

# CAPacity

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



Summer 2007

**In this issue:**

CAP® Profile of the Quarter	1
Workforce Development on Main Menu at ISA	2
Welcome New CAPs	2
Latest News	3
Frequently Asked Questions	4

## CAP® Profile of the Quarter: Rahul Bhojani



When ISA established the Certified Automation Professional® (CAP®) program in 2004, Rahul Bhojani received the announcement by e-mail. He had participated in the organization's survey assessing the need for the certification program.

"I had been waiting for the program to be developed," he said. "I took the exam within the first year that it was offered."

Bhojani works as a senior process control technology specialist at Bayer Corporate and Business Services in Baytown, Texas. He has worked in automation for 10 years, seven in this position. His current responsibilities include developing scope, estimates and specifications; testing; commissioning; and startup of instrumentation and control systems.

Although Bayer does not require certification for his position, the company supported Bhojani in his pursuit of the certification. "They paid for all my exam-related expenses, including the fees and review books," he said.

Bhojani pursued the certification to document his competency in the field. He describes the primary benefits as personal and intangible; he believes it gives him an edge in the highly competitive, global engineering field. "I have a broader knowledge of the field after having prepared for and taken the exam," he said.

With the CAP® listed after his name on his business cards and e-mail footer, Bhojani gets some questions about it. "People will ask me about it if they don't know what it is," he said. "It is growing in recognition."

In response to industry requests, ISA established the CAP® program 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 renew their certification every three years. This is accomplished earning Professional Development Points (PDPs) by working, training and continually gaining knowledge in the field.

Bhojani prepared for the exam by reviewing the ISA Study Guides, reference books listed on the ISA Web site, standards, vendor manuals, handbooks and white papers. He allocated 10 hours a week over three months to study.

"It requires an organized approach," Bhojani said, when asked what advice he has for those who are preparing for the exam. "Complete and submit the application first, getting those required documents out of the way. Then identify the technical areas covered on the exam and those you need to learn more about."

The CAP Learning system can help with this step, Bhojani said, but it was not available when he was preparing for the exam.

The third step in the process is to gather the study resources needed, and then finally beginning to read and study. "Allocate a specific number of hours each week to study, and be disciplined in sticking with your plan," he advised.

Bhojani has a bachelor's degree in Instrumentation Engineering and a master's degree in Electrical Engineering. He is a licensed Professional Engineer in Texas and a Certified Functional Safety Expert. He plans to keep his CAP current by meeting the continuing education requirements and renewing it in July 2008.

## Workforce development on main menu at ISA

By Ellen Fussell Policastro

In the next five years or so, the automation profession, like many others, will start to feel the severe strain of Baby Boomers leaving the workforce. Now is the time for organizations to start planning ahead, since the industry will have to compete with other industries for the available candidate pool. If industry leaders start the legwork now, automation professionals can make sure the industry has the right plan in place to keep moving forward.

That is where ISA comes in. In February, ISA leaders from across the globe met in North Carolina to discuss strategic issues surrounding the profession and industries in which automation professionals work. How can the next generation of engineers prepare themselves to lead in the automation profession? How can current automation professionals incite them to pursue a career in the field?

During the meetings, ISA President Steve Huffman, also vice president of Mead O'Brien in St. Louis, Mo., and ISA Executive Director Patrick Gouhin led discussions on how ISA and other member organizations in The Automation Federation can facilitate workforce development through a coordinated strategy to advance the automation profession. "Projects such as K-12 education programs, university relations, model automation curriculum, CAP and CCST Associates, training, corporate membership, government relations, and diversity recruitment can serve the current professionals as well as the next generation workforce," Gouhin said.

One way to get students involved is to "continually work with industry to identify workforce needs and respond by developing education and training programs," said Tom Devine, ISA's chair of the board of district VPs and managing designer at Stearns & Wheeler Engineers in Cazenovia, N.Y. Certification programs are another tool to demonstrate specified levels of experience and competence in the automation profession, he said.

"There's nothing in use today that isn't touched by automation," said Kim Miller Dunn, Emerson's director of sales development and support and ISA's president-elect secretary. "Yet when college students are looking at career opportunities, they don't know the profession exists," she said. Also, "technology is changing so fast, the only way to keep up is to network with other professionals in the field," which is why automation professionals need to talk up automation to students, explore options to get them involved, and strengthen the chain that links us all together, she said.

