

GUARDIAN

On-Line Plant Monitoring

FEATURES

Mimic Based Visual Interface

Supports Vibration and Process Measurements

Full Trending, Spectral Displays and Archiving

Network and Transducer Diagnostic Facilities

High Speed "Live" Spectrum Analysis

Virtually Infinite Expansion Capability

The Guardian System

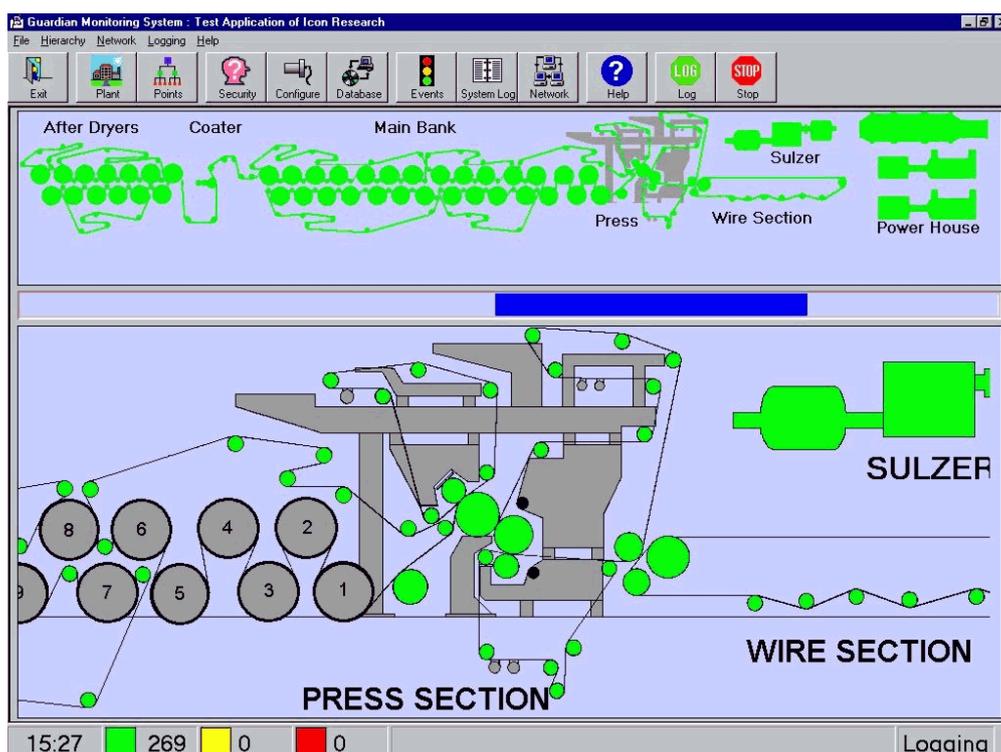
Guardian is a fully featured monitoring software package for rotating machinery and other types of plant. It can handle both dynamic measurements, typically vibration, and process measurements such as temperatures and pressures. The software operates with the ICONET industrial network to provide a highly flexible distributed data acquisition system.

The Guardian application includes all the common functions for plant monitoring,

including alarming, trending, analysis and data archiving.

The visual interface is entirely mimic driven giving clear indication of plant status at a glance. A simple hierarchy and intuitive controls combine to set new standards in ease-of-use.

Mimics and the internal database are easily modified allowing a straightforward upgrade path from a handful of points to hundreds.

