

News on the Industry & Information  
for Contemporary Controls'  
Most Valued Customers

# NETWORK

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## EVENTS

**We attend many conferences and seminars to keep you informed on what's happening in the building controls and automation marketplace.**

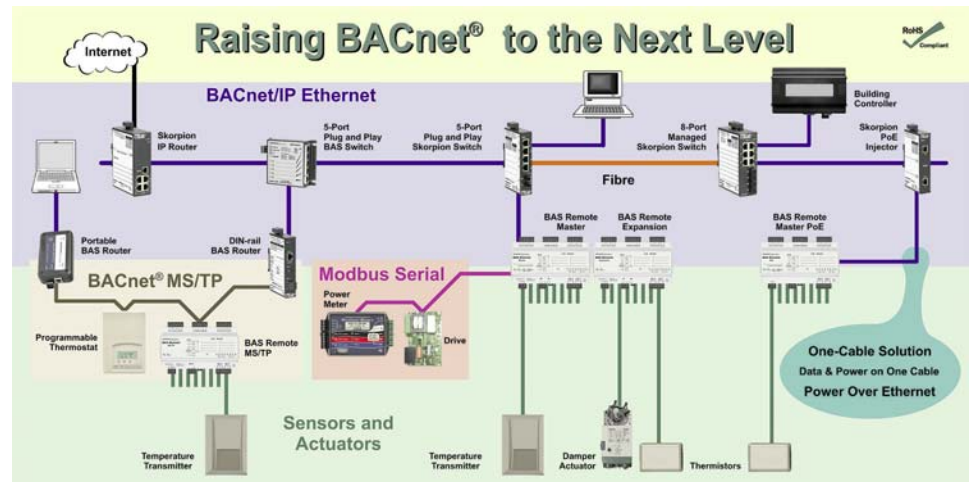
**Niagara Forum**  
**March 30-31, 2009**  
Windsor, England

Over **30** Years  
In Controls

**CONTEMPORARY CONTROLS**

Connecting Networks Worldwide

## Raising BACnet® to the Next Level



The graphic used in our booth shows how to make connections to BACnet/IP Ethernet.

When visitors came by Booth 3953 at AHR Expo 2009, they asked us what we mean by having in big letters **Raising BACnet to the Next Level**. We mean that just about every Building Automation System (BAS) will eventually be communicating over an Internet Protocol (IP) infrastructure and that we have products that will assist in making this all happen. Being on IP does not necessarily mean having your system exposed to the Internet. Companies can successfully operate over an intranet (a private internetwork) and enjoy the same benefits as any other IP network including web browsers for operator interfaces and for commissioning, use of pre-installed structured wiring infrastructure, and the ability to attach to open systems such as BACnet.

BACnet has a very good strategy for migrating legacy control systems with fieldbus wiring to a modern IP network. From the beginning, BACnet supported several data links including Ethernet, ARCNET®, MS/TP, PTP and LonTalk. Later, BACnet®/IP was developed that allowed communication between the legacy data links through the use of BACnet routers. The most popular fieldbus data link used with BACnet is MS/TP—master-slave/token-passing. Contemporary Controls' BAS Router allows BACnet MS/TP networks to connect to a BACnet/IP network. The large graphic we used in our booth tells it all.

At the very lowest level are traditional unintelligent sensors and actuators that are found in any building automation system. These low-level signals interface to point I/O devices such as Contemporary Controls' BAS Remote or unitary controllers. These point I/O devices will either attach to a MS/TP bus or may attach directly to a BACnet/IP network as is the case with the BAS Remote Master. In order for a MS/TP device to gain access to BACnet/IP, a BAS Router is used.

Not all building automation devices are BACnet compliant but that does not prevent them from being connected to the BACnet/IP network. Modbus Serial uses the same EIA-485 physical layer as MS/TP but operates using a much different application layer protocol so gateway functionality must be provided to link Modbus to BACnet.

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The BAS Remote does the trick by mapping Modbus registers to BACnet objects. The customer has the other option of routing Modbus Serial to Modbus TCP using the same BAS Remote.

Once all devices are visible on IP, Contemporary Controls' CTRLink® line of Ethernet switches, hubs, media converters, and routers can make the final connections. If access to the Internet is required, our-soon-to-be released IP/Ethernet Router with built-in firewall completes the system.

To learn more about how this all works, call our office at 630-963-7070 for our white paper *Raising BACnet to the Next Level*.



For being a recession, booth traffic was good.

## Serving His Country With Pride



Private Tran visited Contemporary Controls during the Christmas holiday last year.

Like other mothers whose sons or daughters have enlisted in the armed forces, Contemporary Controls employee Van Flores treasures the letters she receives from her son, Tri Tran. Tran enlisted in the Army for seven years to serve his country with pride and honor.

He completed his basic training at Fort Knox in Tennessee. Private Tran is now based at Fort Riley in Kansas until June 2009 where he is assigned to repair tanks. His next deployment will be Iraq.

