02.433 Radio 11 Group 5 1022 Slot #1 -57.21
Voice Call 17:51:54.400 00:01.020 Radio 11 Group 5 1022 Slot #1 -57.21
Registration 17:51:54.179 00:00.360 Radio 43 Radio 64251 1022 Slot #2 -57.21
Voice Call 17:51:52.476 00:01.020 Radio 11 Group 5 1022 Slot #1 -57.21
Voice Call 17:51:51.099 00:01.020 Radio 11 Group 5 1022 Slot #1 -57.21
Voice Call 17:51:49.358 00:01.020 Radio 15 Group 3 1021 Slot #2 -57.21
Voice Call 17:51:47.062 00:00.660 Radio 43 Group 2 1021 Slot #1 -57.21
Voice Call 17:51:44.367 00:00.660 Radio 43 Group 2 1021 Slot #1 -57.21
Voice Call 17:51:42.353 00:00.660 Radio 43 Group 2 1021 Slot #1 -57.22
Text 17:51:39.307 00:00.360 Radio 43 Group 1 1021 Slot #2 -57.21
Registration 17:51:37.896 00:00.180 Radio 15 Radio 64250 1021 Slot #1 -57.22
Text 17:51:29.677 00:00.300 Radio 15 Group 1 1022 Slot #1 -57.21
Record 6 of 24
Live Monitor
Reports
Analytics
Administration
Connected


TRBOnet Watch
File
Tools
Request Feature
Help
Analytics
Data review
Traffic sources
RSSI Levels
Coverage
Repeater:
Period:
February 2011
Start
Back
Settings
Mapnik
RSSI Good Level
RSSI Average Level
RSSI Bad Level
Monitoring
History
Analytics
Administration

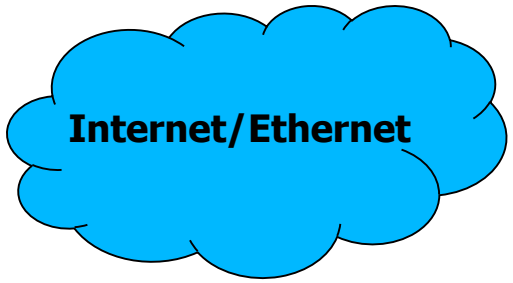

TRBOnet.Watch v1.6 / Console
File
Tools
Request Feature
Help
Analytics
Data Overview
Traffic Sources
Group Traffic Sources
RSSI Levels: All Data
RSSI Levels: GPS Only
RSSI Levels: Map
Repeater:
City Cap+
Period:
July 2011
Cycle map
Live Monitor
Reports
Analytics
Administration
RSSI Good Level
RSSI Normal Level
RSSI Bad Level
Connected


TRBOnet.Watch v1.6 / Console
File
Tools
Request Feature
Help
Live Monitor
IPSC
Serial: 484TMG0033
Version: 1.8.0.0
Cap+
Serial: 484TLS5522
Version: 1.8.0.0
Airport Cap+
Serial: 484TMG0031
Version: 1.8.0.0
Live Monitor
Reports
Analytics
Administration
Monitoring
Topology
Diagnostics
Current Channel:
C+
TX Power:
Low
State:
Enabled
Knockdown:
Repeat
Reset
Write
Reload
Alarms
IP
UDP Port
Radio Name
Firmware Version
Serial Number
Service
State
Channel Name
Cha
192.168.0.241 50000 2001 1.8.0.0 484TMG0033 Master Repeat, Unlocked Wide Both Digi
192.168.0.242 50000 2002 1.8.0.0 484TMG3851 Peer Disabled, Repeat, Unl Wide Both Digi
192.168.0.251 50000 3001 1.8.0.0 484TLS5522 Master Repeat, Unlocked, Hil C+ Cap
192.168.0.252 50000 3002 1.8.0.0 484TKS6406 Peer Repeat, Unlocked, Hil C+ Cap
Column Chooser
Exciter EEPROM Corruption Type 1
Exciter EEPROM Corruption Type 2
Exciter EEPROM Corruption Type 3
Exciter Revision
Incorrect Carrier Frequency
Incorrect Codeplug for MTR2000 PA
Interoperability Between Exciter and PA
PA EEPROM Corruption Type 1
Peer 3002 Write Successful.
Connected

- Full range of solutions:
  - Voice Dispatch
  - GPS Positioning
  - Indoor Localization
  - ManDown & LoneWorker
  - Phone Interconnect
  - Diagnostic and Monitor (TRBOnet Watch)
  - Accessories
  - Custom Option Boards







TRBOnet Support Team

- TeamViewer / Quick Support
- Phone Europe: +7(981) 738-8118
- Phone UK: +44 (203) 608-05-98



Your system

- Skype: trbonet
- Email: plus@trbonet.com support@trbonet.com

Thank You!



info@trbonet.com
www.TRBOnet.com