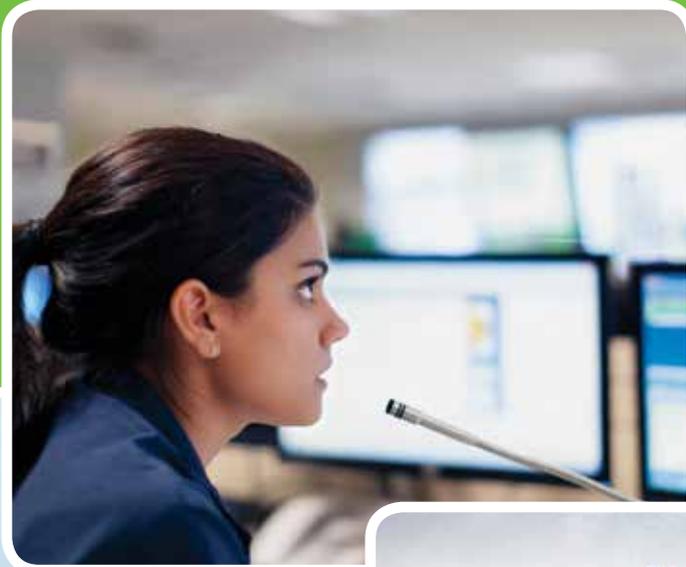


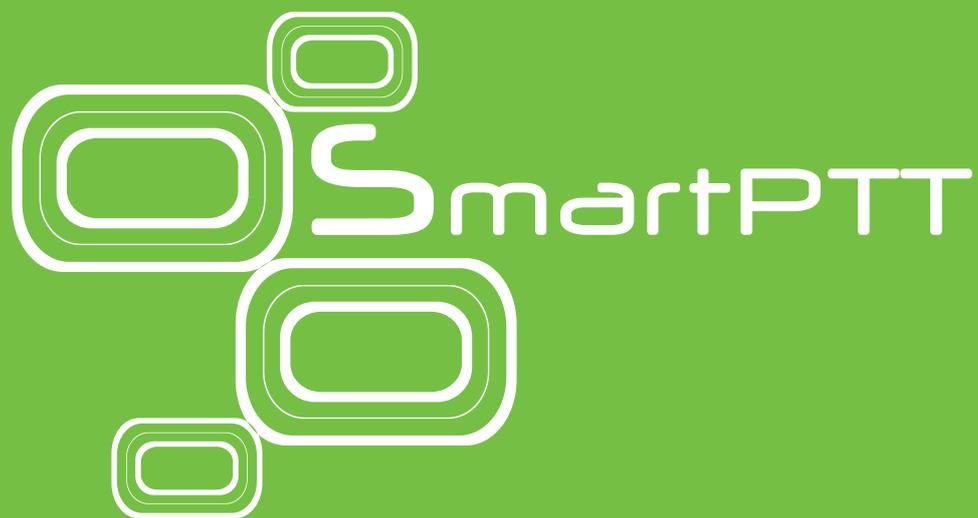


INTEGRATED SOLUTION FOR MOTOTRBO™



CASE STUDY PORTFOLIO

THE SMART CHOICE  
FOR YOUR FUTURE



# SmartPTT – Integrated Solution for MOTOTRBO™



## CORE FEATURES



RADIO DISPATCH



GPS TRACKING



WEB CLIENT



EVENTS AND  
VOICE LOGGING



TEXT AND DATA  
TRANSFER



### MONITORING

- Real-time MOTOTRBO infrastructure monitoring
- Graphical representation of network topology
- Repeater diagnostics
- Monitoring reports



### SIMULCAST

- Easy cooperation for all radio system users
- Wider area coverage with minimum frequencies
- Real-time roaming and handover during the call



### RADIO NETWORK BRIDGING

- Communication between subscribers located in different networks
- Intelligent dynamic calls routing of private and group calls
- Customizable rules for selective bridging



### TELEPHONE INTERCONNECT

- Based on VoIP technology
- Support for private and group radio calls from telephone
- Dialing a phone number from a radio station or patching by a dispatcher
- Telephone calls from/to the dispatcher consoles