But just building new programs is not the total answer; the key is a full-line strategy. "We need to identify the ABCs of where we are going, what we want our members to do, how to do it, and why they should do it," Gouhin said. It is important to generate more questions than answers, Gouhin said. In developing a K-12 program, for instance, you might ask, "Should I approach my local school district? Who do I go to? Do you have a contact?

What do I say? What can I expect? Do you have sample talking points for me? How about sample experiments I can take? What advance follow up should I do? How do I make sure it is at the right level? How do I relate best to the kids and to the teacher? What post-visit follow up should I do? What should I say about ISA? Should I push these students into an industry that is always changing and might go away?" ISA anticipates developing a coordinated program addressing these kinds of questions in the context of the larger workforce development strategy.

While few college students are aware of careers in the automation profession, another challenge to overcome is some "colleges often fail to include industry standards in course work," said Leo Staples, supervisor Field Technical Services at OGE Energy Corp. and ISA treasurer. "One way to address these problems is to develop intern positions for college students," he said. "During the intern period, companies should introduce students to issues such as industry standards, certification, and the need for continuing education."

### About the author

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## Welcome New CAPs

Mack Andrews	Univ of Texas Hal C Weaver Power Plant
Jeffery Blue	Southern Nevada Water System
Gregory Bocak	Atlantic Control Systems Inc
Shawn Clement	Motiva Enterprises LLC
Ronald Cordier	Mount Sinai Medical Center
Thomas Devine	Stearns & Wheeler Engineers LLC
Charles Hummer	LDP Group
Daniel Hurley	Reheis Intermediates
John Kowalcheck	Equipment & Controls Inc
Michael Kruger	Exelon Power
Matthew Lees	Schering-Plough
James McCrindle	Chevron Inc
Deborah Miller	Zeon Chemicals Inc
Kim Miller Dunn	Emerson Process Management
Stephen Orton	IAP World Services
Kamlesh Parmar	Fluor Canada
Larry Ray	Maverick Technologies
Charles Rose	Jacobs Technology
Craig Salahub	Petro-Canada Oil and Gas - North American Natural Gas
Kishorkumar Senjaliya	Bantrel Corp
Manish Sood	Saline Water Conversion Corporation
Raymond Spangler	Central Automation Inc
Vernon Trevathan	Control & Integration Management LLC
Wyn Triska	PGE
Rick Walkemeyer	Yorba Linda Water District
Bruce Yosko	Merck & Co Inc

## Latest News

### Testing Window Deadline Approaching

Are you planning to become a CAP® before the end of the year? Testing Window 3 is available, which is 1 November–31 December. The deadline to apply is Monday, 17 September 2007. Take your exam electronically and receive immediate results of your CAP status. To review the details click [www.isa.org/examschedule](http://www.isa.org/examschedule).

### CAP Community

Have you heard about ISA's newest email community? It is the CAP Community. This email discussion group is for those who are currently Certified Automation Professionals®. Members can post questions when trying to solve technical issues, jobs that are open, or why they became a CAP® and what the benefits have been.

If you are interested in joining the CAP Community and are currently certified go to <http://www.isa.org/cap/community> and request to join. If you are ready to become a CAP® go to [www.isa.org/CAP](http://www.isa.org/CAP) and click "Apply".

### Take the CAP Exam for Free

ISA's CAP Review Course (EC00) is being offered at ISA EXPO 2007 in Houston at Reliant Center 1-3 October, 2007. The CAP exam will be given the day after in the paper/pencil format. If you register to take the course, and complete the CAP application and submit it to ISA by 23 August, the exam application fee will be waived. You could save up to \$295. For more details on the course visit [www.isa.org/training/JEC00](http://www.isa.org/training/JEC00)

If you have previously applied to take the exam electronically, and decide to take it at ISA EXPO, you must contact ISA to change your exam format. If you do not make this change by the application deadline ISA cannot confirm you for the exam on 4 October. If you have questions please contact Customer Service at (919) 549-8411.

### Examen CAP en Español—El examen del CAP está también disponible en Español!

The CAP exam is now available in Spanish. To take the exam in Spanish you must complete the Spanish application. Visit [www.isa.org/CAP](http://www.isa.org/CAP) and click "Apply." The CAP Review Course is not currently available in Spanish but may be soon. Look for program updates at the link above. If you have questions, a bi-lingual customer service specialist is available to assist you at (919) 549-8411.

