

CAPacity

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



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In this issue:

CAP™ Profile –Jim Conti	1
What's the Value of Automation Knowledge, part 3	1
Step One in Achieving CAP™ Certification	3
Congratulations	3

CAP™ Profile – Jim Conti

When Jim Conti first learned about ISA's Certified Automation Professional® (CAP™) program in a *Control* magazine ad, he decided to pursue it for personal reasons. "I wanted to have a credential above and beyond what other engineers have," he said. He received the CAP designation in November 2005.

An ISA Member, Conti holds a bachelor's degree in engineering and has worked in automation for 20 years. Ten years ago, he joined Van Dam Machine in West Patterson, N.J., where he currently works as an electrical engineer. The company designs, manufactures and sells printing equipment for the plastic packaging industry.

In his role, Conti oversees product design. His responsibilities include documentation, programming and control system design. Additionally, he assists with product operations and developing training manuals.

Conti's certification was not required by his employer. He pursued the third-party validation of his skills and abilities on his own time and at his own expense. "I took the day off from work and traveled to Philadelphia for the exam," he said.

He believes the certification process has helped him with his job responsibilities. As a result of his training for the exam, he learned new metrics for tracking project progress and new ways of drawing information packages. In addition, he has applied the new tracking techniques to the budgeting and management of renovation projects at home.

In response to industry requests, ISA established the CAP™ program in 2004 to recognize and document the specialized knowledge, education, and experience of automation

Continued on page 2

What is the Value of Automation Knowledge? Part 3

Parts 1 and 2 of this article reviewed several types of potential benefits from "general automation knowledge" and its potential value. You can read both parts in the December 2005 and February 2006 editions of CAPacity, available online at www.isa.org/CAP.

Certifications have two primary objectives:

- Motivate people to learn more, and
- Recognize them for that knowledge

Generally people have to do focused study to pass a certification exam; and all real certifications have a broad exam in the field of the certification. Real certifications are different from certificates – Certificates are typically awarded for taking one or a series of courses. Several suppliers offer "certifications" after taking a course or a series of courses on their product, but these are really certificates. In our litigious society, awarding a "certification" without a well-administered, high quality exam that was created through a well defined process invites a suit if that person's performance later causes harm in the topic area of the "certification".

Preparing for an exam, particularly a "high-stakes" exam like that for CAP™ is a tremendous motivator for studying. Most of us can remember that when we were in college the most intense studying we did was just before an exam. A certification exam related to one's job and future advancement is even higher-stakes than a typical college exam.

While one does not have to be expert in every topic in the Body of Knowledge to pass the CAP™ exam, s/he generally needs to know something about nearly all of the topics to do well. Since few people know all of the topics, they will have to study to pass the exam. While CAP™ is too new to have good data, it is likely

Continued on page 2

professionals. CAPs are responsible for the direction, design, and deployment of systems and equipment for manufacturing and control systems.

Conti uses the CAP after his name and has received a few inquiries about it. "It is not well known at this point," he said. "But once it catches on, more companies will ask for it. I expect it to be a requirement for a lot of companies."

Having gotten an early start with the CAP designation, Conti mentions the program to professional colleagues at other companies and encourages them to pursue it.



To prepare for the exam, Conti took a few days off work to attend the ISA-sponsored training course. "It showed me the weak points where I needed to do more reading and studying," he said, explaining that he followed up on those points with study materials identified by the course instructor.

He recommends the preparatory course to others who are considering the exam. "It was a definite benefit to me. I learned about areas of automa-

tion that I hadn't considered or even realized were part of the field," he said. "It also gave me more confidence in what I did know."

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.

"The continuing education requirement is a benefit for me," Conti said. "It will encourage me to keep my skills and knowledge updated." He plans to renew his certification in three years.

More information on the study guide, review course, and *A Guide to the Automation Book of Knowledge* is available online at www.isa.org/CAP.

that about 100 hours of efficient, focused study will be an average amount of time needed for an automation professional with at least five years of experience (the minimum requirement for the certification). Depending on how much the person already knows through experience or past study, the study time might be several times this much. A few people have such broad and deep knowledge that they can pass the exam with no additional study and those people deserve to be recognized for that knowledge.

As a comparison, while the Professional Project Manager (PMP) certification is not technical in an engineering sense like CAP™, applicants for that certification seem to study several hundred hours. That study time might include reading through several books and even taking five or more days of prep classes. Even so, there are over 20,000 successful applicants for this certification **every year!** Drastically tougher criteria for the PMP will go into effect in the fall of 2005 and will surely increase the typical study time. Many local sections of the Project Management Institute offer PMP prep courses: the one in my home town is five days long and is offered twice per year to a large audience each time. However, that course only begins to cover the cover the amount of studying people do.

So if you could convince your employees to become CAP™ certified, they would obtain the general automation knowledge at very little cost to you. You might pay the application fee and you might pay for study materials, but those would be a very small percentage of the value of the knowledge they would get.

Of course there is a lot of other value from the CAP™ in giving a more competent, professional appearance to your customers, but that is another story.

ABOUT THE AUTHOR

Vernon Trevathan worked for Monsanto for 35-years in a variety of positions including Manager Process Control and Manager Project Managers and was Vice-President System Integration for Benham Company, a 1,000 person engineering company. He now consults and teaches automation project management and automation technology. He Chairs the ISA CAP™ Steering Team and is an ISA Fellow.