### PTT FROM SMARTPHONES

- Smartphone operating within SmartPTT network
- Private and group calls to radios
- Text message exchange within radio system
- GPS data collection from smartphone users



### DIRECT IP CONNECTION

- No control stations and sound cards
- Seamless integration of several sites into a single network
- Extension of regular dispatching system functionality



## Transportation

### SmartPTT Solution for the Largest Logistics Operator in Brazil

SmartPTT-based solution for transportation and logistics is used by one of the largest logistics operators in Brazil - VALE S/A mining.

When Ferrovia Centro-Atlântica, the rail logistic branch of VALE S/A mining, decided to replace their conventional VHF analog radio communication system, they chose MOTOTRBO platform because of its faster implementation and cost-effectiveness. For the dispatch software of the system, the company discovered an undoubted advantage in SmartPTT software due to its customization possibility and friendly graphic interface for event monitoring and radio network bridging service.

SmartPTT-based solution covers 800 km of railroad and system extension is expected. The solution is applied for dispatch radio communication between several departments, including Maintenance, Operation and Rail Traffic Control. Such features as Digital Voice Dispatch, ARS, and GPS provide voice transmission, locomotive licensing, derailment detection and automatic locomotive path changing.

**Company:** Ferrovia Centro-Atlântica (FCA)

**Location:** Brazil - Minas Gerais State - Divinópolis City

**System description:**

- 4 IP Site Connect systems
- 2 repeaters in each site (2 voice channels and 2 data channels)
- 3 dispatchers
- 210 subscribers
- Expected extension: 21 repeater and 3000 subscribers

### Recommended Solutions:



SmartPTT Enterprise



SmartPTT Monitoring



GPS Tracking



SmartPTT Radio  
Network Bridging





## Public Services

### SmartPTT Solution for a Municipality in the Netherlands

Kerkrade municipality made a decision to switch from analog to digital radio system to improve safety of its employees due to increasing aggression in the town. MOTOTRBO system was chosen to provide better coverage unlike simple voice communication VHF analogue system that had been utilized by the municipality.

To provide even higher employee safety GPS tracking of the subscribers was required, and SmartPTT software with a number of maps and broad functionality for geofencing and route control fully met organization requirements. Easy-to-use dispatch console interface added to the number of the solution advantages.

Up to 61 municipality employees can now be managed from SmartPTT console and all types of calls and GPS positioning are available for their safe operation.

**Company:** Kerkrade Municipality

**Location:** The Netherlands

**System description:**

- IP Site Connect
- 1 repeater
- 1 dispatcher
- 61 subscribers

## Recommended Solutions:



SmartPTT Enterprise



Radio Dispatch



GPS Tracking



Events and  
Voice Logging





## Energy

### **SmartPTT Solution for the Largest Hydroelectric Power Plant in Brazil**

ITAIPU is one of the largest public hydroelectric power plants in Brazil. Previous conventional VHF analog radios did not meet the needs of such a large organization. It was decided to move to the new trunking system that could provide reliable communication for a large number of subscribers.

SmartPTT offered the company the optimal balance of cost and quality of product and services. The main advantage of this system became the ability to route telephone calls automatically to radios, when user was not at his desk.

Implemented SmartPTT system is intended for interaction of 230 subscribers providing communication between radio and telephone subscribers. Currently it serves 70 employees divided in 12 groups.

**Company:** ITAIPU Binacional

**Location:** Brasil - Paraná State - Foz do Iguaçu City

**System description:**

- Capacity Plus
- 6 voice repeaters and 2 data repeaters
- 4 dispatchers
- 230 subscribers

## Recommended Solutions:



SmartPTT Enterprise



Radio Dispatch



GPS Tracking



SmartPTT Monitoring





## Manufacturing

### **SmartPTT Manufacturing Solution for the World's Largest Single-Line Pulp Mill**

Eldorado, the world's largest single-line pulp mill based in Três Lagoas City, Brazil, uses SmartPTT solution for efficient communication between its departments.

