BH: Open Systems International (OSI) was founded based on the premise of offering open utility automation solutions in a field dominated at the time by proprietary technologies. In the early '90s we saw the major shift in the IT and computing paradigms and the shift toward microprocessors, desktop workstations, and of course new Windowing technologies. We hence leveraged this forthcoming change by offering an array of new open automation software solutions to the utilities grappling with large complex main-frame based systems and proprietary hardware. Our philosophy since day one has been to offer our customers innovative solutions based on main stream state-of-the-art computing technologies.

WORLD-GEN: HOW DID OSI COME INTO EXISTENCE?

BH: Our success is primarily due to our business culture and philosophy, which is very customer centric, as well as our innovative spirit. We see ourselves in a customer service business first, and automation/software business second. Our solutions are innovative, simple to implement and maintain, and offer the fastest return on investment compared to the traditional solutions offered in this market. We have the best customer satisfaction record in our industry and the largest growth rate of any of our competitors in North America.

WORLD-GEN: WHY HAS OSI BEEN A SUCCESSFUL SUPPLIER TO THE UTILITIES?

BH: Our success is primarily due to our business culture and philosophy, which is very customer centric, as well as our innovative spirit. We see ourselves in a customer service business first, and automation/software business second. Our solutions are innovative, simple to implement and maintain, and offer the fastest return on investment compared to the traditional solutions offered in this market. We have the best customer satisfaction record in our industry and the largest growth rate of any of our competitors in North America.

WORLD-GEN: WHAT COSTS ARE INVOLVED WITH MAINTAINING AN ENERGY MANAGEMENT SYSTEM (EMS)?

BH: Traditional solutions offered by our competitors are fairly archaic and require a large staff to maintain. Due to the complexity, many of these systems are not kept up to date and the upgrade cycles are 4-5 years as opposed to annual or bi-annual as it is with our systems. I am flabbergasted at the staffing levels some of our competitor systems require for basic maintenance.

It is not unheard of to see utilities with large teams of 15-20 people involved with mundane maintenance tasks. Our systems, in contrast, require smaller staff for basic maintenance, and elevate the role of our customers’ maintenance teams to re-focus their attention to major operational, grid reliability and security issues facing the utilities today.

In addition to the cost of labor, of course the technology costs tend to be high with proprietary systems and traditional systems due to their unnecessary complexity.

In contrast OSI’s solutions’ maintenance cost a fraction of the industry norm.

WORLD-GEN: WHAT NEW CHALLENGES ARE SHAPING THE UTILITY INDUSTRY?

BH: There are many great challenges facing the utility industry. Profitability and higher return on shareholder investments, along with higher cost of fuel, grid reliability concerns, regulatory mandates and insufficient transmission infrastructure are amongst the largest challenges facing transmission and generation operators.

In my opinion, the greatest challenge will be to deal with regulatory reliability standards with obsolete technology and fully taxed infrastructure.

Of course, from a technical point of view, interesting technical challenges will be the Smart Grid initiatives, conservation and renewal energy projects.

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BH: These new reliability standards will have an immense impact on the way utilities operate and will undoubtedly affect the real-time operation of the power grid. Reliable and robust automation systems are needed to effectively monitor and control the power system, optimize its reliability and avert potentially catastrophic failures. NERC mandatory guidelines for reliable control systems; disaster recovery and emergency control systems; operator training simulators and systems designed to be impervious to cyber attacks are a few examples of the impact these reliability standards will have on the automation systems deployed by utilities. After all, as NERC noted in its incident report, the failure of a SCADA/EMS system was partially responsible for the Northeast Blackout on August 14, 2003, and thus precipitating the enactment of these mandatory reliability standards by FERC.

OSI is helping many of our customers to implement reliable EMS systems to cope with the new reliability standards. Our secure technology will give utilities a more secure platform for system operations. Our Transmission simulation and monitoring suite of applications will allow our customers to better monitor their transmission systems and avert potential contingencies, optimize operating conditions and above all train the operators to better deal with system emergencies. Our customers can also better keep up with system expansions and system changes using our platforms, which are easy to maintain and upgrade over their traditional proprietary systems.

BH: In the face of regulatory and market challenges, technology shifts, high cost of fossil energy and reliability concerns, utilities are at a major crossroad. Only those who can re-engineer themselves and optimally navigate this tumultuous era can emerge as a viable player for the next 10-30 years. Tremendous efficiency and cost pressures from one hand, and the concerns for reliability and lack of investment will be challenges facing all utility CEO’s.

Our vision for the Utility of the Future is a grand vision. Our model Utility of the Future will be a modern, agile and progressive enterprise, embracing modern technology, end-to-end integrated with suppliers, customers, a purveyor of environmentally friendly policies, having a substantial renewable energy portfolio and offering innovative and customer friendly demand side programs. Such an enterprise offers a great deal of opportunity for suppliers such as OSI for innovative information and control technologies, omni-present cheap measurement and control devices across the grid and at the points of supply and demand, as well as efficient technologies with minimum implementation and maintenance costs.

Energy conservation, real-time pricing, and smart homes offer tremendous opportunities. To give you a glimpse of the future, let’s say 15 years from now with cost of energy at least 300% more expensive than today, you will be dealing with a conscious consumer living in a smart house with smart appliances which want to run when retail energy prices are optimum during the daily or weekly cycles. For example, a washing machine which is pre-programmed to run in real-time energy prices fall below a threshold, an air conditioner which stores energy at night or when energy prices are lower during low demand periods, and a television program or channel which bundles its environmentally friendly programming with a “green energy” component to run your entertainment equipment. For instance, you can watch Program A, and Program A makes sure part of the energy you consume in real-time is supplied by a renewable source.

In a fully integrated and connected utility these are all possibilities. Imagine the opportunities presented by a mega network backbone with smart devices all over the grid.