Questions or comments pertaining to this article are welcome, and can be forwarded by e-mail to Vernon Trevathan at trevathan@member.isa.org

Thanks to the ISA Management Division for allowing us to reprint this article from their newsletter. For more information on the Division, please visit www.isa.org/community/divatman

Step One in Achieving CAP™ Certification: ISA's CAP™ Learning System

CAP™ is a powerful professional credential. At the heart of its value are the knowledge and skills developed through certification preparation. By learning and applying CAP's extensive body of knowledge, CAP™ candidates become more effective on the job and more marketable as automation professionals. Certification indicates to employers and customers that you are motivated and committed to upholding the highest standards of performance.

It's time to get started...so what are you waiting for? Like other automation professionals, you may feel that you don't have time to prepare or that you don't know how to get started.

To help you overcome these hurdles, ISA created a comprehensive and convenient training program to simplify CAP™ exam preparation. ISA's CAP™ Learning System was just introduced in March and it's already changing the way people are approaching the CAP™ exam.

ISA began development of the CAP™ Learning System over a year ago. A team of ISA staff, automation experts, and instructional designers from Holmes Corporation, a leader in adult educational design, were assembled and given the task of creating a first class training product for CAP™ candidates.

Their efforts certainly paid off. The CAP™ Learning System concept has evolved into a comprehensive and interactive study program that blends printed textbooks with online review and testing tools. The content covers the entire CAP™ body of knowledge and the print and online format offer flexible training to accommodate any schedule. Corporate group training is also available, complete with group progress tracking and volume discounts.

"The CAP™ Learning System is based on comprehensive content developed by ISA experts, and it focuses on efficient preparation for the CAP™ exam," said Dale Lee, ISA Director of Certification Services. "It's convenient for busy automation professionals, because they can study on their own terms instead of having to travel to attend several classes."

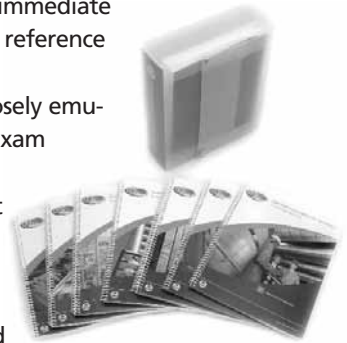
What will you get when you order the CAP™ Learning System?

The CAP™ Learning System includes seven printed modules, covering the seven technical topics tested on the CAP™ exam. These books are based on ISA's A Guide to the Automation Body of Knowledge. The difference is that the CAP™ Learning System books are formatted to facilitate efficient learning and review. They're more than a reference tool – they're designed as a study tool.

To enhance the learning process, the CAP™ Learning System also includes interactive online review and testing tools. The online portion of this program includes 500 multiple choice questions

that improve understanding and retention of materials through a variety of applications. These online components will help you determine your initial level of knowledge, create a study plan based on your individual needs, reinforce your studies with practice tests, and track your learning progress:

- A pre-test to determine your initial strengths and weaknesses
- Timed module-specific tests with immediate feedback, answer rationales, and reference to relevant sections in the text
- A timed post-test, designed to closely emulate the computer-based CAP™ exam
- An online progress report
- eFlashcards for review of relevant terms and definitions
- An online glossary



It's time to take the first step toward CAP™ certification. For more information on the CAP™ Learning System or to try a free demo of the program, visit www.isa.org/caplearn.

Congratulations to these Recently Certified CAPs

Arkansas

James Brown, Tyson Foods Inc.

California

Charles Foote, Encana
Scott Lindemood, Bay Tec Engineering
Christian San Juan, Big West of California LLC
Louis Verduzco, CDM Inc.

Colorado

Greg Lehmann, Washington Group Intl.

Georgia

Joe Crawford, Crawford Engineering Service
Virgil Sutton, Georgia-Pacific Corp.

Hawaii

Ryne Okimura, Tesoro Hawaii Corp.

Iowa

Carman Lynner, Western Iowa Tech Community College

Illinois

Reed Hannebaum, Maverick Technologies
Garrick Krebs, Maverick Technologies
Richard Low, Washington Group Intl.
Ronald Pupilava, Rock River Water Reclamation District

Indiana

Joseph Alford, Eli Lilly and Co.
Joe Ashby, Indiana State University
Darryl Carpenter, Eli Lilly and Co.
Joseph Heitz, Eli Lilly and Co.
James Wiesler, Eli Lilly and Co.
Jerry Yantis, Eli Lilly and Co.

Michigan

John Schott, TimeShare Tech Services

Minnesota

David Ferguson, Blandin Paper Co.
Jason Greenfield, Fagen Engineering LLC

Missouri

Jeff Comstock, Clark Richardson & Biskup
David Cortivo, Maverick Technologies
Bradley Ems, Maverick Technologies

New Jersey

James Conti, Van Dam Machine Corp.
Robert Kluck, PDIR

Oklahoma

Jon Richardson, Enogex Inc.

Pennsylvania

Dean Ford, Maverick Technologies

South Carolina

Lyle Hiltner, Spirax Sarco Inc.

Tennessee

Hershel Heifner, Premcor Refining

Texas

James Schlager, Maverick Technologies

Alberta, Canada

Kim Dingwall, Enform Canada

Saudi Arabia

James Anderson, Saudi Aramco



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- Control Systems Engineer
- Plant Manager
- Systems Integrator

Calling ALL CAPs

Your knowledge and expertise in automation earned you this prestigious certification. Now, ISA needs your assistance to get the word out about the CAP program and increase its credibility.

Editors and reporters from trade magazines are often interested in obtaining technical articles from industry experts. Publishing articles in trade magazines or being a source for a story are great ways to increase your personal visibility, as well as the visibility of the CAP program.

If you're willing to write technical articles, or even simply be a source for technical articles, please let our media relations coordinator, Jennifer Infantino (jinfantino@isa.org - 919-990-9287) know your areas of interest/expertise.



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[™]).