Eldorado Celulose E Papel Ltda is a Brazilian company engaged in manufacturing pulp, paper and related products. The company moved from conventional VHF analog radios to MOTOTRBO platform to take advantage of new digital standard allowing implementation of trunking radio system.

SmartPTT software was chosen because it met specific needs of the company including friendly user interface and the ability to track all events in the system. Timely and skilled technical support services ensured fast implementation of the system and remote system monitoring provides easy system maintenance. SmartPTT allowed Eldorado consolidate its 23 departments supporting not only voice calls to radios but also communication between radio and telephone subscribers. Right now 200 employees are collaborating with the help of SmartPTT and there will be more.

**Company:** Eldorado Celulose e Papel

**Location:** Brasil - Mato Grosso do Sul State - Três Lagoas City

**System description:**

- Capacity Plus
- 6 voice repeaters and 2 data repeaters
- 1 dispatcher
- 200 subscribers

## Recommended Solutions:



SmartPTT Enterprise



Radio Dispatch



SmartPTT Telephone  
Interconnect



SmartPTT Monitoring





## Transportation

### SmartPTT Solution for Highway in Brazil

VIAPAR Company decided to improve operational dispatch communication by shifting to digital dispatch solution that would offer more opportunities for fleet management by utilizing software solutions.

Due to the nature of the transportation industry, VIAPAR placed high demands on the reliability and usability of communication systems. The system had to combine the functions of voice and data with the ability to track the location in real time, and also have convenient interface for simultaneous management of employees from different departments utilizing various means of communication.

VIAPAR chose SmartPTT because of better technical approach, customization possibility and exclusive function required for the system usage: bridging of several radio networks, telephone interconnect, and custom console allowing more efficient fleet management. SmartPTT-based system currently serves 103 subscribers from four different departments (Maintenance, Emergency, Operations and Traffic).

**Company:** VIAPAR Rodovias S/A

**Location:** Brasil - Paraná State - Maringá City

**System description:**

- 20 IP Site Connect systems
- 20 master repeaters for voice and data traffic
- 1 radioserver
- 4 dispatchers
- 103 subscribers

## Recommended Solutions:



SmartPTT Enterprise



SmartPTT Radio  
Network Bridging



GPS Tracking



Web Client





## Public Safety

### **SmartPTT Supports Communication of Investigations Police of Chile**

Investigations Police of Chile implemented digital radio communications system in its departments to provide operational communication and higher level of protection for the police officers. One of the key demands for the system was the ability to keep constant log of all events, including recording of all voice calls.

SmartPTT offered efficient and cost-effective solution meeting the demands of the organization. With its feature of MP3 voice recording and event log, enhanced by distributed voice and data storage ensuring reliable storage of all information, SmartPTT system contributed greatly to high security of police actions on the streets.

**Company:** Investigations Police of Chile

**Location:** Chile

**System description:**

- IP Site Connect
- 4 repeaters
- 2 dispatchers
- 90 subscribers

## Recommended Solutions:



SmartPTT Enterprise



Radio Dispatch



GPS Tracking



SmartPTT Radio  
Network Bridging





## Public Services

### SmartPTT Solution for Public Department of Traffic Control

STT is the ministry of Guarulhos city government responsible for managing and monitor traffic, maintaining and signaling county streets. Guarulhos is the second biggest municipality of the state, having 1.3 million inhabitants, and it is part of «Big São Paulo», formed by the conurbation of several cities. With numbers of this magnitude, Guarulhos has a troubled transit. STT plays an important role to organize supervise city streets, and SmartPTT is an essential tool to keep this gear running in emergency situations such as storms, accidents and events of such kind.

The implementation of SmartPTT and MOTOTRBO system provided STT with the capability to reduce service time, giving more flexibility to the process.

Tracking GPS location of 150 subscribers on Console screen, Dispatcher is capable to choose the nearest employee and in an instance send them to the required place. Dispatcher is also capable of managing workers divided in two different IP Site Connect systems using only one Radioserver, which provides flexibility to the system architecture and easy control of workers in different areas. Events log and report tool provide complete analysis information for department manager for evaluate the actions of its employees.

