

MoviSight

DISTRIBUTED FIBER
SENSING SOLUTIONS



PIPELINE INTEGRITY
MANAGEMENT



SEISMIC &
SEISMOLOGY



INTRUSION
DETECTION



POWER CABLE INTEGRITY
OFFSHORE & ONSHORE



WELL
MONITORING



STRUCTURAL HEALTH
MONITORING

MoviSight



> WHO WE ARE

THE REFERENCE IN DISTRIBUTED FIBER SENSING SOLUTIONS

MoviSight brings a new generation of fiber optic sensing based solutions to the market using **DAS, DTS & DSS**.

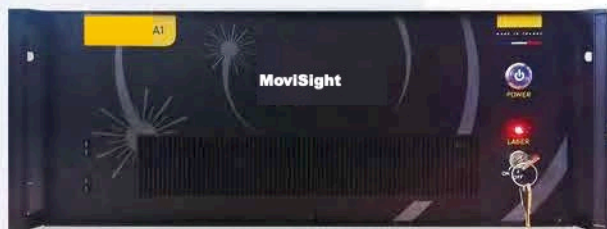
MoviSight benefits from high adaptability and many years of experience to provide on-custom, high-performance equipment and a large panel of on-site services thanks to highly skilled personnel. We offer solutions to applications such as: **Pipeline Integrity Monitoring, Seismic Acquisition, Intrusion Detection, Umbilical and Power Cables Integrity Monitoring, Well Monitoring and Structural Health Monitoring**. Our patented technologies use innovative optoelectronic architecture and unique HPC (High Performance Computing) real-time signal processing algorithm to measure accurately temperature, strain and vibrations over tens of kilometers.


MoviSight assists you from initial study to on-site implementation





> WHAT WE DO

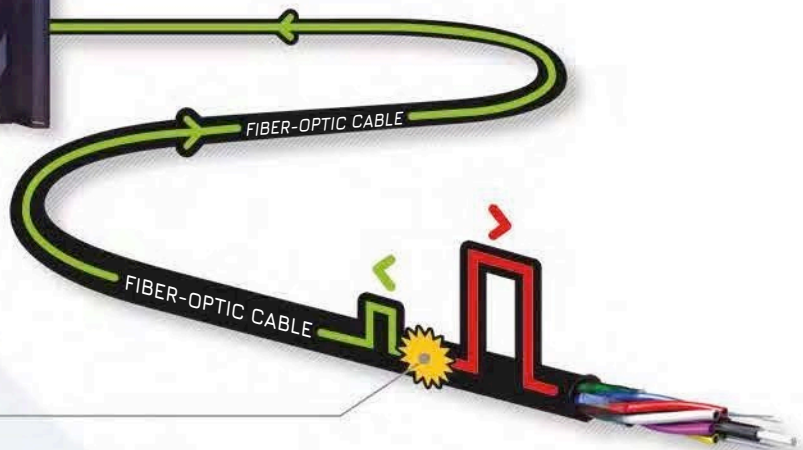
All our solutions come with a 3 years warranty (part and labor)



 Laser pulse propagating through the fiber

 Small part of the pulse back to the equipment due to scattering effect

 Hot/cold spot, Vibration, Mechanical strain,...



All MoviSight solutions require only a single ended access to standard optical fibers.

MoviSight



PIPELINE INTEGRITY
MANAGEMENT



INTRUSION
DETECTION

WHY & HOW

MoviSight large range of products allows the delivery of a **complete and integrated solution for Pipeline Monitoring that offers:**

- > **Leak Detection** with MoviSight G1 (DSTS: Distributed Strain and Temperature Sensing) and/or MoviSight A1 (DAS: Distributed Acoustic Sensing)
- > **Third Party Intrusion** (TPI) with MoviSight A1
- > **Geohazard** with MoviSight G1

MoviSight PIDS (Perimeter Intrusion Detection System) solution using our unique DAS technology together with FOGuard suites provides **high-performance** and reliable detections of intrusions on fence, wall and borders. It can be **easily integrated into a VMS (Video Management System) or used as a standalone solution** with its own algorithm for event detection and classification.

Thanks to our **many years of experience**, MoviSight provides all the associated services and can install, commission and perform long term maintenance worldwide for Pipeline Monitoring and PIDS.

KEY ADVANTAGES

- > All technologies (DAS, DTS, DSS) can be combined from a **single manufacturer**.
- > **Worldwide experience** on Pipeline Monitoring and PIDS.
- > Long range monitoring with optimized solution **to reduce investment and maintenance costs**.
- > **Interoperability** with SCADA, Hypervisor and VMS solution.
- > MoviSight owns a unique **Test Center** to demonstrate performances in customer field conditions with high fidelity.

REFERENCES



A1 MoviSight A1

MoviSight A1

Device provides vibration and acoustic sensing typically every 2 m along several tens of kilometers with optical fiber cable deployed on or near the infrastructure. The MoviSight A1 device can be connected to optical fiber cables already in place. It is compatible with standard single-mode or multi-mode fiber. This system is specifically designed to meet harsh environment requirements with single-ended connection to the optical fiber sensing cable.