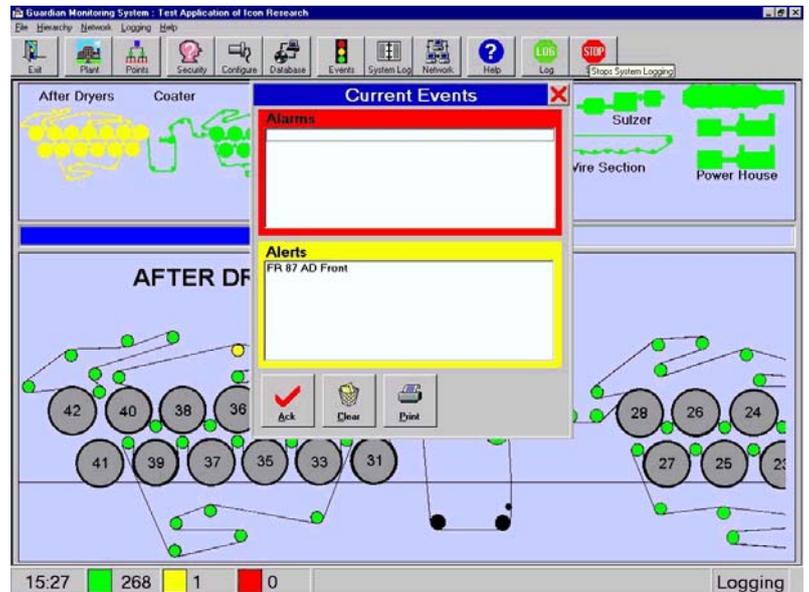


“If it’s Simple, Operators will Use it”

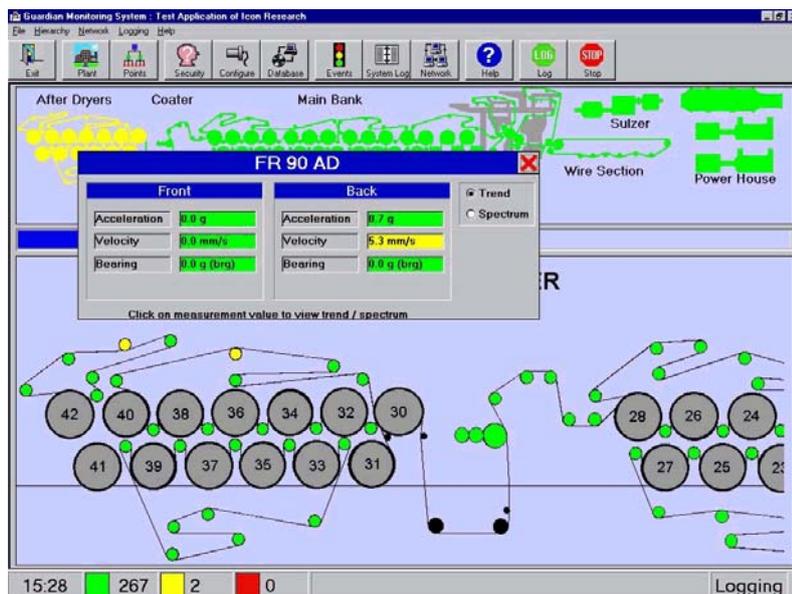
The Guardian application has been designed to monitor plant with the minimum amount of operator involvement and intervention. Overall plant status can be seen by simply glancing at the front screen mimic. Any excursions above pre-set alarm limits are reported immediately, and these are acknowledged and cleared as required. All system activity is automatically recorded in a log so that a complete history of plant operation is maintained. Operators can even enter their own notes and observations.

The “traffic light” display at the foot of the screen shows the status of all measurement points. If a point goes into alert or alarm, that portion of the

mimic changes colour accordingly, thus giving clear and unambiguous reporting of machine problems.



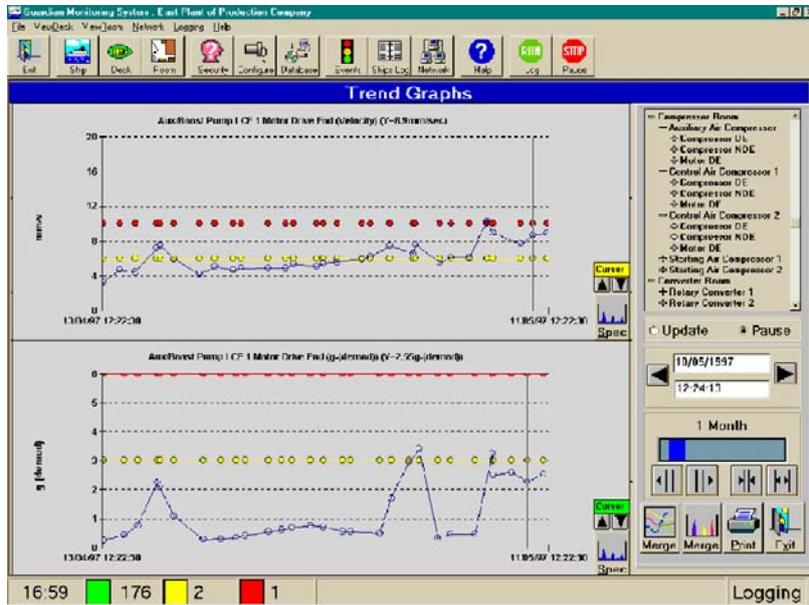
Faults Pinpointed and Clarified



A mouse click brings up a measurement screen that provides further details of the highlighted problem. Here, it is possible to tell whether a problem is, for example, shaft or bearing related. It pinpoints the precise area of the machine needing to be looked at.