**Company:** Secretaria de Transportes e Trânsito da cidade de Guarulhos (Ministry of Transport and Traffic of Guarulhos city)

**Location:** Country Brasil - Sao Paulo State - Guarulhos City

**System description:**

- 2 IP Site Connect systems
- 6 repeaters
- 1 radioserver
- 3 dispatchers
- 150 subscribers

## Recommended Solutions:



SmartPTT Enterprise



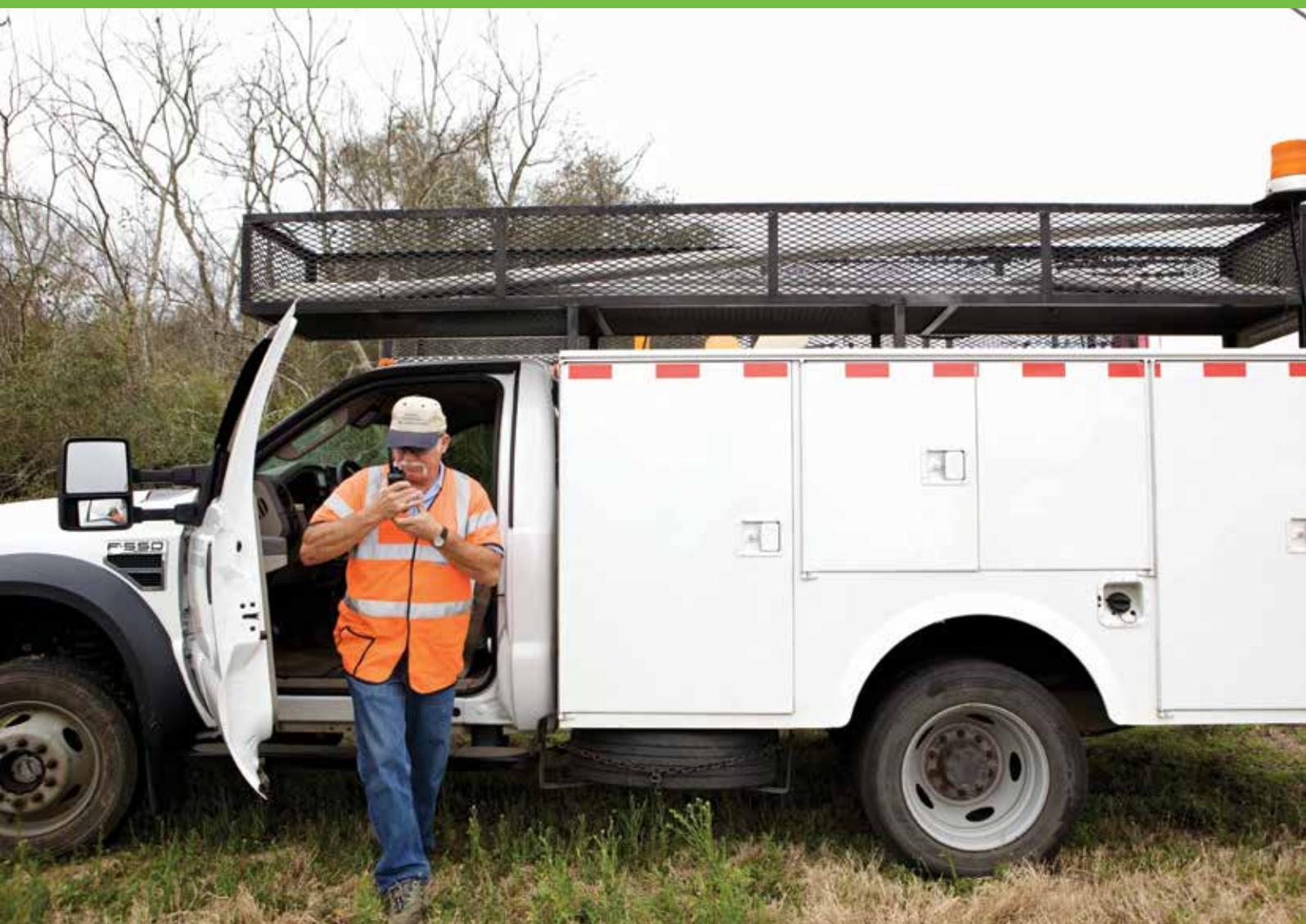
Radio Dispatch



GPS Tracking



SmartPTT Radio Network Bridging





## Oil and Gas Extraction

### **Nigerian Oil and Gas Exploration Company Chose SmarPTT**

NAOC (NIGERIAN AGIP OIL COMPANY LTD.) is a company based in Lagos, a Joint Venture between Agip and The Nigerian National Petroleum Corporation (NNPC) that is involved in oil and gas exploration and production activities in Nigeria.

The company was looking for a cost-effective solution to arrange communication for company's 10 field engineers and improve interaction between them and the management. Existing analog radio network didn't meet company's requirements. Solution combining MOTOTRBO platform and SmartPTT software proved best for this challenge since it offered digital radio communication features - digital dispatch and GPS tracking combined in one dispatch console.

