

CAPacity

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



Spring 2008

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CAP of the Quarter: Daniel Comfort

After working for many years as a mechanical engineer, Daniel Comfort moved into automation and controls. Obtaining ISA's Certified Automation Professional® (CAP®) helped demonstrate his competency in the new field.

"When I decided to make a career change in late 2005, one of the primary questions I'd get asked in interviews was how I could prove my competency in controls," he said. "My education is in mechanical engineering and controls is seen as an electrical engineering function."

Comfort worked many years in the chemical industry for Union Carbide, Allied Chemical and DuPont, primarily in his hometown of Buffalo, N.Y. He started in the areas of industrial hygiene and emissions control and moved into reliability engineering over the years after recognizing a need. "It seemed we were always short of control people and the electrical engineers were not keeping up with control systems installation and upgrades," he said.

To compliment his work experience in controls, Comfort registered for the CAP review course and exam while working at DuPont. He took the course and exam, and became certified in October 2007, shortly after beginning his current position as senior design engineer for Fluor Corporation in Sugarland, Texas.

"The ISA certification was documentation of my capabilities for the interviews," he said, explaining his motivation for pursuing it. "What better evidence is there than certification from the world's recognized authority on controls?"

In his role at Fluor, Comfort designs steam-unit refineries for the Kuwaiti National Petroleum Company. His job responsibili-

ties include front-end engineering and design; preparing initial drawings, specifications and estimates; and safety system specifications for new refineries and expansions.

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. They must earn Professional Development Points (PDPs) by working, training and continually gaining knowledge in the field in order to maintain their certification which is renewable every three years. Comfort plans to keep his certification current and renew in 2010.

"The decision to pursue the CAP gave me personal motivation to reengage my core competencies and catch up with current technologies," he said. "I had been working with older programmable controllers at that time and felt I was falling behind."

An additional benefit of his certification has been to connect with others through the CAP network.

"There is so much change in the industry and in technology, we have to sustain our education at a greater rate," said Comfort. "Certification is a means to do that."

To prepare for the exam, Comfort read books and back issues of magazines, used the sample exam questions in *InTech* magazine, and took the review course, which he found extremely valuable.

"Keep reading all the time, go to engineering shows and ISA vendor presentations," he said, advising future CAP candidates.

Welcome New CAPs

Congratulations to our newest group of Certified Automation Professionals!

Bashir, Imran
Bantrel Corp.

Bromka, Joseph J.
M & W Zander US
Operations, Inc.

DeYoung, Mark W.
Stone Technologies, Inc.

Dixon, Gregory Harold
Mesa Associates

Garrelts, David Robert
AES Corporation

Griffin, Jay L.
Maverick Technologies

Hryckowian, Andrew
Ingersoll Rand Johnstone

Leger, Barry L.
ConocoPhillips

Miller, Glenn Richard
Maverick Technologies

Nash, Thomas Edward
Schering Plough Corporation

Netchitaliouk, Andrei I.
Intevac

Parks, David L.
Mangan, Inc.

Patel, Jagdish K.
Polytron, Inc.

Pluymers, Ronald D.
Sunoco

Sosa, Enrique
T Y Lin International H J Ross

Steenefeldt, Terence George
Eskom Enterprises

Thompson, Lawrence M.
Electronic Sys. Dev. & Training

Tumm, Laszlo E.
Cybertech Automation

Waheed, Asim
Intech Process
Automation, Inc.