If several alerts or alarms have occurred simultaneously, these can be reviewed in turn.

Trends and Levels

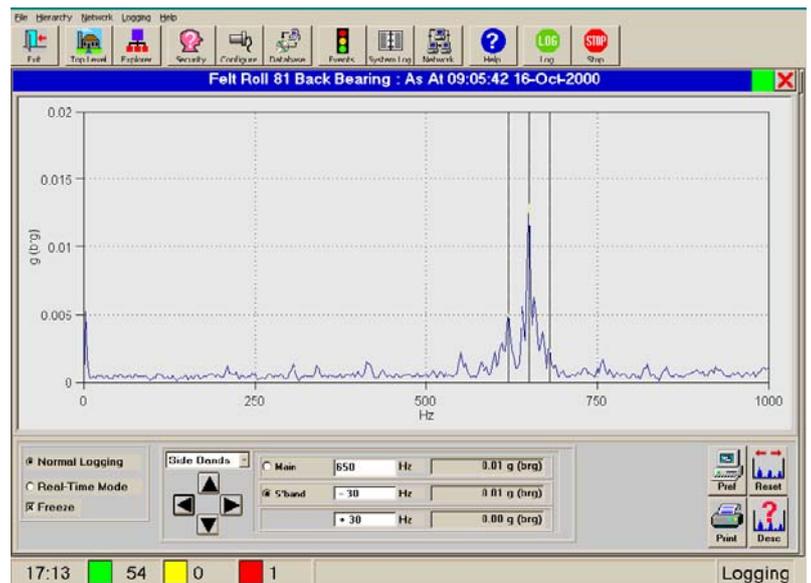


Once a problem has been identified on a machine, the next question is inevitably “How long can we leave it running?” This is where trending comes in. The rate of deterioration can be assessed, and comparisons made with previous occurrences on this, and other machines. Flexible comparison and overlay facilities are available.

Further Analysis

Additional analysis tools are available to determine the exact cause of a problem. Full time and spectral analysis displays can be called up with the ability to overlay and compare with other historical data.

It is also possible to go “live” to any point on the system and see time/spectral updates in real time. This is especially useful where machine parameters are changing, such as speed and load.



System Configuration

Configuration of measurement points has been made easy with a single screen entry for each point. This is "what you see is what you get" in its simplest sense. For larger systems, a database editing facility is

available enabling a short-hand method of entering hundreds of points.

Scan rates and data storage criteria are fully programmable to optimise system performance.

Data Archiving

The Guardian software is designed to carry out its monitoring tasks for months and years with a minimum of system maintenance. Large amounts of data can be recorded over extended periods, and so straightforward data reduction methods are needed. Guardian provides highly flexible data archiving methods to ensure that the system

operates efficiently and without overloading the host computer's storage facilities.

Archiving can be programmed to occur automatically at pre-set intervals. In this case, no operator intervention is required, and the system will sift out the important data for safe-keeping while removing uneventful information.

Global Access

The combination of Guardian and ICONET hardware enables the full power of the internet to be utilised. Remote access via telephone and internet is possible enabling

data to be examined from virtually anywhere. The system even allows the possibility to go "live" to a single measurement point from anywhere in the world!

Security and System Diagnostics

Guardian incorporates a two-level security system to ensure that system parameters can only be changed by authorised personnel.

The quality of data monitored by the system is only as good as the measurement devices

that are connected to it. Guardian has automatic diagnostic facilities for checking the integrity of acquisition nodes and even the transducers connected. Failing accelerometers and open circuits or shorts on their connecting cables can be identified.

Specifications subject to change without notice

Get to Know Your Machinery Better

**Icon Research Ltd
3 Raw Holdings
East Calder
West Lothian
EH53 0HY
UK**

**Tel: +44 (0) 1506 885000
Fax: +44 (0) 1506 885501**