Patti Perspective

March 2016

Greetings!

This month we're thinking more about legacy migration to the SIMATIC S7 series PLCs. We do a lot of these upgrades, but we also know there are many systems still in need of an upgrade. We displayed legacy systems at Manufacturing in America last week, and we heard an equal amount of "Wow! I haven't seen those in years!" and "Oh, yes. We still have those on a few lines."

Are you really considering all of the costs involved when deciding to invest in your company? Are you calculating in your missed opportunity costs of not upgrading? How much more revenue could you bring in if you:

- Doubled your production speed - within a month?
- Reduced your upload time from 7 minutes - to 30 seconds?
- Cut your diagnostic time down from hours - to seconds?

Hit "reply" to this email and tell us: If you've upgraded, what did you wish you knew before you did? If you haven't upgraded yet, why not?

We're spotlighting Phil McRoberts this month. In his relatively short time at Patti Engineering, he is quickly becoming one of our Siemens experts. You might say engineering runs in his family. Read on to find out more.

Five Reasons to Upgrade to

Siemens SIMATIC S7 PLC

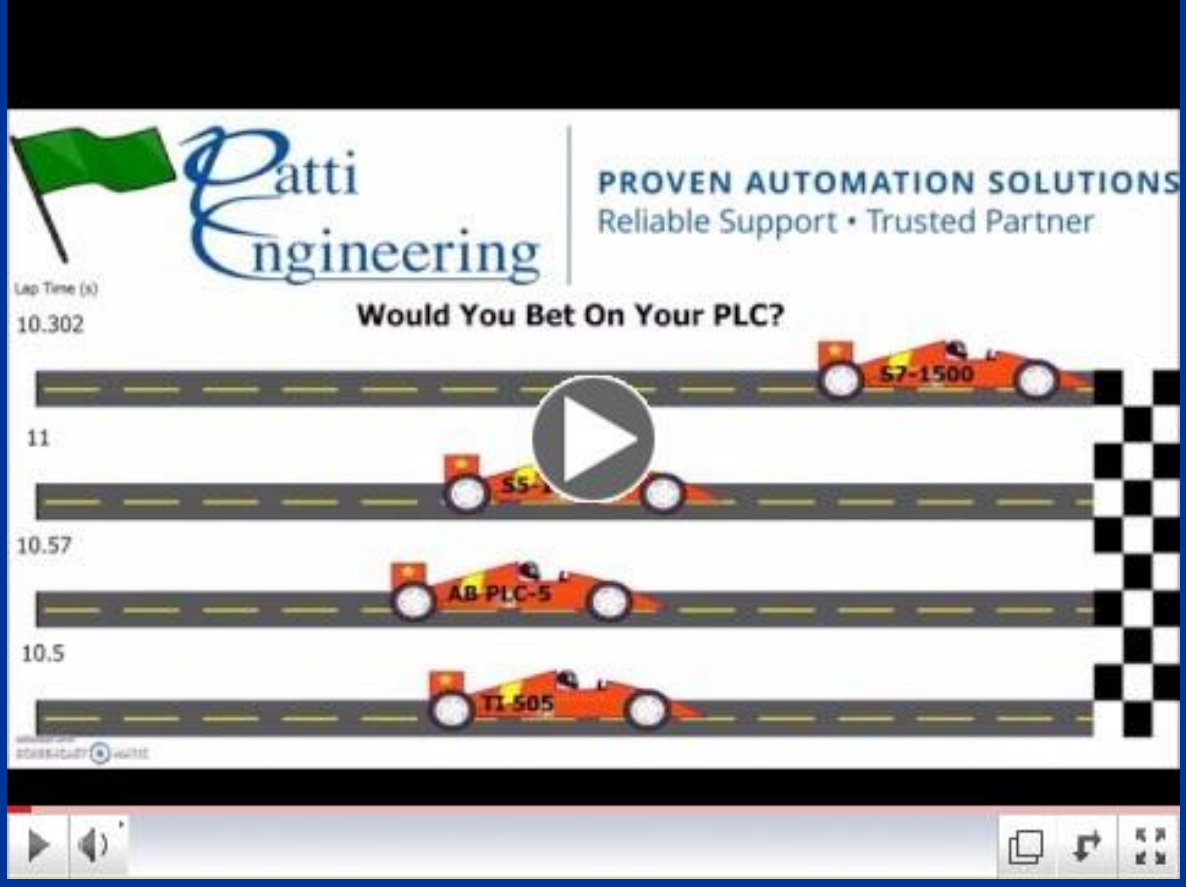
1. Reliability

Sticking with a legacy system means taking a gamble that you can still rely on your system, its parts, and its maintenance. We had one customer who was calling us every couple of months because their PLC had "eaten" their program. Staying with an obsolete system often means parts are no longer available through the manufacturer. It can initiate time-consuming eBay hunts. Some systems were installed so long ago that the documentation is long gone. There's only one person who remembers how it was installed- and he's retiring. Can you rely on having the know-how available when you need it?

What if you could quit worrying about the next time your system is going to fail - and start planning how you'll take advantage of all its new capabilities?

2. Speed

This month, we built a display that shows the speed difference between the S7-1500, an S5-100U, an Allen Bradley PLC 5-80, and a TI-505. We compared the cycle time by measuring the I/O through a relay. Measuring it this way is comparable to a real-life application. Other speed comparisons typically show scan times, which can exaggerate the difference. With this true-to-life test, the S7 was still more than twice as fast as any of the others.



3. Efficiency

