



Providential in Providence

As I listened to the run of successes our users offered up at the DFMA Forum this year, it struck me that Providence, RI, was a particularly fitting location for this event. One definition of providence is “the prudent management of resources; foresight.” That mix of value and vision was on full display, again.

From the first Forum I personally attended in 1990, I have watched people unlock, year after year, often breathtaking design efficiencies and cost reductions. Most remarkable is that these landmark savings have been consistently realized and never overshadowed, in our opinion, by advancing developments in manufacturing and digital design. The DFMA system still produces gargantuan results.

So exercise “providence” and hold onto the DFMA vision – keep at it! It is real; it is fundamental. The prudence and foresight DFMA brings to manufacturing are essential ingredients of the successes that you’ll see at the Forum another 15 years from now.

Best regards,

John Gilligan
President



**NEW ONE DAY OVERSEAS
COST ANALYSIS WORKSHOP
offered by Boothroyd Dewhurst.
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Looking Back at the 2007 DFMA Forum

Raw material cost reductions of 60 percent. Parts/operations down from 78 to 18. Assembly time down 31 percent. And millions, literally millions, of dollars in overall savings.

Numbers like these – and many other equally enthusiastically reported gains and innovations – were the rule, not the exception, at this year’s DFMA Forum. Whether the savings were in time, materials, costs, or “all of the above,” users of Boothroyd Dewhurst’s software reaped benefits they were pleased to share with the more than 100 people who came from all over the world to Providence, Rhode Island, in June.

Among the 2007 highlights reported by companies using DFMA:

- Harris Corporation reduced the number of parts/operations from 78 to 18, and costs per unit by almost \$86. Estimated savings based on expected production volumes were \$4,297,500.
- TRW beat out a competitor by achieving potential annual savings in the millions, securing a major business opportunity with Ford Motor Company.
- Deere reduced raw material costs by 60 percent and parts from 17 to 10, beating its original product target cost by seven percent.
- Soletron reduced both part count and direct assembly time by 31 percent.
- LeCroy reduced the number of parts in a product from 68 to 22, improving manufacturability and controlling costs.

These results, and other presentations covering such topics as lean manufacturing, sustainable design, benchmarking and DFMA in a global engineering environment, made for fascinating listening for attendees. Boothroyd Dewhurst executives welcomed the feedback and insight generated from such a wide range of DFMA users and guest speakers.

“Our customers’ individual successes, presented one after another at an event like this Forum, demonstrate very clearly the ways in which DFMA can be applied to virtually any manufacturing process with outstanding results,” said Nick Dewhurst. “There have been a lot of changes in manufacturing technology in the two decades since we first commercialized our software. DFMA continues to prove its worth as a costing methodology and as a foundation for innovative thinking about design and manufacture.”



DFMA at Deere

To meet recently imposed Tier 3 regulations from the Environmental Protection Agency, Deere & Company developed a new engine for a combine. Because the engine was a different size than the previous one, modifications to the basic combine platform were needed. Deere used the redesign as an opportunity to perform a DFMA analysis of the swing-out landing deck, which has an integrated ladder that provides access to the combine during maintenance. The goal of the redesign was to reduce the estimated design cost by 26 percent.

"We selected the landing deck for DFMA analysis because we had to take cost out of the design without affecting its integrity, and the software helps us determine how to do that," says Matt Saxton, cost management specialist at Deere.

By implementing many of the 83 design ideas that DFMA brainstorming generated, engineers at Deere were able to reach their target cost—and surpass it, cutting costs by an additional 7 percent. Read an article about the redesign [HERE](#).

Worth Reading

The Parts Standardization and Management Committee at the DoD has prepared a 24-page report titled, "Reduce Program Costs Through Parts Management." The report notes that "The average cost for adding a new part into a system is \$20,000." The full report is available online [HERE](#).

Bad human factors designs is a web site that posts "illustrated examples of things that are hard to use because they do not follow human factors principles." Click [HERE](#) to access the web site.

Design News has published its annual engineer salary survey. In answering a question about why current design projects are requiring engineers to be more creative and innovative than a year ago, respondents said that the greatest driver is cost. Click [HERE](#) to view the article, the bar chart is at the bottom right.

Minimum Part Count

Congratulations to James Bolton of TRW Automotive (center) on being the 2007 DFMA Supporter of the Year. Boothroyd Dewhurst, Inc., gives the award annually to a DFMA software user who significantly contributes to the success of implementing and promoting DFMA within a company and in the product development community at large. Bolton's presentation at this year's Forum, titled, "The Use of Design for Manufacture and Assembly on a Global Basis," discussed the challenges, implementation, and management of a DFMA program in multiple locations of an international manufacturing organization.

James Bolton with John Gilligan (L) and Nick Dewhurst (R)



DFMA News Briefs

Interested in alternative fuels? Jeff Kalinoski of Directed Technologies, Inc., is. He and a collaborative design team used DFMA to create a proposed onboard automotive hydrogen fuel system, and then extrapolated how it would look in 2010 and 2015. Read more [HERE](#).

Ned O'Donovan of Gerber Scientific Products uses DFMA as part of a proactive maintenance program. "As director of new product development and project management, he added Gerber Scientific's field service representatives to the design teams that interact with the Design for Manufacturing and Assembly software," writes Industry Week editor John Teresko, who also interviewed Nick Dewhurst for [THIS ARTICLE](#).

Reporter Natalie Myers of the Providence Business News interviewed BDI president John Gilligan. Her article, titled "Going 'lean' from the point a product is conceived," is available online [HERE](#) (paid subscription required).

Analyst Roy Wildeman of Forrester Research included Boothroyd Dewhurst and user Dell in a report titled, "Design for Manufacturability Becomes a Reality," March 2007. You can read the executive summary [HERE](#) or view a PowerPoint presentation for a teleconference based on the report [HERE](#).