The Process that gave me a different Perspective to Education

I take this opportunity to describe my educational background and associated strength that motivated me to go for the Graduate course in “Master of Science in Control Systems Engineering” at Oklahoma State University.

The Catalyst

Looking retrospectively, during my junior school, when my classmates had seen only a speed control of an automobile, I was fortunate to see a full-fledged chemical plant controlled by *6 feet by 6 feet* control panel having multi color bulbs and lot of red and green push buttons. My father who was holding a responsible position in that chemical industry was maintaining that plant. That’s how I got exposed to a live Industrial Automation.

That led to my choosing Instrumentation and Control Engineering for my Bachelor’s degree. My favorite laboratory was the “Process Control Lab”. After working in the lab, I could visualize all the theoretical concepts I had studied, as I was working with a live instrumentation and control setup. It was engrossing, giving the set points in the computer and then watching the whole system automatically adapt to the new set point! I was only starting to wonder, how it would be to control a huge process plant with lots of complex processes going in parallel.

The Foundation

Courses:

My curriculum included subjects like **Process Control and Dynamics, Control Systems, Industrial Drives and Control, Basic Sensors and Transducers, Process Control System Components, Instrumentation System Design** and other such related topics. To learn further about controls used in industries, I chose for my electives, specific subjects like **'Role of Instrumentation and Control In Petrochemical Industries, Iron and Steel Industries & Power Generation**' in my final semester. And that instilled in me the capability to comprehend, assimilate and expand new concepts in industrial processes and computer applications.

Research:

Having gained good theoretical knowledge I developed the thirst to learn the practical application aspects. So I did a Project work to develop a SCADA System (Supervisory Control and Data Acquisition) for automating the fuel filling systems of aircrafts in the International Airport at New Delhi *(Gist of the Project is provided in Appendix I).* Now I have a good perception about the requirements for developing a SCADA system in the Industries.

I researched further and presented two Student Level overview Papers *(One of which is enclosed herewith)* on SCADA and Industrial Automation in National Level Symposia and this paper was selected as the **Best Technical Paper** presented in both the occasions.

In pursuit of meticulous analysis of my subjects, I searched the SCADA Mailing List in the Internet for specialists and I came across Mr. Jacob Brodsky, Principal Electrical Engineer in Washington Suburban Sanitary Commission. Through corresponding with him for well over a year, I learned a lot about the practical applications and day-to-day use values of the theories that I have studied.

I have read some of the recent articles posted in the websites “Control Engineering Online” and “ICS.ORG” in order to keep me abreast of the latest developments in the field of Automation.

Co-curricular Activities

I believe that a person's ken is embellished by one's extra curricular activities. Naturally I took the opportunity of being the ' **Students' Coordinator** in the National Level Technical Symposium **INSTRUFEST 2K** ', conducted by our Department. That gave me the opportunity to realize the importance of Leadership and Team Building.

I have presented many papers on technical and also on management topics in my class as well as to the juniors in my college *(One of which is enclosed herewith).* As much as I love to study, I love to teach also. This line of studying and coaching gave me different perspective in understanding my subjects.

Why MSCSE Program at Oklahoma State University?

In ardent pursuit of knowledge in my sphere of interest, I am looking forward to doing my graduate studies in Master of Science in Control Systems Engineering. In my home country, India, only a few large industries treat automation as a part of the project design. With the economy opening up globally, automation has to be accepted as an essential investment by the medium and small industries. To spread the concept of automation to these industries, comprehensive research knowledge is essential.

I found that the courses offered by Oklahoma State University can play a pivotal role in converting the knowledge embedded in the fundamental science to a technology that can be adopted for the "real world" industrial solutions. This is the kind of challenge I am seeking for in my graduate course so that I can contribute as much as I can for the modernization of the industries in my country.

I am keen in getting associated with the research being carried out on process optimization in large-scale industries in such a way that I can apply these principles on to medium scale industries having limited finance.

For an avid candidate like me, I am confident that the Master of Science in Control Systems Engineering program will properly direct my impetus towards a career in industrial automation and give me enough ambits to excel in my chosen field of interest.

Nagappan Muthiah

Name Sign Date