The newer HMIs (Human Machine Interfaces, or screens) not only can show exactly where a problem is, but also what the problem is. This allows operators to clear the problem very quickly. Some older diagnostic equipment is much more vague, causing operators to solve the problem with all of the efficiency of untangling Christmas lights.

The S7 along with its associated equipment, is much more energy efficient as well. There is also energy saving software such as PROFIenergy which can analyze and automate strategies to reduce the standby load.

4. Cost

You might be thinking "What?! Cost is a reason not to upgrade! It's going to cost me thousands to install a new system!" But what is the cost of downtime? One study showed that each minute of downtime in the auto industry costs $22,000. What is the opportunity cost of not upgrading? If you could double your production speed, not upgrading costs you half your potential revenue.

5. Innovation

Upgrading to S7 technology isn't really innovation anymore - it's simply keeping up with the times. But new innovative advances are becoming available for the S7 - and not the S5. Siemens is committing 5 billion Euro

to R&D this year alone. The best way to benefit from these new developments is to use current technology.

There's discussion lately about Detroit becoming the next Silicon Valley - or Silicon Valley becoming the next Detroit. For Detroit to drive that amount of growth requires innovation and some risk taking. If we in Detroit don't take those steps, Silicon Valley will. We have to acknowledge the risk involved in not changing.

We can't innovate from a place of fear. We were all around for 2008 and we know how scary that was. None of us wants to see that much red on our balance sheets ever again. None of us wants to look across the table at one of our long-time employees and have that heartbreaking conversation again. The riskiest option isn't to grow and change. The riskiest option is to hold too tightly to what has worked in the past.

This investment in your business is worth it.

To discuss your legacy migration or how Patti Engineers can help,

Contact Us

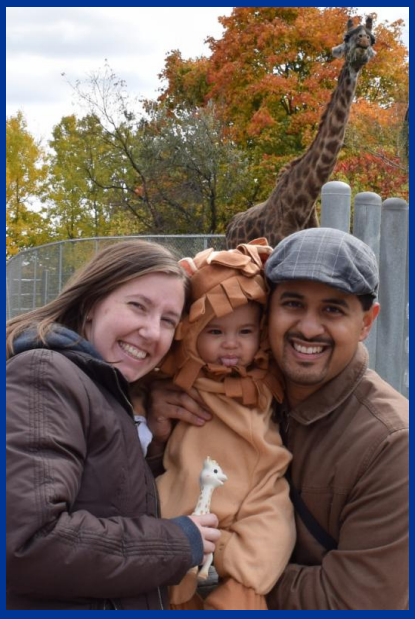
Patti Personnel Spotlight: Phil McRoberts

Whether it's during the workday or the weekend, you're likely to find Phil McRoberts entrenched in an electronics or engineering project. Phil started with Patti Engineering in October of 2014, and has quickly become one of our go-to Siemens experts.

