

THE MANUFACTURERS

Data Physics designs & manufactures powerful instruments for Dynamic Signal Analysis & Control and electro- dynamic shakers, amplifiers & application software.



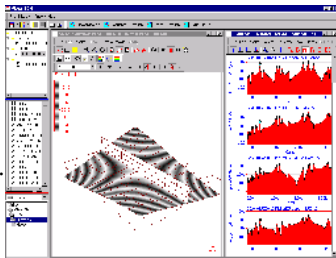
SignalCalc QUATRO



Dytran manufacturers sensors for Acceleration, Pressure, Force and Impact Hammers and provides electronics.



Vibrant Technology and **Imperial College London** author high quality Modal and ODS Analysis software.



Transera's HTBASIC, an elegant emulation of HPBASIC. **BSWA** offers Type 1 & 2 measuring microphones & accessories.

KINGDOM Pty Ltd is a specialist in technical and scientific software, systems and instruments and a supplier of associated equipment such as modal analysers, sensors and microphones and including support and training.

INVITATION:

We invite you to join us for a day on which you will be able to learn about the latest advances in vibration and acoustic analysis technology and meet other engineers in similar industries as your own.

THE SEMINAR

This free seminar is the Australian & New Zealand launch of the new Data Physics **TURBO Rotor Dynamics** Analyser and the new **Real Time** (digital filters) **Octave** Analysis on QUATRO and ABACUS DSP engines.

Location and Date

8:00 am Wednesday July 1, 2009 at the Best Western Motel & Convention Centre, Attwood, (Melbourne Airport). Details are on www.kingdom.com.au.

AGENDA..... PROPOSED

8:00 Registration
8:30 Registration and Introduction
8:45 Dynamic Signal Analyser overview and Applications
9:15 Signal Processing Basics, general coverage & background.
9:30 **Rotating Machinery** testing - RPM measurements, Synchronous average, Demodulation, Order Track.

10:30 Coffee and Tea

10:45 **Rotating Machinery** testing - TURBO Rotodynamics, Gap Voltage, Slow Roll Vector, Waveform Reference, Plots, Orbits, Timebase, Trend, X-Y, Polar, CL, Waterfall, Cascade, Spectrum,
11:30 **Structural Testing** incl Impact & Shaker excitation, MIMO, Transfer Function, Stepped Sine, Normal Mode, Modal Analysis, DOF identification.

12:30 Light lunch

13:15 Recording & Playback analysis, Event Capture.
13:45 **Quality Control**, (Pass/ Fail Limits & Statistical data base)
14:15 **Correlation**, precise measurement of signals & differences.

14:45 Coffee & Tea

15:00 TEDS, Transducer Calibration, Engineering Units, Signal Export.
15:30 **Acoustics**, Octave analysis, FFT based Sound Intensity, Sound Pressure, Sound Intensity, Sound Power, Psycho-Acoustics.
16:00 **Vibration Control**. An introduction to Single Shaker and Multi Shaker test control.
17:00 Q&A
17:30 Close

NOTE: Most items will use practical testing with appropriate equipment and/or real data.

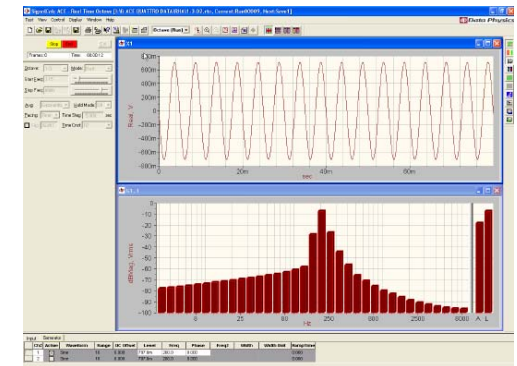
HOW REGISTER

1. Obtain pdf booking form at www.kingdom.com.au
2. Email pdf form to vibration@kingdom.com.au or
3. Fax the booking form to Kingdom at +61 2 9975 3819
4. Email name, address and telephone details of attendees to vibration@kingdom.com.au

Data Physics & KINGDOM PTY LTD

Present
An Advanced Training Seminar
on
**General FFT Analysis,
Rotating Machinery Diagnosis &
Modal Testing including:-**

- **Data Acquisition**
- **Dynamic Signal Analysis for Vibration & Acoustics,**
- **Rotational Machinery Analysis**
- **Rotor Dynamics Analysis,**
- **Single/Multi Plane Shaft Balancing,**
- **Structural Testing & Analysis**
- **Modal Testing & Analysis and**
- **Acoustic Testing & Analysis and**
- **Single Axis/Shaker Control.**



A Free Occasional Seminar by:

dp Data Physics



Who Should Attend?

Design, Specification & Project Engineers, Plant Engineers, Maintenance Engineers, Supervisors & Superintendents and Maintenance Technicians. Consultants and Research Scientists can also team about the latest PC based analysis and diagnostic Vibration testing and Control methods in use in Europe & USA and those concerned with the Quality, Reliability and Maintenance of manufacturing or operational processes.

