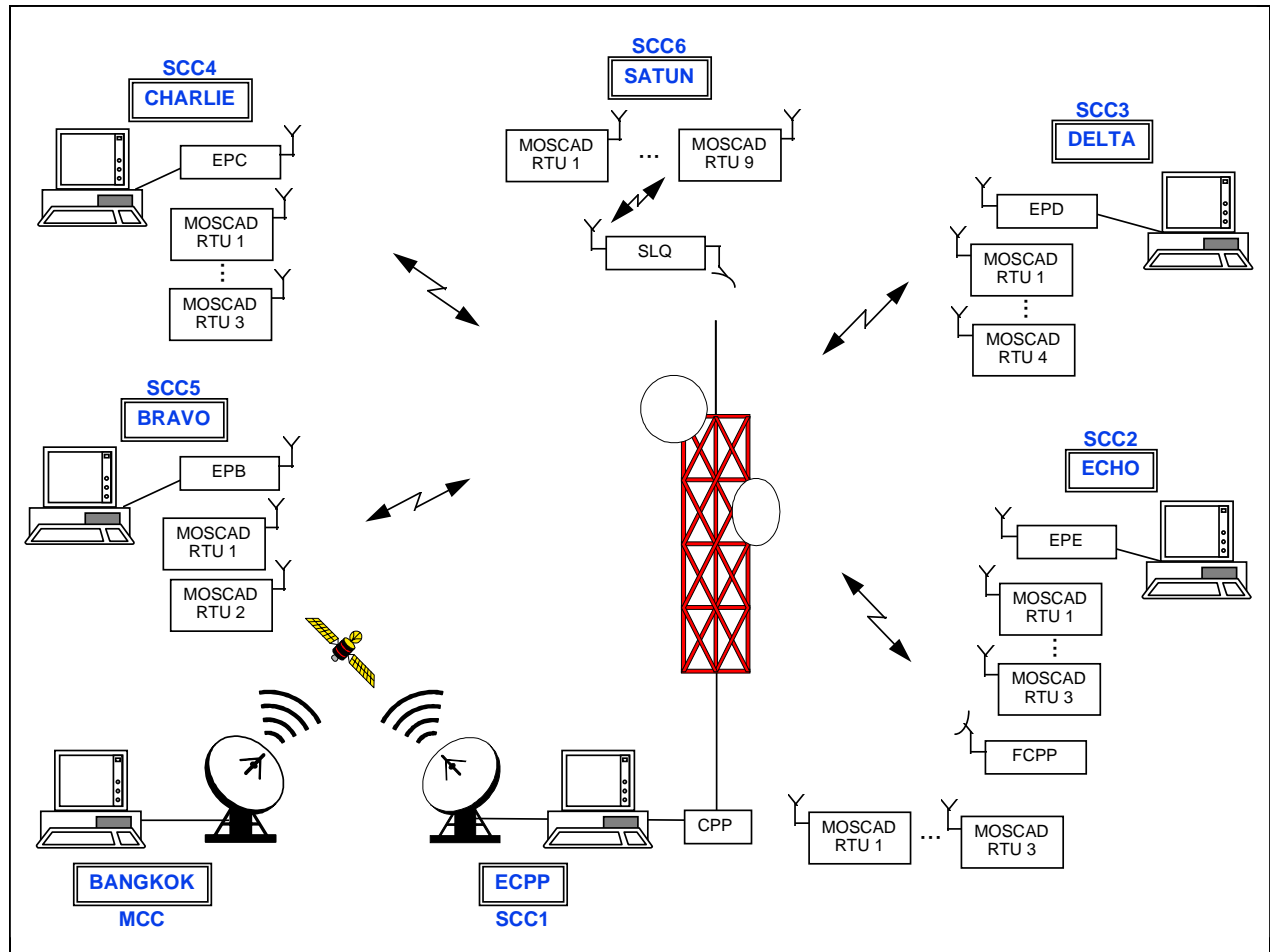


Oil & Gas SCADA
Application

Project Description



GENERAL

Unocal 76 Corp. has placed an order with Motorola Inc. for the supply of an advanced radio communication system for their gas production system in Thailand.

Unocal 76 Corp. produces over 530 million cubic feet per day of natural gas in the areas of Erawan and Satun, and transfers it through underwater pipeline towards Bangkok.

The new system, based on Motorola's sophisticated MOSCAD RTU, controls and monitors gas wellhead platforms in five different fields.

MOSCAD & MDLC

In this project, the MOSCAD RTU, installed on each platform, monitors various functions of the rig, such as fire pump control, generator status, instrument gas supply, launcher position, sump tank level, flowlines and intruder alarm.

The MDLC communication is implemented over an analog microwave link.

Using MDLC protocol (based on ISO/OSI seven layers reference model) ensures efficient and reliable data communication.

SYSTEM OVERVIEW

The system includes six SCCs (Secondary Control Center); each SCC controls 3–9 rigs. The SCCs are linked to the MCC (Master Control Center), which, in turn, is linked via satellite to the main office in Bangkok. The SCADA software used is FIX DMACS of Intellution.

The MCC is connected to a wall-mounted MIMIC panel which displays analog status and readings.

The MCC, equipped with an omni-directional antenna, is also used as a Store-&-Forward repeater, to allow communication between the SCCs and well-head RTUs.

The local processing power of the MOSCAD RTU allows performing ESD (Emergency Shut Down) and Separator functions.

CAPACITY & FUTURE EXPANSION

In the first stage of the project, one central and six sub-centrals controlling a total of 33 MOSCAD RTUs, have been connected.

The second stage of the project will connect another field including 15 MOSCAD RTUs. □

| FEATURES | BENEFITS |
|--|--|
| MDLC communication protocol | Optimized, efficient, and reliable data communication that provides safety for the gas distribution system |
| Multi-protocol processor based on Motorola 68302 | Allows multi-tasking operation with on-line network monitoring, traffic analysis, on-line diagnostics, remote monitoring and error logging |
| Remote control of gas wellhead platforms | Reduces the number of visits to the sites and allows immediate and faster response in case of emergencies |
| Remote diagnostics | Greater efficiency in financial and personnel management |

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