"Phil has been a great addition to the team," said Dave Foster, VP of Engineering at Patti Engineering. "He has been able to really grow his Siemens knowledge through projects at Patti Engineering. When we hired him a year and a half ago, he had impressive experience with the 840D. His quick learning has expanded that expertise into really the whole Siemens automation family."

Phil first graduated Magna Cum Laude from Macomb Community College, with an A.S. in Mechatronics and Certificate in Automated Systems Technology. He then attended Wayne State University, and earned his B.S. Electrical Engineering. He primarily works on projects focused on engineering solutions for Siemens 840D Solution Line, Siemens Step 7, TIA Portal, RFID, and barcode readers. Phil has been a key member of our team working for the past 15 months on a project for our OEM customer supporting the General Motors and Ford joint 10-speed automatic transmission project. From manufacturing to installation, Phil has used his Siemens expertise to assist our team in supporting the OEM for the valvebody, case subassembly, and test & button-up lines. Phil is currently onsite in Romulus, MI supporting the pre-production phase.

What does Phil enjoy about working at Patti Engineering? "The comradery is amazing, in and out of the office," he says. "I remember my first day, I felt very welcomed and was impressed by everyone's wealth of knowledge, experience, and talent."



Math, science, and engineering are a family affair for the McRoberts. Phil's wife, Stephanie, is a high school mathematics teacher and STEM director. Their son, Everett, turned two this month - on Pi Day (3/14), fittingly. His dad, Richard, also shares his passion for electronics. They exhibited at the first Maker Faire Detroit in 2011 and again in 2012 with a large 3-Axis CNC Machine, tandem side-by-side bicycle, and radio-controlled teleconferencing Robbie-the-Robot. Phil and Richard are also members of the Academy of Model Aviation (AMA). Everett is a youth member, making it a 3-generation tradition. Phil primarily flies electric foam airplanes and multi-rotor copters. On Memorial Weekend, the family visits Phil's grandparents in Indianapolis and the AMA Headquarters' Museum in Muncie, IN. This annual trip is timed to coincide with The Greatest Spectacle in Racing; this year, Phil and Stephanie will attend the 100th anniversary of the INDY 500.

Phil is actively involved in the community with the Asian Pacific American Chamber of Commerce (APACC), Philippine Chamber of Commerce - Michigan, and the National Federation of Filipino American Associations. He is also an accomplished musician. He has been a pianist since he was little and he also plays pipe organ and low brass instruments. He toured Europe in 1999 with the Blue Lakes International Symphony Orchestra, marched with Canada's award-winning Philippine Heritage Band, performed on stage at the Lincoln Center in NYC, Grand Ole Opry in Nashville, Detroit Orchestra Hall. He's currently bass bone for the Redford Symphony Orchestra.

We are grateful to have all of Phil's talents at Patti Engineering.

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We work as partners with our clients. When you need an expert to help solve automation challenges, we are here to add value to your solution - enhance efficiency, increase productivity, and work with your team as a trusted resource. Visit our **website** for more information on our areas of expertise, or call us (248)364-3200 for a free initial consultation.

Thank you for your interest in Patti Engineering.

Best regards,

Georgia H. Whalen
Director of Marketing
Patti Engineering

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Replacing Legacy Networking Protocols with Ethernet

Nick Hitchcock presented in a webcast hosted by Control Engineering this month discussing applications of Industrial Ethernet. That webcast is now available on demand.

Additional Q&A about Industrial Ethernet

Click here to view Webcast

Instituting Best Practices - Two Integrators' Perspectives

Steve Palmgren, PE, VP of Texas Operations at Patti Engineering, Inc. joined Charles I. Sheets, PE, director, Industrial Systems Division at Matrix Technologies, Inc. on a webinar earlier this month to share their perspectives. The recording is available at the link below.

Click here to view Webinar