T.E.C. News Quarterly

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Winter, 2001

E-ZBas at 2 Broadway

The MTA's recent lease of 2 Broadway, a 34-story facility in downtown Manhattan and noted as the largest NYC lease deal on record, prompted the multi-million dollar, 1.6 million sq. ft., renovation of its designated new headquarters. The MTA is recognized as the largest transportation network in North America, which comprises of subways, busses, railroads, bridges, and tunnels, serving 2.3 billion riders and about 300 million vehicles annually. Recent technological developments such as Metrocard™ and E-ZPass℠, have taken over transit tokens and long waiting lines at toll booths. Its new headquarters, in turn, also required a similarly impressive modern-day Building Automation System that would serve its occupants and facility management with ease of care and efficiency.

Along with the replacement of the 1958 façade, HVAC equipment, electrical distribution gear, and elevators, a new state-of-the-art Building Automation System was installed. The facility's BAS requirements demanded a high-speed communication network with easily manageable control devices and software, as well as, entailed the integration of the building's smoke control system. T.E.C. Systems, Inc., having been awarded the BAS controls project, responded with the design and installation of a Honeywell Excel 5000 BAS, which would tie together all HVAC and Smoke Control functions.

This large facility required precise coordination of a 5000 ton chilled water plant, (3) 200,000 CFM & (4) 100,000 CFM primary air fans, 650 VAV boxes, and 400 combination fire/smoke dampers to assure a comfortable, safe environment for MTA employees and critical systems, such as: the main data center and disaster recovery center. Honeywell XBS graphical user interface makes monitoring and controlling this facility an easy task for building engineers through access to all BAS points.

Stringent schedule requirements challenged T.E.C. to efficiently run several electrical subcontractors along with certified software engineers and technicians to meet the MTA's deadline. Its completion date requirement was met with outstanding punctuality, reflecting the efficiency and high-quality workmanship of T.E.C.'s excelling staff. Just as the MTA makes commuting easier, T.E.C. Systems Inc. has made operating the MTA's headquarters a simpler job.

Inside this issue:

We specialize in:

- HVAC SYSTEM CONTROLS
- OPEN / INTEROPERABLE TECHNOLOGY
- SYSTEMS INTEGRATION
- FIRE / SMOKE CONTROLS

Schedule of Events

- HomeNet Winter 2001 is to be held at the L'Auberge Del Mar Resort and Spa in San Diego, CA between December 3-5, 2001.
- International Air-Conditioning Heating Refrigeration Exposition will be held at the Atlantic City, NJ between January 14-16, 2002.

December 2001

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January 2002

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February 2002

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March 2002

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T.E.C. Systems Inc. is a complete service, Long Island City based, automation controls contractor. Specializing in the design and implementation of Computerized Building Automation Systems, T.E.C. has completed thousands of successful control implementations in commercial, industrial, residential, and institutional facilities. Recently, T.E.C. Systems Inc. has been pioneering the Open System Integration technologies, utilizing LonWorks and BACnet. Staffed with professional design, installation, software, and service engineers, T.E.C. can produce turnkey automation systems for all control system needs. Visit us at www.tec-system.com to learn more about what T.E.C. can do for you.

What's New?

Jamaica Air Train is one of T.E.C.'s newly awarded assignments, subcontracted by Railworks, Inc. The project, designed by Lizardos Engineering Associates, PC, consists of implementing a Honeywell DDC system with electrically actuated end devices in the new headquarters facility being constructed for the Air Train monorail which is designed to connect JFK to the LIRR, and to the E, J, and Z trains of the MTA. The project will begin in March of 2002 and is scheduled to complete 3/2003.

300 Madison Ave. - Another project with design engineers Jaros Baum and Bolles, has been awarded to T.E.C. Systems Inc. at 300 Madison Ave, in NYC, for Turner Construction. This project is a new 35-story building on the corner of 42nd and Madison Ave, and will comprise of Honeywell DDC controls with pneumatic end devices totaling an estimated 2500 points. T.E.C. will work on both the temperature control and smoke management systems.

ASHRAE EXPO 2002 - This year's ASHRAE's show, with over 1,100 exhibitors, will be held in Atlantic City, NJ from January 14-16, 2002. In its three day expo, hundreds of the latest HVAC solutions for contractors, facility managers, and consulting engineers will be on display, as well as free educational sessions. American Auto-Matrix (booth 4520), LonMark Association (booth 4319), and Echelon (booth 4533) will be presenting their latest products and technologies in the BAC showcase section. Honeywell will be exhibiting their new SymmetrE product (booth 3649).

Open Systems 2001 completed - In their last session of Open Systems 2001, Echelon ended a 31-city tour at the Sheraton Hotel on 52nd Street and 7th Ave. in Manhattan on November 15, 2001. Ron Bernstein, Echelon's representative, debriefed attendants of the latest and greatest in the Open System technology field, ending with an impressive live demo of Echelon's building control management via internet. Sponsors, such as T.E.C. Systems Inc., displayed their own partake in the open systems field and gave a quick run-down of their latest interoperable technology project achievements. For those of you who were unable to attend, we look forward to seeing you at future seminars.

