Remote Control and Monitoring for Subsea Developments
Nautronix | Vision

Global Leaders in Through Water Communication and Positioning Technology for the Offshore Industry
NASCoM | Presentation overview

- Introduction overview
- Industry needs
- Example scenario
- Solution acoustic signalling
- Power sources
- NASCoM conclusion
Acoustic signalling has developed significantly over the last 5 years.

High integrity, reliable acoustic signalling is now a reality and is being applied to the remote control and monitoring of subsea hardware.
Industry concerns

- Industry focussing on reduced costs
- Smaller reservoirs
- Lead time and high cost of umbilicals
- Umbilical deployment time and logistics
- Vessel time to support multiple, smaller operations
NASCoM | Example scenario

• Multiple subsea assets for a reservoir
• Connections for:
  – Products
  – Chemicals
  – Power
  – Control
  – Monitoring

• Umbilical connections require:
  – Umbilical cost
  – Deck space
  – Connection logistics - ROV/Diver
  – Deployment hardware
  – Point to point connection (usually)
NASCoM Example scenario

Wireless acoustic communication enables:
- No umbilical for communications (lower cost)
- Available deck space
- Quick deployment
- Multi-user access to multiple assets
- Support replacement or additional sensors

NASCoM provides:
- Multiple sensor monitoring and data logging
- Multiple solenoid drivers/readbacks
- Data processing/filtering
- Parameter monitoring/warning
Nautronix | Acoustic technology

• Our core technology is ADS²
  - Acoustic Digital Spread Spectrum

• Advantages over traditional and high frequency broadband systems
  - Extremely robust signalling
  - Longer ranges
  - Extended ranges via data networks

• No interference with other acoustic systems
• Proven on critical military and oil and gas projects worldwide
• Average acoustic success rate of 99.3% over 12,001 transmissions
NASCoM | Power

- No umbilical means no direct surface power connection
- Lithium battery provides up to 2 years deployment
  - Additional battery packs can extend this
- ‘Hot swap’ replaceable battery packs

- Can pick-up power from other local subsea equipment
- Local power generation
  - Subsea turbines
NASCoM | Conclusion

• Reliable acoustic signalling is now a reality, proven on high integrity requirements such as emergency BOP control systems

• With wireless communication, sensors can be monitored and functions controlled remotely using acoustic signalling and local power

• Enhance valve operation, remote release, or replace failed control links

• Support Life-of-Field operations and build on the “Field of the Future”
Thank you