The Presenters

Mr Arun Menon has been the Product Manager for Dynamic Signal Analyzers for the past 6+ years with Data Physics Corp., responsible for product development, marketing, technical sales support, application development and training. Before that Arun was with Metso Paper USA, Inc., serving as Product Manager - Machine Analysis, responsible for paper machinery testing services and with ABB Inc., as Global Business Manager - Machine Health Systems and Diagnostics Services, responsible for paper machinery testing services and condition monitoring system development and sales. Arun also served with Beloit Corporation and with Tata Motors (India) as an Engineer in automotive vibration testing. Arun's expertise is in signal processing, data acquisition, vibration testing, rotating machinery testing and analysis, modal testing and he holds a M.S. in Mechanical Engineering (Colorado State Univ., USA) and resides in Roscoe, IL USA where Data Physics have their Mid-Western Office.

Mr Richard Lovegrove is MD of Kingdom Pty Ltd and has a higher degree in engineering from UNSW and 20 years experience in Dynamic Signal Analysis and Control with Kingdom Pty Ltd, the sole distributor of Data Physics products in Australia, New Zealand and Indonesia.



Data Physics (DP) started with the development of the SignalCalc software library on HP Basic computers in 1984 and progressed to signal processing solutions on PCs using add-on DSP hardware to provide the computational power required for real time measurements and analysis.

In addition we will show Dytran accelerometers, BSWA microphones, DP shakers, Vibrant's ME'scope, Imperial College MODENT, Transera HTBasic and ANCO mechanical shakers.

You will learn about

ABACUS & QUATTRO DSP ENGINES

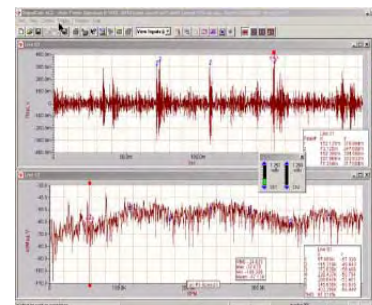
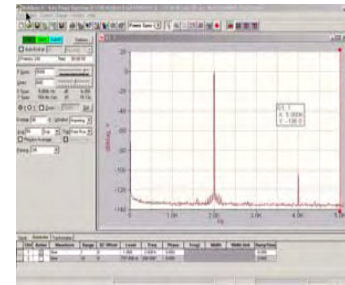
Data Physics ABACUS and QUATTRO DSP centric engines represent the latest advance in FFT processing by providing ADC resolution of 24 bits which combined with 32 bit floating point processors and advanced engineering, result in dynamic ranges between 135 dB and 150 dB over selected frequency spans and with 3200 spectral lines standard.



SignalCalc® Mobilyzer & ACE-QUATTRO

SignalCalc® is a powerful measurement and analysis software family for noise, vibration, drop test, dynamic balancing and rotor dynamics applications. SignalCalc® consists of a range of general purpose and application specific solutions. The user-interface is the result of the extrordinarily creative thought which has gone into its development. The system uses windows in the best way possible, giving immediate access to the tools and controls needed without undue operational complexity.

SignalCalc® instrument interface enables direct application to Test & Measurement in General FFT, Correlation, Transfer Function, Recordings, Acoustics, Structural, Environmental, Rotating, Production pass/fail and Remote operation test & measurement.



SignalCalc® enables sophisticated measurements to be undertaken in the time and frequency domains and to record the raw signal for later replay and reanalysis with new measurement settings. The Analysis can be exported to Modal packages for full structural analysis.

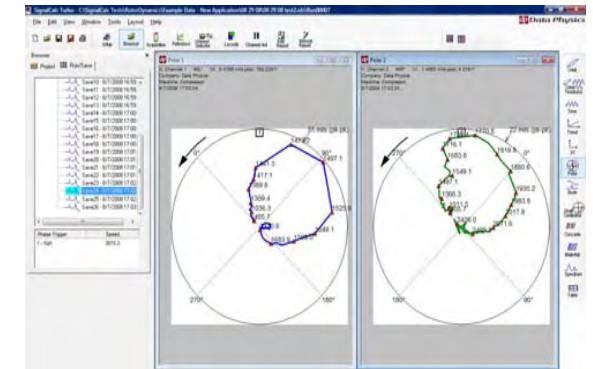
SignalCalc® Balancing - ABACUS/QUATTRO

SignalCalc® Balancing is a newly introduced product providing Single Plane, Dual Plane and Multi Plane Dynamic Balancing for rotating Machinery. The software runs independently on QUATTRO and ABACUS platforms.



SignalCalc® TURBO - ABACUS/QUATTRO

Using the ABACUS DSP engine as the platform, SignalCalc Turbo provides a powerful measuring instrument for Turbomachinery. Turbo is a new portable data acquisition and analysis system for rotating machines with emphasis on machines that use journal bearings. Packed with powerful measurement functions, it is ready to tackle the most difficult rotating machinery diagnostic problems encountered in the power generation, oil and gas, transportation and is equal to anything on the market. processing industries.



Convenient Setup of Project, Hardware, Measurement, Acquisition and Default Annotation. Built in database for Channel Names, Machine Names, Phase Trigger Name and Transducer Reference information PLUS facilities for : Slow Roll Vector Reference, Waveform Reference, Gap Voltage Reference, Plot Types, Orbit, Orbit + Timebase, Time Trend, X-Y, Polar, Bode, Shaft Centerline, Cascade, Waterfall, Spectrum, Full Spectrum, Tables, Default and Custom Layouts, Disk Recording and Playback Analysis, DC Orbits and Shaft Deflection View are all provided. Effective Display and Analysis Tools with Data from any type of vibration transducer combined with multiple phase triggers (tachometers) may be acquired, processed and displayed using unlimited display layouts.