

CAPacity

Newsletter for the ISA Certified Automation Professional® (CAP®)



Spring 2009

In this issue:

CAP Profile of the Quarter	1
Engaging the Next Generation of Automation Professionals during Automation Career Week	2
A lean, mean, continuous improvement machine	3
Toon	3
Testing Windows	4
Welcome New CAPs	4

CAP Profile of the Quarter: Ryan Dsouza



While looking for ways to differentiate himself and find a competitive advantage in the automation job market, Ryan Dsouza came across the Certified Automation Professional® (CAP®) program on the International Society of Automation's ISA website.

"I have always been interested in some sort of industry certification, and I was happy to learn about ISA's CAP program," said Dsouza.

Dsouza is the North East Regional Manager for GE Drives & Controls, based in Edison, New Jersey. He is an Engineer, MBA, and Six Sigma Green Belt. He has worked in the control systems industry for 10 years, the past 2 years at GE. He is responsible for the following activities in his current role:

- developing and executing go-to-market and channel strategies to increase revenue and grow market share in GE Drives & Control products
- providing training and application support for GE AF6 series drives to GE sales teams, channel partners, and customers

Through a unique approach to his responsibilities, Dsouza secured the role of introducing the next generation of GE AF6 series Drives to the marketplace in 2008.

GE does not require certification for his position, but the company supported Dsouza in his pursuit of CAP certification. "GE definitely appreciates employees who have skills, experience, knowledge, and certification in applicable fields, especially if it can be applied to the job," he said.

Dsouza pursued certification to validate his skills and abilities in the industry. "The certification gives me an edge in the highly competitive global engineering field," he said. "I have increased my industry and technical knowledge, credibility, and quantified value, and I've moved into my current position because of my certification."

In response to industry requests, ISA established the CAP program in 2004 to recognize and document the specialized knowledge, education, and experience of automation professionals. CAPs are responsible for the direction, design, and deployment of systems and equipment for manufacturing and control systems.

"CAP confirms my capabilities in the industry and adds credibility to my technical opinions and decisions."-Dsouza

CAPs must renew their certification every 3 years. This is accomplished by earning Professional Development Points (PDPs) by working, training, and continually gaining knowledge in the field.

Dsouza admires the fact that continuing education points are required for renewal. He plans to renew his CAP certification in June 2009. "My certification helps me get more involved with automation professionals in the industry and stay current with what's new in this rapidly changing field," he said.

Dsouza took his certification exam at a testing center in New Jersey in June, 2006. In preparation for his exam, Dsouza looked to the CAP Learning System, ISA Body of Knowledge, white papers, ISA standards, and GE and Siemens training materials. He will use these resources to prepare for his renewal as well.

Continued on page 2

Engaging the Next Generation of Automation Professionals during Automation Career Week

On the final day of ISA EXPO 2008, 400 high school and middle school students exploded into the Reliant Center to engage in three informative hours of automation insights and an introduction to the possibilities of a career in the automation field. The event, called iAU2M8.08, focused on teaching students about interesting and rewarding career opportunities.

Students went on a guided tour of the ISA EXPO exhibit floor to get an all-encompassing view of the many industry products and services. Event sponsors Asco Numatics, C-STEM, FIRST,

Plans are in the works for a larger scale event this year during ISA EXPO. iAU2M8.09 will include more activities, host more students, and spend more time educating the next generation of automation professionals!

JETS, National Instruments, Shell, the Department of Engineering Technology @ University of Houston, and Yokogawa joined in the outreach effort. Some sponsors provided materials for the students to take home, others set up

student-specific exhibits in the mezzanine area of the exhibit hall, and some conducted presentations right from their exhibit space for volunteer-led student groups.



Topping off the day, a dynamic keynote speaker, John Hanks from National Instruments, addressed the young Houston school crowd. Hanks was a good fit for the keynote presentation. He discussed his role as Vice President of Industrial and Embedded Products at National Instruments, which prompted rich dialogue among the group. He talked about his job requirements in leading NI's future software and hardware product strategy and marketing, and covered other career paths in the automation profession as well.

The event was well-received by teachers and students of the Houston Independent School District. Plans are in the works for a larger scale event this year during ISA EXPO. iAU2M8.09 will include more activities, host more students, and offer more time for educating the next generation of automation professionals! ISA also hosted another demographic during Automation Career Week – college students and young professionals.



YAPFEST, a networking festival for automation professionals and students ages 18-30, attracted more than 250 attendees, breaking the attendance record from previous years.