Building Management Sleuth

Building Management Systems are generally one of the most heavily utilized systems within a facility. When problems arise, its multi-system network operations can force even the slickest operating engineer to become an investigative sleuth. Here are some front-line tips to help narrow down trouble spots and gather information that will assist your controls service contractor.

1. If you are unable to suddenly maintain environmental conditions on a previously properly operating system:

   a. Proper system operation is dependent on the availability of many resources including: electrical power, chilled water, steam, condenser water, adequate airflow, etc. Make sure these resources are available. Problems with inadequate primary water temperatures, clogged air filters, etc., often only manifest themselves downstream in the process.
   b. Check the control system to see if anyone has logged in and made control adjustments or overridden points. Sometimes changes can be made that can affect equipment performance.

2. If you can't communicate with a particular section or area:

   a. Check for power conditions around the panel and equipment area. Power failures will bring the monitoring system down, even though the mechanical equipment is still working.
   b. Also, check if there is construction being done around the area. A lot of times construction jobs can interfere with equipment, rendering them inoperable, or can disturb the communication line.

3. If you can't communicate with a particular piece of equipment from your workstation:

   a. Find out if anyone had been around your PC or moved it in anyway. This can happen during cleaning.
   b. Also, see if anyone has tried loading an application other than the one intended for the workstation. Sometimes these outside programs can interfere with the system's application, shutting it down incorrectly. Try restarting the computer and delete any unnecessary applications.

When problems arise, a simple investigation can help you to quickly and easily get systems back on line. Remember, if you've gone through the troubleshooting process and the problem still persists, help is always only a phone call away. We, at T.E.C. Systems Inc., are here, twenty-four hours a day, seven days a week, ready to serve you.

TEAMWORK SAVES ENERGY

Third and goal. 10 seconds on the clock. Teamwork is what's required at crucial moments like this. During a Monday night football game the final winning goal is dependent on getting the ball over the goal line. Getting the ball there takes teamwork. This isn't only true on the gridiron, but also for any task that requires group cooperation. When a well-coordinated team pulls together the results can be phenomenal. This team approach gave huge success for the contractors and clients involved in the 201 Varick Street project for the U.S. General Services Administration.

Led by ConEdison Solutions, a Westchester based, full service energy provider, a project team was formulated to design and install energy saving measures at the Federal Building at 201 Varick Street in New York City. The goals of the GSA were to reduce energy consumption through the retrofit of antiquated mechanical and a non-functioning Andover Control System.

The collaborated efforts of ConEdison Solutions, AKF Engineers, LLP, T.E.C. Systems Inc. and JDP Mechanical, LLC, brought together a custom designed system that met the GSA's needs. ConEdison Solutions performed energy system surveys, and developed the energy conservation measures that formed the basis of the retrofit project.

AKF Engineers, a Manhattan based design-engineering firm was responsible for designing the mechanical and electrical systems, along with reviewing all technical aspects of the project. The control system design and implementation was handled by T.E.C. Systems Inc., a Long Island City based control systems contractor. JDP Mechanical of Queens, NY performed all mechanical system modifications and enhancements.

The project included the upgrade of the central chilled water plant, including the installation of two 575 ton gas fired chillers, one 600 ton electric centrifugal chiller, 66 variable frequency drives, and 69 high efficiency motors. The "brain transplant", to implement the energy savings routines was the design and installation of a Honeywell Excel 5000 Building Management System.

Forty-eight Honeywell stand-alone control panels were installed to provide interface to the mechanical systems and perform automatic temperature control and energy savings routines. All facility operations can be monitored and controlled through the Honeywell XBS graphical user interface. "The flexibility of the Excel field controllers al-

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TEAMWORK SAVES ENERGY cont.

lows for easy integration to the mechanical and electrical systems", states Larry Lachow, project manager for T.E.C. Systems Inc.

"I feel the real success of this project is based on the team effort of all involved parties. When everyone is on the same page from day one, project coordination becomes a breeze. I'm looking forward to more projects like this. The results are fantastic", adds Lachow. It's in the team effort that the true success of this project lies. Timely coordination of key specialists and the methodical distribution of project sectors resulted in a project deserving well its recognition.

The next time you're faced with a "third and goal" situation in your future projects, make sure you're involved with a team that can help you get the ball over the goal line.

T.E.C. Systems Inc.
54–08 Vernon Boulevard
Long Island City, NY 11101

Phone: 718–784–7955
Fax: 718–392–1154
Email: johna@tec–system.com

In the Spotlight

Honeywell's new product, SymmetrE ™, is a Graphical User Interface (GUI) geared towards complete facility integration and management. Based on Honeywell's industrial GUI, Plantscape ™, the platform has a 10 year, successfully proven, history in the process market. Enhanced with tools and protocols for Building Management and HVAC control needs, SymmetrE ™ is every facility manager's dream tool.

SymmetrE features device integration with protocols such as: Honeywell C-Bus, LonWorks, BACnet, Modbus, OPC and advanced DDE/DDC. Its web accessibility function allows users to access the system both by intranet and Internet with full LAN/WAN capabilities. Its building maintenance features include C-Bus Scheduling, Alarm Paging, Integrated Maintenance Manager, phone control, and global scheduling. Its scalability allows up to 5 concurrent workstations with over 20,000 points, and unlimited Web access via conventional browsers using Web Toolkit.