

CAPacity

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



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CAP® Profile – Jeff Putnam

Jeff Putnam was the first in his company to receive the ISA Certified Automation Professional® (CAP®) designation. Since successfully completing the CAP exam in 2004, he has coached several colleagues through the process.

“The CAP® is a certification that works for what we do,” said Putnam, senior engineer with MAVERICK Technologies in Columbia, Ill. “It encapsulates work in this field, so I thought pursuing it would be a good idea.”

MAVERICK Technologies is a next-generation operational consulting and systems integration firm, committed to raising business value through the innovative application of industrial automation and information technologies. Their operations network includes more than 500 engineers, IT professionals and other personnel at numerous locations around the globe.

Putnam’s current job responsibilities involve supervising a six-person startup team at a customer site. The team is upgrading controls on the customer’s automation system. Putnam provides oversight and troubleshooting and serves as the primary point of contact with the customer.

He learned about the CAP® from the president of his company, who participated in developing the certification program. “He and some others in ISA locally were highly involved,” Putnam said.

MAVERICK does not require the CAP® certification but supported Putnam’s pursuit of it by paying his exam fee. “It is not a requirement,” he said, “but it could be beneficial around review time.”

Putnam’s motivation for pursuing the CAP® was primarily personal. “I did it for myself for the most part, hoping that it is going to become required on certain projects in the future,” he said, comparing CAP® to customer-driven certification requirements such as PE. “It’s starting to take hold, but it is not there

yet,” he said. “Customers are becoming more aware of it, and some are beginning to request it on their projects.” He believes having the CAP® designation would be helpful if he decided to change jobs. “It is known within the automation industry,” he said, and consequently, he recommends the program to anyone considering it.

“I learned a lot by going through the process,” Putnam said. “With 15 years in the industry, I found there was still so much I did not know and had to become familiar with for the exam.”

Putnam participated in a beta test of the ISA review course before it was officially introduced. “If you can take the review course, do it,” he said. “It is an excellent class to identify what areas you need to study.”

Calling the breadth of the exam its biggest challenge, Putnam studied for one month in preparation. In addition to taking the review course, he reviewed references that were cited in the course.

“CAP is a certification that works...It encapsulates work in this field.”

–Jeff Putnam

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.

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

Putnam plans to renew his certification in December 2007.



Berra: Automation Engineers Have 'Greater Power'

An engineer's job 10 years ago couldn't be more different from the position today. Just knowing how to engineer a process is not enough anymore. Today, you have to know all the parameters behind the process—the true business decisions.

Who better to talk about the changing world of automation than Emerson Process Management President John Berra? *InTech* editors recently traded questions with Berra.

InTech: As head of Emerson Process Management, how have you seen the process automation business change over the years?

Berra: I've seen a staggering amount of change in both the technology and the business. We've gone from slide rules to servers, "huff and puff" to bits and bytes, bus bars to Fieldbus, reset wind up to model predictive control. Automation has changed continuously to help process companies improve safety, profitability, and environmental compliance. Today's manufacturers are struggling to improve the performance of their businesses and generate returns above the cost of capital.

Aging plants in mature markets are run by a shrinking workforce and must compete with newer plants—and do so globally. Estimates run as high as \$65 billion of installed automation around the world, which really needs to be upgraded to stay competitive.

Our users continue to innovate, designing new processes that demand better automation utilizing state of the art technology. Examples include offshore deepwater drilling, oil sands steam assisted gravity drainage, liquefied natural gas, biogenetic drug production, and ultra-super critical power plant technologies.

New facilities in emerging markets face the challenge of a less-experienced workforce and must reach world-class performance in order to export. New facilities want to take advantage of the latest in automation but also want technology that is proven.

InTech: How has Emerson changed?

Berra: We've changed in many ways, but we have also remained true to our values and beliefs. We help our customers move from abnormal situation management to abnormal situation prevention through products and services designed around predictive diagnostics. We're very proud of our track record of being at the forefront of innovation in our industry. We've integrated all our products and developed new ones to transform plants into smart manufacturing facilities.

We've expanded our customer support expertise around the world by greatly increasing the number of solutions personnel within our various industry centers of excellence. This enables us to collaborate with customers as their automation supplier, especially to serve a growing demand for us to perform as main automation contractor (MAC). Since the new technologies have made automation more powerful for businesses, we as automation suppliers are growing to perform the MAC role in projects, engaging with users and contractors at the beginning of projects—performing front end engineering, and on through commissioning and startup.

Another major growth area for us is asset optimization. We've developed technologies and services to help customers identify and change their business processes for sustained improvement in process and mechanical equipment, instrumentation, and electrical power. Our global asset optimization force has grown to more than 1,800 personnel.

