

MILWAUKEE ELECTRONICS NEWS

Q1 2018

About Milwaukee Electronics

Milwaukee Electronics designs and manufactures custom circuit board assemblies for the medical, transportation, military, HVAC and a variety of other industries. The Company operates over 135,000 square feet of manufacturing in Portland, Oregon; Milwaukee, Wisconsin; and Tecate, Mexico. In addition to EMS and product design and engineering services, it offers PCB layout services through its San Diego PCB business unit and quick-turn prototyping through its Screaming Circuits business unit.

McClain Promoted to President

Rick McClain has been promoted to President. Now in his 22nd year with Milwaukee Electronics, McClain has served as the Company's Chief Operating Officer (COO) since 2016. P. Michael Stoehr, who previously served as President and Chief Executive Officer (CEO), will continue as CEO.



Rick McClain

"As one of the longest tenured companies in the electronics manufacturing services (EMS) industry we feel it is important to have a succession plan that ensures not only strong leadership,

but a strong commitment to the culture that has brought us business success. This organizational change is part of a transition plan designed to achieve that goal. Rick has a strong track record of moving our company forward in a variety of business and technical initiatives that have enhanced our systems strategy, standardized our equipment platform and helped our business service mix evolve to support our customer's changing needs. He is ready to take

a stronger role in running the day-to-day activities of the Company. Additionally, this transition gives me more time to fo-

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Message from Mike

We recently had a third-party do a telephone survey with key contacts at some of our largest customers. We learned several things from that survey. First and



foremost, we have areas where we can improve and we are working to address not only the specific issues, but also the root cause factors. We've also learned that most of these customers selected us for our ability to provide unique solutions using a business model that is more flexible than that of our competitors. Additionally, the survey validated that our business ethics, centered around integrity and relationships built on

trust, are important to our customers.

This month we've announced that Rick McClain is moving from the role of Chief Operating Officer (COO) to President. I retain my role as Chief Executive Officer (CEO). I think in light of the survey responses, it may be good to elaborate a little on the thinking behind this transition.

The electronics manufacturing services (EMS) sector has grown explosively over the last several decades. Most multinational EMS companies have business models dictated in part by their key investors. Milwaukee Electronics has bucked this trend. We want to be the company that addresses the gaps that standard business models have neglected. We also want to continue to be the company that has a culture based on trust and integrity. As a result, our succession planning has been very well

thought out. This current transition frees me up to concentrate more on customer relationships and growing some of the gap filling solutions we are providing the market. It also ensures a strong leader well-aligned with our culture of integrity and trust is running our day-to-day operations.

Our goal in dividing responsibilities is achieving stronger focus on the things that matter to our customers: efficient operations building perfect product; gap-filling, flexible solutions; integrity; and strong relationships built on commitments both parties can trust. If you have any questions about the announced management transition, feel free to contact either Rick or myself.

P. Michael Stoehr
CEO

Second Leadership Development Program Commences



Paul Forker

Paul Forker Joins Sales Team

Paul Forker has joined Milwaukee Electronics as Director of Business Development – West Region. Previously, he was associated with Fusion EMS as Vice President Business Development. He was earlier associated Electro Mechanical Technology and the Beams Company in sales engineering and management positions.

“Paul brings over 25 years of sales experience and is familiar with our industry and the companies in our region. I believe that expertise makes him a huge asset as we tell the market more about Milwaukee Electronics’ unique mix of services since he fully understands the difference between our approach and the standard business models in the industry,” said Jered Stoehr, Vice President, Sales & Marketing.

Forker received his Bachelor’s degree from Cornell College. He is also an IPC Certified EMS Program Manager (CEPM).



Above, the graduation photo of Milwaukee Electronics’ first Leadership Development Team. Members completed the program in 2017.

Milwaukee Electronics has launched its second Leadership Development Team (LDT) program. The program’s goals are:

- Retain promising talent
- Focus participants on career advancement and preparation for larger roles
- Strengthen commitment to the unique culture with Milwaukee Electronics
- Build relationships with others in the Leadership Development Team
- Build personal relationships with key members of the executive team.

Twelve candidates were selected for this year’s LDT program.

