Patti Perspective

November 2011 - Vol. V, Issue 6

Quick Links

Patti Engineering's website

Patti Engineering's Blog

President, Sam Hoff's Blog

V.P. of Engineering, Dave Foster's Blog

Like us on Facebook

View our profile on LinkedIn

View our videos on YouTube

Follow us on twitter

Greetings!

The holiday season is upon us, we hope you enjoyed Thanksgiving with your family. Here at Patti Engineering we have a lot to be thankful for. We want to say thanks to all of our wonderful clients and partners; you have helped us to achieve a tremendous year of growth after transitioning our way out of the downturn in the economy!

In addition to our clients and partners, we want to recognize the dedicated and loyal staff here at Patti Engineering. From our engineers to our administrative staff to our sales team, everyone has contributed to our success. Thank you for your effort and dedication.

This month we are featuring an article on our powertrain controls capabilities. We have extensive and unique expertise and experience in this market. From plant floor to the 'top floor', we add value to help our powertrain clients achieve their goals.
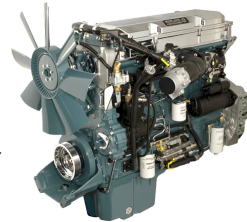
The Patti Personel spotlight is on one of our exceptional engineers, Aju Mathew. His technical capabilities and expertise in providing services to a wide variety of industries and clients will be instrumental in continuing our success in Texas.

We always love your feedback. Let us know if there is a specific automation topic you are interested in or if you have comments on what we have covered here.

Thank you for your interest in Patti Engineering!

Best regards,

Georgia H. Whalen

Director of Marketing
Patti Engineering, Inc.
Phone: 978.697.2664
email: gwhalen@PattiEng.com

Powertrain Control Systems - Integration Solutions Yield Increase in ROI

Did you know that Patti Engineering has extensive experience in powertrain controls projects and ongoing support delivery? Not just your standard auto powertrains; Patti Engineering can handle the most complex powertrain controls projects where the manufacturer is building custom engines with thousands of different configurations.

Patti Engineering has longstanding relationships with several of the world's leading manufacturers of medium and heavy-duty diesel engines for the commercial truck and construction equipment markets where we serve as a trusted advisor. We have worked on projects throughout the US as well as in Germany and China. In addition to the manufacturers themselves, we work with the original equipment manufacturers, or OEMs, providing equipment to our client's facilities. In this article we will give you an overview of our extensive experience and capabilities.

Our value to our clients is our exceptional ability to take a control system to the next level. Our solutions address the needs of the organization at all levels, from operators, team leaders, supervisors, mid-level managers to executives. From a 'top floor' perspective, what is needed from the plant floor?

With all eyes on the bottom line and ROI, the plant floor needs to operate at peak efficiency with as little down time as possible. Programmable Logic Controllers (PLC's) need to communicate vital build information to the Manufacturing Execution System (MES) which needs to integrate seamlessly with accurate information to enable the Enterprise Resource Planning (ERP) System to facilitate faster and more informed decisions, supporting and streamlining business processes at all levels. Our expertise is bridging the gap between the factory floor and top floor.

Patti Engineering works with OEM's to commission new main assembly lines for various sized medium and heavy duty engines. In this role we serve as the technical advisors to the OEM during commissioning and installation. The vast majority of the equipment at the manufacturers of medium and heavy-duty diesel engines is controlled by Siemens PLC's. Patti Engineering's status as a Siemens Solution Partner ensures the OEM that we can provide valuable Siemens expertise.


Along with supporting lines that we helped install, we have reworked lines that were installed by other OEMs. The reworks were required from our client's point of view because the equipment was hard to support in its current form and did not integrate well with the manufacturing execution system (MES). The OEMs that were responsible for these lines did not have the extensive experience with Siemens that would allow them to deliver the product the plant wanted. Our engineers extensive experience and expertise with all aspects of the Siemens engineering software suite (Ladder, STL, Graph, Safety, etc.) allowed us to develop more robust control systems for the equipment to be more productive, efficient and supportable.

We have served as a trusted resource and partner to several of our powertrain clients on a daily basis for 5 to 7 years. Over this span of time, we have supported as much as 90% of the equipment in the plant. On a daily basis we wear various hats based on needs. We have continued to support various machining and assembly lines, implement new controls to enhance the line and add more features and functionality. Because of our widespread help throughout the plants, we have also spent a lot of time training other engineers, supervisors, team leaders and operators.

Our clients look to us to continue our efforts to bridge the gap between the plant floor and top floor. Each assembly line is integrated to the MES. As each part arrives at a new station the PLC performs a transaction with the MES system to receive the build requirements for that particular part. As the work is completed, the PLC reports back to the MES that the work is completed in order to track build history of the engine as well as to keep track of parts used in assembly for inventory tracking. This information is critical for the plant in case the engine has issues in the field.

