



International Society of Automation
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Meeting: **Second Annual ISA Automation Executive Summit**
Date: 15 October 2008
Chairman: Patrick Gouhin, Executive Director & CEO
Recorder: Bernard Penney, Director, Marketing & Corporate Communications
Location: ISA Expo 2008, Reliant Center, Houston, TX
Distribution: Attendees

Attendees:

Dr. George Cheng	CyboSoft
Vernon Trevathan	Control & Integration Management
Patrick Gouhin	ISA, Executive Director and CEO
Steve Huffman	ISA, Past President
Kim Miller Dunn	ISA, President
Dr. George Cheng	CyboSoft
Gerald Cockrell	ISA, President elect-Secretary
Maurice Wilkins	Yokogawa
Scott Hillman	Honeywell
Monte King	Shell
Dr. Kris Pister	Dust Networks
Joy Weiss	Dust Networks
Nick Sands	DuPont
Greg Bodenhamer	Schneider Electric
Andy Gravitt	Schneider Electric
Peter Zornio	Emerson Process Management

Dialog:

An informal discussion took place over lunch focusing on the most strategic issues the automation profession will face over the next decade or more. The attendees were thanked for participating in ISA's second annual Automation Executive Summit. Gouhin started the meeting with a review of the topics and challenges discussed at the last Executive Summit, and the steps ISA has taken to begin implementing solutions. The following are the high-level points of the opening presentation:

- *This is NOT a sales pitch for ISA*
- *This is about working collaboratively to advance the profession of automation*
- *It is about identifying strategic imperatives*
- *We are trying to assemble a common vision and mobilize efforts to realize a brighter future*
- *ISA asks for your ongoing support in contributing to the vision and sharing your concerns relative to the future of the profession*
- *Together we can accomplish more than any of us (or our organizations) can independently*

- *As Defined at Last Year's Summit*
 - *Education – knowledgeable, skilled workers*
 - *Government Relations – support for profession*
 - *Perception of Engineering – improve image*
 - *International Awareness – broad appeal and support*

The movement is underway to create the: “Voice of Automation!”

The entire Executive Summit review presentation by Gouhin may be found here:

http://www.isa.org/Template.cfm?Section=ISA_Sponsored_Events&Template=/content/contentgroups/multiuse/isa_automation_executive_summit.htm

Meeting Objective:

The attendees were reminded of the ISA desire to engage corporate executives in an ongoing, meaningful discussion that can positively impact the automation profession over the next decade or longer. ISA is striving to be a contributor in shaping the future and requests corporate support in engaging in a collaborative endeavor. In that spirit, a strategic discussion followed that is intended to provide advice and guidance for action in the upcoming year(s).

Discussion Overview:

Gouhin then opened the meeting to continue the dialog discussing strategies that impact the entire automation profession. The discussion over the next two hours is summarized below. “Statements” come from concerns or challenges expressed by the participants without any prompting. The resulting “comments” summarize input from around the table and provide the desired dialog that will allow ISA to craft our future action plans.

Statement: *“A lot of attention is being given to developing the younger end of the automation workforce, which is important, but what about developing the older end?”*

Comments: It is important to have a transition plan for the work place to help transition professionals from one industry in the automation field to another or, where skills are applicable, from another profession into that of automation. Additional training will be required to facilitate this. We also need to examine re-training of returning veterans as part of any workforce development effort. Returning/retiring veterans have unique experiences that make them viable candidates, in many instances, for automation careers. It is important to create a military transition to the automation profession and to formally communicate the roadmap on anticipated opportunities and needed skills to realize these careers.

Statistics show the U.S. needs 15,000 new automation professionals every year for at least the next decade simply to remain at productivity levels of today. Several corporations are currently staffed at only half capacity of experienced engineers. They are only surviving by having employee’s continually working over-time. This is a compelling story to tell universities and other centers that may house tomorrow’s automation professionals. It is believed that early university adopters of an automation program would benefit from producing a quality product that is in demand thus ensuring high placement rates and high salaries for new grads.

