



Ray Halbert

737 MAX Build Integration Leader
The Boeing Co.
SME Member Since 1987



A Partnership that Benefits Everyone

Over a year ago, The Boeing Co. joined SME's Corporate Membership program as a supporting member. As a longtime SME member myself, I was personally excited to renew my membership and glad that more of my colleagues could participate under the corporate membership plan.

Everyone has their own unique and personal reasons for becoming an SME member. For me, I found SME resources to be helpful in growing technical knowledge early in my career. This included using the SME library, watching many videos from the former Manufacturing Insight Series, participating in conferences and expanding my network through meeting people in my local chapter. I still recall many of the awesome tours the local chapter would organize of companies in other industries that produced a wide variety of products.

As Boeing's 737 MAX build integration leader, I have overall responsibility for our newest 737 airplane's manufacturing and tooling plan.

Our team of manufacturing, tooling and equipment engineers applies lean principles and practices, leverages and implements advance manufacturing technologies and ensures designs are producible for a safe, efficient, high-quality production system. The 737 MAX is the fastest-selling, single-aisle airplane in history—and our Renton, WA, factory produces 47 airplanes across all 737 variant programs every month. Starting next year, we'll be making 52 a month!

To accomplish that level of production takes a technically capable and knowledgeable workforce prepared to deliver today and to innovate for tomorrow.

Our team members are eager to enhance their technical knowledge and professional growth. Engagement with external technical societies and professional organizations like SME can complement and support the learning and development opportunities available within Boeing. That

development and knowledge sharing enables our team to achieve world-class quality and performance for Boeing and our customers.

We're driving our production strategies to leverage rapidly advancing technology, including automation, additive manufacturing, robotics, advanced materials and other smart manufacturing approaches. SME offers numerous avenues for Boeing's technical community to connect to other technical experts and industry peers who are committed to cutting-edge technology within all disciplines of manufacturing.

Consider the vast array of SME tech groups and communities focusing on additive manufacturing, composites, automation, machining, lasers, manufacturing education and forming and fabricating, and product and process design and management. These communities provide engineers with robust sources of knowledge and contacts to help them learn and share technical excellence.

Those who take advantage of becoming certified in technical disciplines—like SME's certifications for manufacturing technologist (CMfgT) or manufacturing engineer (CMfgE)—develop and demonstrate skill and expertise that advance their work and supports future career growth.

And SME's various publications, knowledge library and other resources provide additional ways to access and contribute to the collective expertise in important technical areas.

Boeing's corporate membership enables and encourages more of our team to take advantage of opportunities and resources like these—and that applies across our Boeing enterprise, well beyond the 737 program that I work on.

Our strong partnership with SME and with other technical organizations can be an integral part of how our workforce develops, utilizes and innovates with advanced manufacturing to provide our customers the products and services they want, safely, effectively and efficiently. ➤

Designs Needed for 2018 Digital Manufacturing Challenge

Automobiles have long been one way to express individuality—particularly when customized with aftermarket or even maker-inspired components. Such components or systems often enhance the styling and/or the capability/performance of a common stock vehicle. This sort of innovation is what the 2018 Digital Manufacturing Challenge seeks to encourage. For this tenth anniversary installment of the challenge, the 2008 theme will be updated and revisited to comprehend all of the latest digital tools and techniques available.



As such, student designers are invited to create innovative automotive aftermarket peripherals that integrate and exploit the best of digital design, additive and subtractive tools/technologies to create and showcase your vision of a unique automotive feature or function. Contestant teams are asked to create virtual prototypes incorporating any mechanical, electrical and/or optical elements, and are encouraged to employ more than just one of the seven available additive manufacturing processes. Contestants need not build their item, but must recommend and justify through their research and cost-benefit/value analysis, their design, process and material selections to achieve the styling and/or the capability/performance claimed. Entries are due by

Feb. 26, 2018. Additional details are available at sme.org/digital-manufacturing-challenge. ➔

Journal of Manufacturing Systems to Publish Special Issue

SME's *Journal of Manufacturing Systems* is seeking cutting-edge research works focused on IoT-enabled smart manufacturing. Topics of interest include, but are not limited to:

- Innovative sensing strategies for process monitoring and tracking of product history,
- Machine learning techniques to improve process control and part quality,
- Smart tooling and in-line part inspection,
- Integration of AM in smart factories,
- Smart modeling of factory floors and manufacturing processes integrated with sensor data,
- Manufacturing data analysis and diagnostics for real-time reporting using intranet capabilities and/or the cloud,
- Case studies in the design and deployment of networked-distributed digital manufacturing paradigms,
- New human-machine interface and communication technologies,
- Cyberphysical systems for the design and operation of smart manufacturing facilities, and
- Use of cloud, distributed and digital manufacturing paradigms in cyberphysical systems.

Paper submissions are due Dec. 1, 2017. Learn more at sme.org/journal-of-manufacturing-systems-special-issue. ➔

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