Wang, Bing (Brian)
Vale Inco

Wilson, Chris S.
Tetra Tech

Kissing Cousins – Automation in the Audiovisual Industry

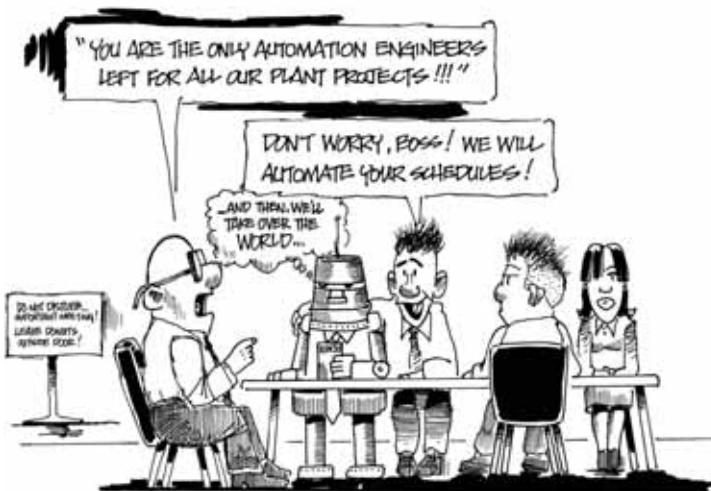
Three years ago my wife and I decided to move home. We'd been in New York long enough and Atlanta was calling. So to get back to my hometown I hung out a shingle and started looking for automation work there. I was hoping to pull in some energy management consulting jobs or maybe a small design for a building automation system. Yet after being at one firm for 10 years, I had forgotten how much time goes into finding new customers. So when a friend suggested I program his audiovisual controllers as a side job, I didn't laugh as quickly as I had the many times he'd suggested the same thing before.

Audiovisual automation looked nice in this cousin to industrial automation. Most control was discrete—maybe a little wild as far as cross-manufacturer communication went—but it was by and large an easy job. Because all I had to do was program this stuff, I didn't need to invest a lot of money to get this side business running; I took the classes offered on programming and design and a couple of certification tests, and in just a few months I had all the credentials I needed to go out and solicit work in this new field. Work came quick, projects were comparatively small and it was low stress. For once I was not worried about missing deadlines, which of my key guys maybe out sick, would startup reveal some hidden design flaw, or whatever other problem you could imagine. All I worried about now was whether I could turn on that fancy flat panel TV with the serial command I found online. And best of all, I could still keep looking for real work. And when I found it, I didn't have to let this little gravy boat go. I could juggle these small jobs with the real stuff.

There were a number of surprises though. Code compliance issues quickly revealed themselves to my trained eye. "Where is your burner cutoff switch?" "Don't you want to protect your processor from network security issues?" "Have you looked at the power load on that cable?" "How do you plan on shutting off those speakers so they don't interfere with the fire alarm?" Not many of these integrators had thought of these things. These systems typically were an afterthought to the building design. No inspectors were going to check them out, and, if it was a residential job, the homeowner's desire was the final word.

And it was so wasteful! Here I am selling energy management on one side of the shop and on the other I'm making it so easy to burn energy. "With one click you have all the fireplaces in your house running!" "We can have the blinds open in your 10th-story conference room, Mr. CEO, so they can see the cityscape, and I'll just force that projector to its maximum output and crank the AC to adjust for the heat gain." While I'm not a greenie, I don't think you should just throw money away—even when it's not mine.

I started picking up a few jobs in this cousin industry because people saw the CAP® and were curious. "What is this strange



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

designation?" "How does this fellow know how to make all these dissimilar systems play so nice but have no clue as to what the resolution of an HDTV is?" "How can he program a surround sound receiver to output through three zones but doesn't know why DTS® is better than Dolby® Digital?" "How can he calculate the bandwidth of a videoconference call but can't tell me why it needs auto-echo cancellation in the room?" And then it hit them, I was a stranger in a strange land. I was an automation professional and didn't care about the placement of their speakers. I was a technical person who could provide a much-needed service without an opinion on their product. The residential integrators had heard of such a person but they couldn't find him at Best Buy. The commercial integrators were even more amazed that I hadn't started my own integration firm or been quickly gobbled up by one of them.

"I started picking up a few jobs in this cousin industry because people saw the CAP designation and were curious."
- Jacob Jackson

And then something happened, something wonderful and terrible all at the same time. My wife of eight years announced we were having a baby (whose imminent arrival is just hours away as I write). My wonderful little startup was kicking into high-gear on the industrial side but we hadn't yet tackled the minutiae of operations on the business side—such as securing comprehensive health insurance—and thus, what was wonderful news for our family wasn't so wonderful for the business.

