Secure Communication and Smart Grids

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TOPICS

1. EADS and Cassidian
2. TETRA and Smart Grids
3. Use Cases
EADS - Aerospace, Security, Defence

EADS 2011: Employees ~ 133,000; Revenue ~ €49 bn
Cassidian – Defending World Security

Nationwide Security

Security of Deployed Forces

Critical Infrastructure and Natural Assets Security

Major Event Security

Communication Network Security

Advanced Cyber Security
Cassidian - 28,000+ People Worldwide

USA 680 employees
Canada 160 employees
Mexico

UK 3,700 employees
Belgium 170 employees
France 7,600 employees
Spain 1,600 employees
Italy 1,300 employees
Morocco
Algeria

Finland 310 employees
Poland
Slovakia
Romania

Germany 12,000 employees
Hungary
Greece
Qatar

KSA 280 employees
South Africa 270 employees
UAE 130 employees
Oman

Rest of World 120 employees
MEIDA considered at 100%

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Cassidian – Leader of Secure Communication Solutions

• 210+ secure radio networks in 70+ countries

• Public Safety, Utilities, Airports, Transportation, Industry, Defence

• Market leader in large-scale & nationwide networks

• Wide portfolio
  – networks
  – devices and accessories
  – management and provisioning solutions
  – applications
  – services
  – emergency response solutions

• Cyber Security: Security Operations Centres and ICS/SCADA protection solutions
TETRA and Smart Grids – Perfect Match

- Designed for reliability and high availability
- Very high security, e.g. British CESG certification
- Radio technology – wide coverage and flexibility
- Global standard and strong eco-system
- Voice for mobile workforce management
- Data with low latency
- Scalable solution
Smart Grid Applications of TETRA

- Control of Distributed Production
- Mobile Workforce Management
- Distribution Automation

- Generation
- Transmission
- Distribution
- Consumption
KEPCO – South Korean Power Utility

• KEPCO in a nutshell
  – Energy generation, transmission, distribution and retail
  – Korean market share: 89% of generation, 100% of transmission/distribution/retail
  – Sales in 2011: ~455,000GWh

• TETRA for Smart Grid Applications
  – Since 2007 – only for data
  – Nationwide network with 200+ base stations

• TETRA Applications - improve efficiency and ensure business continuity
  – Distribution Automation
  – Transformer monitoring
  – Distribution maintenance
  – Wind velocity monitoring
  – Automatic meter reading (planned)

Source of picture: kepco.co.kr/eng
Control of Distributed Energy Production

Challenge

- Balance between energy production and consumption
- Control of solar cell plants
- Wide geographical coverage - tens of thousands plants
- High security and availability
- SCADA and control room integration

Solution

- TETRA radio network
- Small and easy-to-install control box with radio antenna
- No changes into SCADA system
- Also voice services for maintenance personnel

Balancing energy production and consumption
Cassidian’s Energy Company Customers
(not complete list)

- Korea Electric Power Corp (KEPCO), South Korea
- Fortum, Finland – using Virve network
- Fortum, Sweden – using Rakel network
- Helsinki Energy, Finland
- Munich City Utilities, Germany
- Evonik Energy Services GmbH, Germany
- Lechwerke AG, Germany
- Thailand’s Metropolitan Electricity Authority
- CLP Power, Hong Kong
- Pan American Energy, Argentina
More Information

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