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## Website provides useful advanced process control information

Following is an interview with Dr. Babak Khosrowshahi, the founder of APC-network.com.

### What is APC-network and what are its objectives?

“APC-network brings together a virtual advanced process control (APC) community. To end users, APC-network provides information as well as interactions with other people in the field. That ought to facilitate better decisions. To vendors, we give a chance to ‘rub shoulders’ with their customers. It is the equivalent of going to a conference, seminar or training course, except that the events take place more often without anybody leaving their office.

“A Web community, as any other community, requires participation of all the members to improve and sustain its effectiveness. In the end, APC-network will go to wherever the community drives it.”

### Why do you see a need for this kind of presence on the web?

“The need has always been there! Lack of APC information has hampered our industry since it started, and the uninitiated find it difficult to discriminate between empty propaganda versus technical information. Moreover, recently the APC industry has been shaken by its own failures. Larger APC vendors have shed senior technical people, who started up successful companies in competition against their former employers.

“APC-network creates a level playing field, giving exposure to all vendors and consultants, large and small. Twenty years ago, operating companies would not touch a small ‘fly-by-night’ vendor, and our contribution is to help identify the good small companies that deliver excellent value for reasonable prices. Today, the small company stigma is gone, to a large extent because of availability of information.”

### Other than recognition of small vendors, what value does APC-network bring to the hydrocarbon industry?

“APC has been around for at least three decades in the form as we know it today, i.e., software programs using real-time measurements and controlling the process in open or closed loop. There have been success stories worth millions of dollars in benefits, and there have also been applications that were turned off as soon as the vendor was out of the plant. Those failures have tarnished the reputation of APC in spite of the potential profitability. As a community of APC end users, suppliers and consultants, we are interested in showing that APC technologies and applications are profitable, but only when done without cutting corners. We also aim to point out pitfalls and expose those technologies that did not produce the goods.

“As a real-life example of the value of APC-network.com,

several refineries and petrochemical plants subscribed to APC-network to find information to justify new APC projects. They found this information in our APC applications database: benefits, return on investment (ROI), software, hardware, analyzers, etc., as reported by other operating companies that installed these applications.”

### You say you intend to expose the ‘bad apples.’ What is the mechanism for doing so?

“By bad apples I take it to mean those applications that did not meet expectations. Bad apples, as well as good apples, are exposed by free information. Our most important information facility is an independent forum for all to express their opinions. If it took five years to implement an online optimizer and it has not worked, the user can register a public complaint. The forum gives vendors a chance to respond, since not all reasons behind a failed application are necessarily attributed to vendors. Maintenance, for example, is an important issue. A refinery with fewer than three or four APC engineers would have a hard time keeping APC working. If that’s the case then ineffective maintenance is exposed as the bad apple.

“We also have an APC applications database provided by the users. Further, we have links to publications that point out practices and technologies that just do not work in their present stage of development.”

### The name APC-network implies that the site is only concerned with advanced process control. Is that true?

“No, it’s not. The acronym APC has evolved over time and in our view it deals with a broader class of computer applications that make the plant run better: expert systems, multivariable control, inferential modeling, real-time optimization and even dynamic simulation for operator training. Process control engineers should be aware of these technologies. We cover 32 complementary technologies in this field, including connectivity, real-time databases, process simulators, optimizers, abnormal condition management, performance monitoring, blending, scheduling, operator training dynamic simulators, yield accounting, security and others.”

### What’s the membership like?

“APC-network membership more or less mirrors the industry. We have attracted:

- Operating company process control engineers
- Automation managers
- Members from vendor companies, consultants, training providers and advisory services
- Recruitment agencies
- Trade magazines
- Academic members who are interested in following industry trends.”

*Continued*

**Is APC-network profitable?** “In the long run, any business venture must be profitable, and APC-network is no exception. We generate revenue by companies subscribing to our services to promote their products and services, and end users accessing our site. Other sources of revenue for the site are from advertising APC jobs and training. The jobs section has been particularly successful with APC companies and refiners advertising their jobs, and candidates supplying their career summaries for inclusion into our database. We have only been online since June 2003 and have not yet fulfilled our goal in terms of revenues, but the growth is quite encouraging and we are optimistic.”

**Can you describe the technical content available to site users?** “The technical content available to the users differs with two levels of access. The first is for nonpaying registered members as follows:

1. Read the publications section, which includes links to papers, articles and trade magazines.
2. Ask our expert an APC question.
3. View the archive of practical answers to questions submitted by control engineers.
4. Take part in the APC Forum and also share experiences in real time using the technical live chat facility.

“The subscriber level permits access to our knowledge database, divided into four categories:

1. Unit oriented, detailed descriptions of APC solutions.
2. Application database, which includes user experiences and details of implementation.
3. A list of APC products, consulting services, training tools, etc.
4. APC guidelines.”

**How is APC-network different from other Web sites of this kind?** “There have been attempts at developing online communities by the large automation companies. Yet, despite large resources and budgets, these initiatives failed. Users could not help but associate those sites with the hosting company to the exclusion of other vendors and consultants, as well as inconvenient information.

“APC-network is independent. It has no affiliations to the software, engineering or operating companies, and that is an

essential ingredient for end users to trust the information. APC-network is highly focused; you might even call it a niche. As shown in our online surveys, for a technical community such as this, relevance is one of the most important aspects of the content.”

**How do you avoid the ‘annoyances’ associated with the Web?** “We come across annoying features like pop-up advertising, spam, viruses, broken links and massive amounts of irrelevant material. I am happy to say that we do our best to rid our Website of all these problems. When you search for advanced process control on Google, 19,000,000 results come up, and that is a problem of disinformation. Our policy is to update our site immediately on finding new information and inform our users of the highlights every month via an e-mail update. Users avoid wasting time searching the site for new content unless they are looking for specific information.”

**What are your plans for the future?** “Phase 1 was completed by June 2004, and we reached our initial goal to create a versatile and stable site. “Phase 2 aims to develop the knowledge base, and we are pursuing several ideas:

• Product comparisons

• Trending real-time APC data to our users to assess application performance. Our subscribed vendors would like to demonstrate the performance of their APC software product by streaming data from their client’s plant real-time database onto our web pages.

• Web-based APC training (Web training). The training will be process unit specific and will build the APC knowledge on a foundation of the process engineering and economics of the units. Details of the APC Web training will shortly be available on APC-network.com.” **HP**

**Y. Zak Friedman** is a principal consultant in advanced process control and online optimization with Petrocontrol. He specializes in the use of first-principles models for inferential process control and has developed a number of distillation and reactor models. Dr. Friedman’s experience spans over 30 years in the hydrocarbon industry, working with Exxon Research and Engineering, KBC Advanced Technology and in the past 12 years with Petrocontrol. He holds a BS degree from the Israel Institute of Technology (Technion) and a PhD degree from Purdue University.