Then I met Scott Walker and Andy Beach, who own Waveguide Consulting. Scott—who is all about energy management—got his LEED accreditation and embarked on a crusade to turn the AV industry green, and was looking for some muscle to back him up. Now the perfect setup: Scott hears about me from a vendor, Andy happens to be a former Emerson guy himself, and the CAP catches their attention. So we started talking.

I quickly found that we have a workable arrangement: Scott's passion for green is close enough to energy management for me; Andy is a great CFO, so I never again have to file a company tax document; and they have full-coverage health insurance. We struck a deal and then things started to get interesting.

Scott actually believes in standards. He's been the president of InfoComm International (think ISA for AV) and is the current chair of the ANSI Performance Standards Committee for InfoComm. He even went to the ISA Expo to actually see industrial automation products. At Waveguide, we actually design AV solutions, just like an industrial system. There are design reviews, site acceptance tests, project planning meetings, vendor training, a programming department and real licensed professional engineers. The designers and project managers at this company actually consider and use industrial products. My goodness, I found the Promised Land!

So over the past year of entrée into this cousin industry, I'm bringing what I know from the old world. We're designing in power meters to show energy consumption on systems. We're working with an industrial rep to find an RFID solution for a customer. We've talked with Bryan Singer about ISA SP99 and how we can adapt the standard to this industry. Bryan did a presentation for the local section and one of the guys even came out to see what he could learn, which turned out to be a lot.

It's a small start, but there are plans for a whole lot more and I'm here just having a grand ole time. Do I miss the more industrial world? Kind of. It's nice to see a product, or thousands of them, come out of some machine you designed. The range of sensors has greatly reduced, no more chemical processes to even think about. But the IT world is much closer to this one; it needs SP99 even more than a lot of plants do, to tell the truth. (I'll tell you why another time.) And the toys you get to play with can't be beat! I still don't know, or care, what the difference is between DTS and Dolby Digital, though. I hope they don't kick me out because of it.

-Jacob Jackson, CAP, CTS, MCP, Control Systems Engineer, Waveguide Consulting

Testing Window Deadline

Are you getting ready to take an exam? Don't delay—the next testing window deadline is rapidly approaching!

All CAP applications must be postmarked on or before 15 May 2008 to be eligible for Window 2 with testing between 1 July and 31 August 2008.

Testing must be completed within two exam testing windows. Your first exam testing date must be scheduled during the first available window after you postmark your application to ISA. All rescheduling and retesting must be completed within the two consecutive exam testing windows within your nine month eligibility period. If you postmark your application between 16 May and 15 September 2008 the next exam availability period is 1 November–31 December 2008.

Here are some helpful reminders about the application and exam process:

- Download your application at www.isa.org/cap and mail, along with payment, to ISA
- Upon approval of your application, a testing eligibility code will be mailed to you
- Go to www.prometric.com/ISA to locate a Prometric electronic testing center near you to schedule your exam date
- Prometric will send you a test date confirmation via e-mail
- Report to the testing center at the scheduled time, bring a valid photo identification and the confirmation email you received from Prometric.

You will be given your pass/fail results immediately after testing at the Prometric test center.



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Please share this publication with others in your company:

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- Plant Manager
- Systems Integrator

FAQs: Renewals

How will I know I need to renew?

ISA sends renewal reminders in the forms of letters, postcards, and e-mails; however, it is the responsibility of the CAP to send the paperwork in at the appropriate time. Please ensure that you keep your contact information updated with ISA so that you will receive these notifications. To update your member contact information, send an e-mail to info@isa.org, call (919) 549-8411, or log on to the member section at www.isa.org.

How many Professional Development Points (PDPs) do I need to renew?

135 PDPs are required to renew your certification prior to your certification expiration date. To reinstate your certificate after your expiration date, you must submit your application post-marked within four (4) months after your certification date. Up to 90 PDPs can be earned solely from work experience and a minimum of 60 PDPs must come from work experience. The remaining points will need to be earned through training and/or professional activities.

If you do not renew within four months after your expiration date, your certification is considered lapsed and you must submit a new application and retest to reinstate your certification.



Founded in 1945, ISA (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.

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 three certification programs: Certified Automation Professional® (CAP®), Certified Control Systems Technician® (CCST®), and Certified Industrial Maintenance Mechanic® (CIMM®).