Attendees enjoyed the following activities:

- Keynote presentation from Monte King, Manager of Workforce Development for Shell Oil Company
- Panel discussion focused on workforce development, hosted by Bob Vavra of *Plant Engineering* magazine. Other panelists included Chip McDaniel of Automation Direct and Greg Hale of *InTech* magazine
- ISA EXPO show floor tour, guided by Bob Vavra of *Plant Engineering* magazine



Watch for more information about iAU2M8.09 or YAPFEST 2009 at www.isa.org.

CAP Profile

Continued from page 1

When asked what advice he would give to others considering the certification process, he said to first complete the application; then identify exam topics and areas which need additional focus; and finally, study and take the exam.

Before working with GE, he worked with IBM for 3 years and Siemens for over 8 years in various roles, including design, engineering, commissioning, and sales and marketing of industrial automation products, solutions, and services for diverse applications in various industries in India and the US.

A lean, mean, continuous improvement machine

By Charlie Gifford

Trends come and go in manufacturing, but most manufacturers under competitive pressure to continuously improve are sticking with one trend—lean manufacturing.

Lean manufacturing methodologies are a major part of a continuous improvement business model. North American and European industries are applying it to compete with low-cost labor. Lean has to do with reducing waste in order to improve all key measures of manufacturing performance: quality, asset utilization, safety, materials management, cost, and delivery. In lean manufacturing, every person in the plant and business is a decision-maker. Each person learns to see the forming of workflow bottlenecks and waste and then knows the process to correct the condition quickly.

Lean is not just inventory or cost reduction as quite a few American companies mistakenly perceive it. Lean is all about creating a flexible combination of organization and systems to adapt work flows of manufacturing and supply chains to the instantaneous demand requirement of the market. This means a company must be able to identify the demand state of the supply chains and the individual plant, and reconfigure their resources to address bottlenecks and waste to optimize each work order path for the highest profit across the entire value stream.

The industry has documented and demonstrated business benefits of a well-implemented lean manufacturing program. All are challenged to continuously improve based on market demand. Otherwise, the gains from an initial implementation erode over time because they no longer align with the demand state or coordinate the plant's role in the supply chain.

Another huge American challenge is consistency with management turnover. Consumers expect consistent quality across the product line. A failure to perform and deliver quality from one plant to another for one product usually results in the customer leaving the brand entirely and switching to a different provider. It is not good enough for one plant to be world class, they all have to be.

The best manufacturers apply lean on the shop floor and extend it elsewhere in the company, to practice lean warehousing, lean logistics, and the like. You can apply some lean manufacturing techniques, such as value stream mapping, throughout the enterprise. Lean manufacturing never becomes business as usual with manufacturers who are serious about the process. They continue to improve. Process improvement is continuous because it is dictated by market demand, technology change, and scaling of new product introductions. There is always room for improvement.

Lean IT in plants

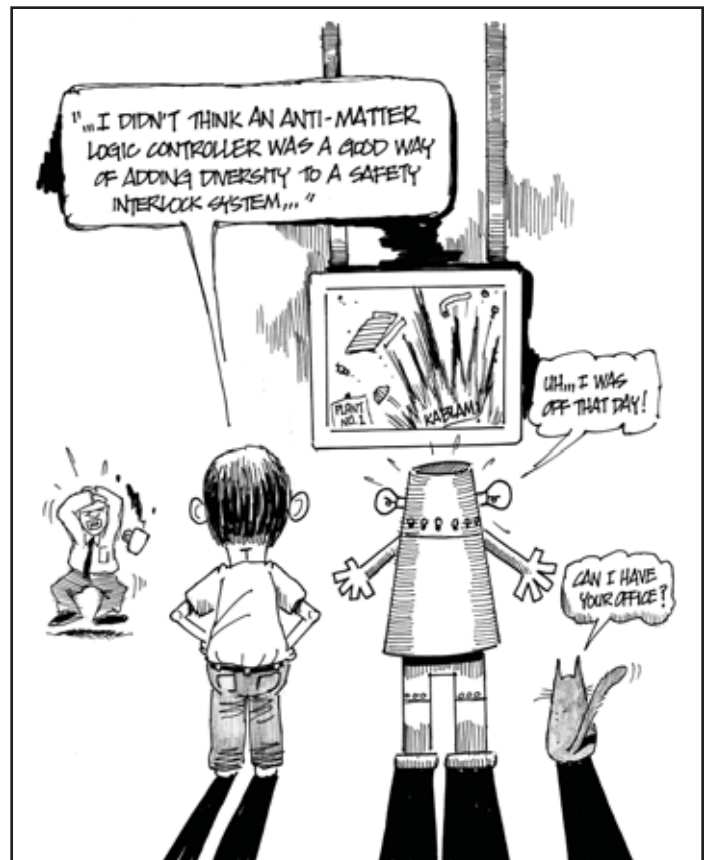
Driven by the globalization and distribution of manufacturing, a more recent trend over the past 10 to 15 years is the computer integrated plants. With powerful servers and a variety of software packages becoming lower cost to acquire and deploy, manufacturers have implemented more applications than in the early 1990s. Some plants now use hundreds of different applications, with some running on devices or embedded in manufacturing equipment on the shop floor, and some hosted at the plant's local internal data

center near the plant management offices.

