Integrated Monitoring of Dynamic Cables

Sonardyne

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About us and our Capabilities

- Over 50 years subsea experience
- Rich subsea engineering heritage
- Evolving subsea technologies
- Navigation & Positioning
- Sensing Imaging & Monitoring
- Wireless comms & remote operations

Floating Wind Solutions
Contending with Even More Dynamism

To better understand behavior of a **Dynamic System in a Dynamic Environment**

- Take lessons from static system in a dynamic environment
- Integrate technologies to solve new challenges and reduce risks

Floating Wind Solutions
Real-world Cable Monitoring Solution

- **ROAM communications to shore**
- **Data harvesting**
- **Bend stiffener e.g. vibration & inclination**
- **Mooring monitoring**
- **Buoyancy e.g. depth & position**
- **Tethers and anchor e.g., tension & position**
- **Current profiling & temp/salinity**
- **Lander - Data management, comms & pos**
- **TDP & CPS e.g., motion, position, vibration & temp**
- **Local and spatial sensors**
Value in Validation to Build Confidence

1. Learning Phase
   - Improving Catenary Design through **Demonstrators**

2. Life-cycle Knowledge Phase
   - Building confidence in **predictive models** over asset lifetime

- **Synced Data acquired effectively**
- **Validate models**
- **Lucidly displayed information**
- **Better asset knowledge & decisions**
- **Extend asset lifetime > ROI**

**Floating Wind Solutions**
Sensor Configuration Methodologies

**Complete layout**
Lower performing sensors installed on all dynamic cables on string. Monitoring all cables with ADCP + Landers in between.

**Scatter layout**
Several locations with full midlevel performing sensors installed on dynamic cables along with an ADCP + Lander.

**Sparse layout**
Strategically placed full configuration - Higher performing sensors and Lander + ADCP system installed on very few dynamic cables.
Thanks for listening!

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