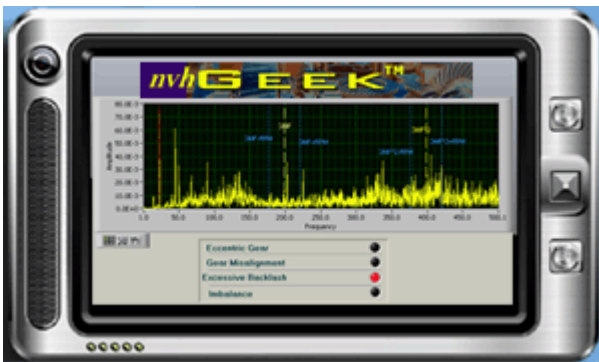# nvhGeek

## MACHINE HEALTH DIAGNOSIS AND MACHINE CONDITION MONITORING

nvhGEEK is a vibration and noise signal analysis suite of software and hardware tools offering a rich set of capabilities. The system features help engineers in locating serious as well as incipient defects in machine elements using vibration and noise data. nvhGeek offers significant time savings by implementing advanced signal analysis approaches and eliminates the tedious traditional efforts required for machine element defect identification.



## KEY MACHINE ELEMENTS
## DELIVERED PRECONFIGURED AND READY TO USE

Key machine elements for which nvhGeek can detect faults include but not limited to:

| | |
|---|---|
| ➢ Gears | ➢ Engines |
| ➢ Bearings | ➢ Motors |
| ➢ Couplings | ➢ Turbines |
| ➢ Pumps | ➢ Transformers |
| ➢ Compressors | ➢ Heat Exchangers |
| ➢ Fans | ➢ Air conditioners |

Based on the application needs the system acquires noise and vibration data from sensors such as accelerometers, impulse hammer, sound pressure and sound intensity probes The vibration and noise data is then processed and the defects are detected. We customize the system to accommodate new machine elements and defects as per customer needs.

## CUSTOMIZED MEASUREMENT AND TEST SYSTEMS
## SENSORS HANDLED:

| | |
|---|---|
| ➢ Point and line laser sensor | ➢ Load Cells |
| ➢ Optical sensor | ➢ Strain Gauges |
| ➢ Accelerometer | ➢ Encoders |
| ➢ Velocity Sensor | ➢ Temperature Sensors |
| ➢ Sound Pressure Microphones | ➢ Eddy Current Non Contact Analog Gap Sensor |
| ➢ Sound Intensity Probes | ➢ Capacitive Non Contact Analog Gap Sensor |

## APPLICATIONS INCLUDE

- ➢ Position and Displacement
- ➢ Thickness
- ➢ Runout and Eccentricity
- ➢ Deformation
- ➢ Part Sorting
- ➢ Vibration
- ➢ Thread Sensing
- ➢ Material Variability
- ➢ Non Conductive Film Thickness

## SYSTEM INTEGRATION ON NATIONAL INSTRUMENTS CRIO/CDAQ/PXI PLATFORMS

## NI LABVIEW BASED SOFTWARE DEVELOPMENT AND CUSTOMIZED MEASUREMENT AND TEST SYSTEMS

Quantum Age has experience in developing advanced data acquisition, test and measurement solutions on NI platform for automotive and engineering industries. We



have engineering teams that include instrumentation, electrical, electronics and mechanical engineering streams and our domain knowledge based approach enables us to conceive and deliver fully functional systems for rugged and high performance applications.