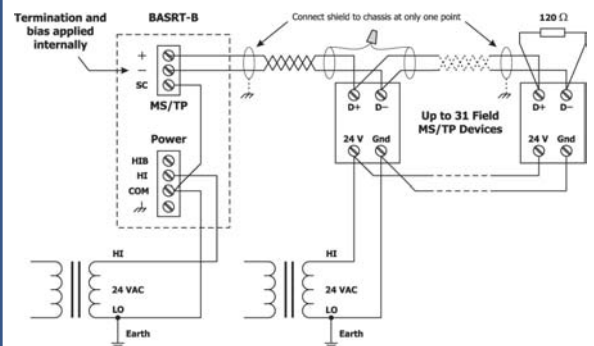
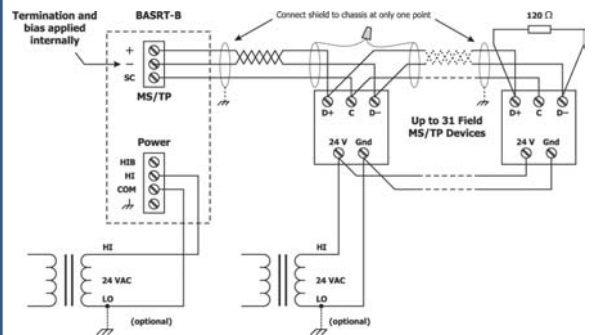
The Private says this experience will prepare him for a better job in the civilian world as well as allowing him to mature under the supervision of skilled adults.

# UPDATE technology

## Data Wiring and the BASRT-B MS/TP Router

BASRT-B installers often ask, "What are the proper data connections for the router?" This decision depends on whether data will flow via a two-wire or a three-wire bus.

It is very important to realize that the SC terminal on the router **must** attach to something to maintain a proper signal reference! If you are using three-wire cabling (as shown in the diagram immediately below), the SC terminal simply receives the data cable's common wire. But if you're using a two-wire bus (as shown below), the cabling will have no common wire and some means must be employed to assure proper reference. In this case, attach the SC terminal to the **Common** terminal on the router's power connector—assuming it is referenced to earth like the other attached devices.



By Bill Greer, Senior Product Specialist

## What IEU Graduates Have To Say

GOOD LEARNING TOOL

Ever since Contemporary Controls launched the virtual Industrial Ethernet University (IEU), the company has done a great service in better educating the public on this technology. More than 360 graduates said the courses helped them enhance their skills, resulting in more technical and professional opportunities.

Most graduates said the material on IEU was informative and more important, relevant to the needs of the industry.

Some graduates felt the content was very compact and precise, just like short notes. "In our busy professional lives, it's really good to be able to visit a site to refresh our knowledge on Industrial Ethernet so we're able to do our best in our jobs. We have encouraged many of our friends to enroll in IEU."

Others commented that the "mini course" structure followed by short exams not only promoted interest and retention, but also allowed the process to qualify as Personal Development Hours for professional license renewal.

The "campus" ([www.ieu.cc](http://www.ieu.cc)) incorporates 22 free courses vital to running highly-effective, trouble-free Industrial Ethernet and 13 guest lectures from the top ranks of this technology. The material and concepts are based upon the IEEE Std. 802.3 and relevant Request for Comments (RFCs).

Additional reference information may be obtained through the university's library and bookstore. The bookstore has a direct link to [www.amazon.com](http://www.amazon.com). Material in the bookstore has been reviewed and found beneficial by Contemporary Controls.

IEU has a virtual professor (William Greer, the company's Senior Product Specialist) who will answer any question by private e-mail. If he is unable to provide sufficient clarification, other experts from the company or outside the company will be consulted.

Contemporary Controls will continually evaluate IEU to ensure its quality to meet learning demands in the future.



### German Subsidiary Relocates to Leipzig Known as a Place of Commerce

Contemporary Controls GmbH (CCG) relocated its office from Eisleben to Leipzig in the state of Saxony to take advantage of the good transportation hub and other available resources. Sales Manager Jan Thriene says his company desired to be near Germany's eastern trade show region where show participation by CCG would prove beneficial in marketing its products and services.

Nearby is the University of Leipzig established in 1409 which helped the city's development into a center of German law and the publishing industry. It is one of Europe's oldest universities. Other universities include the University of Halle and Merseburg. With these institutions in the area, Thriene believes it's an excellent opportunity to acquire more students as interns as well as providing these schools with CCG's products.

Among the city's noteworthy attractions is the Leipzig Trade Fair which began in the Middle Ages. It is the oldest remaining trade fair in the world and has become an event of international importance. Residents also recommend visiting St. Thomas' Church and the Leipzig Zoo. St. Thomas' Church is famous as the place where Johann Sebastian Bach worked as a cantor and home to the renowned Thomaner choir. The Leipzig Zoo is the world's largest home for primates.



CCG's new office is located in Fugger Business Park in the state of Saxony which is the fastest growing region in Germany. The railway station in Leipzig itself is the location of one of the largest shopping centers.

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- Do you know what *Raising BACnet® to the Next Level* means to Contemporary Controls?
- What are several hundred Industrial Ethernet University graduates saying about the curriculum?
- How did Contemporary Controls participate in the BACnet interoperability demonstration at AHR Expo 2009?