This LDT is similar in design to last year’s LDT and is built around four two-day group learning sessions. Sessions will

rotate among Milwaukee Electronics facilities in Milwaukee, WI; Portland, OR; and Tecate, Mexico over a period of about 18 months.

In addition, participants will have work assigned between sessions and each class member will have his or her own personal learning goals to guide their self-development work outside of the group sessions. The four group learning sessions will expand to consist of two full days of work.

Following completion of the program the LDT will tackle a team project aligned with the company strategic plan. Participants also complete a Myers-Briggs Personality analysis and are assigned a Leadership Development Program Mentor and executive sponsor.

Engineering in Action

Perfecting the Handoff From Layout to Prototyping

While San Diego PCB and Screaming Circuits use transactional business models designed to support one-off layout and prototyping needs for many customers, some customers prefer having continuity in their outsourced layout and prototyping efforts. In those cases, the teams at San Diego PCB and Screaming Circuits become an extension of those customers' product development teams, providing continuity in support staff and processes. Additionally, the teams are able to work together in terms of design for manufacturability feedback provided to the customer, helping to ensure an efficient ramp to volume production.

One example of this involves a medical customer who has selected the two business units for its layout and prototyping needs. Their product design team likes San Diego PCB's Altium design tools and layout expertise the ability to work with the same layout team on multiple projects. They've done six layouts so far and are projecting 8-15 combined layout and prototype cycles per year.

A key attraction has been San Diego PCB's Stoplight Design for Manufacturability (DFM) report along with a DFM Summary on each prototype provided by Screaming Circuits. The Stoplight Report, so named because of its red, yellow and green color coding, provides DFM recommendations plus indicates areas where documentation is incomplete. The color coding indicates the severity of the issue.

Screaming Circuits' DFM Summary focuses on the prototype build using a



Use of the same team and a collaborative approach in working with the customer's product development team provides continuity over multiple projects.

four-level ranking scale.

0 = No issue

1 = Minor issue involving one or more of the following:

- Opportunity for design improvement. Issue may impact quality without minor process adjustments and some additional inspection may be required depending on nature of issue.
- Issue does not follow Milwaukee Electronics' preferred Design/Manufacturing guidelines.
- Issue may impact quoted cost depending on difficulty level of remedy.

2 = Major issue involving one or more of the following:

- Product quality likely to be compromised, additional process/inspection steps required to control quality and product yield.
- Violations of industry standard design guidelines, may impact level of

automation that can be used on assembly.

- Will impact quoted cost without modification/change.

3 = Critical involving one or more of the following:

- Issue has major effects on or severely compromises product quality, precludes automation of assembly build and/or requires excessive processing steps to achieve finished assembly. Quoted cost will be impacted.

- Issue MUST be addressed before attempting next build.

The assigned engineer or program manager provides written detailed feedback on the items ranked 1, 2 or 3 to the customer's design team. All aspects of the product from PCB fabrication through assembly processes are analyzed in developing the report.

Additionally, the customer's team likes the fact that working with the same PCB layout supplier who is willing to utilize their customized component library truly gives them a virtual CAD department.

The end result of this combined reporting is that both the layout and prototyping process flag potential issues in a way where customers can easily understand the likely impact of the issue and what level of priority it should have in any corrective action process. This level of feedback combined with the ability to work with an assigned team over multiple projects also eliminates the disconnect that often happens when parts of the product development process are outsourced.

Screaming Circuits Understands the Need for Speed

The folks at Screaming Circuits build winning prototypes for a lot of different industries. But recently, one of the prototypes in a 20-piece rush order helped its end product make some big headlines.

A printed circuit board assembly (PCBA) built by Screaming Circuits went into the car that took the checkered flag at a recent NASCAR race. Nice work team!



Above, the Screaming Circuit "pit crew" associated with the race car PCBA order.

McClain

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cus on strategic initiatives and customer relationships as we expand our business offerings and continue to grow," said Michael Stoehr, CEO.

McClain joined Milwaukee Electronics in

1999, serving as general manager of the Company's Canby, Oregon facility prior to being promoted to COO. He was previously chief financial officer of Electronic Controls Design, Inc. He earlier served as controller and operations manager at

Dynacast, Inc., managing an ERP implementation and turnaround activities in two divisions. He received a B.A. degree in Accounting from the University of Oregon.

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