MAIN FEATURES

- > **Amplitude and Phase based sensing included**
- > **Down to 0,2 m spatial sampling**
- > **Up to 100 kHz measurement frequency @ 1 km fiber length**
- > **Advanced Alerting and Visualisation Capabilities with FOGuard software**



> POWER CABLE/UMBILICAL

WHY & HOW

Power Cable related incidents account for 80% of insurance claims and around 60% relate directly to cable damage during construction of offshore windfarm. Thus, **cable monitoring is essential**.

The MoviSight G1 (DSTS: Distributed Strain and Temperature Sensing) and A1 (DAS: Distributed Acoustic Sensing) series enables **the monitoring of temperature and vibrations over very long ranges**, making both anticipation and detection of multiple potential issues possible (MoviSight G1)

- > **Cable Overload by RTTR** (MoviSight G1)
- > **Shock and Anchor Drag** (MoviSight A1)
- > **Free Span/Suspension Zones detection and localization** (MoviSight A1)
- > **Partial Discharge** (MoviSight A1)
- > **Fatigue Monitoring** (MoviSight A1 & G1)
- > **Manufacturing, transpooling and deployment** using the MoviSight G1-C.
- > **Operation** using the MoviSight G1-R and MoviSight A1-R.

KEY ADVANTAGES

- > **Unique real-time integrity monitoring** during manufacturing, transpooling and deployment thanks to the portable and autonomous MoviSight G1-C.
- > Very high performances with **the easiness and robustness of single-ended measurements** for all MoviSight interrogators.
- > **Independent measurement of temperature and strain** using only a single optical fiber (MoviSight G2).
- > Very long range, **more than 100 km**.
- > Possibility **to detect and localize partial discharges** (MoviSight A1-R).

REFERENCES



> Portable and autonomous version of the G1 series (MoviSight G1-C)

G1 G2 G-SERIES

MoviSight G-Series Interrogation Units provide Strain and Temperature information typically every 1 m along several tens of kilometers along an optical fiber deployed on the infrastructure. **MoviSight G-Series** are ideal for performing accurate and real-time monitoring with harsh environment requirements using a portable and autonomous device (MoviSight G1-C) and single ended configurations needing only one end of the fiber.

MAIN FEATURES

- > **Up to 100 Hz measurement @ 500 m fiber length**
- > **Up to 100 km range @ 10 m spatial resolution (typ.)**
- > **Down to 4 µm/m (Strain)**
- > **Possibility of Simultaneous Strain and Temperature measurement with unique patented G2 technology**
- > **FO-Log intuitive User Interface**

MoviSight



WELL
MONITORING



SEISMIC &
SEISMOLOGY

WHY & HOW

MoviSight unique range of products (DAS, DTS, DSS) allows for a large diversity in **geophysical and well applications**:

- > **4D Vertical Seismic Profiling** with MoviSight A1 (DAS: Distributed Acoustic Sensing)
- > **Surface Seismic** with MoviSight A1
- > **Micro-seismicity Monitoring** with MoviSight A1
- > **Well Integrity**: subsidence, shear, leaks with MoviSight G1-R and G1-C (DSTS: Distributed Strain and Temperature Sensing)
- > **Production Monitoring** combining MoviSight T1 (DTS): Distributed Temperature Sensing and MoviSight A1

Thanks to the combination of Distributed Fiber Optic Sensing experts, experienced geophysicists and Reservoir engineers, **MoviSight can be interated to most logging visualization softwares on the market and provide on-site services.**

The knowledge in geophysics shared with many Universities worldwide has enhanced the processing and data management tools to make MoviSight A1 the most versatile DAS system in the market.

KEY ADVANTAGES

- > **Our reservoir engineers and geophysicists are closely working** with DAS, DTS and DSS.
- > **Large experience on data processing** for passive and active seismic with MoviSight A1.
- > **Application-related workflow**, data-quality control, data format and export.
- > **Field know-how** from frequent collaborations with deployment companies.
- > Several technologies (among DAS, DTS, DSS, all available in MoviSight portfolio) can be combined for **the most accurate diagnosis** in all the applications.

REFERENCES



T1 MoviSight T1

MoviSight T1 (DTS: Distributed Temperature Sensing) measures points continuously and in real-time along the entire length of an infrastructure (a wellbore for instance), with repeatability **better than 0.1°C achieved in the field.** Based on analysis of Raman Stokes and Antistokes signals in an optical fiber, this DTS returns many thousands of measurement points over distances up to 30 km using a multimode fiber, addressing a large field of applications.

MAIN FEATURES

- > **Intuitive FOLog-T1 Software** for acquisition control, processing and display
- > **1 to 16 channels** integrated in a single box (19", 4U)
- > Versatile device showing **high performance at short distances** (for wellbore application), and capable to perform hot/cold spot detection **up to 30 km (for cable monitoring)**
- > **Non-proprietary** compact file format (HDF5)