

EDITORIAL

Are We Doing it Right?

Pranab Saha, Contributing Editor

Welcome to the 2003 SAE issue of *Sound and Vibration* magazine. Two years ago, I authored an editorial with the title: "Do we know what are we doing?" This time I ask, "Are we doing it right?"

Are automobile manufacturers doing acoustics work the right way? And, just what does 'right' mean in this case? At a minimum, "doing it right" should mean delivering what the customer expects.

The automotive industry is very competitive, with a trend toward being lean and profitable. Lean manufacturing involves doing a maximum amount of work with a minimum amount of resources and most importantly with a minimum number of mistakes. One way to achieve this is through a quality control program with an emphasis on doing the work right the first time.

The automotive industry used to think it was doing acoustic work the right way. The influx of lean manufacturing techniques in the mid to late 80s brought a change in work style. The automotive OEMs (original equipment manufacturers) gradually started outsourcing acoustics work, rather than doing all of it "in-house." This forced suppliers into the acoustics business while bringing about new opportunities to the OEMs. They were able to reduce their work forces and cut costs without compromising their ability to manufacture and sell vehicles. However, did this really help?

Now, at the beginning of the 21st century, the OEMs are gradually recognizing that they may no longer have sufficient acoustics personnel in-house. Having at least a few knowledgeable acousticians is essential to ensure that the right outsourcing is done with the right integrators and tier suppliers. Furthermore, outsourcing comes with a price. Many OEMs are so far-removed from the acoustics business that they have no choice but to pay it as the price of doing business. And, in many cases

the customers are not willing to pay that additional price.

Recently, one of the Tier 1 suppliers eliminated a department with the responsibility of soliciting sound package integration business from the OEM. Unfortunately for this supplier, their specialty in acoustic integration lost a lot of meaning after one of the OEMs decided not to outsource complete interiors to any Tier 1 suppliers after assuring them of just the opposite a few years ago. Is this really the right business approach? Is it healthy for the industry in the long run?

On the other hand, when the acoustic integration concept started brewing in this country, the understanding was that the Tier 1 supplier would be working with numerous commodity suppliers to provide a complete package to the OEM. All of a sudden, small suppliers had to sell their products to competitors that were now Tier 1 suppliers. That was discomfiting to the small suppliers and faced some resistance. In the end, larger suppliers absorbed many of these smaller companies, unless they had a strong specialty or got some direct backing from an OEM.

A major difficulty of lean manufacturing is being able to outsource work with confidence. Often outsourcing is conducted at a number of different places with different capabilities. That gives rise to a challenge of maintaining product integrity while still meeting the initial quality standards. Developing quality standards allows direct comparisons of measurements and components made at different places. However, there are different kinds of standards:

- Standards to measure the end-performance of a product.
- Standards to qualify a facility, instrumentation or procedures that are used to make measurements.
- Standards and procedures to ensure that the personnel conducting these studies have the proper proficiency to do the work.

Standards are necessary for "doing it right," but just as important are patience and commitment. In reality, implementation can take three to five years of relentless effort.

Work has been outsourced for a long time:

- In many cases outsourcing is used to research further development of a product. Often this type of work is given to an academic or a research organization.
- Overflow work is outsourced to finish the job on schedule.
- Often work is done jointly in a partnership between the customer and the vendor, involving some outsourcing.

However, to do outsourcing correctly, we need to learn:

- The habit of doing jobs right the first time.
- Quality improvement through defect prevention with a "zero tolerance" policy.
- Strict conformance to quality standards.

A certain amount of experimenting with suppliers is acceptable, but it is most important for the OEM customers to be well educated in the outsourcing business. This means that the OEMs can judge whether the business they have outsourced has been done properly. And in order to do that, the OEMs need to have a significant understanding of acoustics when buying services from outside.

No one in the industry will disagree that outsourcing is necessary in today's business culture and few would discount its benefits. However, the OEMs must have a thorough understanding of what they are outsourcing, in order to implement the correct solution and remain competitive. If the primary emphasis is only on cost, then we must ask the question, "Are we doing this right?"



The author may be contacted at: prsaha@kandse.com.