



➔ *Secure data transmission*

➔ *About our client*

- **Petrom S.A. (OMV)** is one of the largest oil and gas producer in South Eastern Europe. With activities in the business segments of Exploration and Production, Refining, Marketing as well as Gas, Petrom has proved oil and gas reserves of 940 mn boe, a maximum refining capacity of 8 million metric tons per year, approximately 600 filling stations in Romania and 200 filling stations in Moldova, Bulgaria and Serbia. In 2006, the turnover of the company was EUR 3,709 mn and EBITDA was EUR 1,020 million. After its privatization in 2004, the company recorded positive results. The modernization process initiated in 2005 is underway in accordance.
- TOPEX and Vodafone Romania offer a common solution to meet Petrom needs

➔ *Initial situation*

- With over 600 filling stations and exploitation fields Petrom needs a powerful and capable system to transport and pick-up data from each location all over the country. They needed a highly flexible and reliable equipment capable to transmit secure data to a central headquarter where are managed through an advanced ERP (Enterprise Resource Planning) system. Also the equipment must have been able to transmit data from all kind of locations, the majority having no fixed Internet connection available.
- A state-of-the-art monitoring / control system (ERP) requires reliable and cost effective communication. HSDPA technology was the best solution based on coverage, cost and installation flexibility.



➔ *The solution*

- The solution implemented includes all filling stations and exploitation locations in one Virtual Private Network over Vodafone HSDPA network. Data transfer it's made through Bytton 3G wireless router, by sending packages between locations and headquarter on request or time shift. Data are still saved on local data base and send it on office request. Data transfer it's now made in both directions:

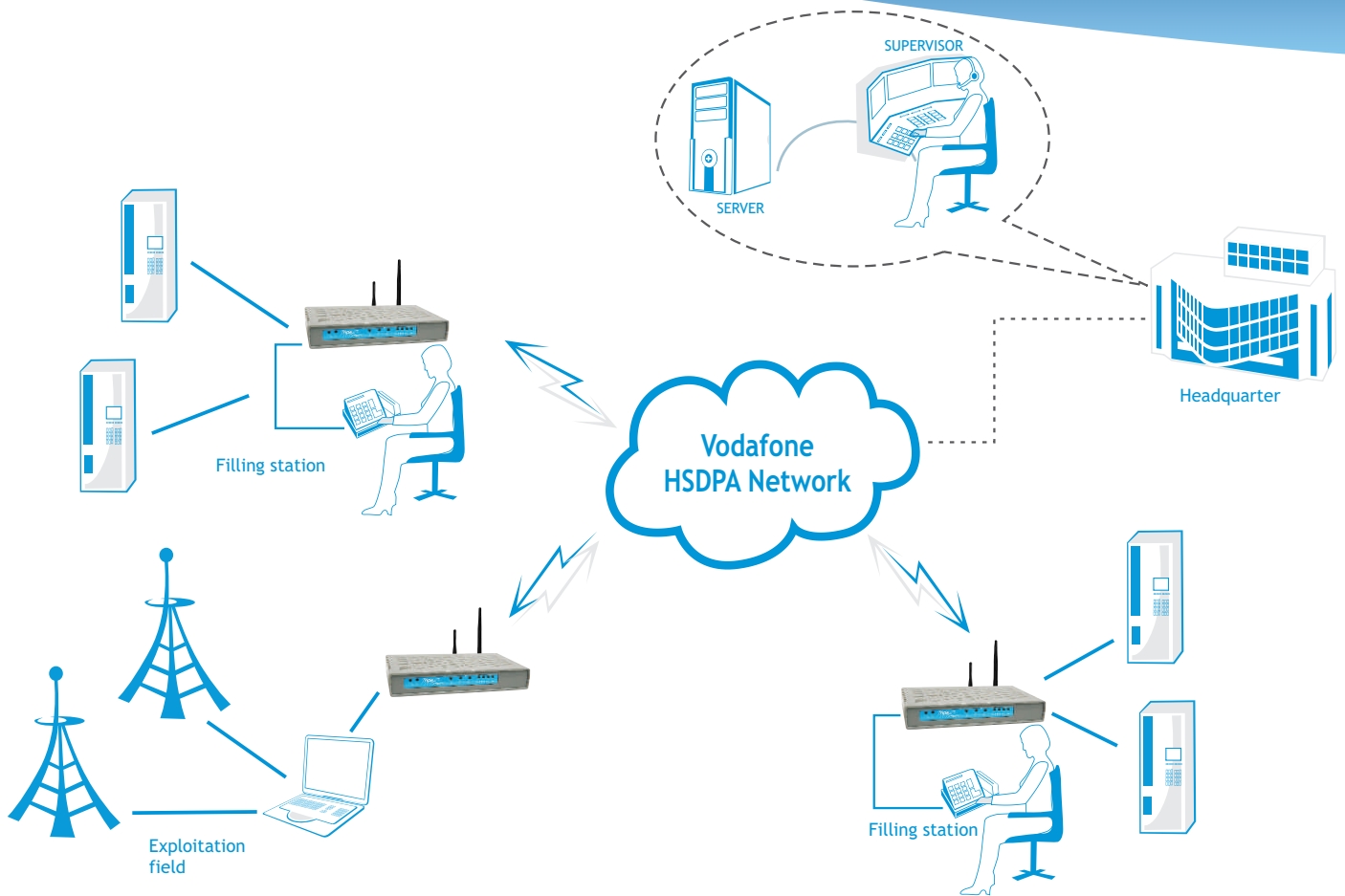
- Getting information from locations regarding technical and commercial activities.
- Sending from headquarter to all places or only selected ones - offer changes or messages prompted on screen.