Implemented solution allowed company's management to benefit from features such as real-time GPS tracking of radio users, subscriber location logging and detailed reports of user movement. Personnel monitoring with extended call functionality throughout the oilfields enhanced the quality of communications.

**Company:** NIGERIAN AGIP OIL COMPANY LTD.

**Location:** Nigeria

**System description:**

- 1 repeater
- 1 SmartPTT radioserver
- 1 dispatcher
- 10 subscribers

## Recommended Solutions:



SmartPTT Enterprise



Radio Dispatch



SmartPTT Telephone  
Interconnect



SmartPTT Monitoring





## Oil and Gas Extraction

### SmartPTT Dispatch Monitoring Solution Deployed at Siberian Oilfields

Maintaining good communication with work teams and ensuring their personal safety is the key priority of oil industry executives, especially in regions where extreme weather conditions mean having to work in temperatures ranging from  $-45^{\circ}\text{C}$  during the winter months to a scorching  $35^{\circ}\text{C}$  in summer.

For this reason, the Mokhtikovskoye and Eguryakhskoye oilfields in the Khanty-Mansiysk region of western Siberia have implemented Motorola's MOTOTRBO™ digital mobile radio with application SmartPTT GPS-based dispatch system. The deployment replaced an analogue two-way radio system and boosted operational communications between management and operating crews while allowing for the monitoring of radio users across a coverage area of some 25km.