Statement: *“What competencies will be required by the automation profession in the future?”*

Comments: The requirements of the workforce change quickly. We need to be able to project competency requirements into the future. These requirements have to be linked back into educational curriculum. Corporations are losing trained employees at twice the rate as they can be replaced. The Automation Federation and ISA are working with the Department of Labor (DoL) to define additional skill categories for the automation profession. This will facilitate automation workforce development transition plans. This creates a ‘pull-through’ roadmap to support this development. The Automation Federation is looking across the entire spectrum of automation profession levels in the creation of a *Competency Model*.

Statement: “*Do those in the field get the respect they deserve making others aspire to similar careers and does the academic community support the profession?*”

Comments: An objective of ISA is to recognize and promote the automation profession. One way ISA is doing this is by defining broad automation profession categories with the DoL; however this profession is much more complicated than manufacturing. The DoL is very interested in ISA’s ability to continue defining Automation Professional job descriptions. We need more of a “Hollywood” perception to put a glamorous slant on the profession. Business schools currently have more appeal than engineering schools. However, the sheen is currently coming off IT careers now due to increased publicity surrounding IT out-sourcing.

ISA has executed on many fronts to support workforce development. In addition, the Automation Federation is supporting an Automation Profession program at the 2010 Boy Scout Jamboree with over 10,000 scouts attending. Corporations can participate in this as well as sponsors. In addition, the Capital Hill fly-in was very successful and well received as a professional advocacy effort. This work should continue.

The Automation Federation and ISA need to tell the story to universities on how exciting a career in the automation profession is. The university student mix needs to shift from Information Technology to Automation technologies. Universities do not yet have classes labeled “Automation”, which is currently the biggest stumbling block nor do they receive significant funds to do automation related research. We need to market the importance of automation to high-school students. We need to market to these students that many corporate CEO’s started with a degree in engineering. This is emphasized in the recent financial crisis that may actually be helping the profession as it points out the need to have marketable skills now like engineering, which is more valuable at present than those of a financial analyst. China is a good example of a country that currently offers Automation as a discipline under engineering in their universities. China is not the only country to offer that, we need something similar in the U.S. ISA and the Automation Federation are helping to send this message to the academic community.

One solution would be to pick a few targeted universities to adopt this program, and solicit corporate funding to get this jump-started. This is a difficult challenge – in fact the University of Oklahoma just cancelled their only automation engineering program. Corporations could make jobs and on-line training materials available through co-op work programs. These could prove to be very effective. We could consider building an entire new school dedicated to training automation professionals. These would be analogous to Textile schools of the past. Every company would contribute to the funding and operation of this school, and be able to recruit from the graduates. This would focus all the energy very effectively. The UK has a “PACT” program for universities that offer different modules that lead to a Masters Degree in Automation. This program is funded by UK automation suppliers as a means to train their next generation of workers. This could be a model we follow here. If so, we would need the following programs:

1. *University Advocacy Group*

2. *Government Funding to Seed Program*
3. *Initiate Pilot Program at Selected University*

Statement: “*Many young people may not know what Automation means and what careers may be open to them.*”

Comments: ISA has defined the term and will continue to plant a flag around the world establishing best practices, along with a corresponding Automation Competency Model. In addition, ISA has written the definitive Automation Body of Knowledge (*Autobok*). ISA has also defined an Automation Engineering curriculum with both 2-year and 4-year versions. ISA has the materials in hand, but the question remains – how can we best convince universities to adopt an Automation Profession program around the ISA curriculum materials?

We need to offer opportunities to corporations to sponsor these types of outreach programs. On-line universities would also be interested in taking on a program like this. Suppliers can donate equipment (hardware and software) to universities to get this started. Perhaps ISA could establish a foundation through which all suppliers could funnel their equipment, and then ISA could focus those resources on targeted schools. In addition to these great high-level strategies, ISA must also get more hands-on tactical input from our HR organizations.

NEXT MEETING

Those in attendance concluded that this was a worthwhile exercise and one that would warrant further expenditure of their time on an annual basis. The attendees expressed an interest in returning for more discussion, and to recruit peers from other companies as well to return back to Expo 2009 for the 3rd Annual ISA Automation Executive Summit on **Wednesday 7 October 2009 from 12:00 to 2:00**.