➔ *Transfer network*

- Transfer network it's provided by carrier Mobile data operator through Bytton HSDPA (for 3G coverage) by offering:
 - network/services presence in all locations.
 - better price offer then other similar company's on the market.
 - installing period and SLA established.
 - transfer data security.

➔ *Transfer data bandwidth:*

- HSDPA up to 3.6 Mbps download speed
- HSDPA up to 384 Kbps upload speed



➔ Technical specifications:

- Double Wireless Router family
 - WAN Wireless: GPRS, EDGE, UMTS-FDD, HSDPA, UMTS-TDD, CDMA 1xRTT, CDMA 1x EVDO.
 - LAN Wireless: WiFi.
- Regarding functionality, TOPEX family equipments are completely Plug-and-Play.
- Switch Ethernet (4+1 ports), WiFi 802.11b/g access point, USB 2.0 (2 ports), serial (2 ports RS 232).
- WiFi Access Point, VPN Router, embedded firewall
- Switch with management - allows VLAN tagging and Layer 2 QoS - 802.1p and 802.1q
- SMS Gateway - can send and receive SMS messages from the web page
- DHCP Server, DNS, DDNS
- PPP, PPPoE connections
- Advanced routing capabilities

- Routing protocols: RIP, OSPF, Unix based Quagga
- Port forwarding, Denial of Service, Stateful Packet Inspection, MAC address filtering, DMZ - Demilitarized Zone, VPN tunneling and pass-through for VPN
- Secured Web Access
- SHA, MD5, PAP, CHAP authentication
- IPSec, L2TP, GRE tunneling
- WEP, WPA encryption using DES, 3DES, AES, TKIP

"We hereby certify that Vodafone MultiOffice 3G Broadband Service is offered through Bytton HSDPA router, developed and manufactured by TOPEX SA. Having analyzed the received offers, we have chosen the TOPEX Bytton HSDPA router, as it excellently performs the specific functioning and delivers the high-speed mobile data transfer for our MultiOffice 3G Broadband. Using TOPEX Bytton HSDPA Vodafone offers for the first time on the Romanian market a new connectivity application at HSDPA speeds. We are very satisfied with the performance of this equipment which meets our exigencies and we highly recommend it."

Best regards, Gabriel Guta - Acting Manager,
Transmission/Microwave-Vodafone Romania"