



**6D**  
TESTING & ANALYSIS

## SERVICE BRIEF: Unattended Structural Testing

Real-world operating data, collected in a product's natural environment, is the best source of baseline information needed to validate designs and troubleshoot failure. For manufacturers and suppliers extended data sample sets provide a far more accurate representation of how a product will react to forces, vibrations, heat, fatigue and the occasional anomaly than data collected through a controlled environment or tight window. But how do you monitor equipment 24/7; and how do you effectively collect data on a piece of equipment on-road, off-road, or off-shore?

6D's Unattended Testing monitors equipment around-the-clock ensuring that all events are captured and analyzed. This long-term approach to field testing and analysis captures the quantity and quality of data to deliver a far more complete picture of the actual environment and stresses leading to structural failures.

### 24/7 Equipment Monitoring with On-Demand Data Access

#### PROVIDING ANSWERS

Unattended testing answers questions like:

- What is the normal and extreme range of conditions to which the equipment will be subjected?
- To what degree will the components withstand vibration?
- How are components best mounted on equipment?
- Will long-term durability and quality goals be met?

#### BENEFITS

- Monitor Equipment 24/7
- Reduce Excessive Warranty Claims & Meet Performance, Quality & Customer Requirements
- Continually Monitor Hard to Access Equipment & Locations
- High Sample Rates & Channel Counts
- Eliminate the Need/Expense of Engineers On-Site
- Cloud Data Storage - Access Data From Any PC or Mobile Device

#### THE 6D DIFFERENCE

In a word - we've seen it all. 6D senior staff pioneered many of the testing and analysis tools, techniques, and best practices now standard throughout the industry. Our services range from testing, data collection, and analysis to troubleshooting, and training.

## UNATTENDED TESTING

### Remote Data Acquisition

With the ability to monitor equipment in remote or hard to access locations, Unattended Testing and Analysis provides the ability to gather, process, and interpret terabytes of data captured during months long, high-frequency tests of equipment on the fly. As a result, manufacturers are gaining invaluable snapshots of in the field stresses that can then be used to troubleshoot equipment failures, tweak product designs or even adjust validation tests to more accurately reflect real-world usage environments.

### Cloud-Based Analysis

Employing sophisticated testing software, the system captures and streams data to a portable USB hard drive with on-board analysis results files and data plots uploaded to a cloud server. Within minutes of a data set being recorded results can be viewed or downloaded on a PC or mobile device. Allowing data to be remotely accessed, downloaded, and checked provides a whole new level of visibility and control. A two-way communication process allows testing to be modified without visiting the site or interrupting the operation.

### Putting the Data to Work

Simulation is playing an expanding role throughout today's accelerated product development processes. And Unattended Testing feeds simulation tools with the information to:

- Replicate in-field operating conditions
- Evaluate multiple design alternatives
- Validate designs

6D collects and analyzes terabytes of data to uncover critical anomalies and hidden nuggets of information impacting product innovation, quality and performance.

At 6D we don't just provide data - we provide answers.