A Manufacturing Execution System (MES) allows management to keep track of the overall effectiveness of the equipment. We have added tremendous value with the development of MES Systems for our clients. Supervisors responsible for one to multiple lines are able to see how these lines are running, any faults currently active, how much time the fault was active, how long the machine has been running in automatic, etc. With this, detail reports can be generated to get a better sense of bottlenecks, problem areas, or nuisance problems which are occurring thereby highlighting areas that need attention to improve the line. This information is used to look for trouble areas and greatly improves the assembly process.
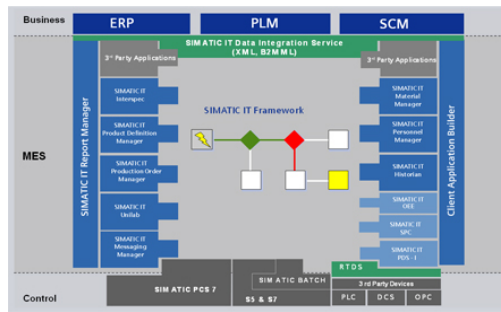
Patti Engineering has extensive experience with powertrain controls. Thanks to the intellect, resourcefulness and dedication of our engineers we have been able to support and improve factory level automation, as well as assist our clients in the support and improvement of their MES systems. Call us today to learn how we can assist your company with powertrain controls projects or need for support.
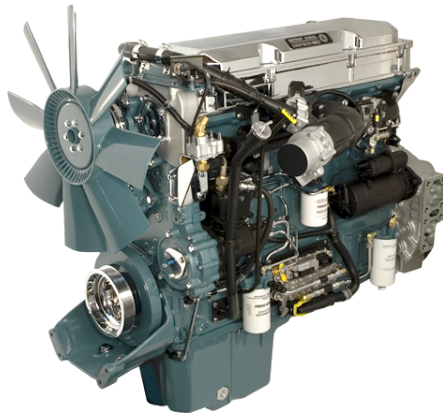
Patti Engineering
Phone: 1-800-852-0994 (US Only)
(248) 364-3200

Patti Personnel - Aju Mathew

Aju Mathew

This month our spotlight is on our dedicated and talented engineer, Aju Mathew. Back in the beginning of September, Sam Hoff, president of Patti Engineering received a letter from one of our clients commending Aju Mathew's superior performance on a complicated retool project (click here to see our blog post with the letter). Not only did Aju complete the project successfully, he did it ahead of schedule! "It is not every day that a client will take time to recognize an engineer's performance," said Sam. "Aju is a valuable member of our engineering team; having been with us for over a decade, Aju is one of the reasons Patti Engineering has enjoyed long-term success. Our clients appreciate the commitment, talent and work ethic that engineers like Aju bring to their work."

Aju joined Patti Engineering in 1998 after earning his Bachelor of Science in Electrical Engineering at Wayne State University in Detroit, MI. Recently Patti Engineering gave Aju an opportunity to relocate to Austin, Texas to assist our clients in that market. Aju's technical capabilities and expertise in providing services to a wide variety of industries and clients will no doubt be instrumental in continuing our success in Texas.

Aju has been married to his wife Rachel for 12 years and has two sons; Andrew 6 years old and Abel 2 years old. Rachel works as a Traffic Engineer for a Civil Engineering firm in Livonia, Michigan

and she continues to work for the same company remotely from their home in Austin. Aju's family is still getting acclimated to Austin area. They are enjoying the beautiful weather in Texas this time of the year.

When Aju is not hard at work for Patti Engineering he likes spending time with friends and family. He is a native of southern India and every two to three years he goes back to India to visit his immediate family and friends. Aju has many hobbies. He enjoys the outdoors, exploring different places, taking snapshots of the nature, listening to music and playing Tabla (a popular Indian percussion instrument). Aju is also a handyman and tinkerer at home. As a handyman, he often helps his friends who are not so handy!

Rachel, Abel, Andrew & Aju

Aju shared his perspective on being part of the Patti Engineering team:

"At Patti Engineering we get to do various challenging projects. Being able to be exposed to different projects is one of the reasons to be with the company after all these years. One thing I like about Patti Engineering is the opportunity to work with new technologies, various customers, and equipments all the time. Also, I love being surrounded by a group of talented engineers who are always willing to help if needed. As an engineer at Patti Engineering, I enjoy the constant challenges of moving from projects to projects and the demand of exceeding customer expectations. Although my education has helped me in my career, I believe that my real strength comes from experience. The vast majority of knowledge that I have acquired over the years has been from my various job experiences at Patti Engineering."

Aju, Andrew & a big Gorilla!