However, this first age of Lean IT was based on disparate applications comprised of different data models, application architecture, transactions, and messaging constructs. The cost of ownership of these applications is very high due to lack of similarity, flexibility, and integration methods. Consequently, plants use spreadsheets and word documents for data collection and analysis and for other information processing, in addition to available plant applications. This makes data warehousing, correlation, analysis, and event-driven workflows impossible to do in a cost-effective manner.

Lean IT strategy must be driven by a continuous improvement business strategy. IT and manufacturing departments must implement a company's strategy throughout their manufacturing strategies and systems. At the best manufacturers, IT's focus is on supporting and enabling improvements in work practices. IT architectures and systems need to continue to identify and improve manufacturing metrics to represent the current manufacturing state of change. To support lean manufacturing, the primary IT responsibility is to ensure the right information is available when decision-makers (everyone in the plant) need them to make correct, timely decisions. Some plants are starting to program smart, automated devices to identify, analyze, and correct workflow as well, especially in high-volume, highly automated facilities. They are starting to

Continued on page 4



The Life and Times of an Automation Professional—An Illustrated Guide, by Ted Williams, Stan Weiner, and Greg McMillan

Welcome New CAPs

Congratulations to our newest group of Certified Automation Professionals!

Adedotun Adeyemi
Quaddynamics Nigeria Ltd

Ali Al-Matouq
Aramco

Anthony Parker
Polytron

Arif Shalahuddin
Chevron

Bryan Singer
Kenexis Consulting Corp

Daniel Perry
OG & E

David Matsulavage
JNE Consulting INC

David Mitchell
Contech Control Services

Edward Bailey

Gary Ng
AltaSteel Ltd

James Miller
BAEe Systems

Judith Lesslie
BP Cooper River Plant

Kazim-Junior Mohammed
Atlantic LNG

Mark McCutcheon
Nexen Inc

Mihir Shah
Qatar Fertiliser Company

Nareshkumar Balakrishnan
Abudhabi Oil Refining Co

Peng Huat Khor Carigali
Hess Operating Co

Peter Baker
EPG Companies Inc-NBT Division

Ronald Battle
UT Battle

Salma Nagir
Atlantic NLG

Samuel White
Lyondell Basell Industries

Thomas McGreevy
BP

Tim Nebel
Fort Dodge Animal Health

William Simoneau
National Grid

William Thomas
3M

2009 Electronic Testing Windows

Two testing windows are still open for 2009. You must postmark or submit your application by the deadlines below in 2009. Visit www.isa.org/CAP and click the Apply link to find the available application option.

Exam Testing Window	Exam Application Postmark Deadline
Window 2: 1 July 2009 – 31 August 2009	Friday, 15 May 2009
Window 3: 1 November 2009 – 31 December 2009	Tuesday, 15 September 2009

Improvement

Continued from page 3

embed business processes in IT systems. Service-oriented architecture accelerates the Lean IT approach. But we need changes to the IT systems to make a permanent improvement in work practice. Over time, positive changes accumulate and compound to provide substantial, sustained business benefits.

ABOUT THE AUTHOR

Charlie Gifford is chief manufacturing consultant at 21st Century Manufacturing Solutions LLC, in Hailey, Ind. E-mail him at charlie.gifford@cox.net.



Founded in 1945, the International Society of Automation (www.isa.org) is a leading, global, nonprofit organization that is setting the standard for automation by helping over 30,000 worldwide members and other professionals solve difficult technical problems, while enhancing their leadership and personal career capabilities. Based in Research Triangle Park, North Carolina, ISA develops standards; certifies industry professionals; provides education and training; publishes books and technical articles; and hosts the largest conference and exhibition for automation professionals in the Western Hemisphere. ISA is the founding sponsor of The Automation Federation (www.automationfederation.org).

Certification

ISA certification provides an objective, third-party assessment and confirmation of a person's skills, and gives them the opportunity to stand out from the crowd and be recognized. ISA currently offers two certification programs: Certified Automation Professional® (CAP®) and Certified Control Systems Technician® (CCST®).