InTech: How has the role of the automation professional changed over this time?

Berra: There are fewer automation engineers and managers in the plant, and yet they have greater power than ever to impact their organizations. They can be more productive, by virtue of amazing new productivity tools and software, and communications that brings the whole plant to their "window." They can be more in touch with their plant by using networked intelligent devices that reach deeper into the facility and continuously report the status of their process, and of their instrumentation and equipment. They can anticipate issues, interact with processes and equipment only when needed, and do so locally or remotely.

Success today includes solid skills in the fundamentals of P&L and balance sheets, and most importantly, the ability to put a clear concept together and then sell it to their management. The automation professional is the unsung hero of our indus-

Join us for lunch and meet your fellow CAPs face-to-face

ISA will host the second annual CAP Luncheon at ISA EXPO 2006 in Houston, on Wednesday, 18 October.

Enjoy this special event with your fellow CAPs and others that are interested in becoming CAP certified. Expand your personal and professional network and take advantage of this great opportunity.

Tickets are just \$30 per person. Register online today at www.isa.org/isaexpo2006.

try. No other discipline requires broader knowledge. No other discipline can have such a dramatic impact on the company's performance. I stand in admiration of the people who make this industry tick.

InTech: Are these engineers and managers making the change?

Berra: Some are, although recall that there are fewer of these professionals in the plants, and they are under increased pressure to deliver day-to-day results across an expanded responsibility. I've often said theirs is a noble profession, and it's true—they do a tremendous job of managing the manufacturing around the world. However, they need help with improving their automation and changing their firm's business practices to realize the benefits of new technology. This is where we as automation suppliers, and ISA with its current reach to over 30,000 members, have a huge opportunity—actually a responsibility—to put in place the base and support to increment the efficiency, safety, and environmental citizenship of global manufacturing.

These are highly skilled professionals, and they do have the desire to make the improvements. We need to make it easier and collaborate with them, bringing needed resources to the table.

It's about added education, training, and support—for a handle, let's call it "Automation 201"—a program that builds on their existing skill set to help them develop the vision of what's possible today, and guides them to create projects that maximize use of new techniques. Further, it helps them justify and sell projects, deploy the new technology, and change working practices to realize the benefits.

InTech: What role can ISA play in this environment of change?

Berra: ISA has the legacy, and it has the strength through its worldwide reach to a huge number of engineers and managers. Outside of the technology and applications, there are major needs for assistance with networking and coaching automation professionals to further automation vision development, project forming, and justification, and then changing business practices to realize benefits. ISA must help their members become the automation professional that I have described.

InTech: What advice would you offer to a person entering the field of automation?

Berra: I think it's important to broaden the engineering mindset to possibly a more holistic "automation professional" view. Enter with a disposition to change the status quo, to innovate. The tools are clearly available. There is no profession I know that can have such a profound impact on the operation and safety of process plants. ISA is there to nurture the automation professional. Take every opportunity to add skills of vision, presentation, and ability to sell ideas. I've been around a long time, but I can honestly say that there is no better time than now to be an automation professional.

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Frequently Asked Questions

Each issue 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 at the complete list of FAQs, or call ISA at (919) 549-8411.

What documentation is necessary to meet the testing requirements?

As an applicant, you must provide documentation with original signatures that verifies all work experience and training, and official transcripts that document your educational experience. Certificates of completion do not qualify as documentation of training or apprenticeship.

Do all of the Verification of Employment and Verification of Responsible Charge forms have to be submitted with my application or can I mail them separately in order to meet the Application Deadline?

All documentation should be received with the initial application. If ISA receives an application that does not meet the requirements (ie, is missing documentation), the applicant will be notified and given the opportunity to provide the remaining documentation. For candidates taking an exam at a private site who do not provide all documentation by the date ISA requests, you will need to reschedule to a new private site, or take the exam electronically. Your rescheduled date must be within your six month eligibility period.

How do I get verification of my previous employment?

You must contact previous supervisors and have them sign the Verification of Employment or Verification of Responsible Charge form for that particular period of employment or position of responsible charge. These forms are provided in the CAP application. Information needed to process the form includes your name, title, location of employment, name of company, dates of employment, description of work activities, and your supervisor's signature. To meet the requirements, the entire period must be documented by signed Verification of Employment forms. ISA will not send these documents to previous employers. It is your responsibility as an applicant to submit all of the necessary documentation.

What if a previous employer is no longer in business or my former supervisor cannot be located? How do I verify this period of employment?

A colleague can verify this period of employment by signing the Verification of Employment form in the presence of a Notary Public.

What if I cannot locate anyone to verify a period of employment?

To apply for certification, you must document the entire period necessary to fulfill the requirement. If you cannot fully document the years, then you must postpone your application until you can.



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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®).

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