



## Signalysis News

March, 2016

How's your bracket looking? If you are like most of us your "Road to the Final Four" is filled with potholes, detours, and an early dead end. Each year it seems March provides the basketball world with plenty of upsets and surprises. While we can all appreciate a good March Madness Cinderella Story, the last thing manufacturers want to see are unexpected noises, vibration, and other quality issues in their products.

Our [End-of-Line Production Test](#) solutions provide 100% inspection of products in manufacturing environments. Identifying NVH issues before your products are shipped ensures quality, reduces warranty claims, and keeps your customers happy. Below you will read more about our testing solutions for [appliance](#) manufacturers. Of course we also serve [automotive](#), [medical](#), and [more](#).

At this point I'm not sure how confident any of us are with our Final Four selections. But with Signalysis you can be sure that your products meet NVH quality expectations prior to reaching customers and consumers.

Sincerely,

[Neil Coleman](#)

President

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Visit our Website

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## ROI: Up Yours!

That's right, you can up the Return on Investment of your Signalysis test system or software purchase by taking advantage of our Maintenance, Enhancement & Support. Signalysis ME&S keeps you current with the latest software releases, provides access to our help desk, allows you to take advantage of special training offers, and more.

So what are you waiting for? Contact [Keith Coomer](#) today to learn more.

## What are you waiting for?



You're not still using a rotary phone are you? So why aren't you using the latest version of [SigQC](#)? We've made some significant enhancements that include:

- PostProcess Design-Time Mode - This feature is designed to aid development of post process templates by allowing intermediate results to be viewed interactively.
- Order Tracking postprocess step allows calculation of spectral content in units of orders of arunning speed for testing rotating parts exercised over a defined speedprofile.
- Complex FRF circle fit over a variable number of modes specified by the nominal resonance frequencies and mode search bandwidths. The output of the calculation includes the analytical MDOF FRF, located resonances, % critical damping values, and mode coefficients.
- Ability for users to configure a dashboard for display of Recent Failures, Real-Time Pareto and Trending data charts.
- Speed menu option from the product data pool list and target data pool list to select all of the production units that fail the current tolerances.
- Production sequence enhancement allowing integrators to specify edge-triggered variable and digital interrupts.

Learn more [here](#).

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## Case Study: Automotive Axle Noise

*When a Tier 1 automotive supplier required a production line test system to assess final drive transmission errors, they naturally called upon the expertise of Signalysis to deliver a solution.*

### Challenge

- Objectively Identify Root Cause of Errors
- Validate Functional Specifications, Ergonomics and Human Machine Interface (HMI)
- Have a Minimal Impact on Production Time

### An Automated Solution

Signalysis designed and developed an [IQC test station](#) that was integrated into the production line for 100% unit testing. The IQC station includes a computer control system, multi-channel data acquisition system, digital I/O interface hardware, accelerometers /automated placement devices and [SigQC analysis software](#).

The system was integrated with a 3rd party test station to conduct 100% part inspection. The system acquired and processed running data, assessed pass/fail, and archived the pertinent data. The inspection station was installed at the earliest point possible in the assembly line to identify “bad” gear sets prior to full axle build.

Read the results [here](#).

## Ask the Geek



### Question:

"Can you explain the purpose of attributes within SigQC?"

### The Signalysis Geek Responds:

Attributes are essentially variables that can be assigned specific values across all products or acceptance tests. For example, an attribute of a gear might be the number of teeth it has. An attribute of a brake rotor might be the nominal frequency of the first mode. Attributes can be any properties specific to a certain type of item that is needed to carry out calculations.

The purpose of an attribute is to allow the use of a single post process template across multiple products / acceptance tests that vary only by configuration. [Read more.](#)

Do you have a testing or software question for the Signalysis Geeks? Send them [here](#).

## Appliance Testing



In the highly competitive Household Appliance market *quality* is the key to customer loyalty. When appliances aren't meeting quality or durability expectations, the results can be disastrous:

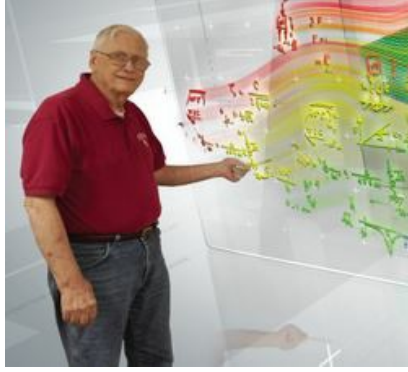
- Excessive Warranty Claims
- Product Recalls
- High Repair Costs
- Lost market share

Our end-of-line test systems help manufacturers identify and eliminate quality problems before they reach the consumer.

Go [here](#) to read more.

## A little light reading...

Senior Applications Specialist, Robert "Bob" Coleman has authored a book "Experimental Structural Dynamics: An Introduction to Experimental Methods of Characterizing Vibrating Structures".



Go [here](#) to read more and learn how you can obtain a copy.

Visit our Website

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## **Signalysis**

*Delivering the Sound of Silence*

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