### Certification Quiz & Conquer

Join ISA CAPs, CCSTs, and CIMMs on 2 October at ISA EXPO 2007 as they showcase their knowledge on stage during the first ever ISA Certification Quiz & Conquer. This competition will consist of two-teams (one CAP®, one CCST®, and one CIMM® on each) answering questions on-the-fly about safety, process control, electrical, systems integration, vibration analysis, and more! The competition begins at 7:00 p.m. and will be held on the expo floor in the Safety Exchange area. See you there!

### Hungry CAPs at ISA EXPO 2007

If you are CAP® certified and you will be at ISA EXPO in Houston, please make sure you receive a CAP ribbon when you receive your ISA EXPO confirmation and name badge. Draw attention to the fact that you are hungry for knowledge, and that you have more now that you are a CAP®. You may want to attend the CAP networking luncheon on Wednesday, 3 October as well! Talk to other CAPs about what's going on in the world of automation, and help others understand why being certified is the way to go. The cost for the buffet lunch is \$28 per person and you can register via the ISA EXPO web page. [www.isa.org/isaexpo2007](http://www.isa.org/isaexpo2007).

### CAPs in the News

Congratulations to these CAPs who have been nominated to hold ISA offices in 2008:

**President-elect Secretary:** Gerald Cockrell, CAP  
(Indiana State University) Indianapolis Section

**Professional Development Department**

**Vice President-elect:** Nicholas Sands, CAP  
(E.I. DuPont Chemical Solutions Enterprise) Wilmington Section

**Strategic Planning Department Vice President-elect:**

Ian Verhappen, CAP

(MTL Instruments Group) Edmonton Section

### CAPping Things Off

As the number of CAP® certified automation professionals' increases, CAPs will be in the "automation news" more. Let ISA know about what you are doing out in the industry. Send your stories to Andrea Smith at [asmith@isa.org](mailto:asmith@isa.org).

Earlier this month, Scott Sommer, PE, CAP, Automation Technology Manager with Jacobs Engineering, did some research for a paper he is co-authoring with Chris Russell, Principal Process Control Technology Specialist, of Bayer Technology Services Americas which will be presented at ISA EXPO. Sommer wanted to survey those engaged in systems integration or those who use systems integrators in their plants or facilities. He opened the survey to many automation professionals, including those in the CAP Community. The response he received was excellent—with over 40% of the CAPs in the CAP Community responding with valuable information.

Sommer said "Most of the information received from CAPs will be used in the presentation. We got a good statistical sample." Half the survey responses received were from CAPs, and according to Sommer "we know we can bank on the experience level the CAPs have in the industry."

Sommer sought CAP certification for his own professional development and as a way to validate the automation knowledge he has gained through his 25 years experience with large manufacturing companies, engineering firms, and principal ownership in a systems integration firm. He plans to renew his CAP next year. Thank you Scott for sharing how you have benefited from being a CAP.

To learn more about this presentation, 25 Valuable Lessons I Learned As a Systems Integrator and Some I Didn't, as well as other events at ISA Expo 2007, go to [www.isa.org/isaexpo2007](http://www.isa.org/isaexpo2007) and search the technical conference program by title or author.



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## Dated Material—Open Immediately!

**Please share this publication with others in your company:**

- Automation Engineer
- Control Systems Engineer
- Plant Manager
- Systems Integrator

### Frequently Asked Questions

Each quarter we'll try to answer some of the more common questions about the CAP program. If your question isn't here, try looking online at [www.isa.org/CAP](http://www.isa.org/CAP) at the complete list of FAQs, or call ISA at (919) 549-8411.

#### What are the acceptable work experience and education requirements?

**I. If you hold a 4 year technical degree:** Four-year academic degree from an accredited educational institution in a technical or technology field including engineering, chemistry, physics, math, etc.

*Related work experience.*

**II. If you hold a 2 year degree or do not have a degree:**

*Related work experience.*

Related experience means a minimum of ten (10) years of work in the automation field. One (1) year of work experience means 1,500 hours of active employment. A cumulative total of 15,000 hours of documented work experience is required during the ten (10) year period prior to your application date. An Associate Degree in automation or a related technology from an accredited educational institution will count as two (2) years of work experience.

Evidence of responsible charge position

Work experience and educational periods may not overlap when compiling the total number of years required for this certification.



Founded in 1945, ISA ([www.isa.org](http://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®).