**Company:** OAO MPC Aganeftegazgeologia

**Location:** Russia - Nizhnevartovsk

**System description:**

- 3 repeaters
- 3 radioservers
- 3 dispatchers
- 70 subscribers

### Recommended Solutions:



SmartPTT Enterprise



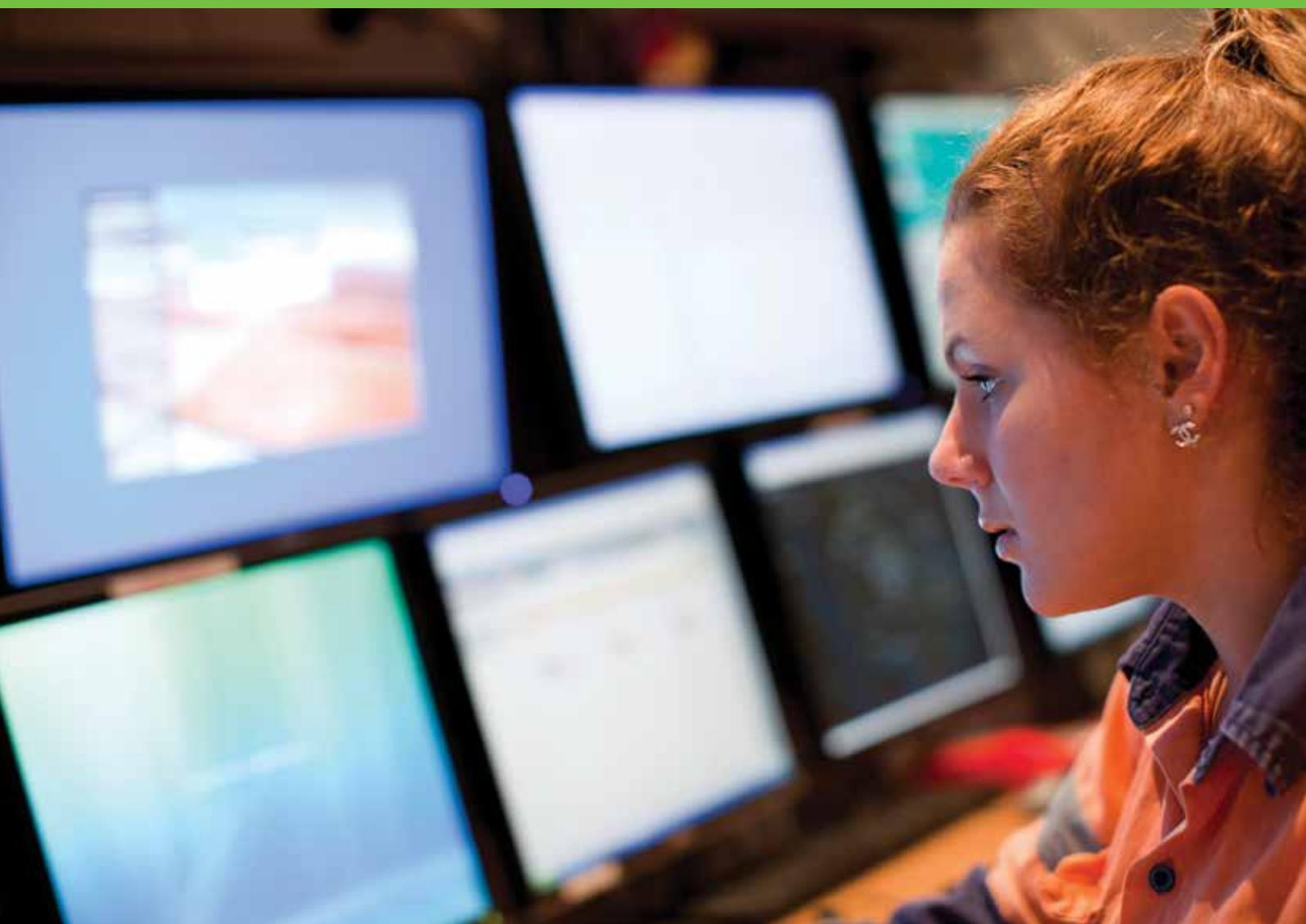
Radio Dispatch



SmartPTT Telephone Interconnect



SmartPTT Monitoring





## Oil and Gas Transportation

### SmartPTT Solution for Oil and Gas Transportation in Nigeria

SmartPTT solution was chosen to support operational communication along Northern Option Pipeline in Nigeria.

Development of Northern Option Pipeline in Nigeria required implementation of reliable radio communication system to increase workforce efficiency, productivity and safety. NOPL Total Company opted for MOTOTRBO due to its high reliability and voice quality.

Demand for dispatch console combining voice dispatch functionality and GPS location tracking lead NOPL Total to SmartPTT. Integrated communications system deployed along the pipeline provided communication and real time positioning of 80 users – pipeline construction and on-field engineers. Seamless communication coupled with constant subscriber location monitoring by SmartPTT contributed greatly to efficient personnel management.

Company: NOPL TOTAL

Location: Nigeria

System description:

- 1 repeater
- 1 radioserver
- 1 dispatcher
- 82 subscribers

## Recommended Solutions:



SmartPTT Enterprise



SmartPTT Monitoring



SmartPTT Telephone  
Interconnect



SmartPTT Radio  
Network Bridging





[www.smartptt.com](http://www.smartptt.com)