



INTEGRATED SOLUTION FOR MOTOTRBO™

SmartPTT

RADIO COMMUNICATION SOLUTION  
**FOR ENERGY**



How to provide maximum worker safety?

Could outage times be reduced?

How to save on labor costs?

**THE SOLUTION IS INSIDE**





# SmartPTT for Energy

## Reduce Outage Times

Utilizing the GPS tracking features of SmartPTT and MOTOTRBO enables utilities to assign the closest work crew to an outage or work site. This allows for faster response times to outages without having to hire more employees.

## Minimize Equipment Down Time

Using the telemetry inputs/outputs of the Motorola MOTOTRBO radio, when an equipment failure occurs SmartPTT can receive notifications of the failure. SmartPTT can notify the dispatcher and can automatically notify maintenance teams via text or voice notification that the failure has occurred. The dispatcher can also create a Job Ticket for the maintenance staff to manage the repair of the failure.

## Manage Work Orders

SmartPTT's Job Ticketing feature enables dispatchers to manage the assignment and status of work orders.

## Worker Safety

SmartPTT has several features that can manage the safety of your workers. The MOTOTRBO radio can send an emergency signal to the SmartPTT dispatcher if the worker presses the emergency button or if a man-down option board equipped radio detects no movement or a wrong angle for too long. SmartPTT's lone worker feature requires the radio transmit and/or move (GPS tracking) within a programmable amount of time otherwise an emergency condition will be initiated. A geo-fence can also be created in SmartPTT to notify the dispatcher if a worker enters a hazardous zone.

## Emergency Management

When an emergency occurs, the SmartPTT dispatcher can control the response to the emergency, by dispatching response teams to the location of the emergency based upon location information provided by GPS. The voice recording and event log functions of SmartPTT enable managers to reconstruct the details of the emergency as needed.

## Operational Cost Efficiencies

Voice Dispatching and Job Ticketing improves coordination of tasks across production teams. The Lone Worker and Man-Down (option board required) capabilities coupled with GPS or Indoor Tracking eliminate the need to send two employees to do the job of one employee. By using the GPS tracking to assign the closest available unit for repairs, fuel costs can be reduced.





# DS Power Co., Ltd. in South Korea

SmartPTT PLUS boosted emergency communications at the company, producing district heating, process steam and generating electric power

## System description

- Linked Capacity Plus
- Smart PTT PLUS
- 5 sites, 710 subscribers

## Solutions



Voice  
Recording



Monitoring



Job  
Ticketing



## Challenges

- Integrated central command network in case of a disaster
- Timely decision-making & damage isolation
- Consolidated management of communication networks of each power plant
- Greater work efficiency and interoperability

## Benefits

- Enterprise-wide emergency communication system
- To address the issue of low output power of existing units, the output power was changed to 100mV and voting system was implemented to minimize RF intervention and to shadow zone at the same time
- Job Ticketing allows to send messages to staff on night shift to maintain work discipline
- SmartPTT reporting, voice and event logging allow the client to manage data efficiently
- Network utilization reporting enabled the client immediately respond to any incident with equipment in any of its worksite
- DS Power is now in better control, its resources reachable at any time and any place

# ENERGISA Group: energy distribution in 9 states of Brazil

ENERGISA assures 99,86% availability of energy to customers, and its communication system is one of the most important services to help achieve this numbers

## System description

- System of distributed IP Site Connect networks
- SmartPTT Enterprise
- 38 sites, 594 subscribers
- 116 SmartPTT consoles

## Solutions



Monitoring



Radio Network  
Bridging



Telephone  
Interconnect



## Challenges

- Cover extensive area
- Areas (states) are divided in smaller work units
- There are natural barriers that complicate communication and transport in some states
- Low bandwidth: the company had satellite band limited to 16 kbps per repeater link
- Fast and reliable communication with maintenance team on field is the key point
- Field workers' control and safety are mandatory
- Reducing operation costs is mandatory

## Benefits

- Satellite connection to the repeaters in order to connect SmartPTT radioserver to the repeaters on distant cities
- Reduced band consumption
- Two level dispatch: SmartPTT permits each unit to have its own radioserver and local dispatch, but at the same time, they can have a central command placed in a single local, commonly the capital city
- Web Consoles allow the remote access to the system via web-browser
- SmartPTT Monitoring and Redundant Radioserver ensure technical management of the network and continuous operation of the system

# MOESK, one of Russia's largest distribution electric grid companies

4 years of successful work with SmartPTT solution in Southern Electric Networks of Moscow United Electric Grid Company

## System description

- 22 IP Site Connect Systems
- SmartPTT Enterprise
- 11 sites, 1354 subscribers

## Solutions



Radio Network  
Bridging



GPS  
Tracking



Telephone  
Interconnect



## Challenges

- Interoperability of the new system with the old analog radio network
- The coverage zone should be extended, using limited available frequency resources
- Continuous centralized operational management (before that the operations were managed via cell phones mostly)
- The radio network topology should correspond to the MOESK electrical network topology
- Multiple dispatcher positions with the ability to manage the radio network from any of them were mandatory
- Real-time visual information about the crews' location was required
- Mobilization readiness and speed of recovery time in cases of accidents should not depend on external circumstances (mass accidents, natural disasters, terrorist attacks, etc.)
- Talk groups and voice recording were mandatory

## Benefits

- The unified and reliable management tool throughout the territory of Moscow United Electric Grid
- Multiple redundant dispatcher positions (any dispatcher can be switched or reassigned to control any area or even multiple zones from one dispatch console)
- Operational management of field crews during emergencies, mass power outages, as well as in areas without alternative means of communication (far from settlements, in underground sewers, etc.)
- Instantaneous call setup (< 0.5 seconds), direct interaction between field workers (in groups and individually) and GPS tracking significantly improved mobilization readiness and reduced recovery time in cases of accidents
- Workers from different zones can always make group calls due to dynamic channel allocation
- Regardless of belonging to a particular base station, any subscriber can make and receive phone calls on the whole territory of Southern Electric Networks
- Support of the existing analog radio park due to SmartPTT Bridging feature
- The coverage increased on 20-30%, the usage of the neighboring sites coverage helped to resolve the problem of coverage absence in certain points
- Interconnection of 22 IP Site Connect Systems into ONE conventional multizone dispatch system significantly increases the load capacity of the system



- **Two-way radio systems integrator and software developer**
- **Motorola professional radio application partner**
- **22 years in the market**
- **More than 240 qualified employees**
- **Customers in over 70 countries worldwide**

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