

Focusing on News & Information  
for Contemporary Controls'  
Valued Customers

# NETWORK

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## TRADE SHOWS

**Bolster your knowledge of the industry  
by attending these trade shows.**

### Building Performance

October 5–6, 2005  
Stand # TBA  
London, Olympia

### ISA Expo 2005

October 25–27, 2005  
McCormick Place  
Lakeside Center  
Booth #1111  
Chicago, Illinois USA



## Why Tighten Our Environmental Standards

It is a fact that small amounts of lead have been used in electronic products for years. And today's environment is helping individuals understand the dangers of such hazardous materials and how it affects our quality of life issues.

Contemporary Controls is concerned about the environment, and it is taking a positive approach with regards to the new European Union guidelines on hazardous materials used in electronic products.

The European Parliament and the Council of the European Union (EU) have released directive 2002/95/EC on restricting the use of certain hazardous substances (RoHS) in electrical and electronic equipment.

This directive asserts that, from July 1, 2006, new electrical and electronic equipment placed on the market does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE).

Maximum concentration levels (MCV) are 0.1% by weight (0.01% for cadmium) in homogeneous materials. A homogeneous material is a single substance. Therefore, components are not homogeneous substances since they are made up of several materials, each with the potential of containing the banded substances.

In order to meet this directive, all components within a product must be examined to ensure that no banded substances exist.

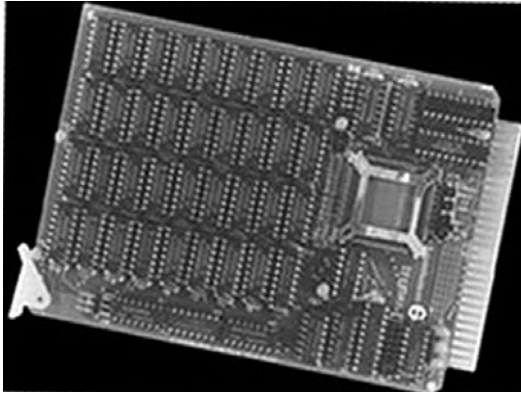
A second directive, 2002/96/EC, seeks the prevention of waste electrical and electronic equipment plus the reuse, recycling, and other forms of recovery of such wastes so as to reduce the disposal of waste. Both directives will have a strong impact on the company's operations in the future, and they feel it is best to commit to these standards for all their products, and all the countries they sell to. Contemporary Controls, with its three foreign subsidiaries, is a global supplier so the company must comply with the pending EU directives.

Contemporary Controls will continue to manufacture leaded products including ARCNET<sup>®</sup>, CAN, and Industrial Ethernet as long as leaded component inventory exists. Once leaded inventory is exhausted, the transition to lead-free production will begin the end of 2005, and to fully lead-free production to start no later than April 2006. As each product is reviewed, its status and planned date for conversion to RoHS compliance will be appended to the RoHS Compliant Product Roadmap that is posted to the company's main website ([www.ccontrols.com](http://www.ccontrols.com)).

As for the company's subsidiaries, Contemporary Controls (Suzhou) Co. Ltd is expected to convert to only lead-free production by September 2005. Heyfra Electronic GmbH (HEG) plans on commissioning a lead-free line by July 2005 with full conversion to lead-free by September 2005. HEG manufactures Industrial Ethernet products mainly for Europe.

Questions regarding a particular product should be directed to the sales department at 1-630-963-7070. Our company will attempt everything possible to accommodate the needs of our customers during this transition period.

## Looking Back in Time—Contemporary Controls Adopts STD-BUS



Nearly 256 kB of memory completely consumes the small 4.5" x 6.5" STD-BUS form factor.

The year was 1979 and the concept of a computer bus was old. Minicomputers such as the DEC PDP-8/E, had them so it was not much of a stretch to extend the concept to microcomputers. In the mid-70s, the S-100 bus was very popular among hobbyists but the boards were very large and multiple local regulators were used on each module since the bus was powered from unregulated power supplies. The bus was designed for the Intel 8080, which required three separate voltages. Zilog had recently

introduced the Z-80 requiring a single 5V supply and they were able to integrate into one chip what an 8080-based system required in three chips. Therefore, it was very possible to reduce the size of the bus boards to a fraction of the S-100 size and that is exactly what Pro-Log and Mostek did when they co-invented the STD-BUS in 1978.

The STD-BUS utilized a special 56-pin edge connector and a compact 4.5" x 6.5" module while the S-100 bus used an 100-pin connector. Each module would implement a function such as analog input module, memory module or stepper motor driver module. Contemporary Controls already had their own set of modules called the 800 series, based on the 8080, which looked remarkably similar to the STD-BUS. These modules were of the same size but utilized the more popular 44-pin connector. The CC modules were proprietary, whereas Pro-Log was promoting the open bus concept where competitors would sit in standards meetings, agree upon specifications, and then go out and produce modules to meet various market segments. At the time, this was a unique concept and Contemporary Controls needed to decide if it wanted to join the party and have the benefit of purchasing modules it did not intend to produce. Contemporary Controls was using its 800 series modules to facilitate system integration projects, and it was difficult to develop a module for unique applications. This open standard called "Simple to Design" seemed attractive.

Matt Biewer of Pro-Log was interim chairman of the fledging STD-BUS Manufacturer's Group (STDMG), and he invited George Thomas to Midcon/80 in Dallas to meet the other members. After seeing the level of cooperation and participating in the exchange of ideas, Contemporary Controls joined the group. Consisting mostly of small manufacturers, the group rotated chairmanships and Contemporary Controls eventually took its turn. This experience proved that association membership and participation was valuable and that more was to be gained through the open system process. Matt Biewer took the lead in the IEEE standardizations effort with IEEE 961 and must be commended. Today the technology has long moved on, but the friendships made with the STDMG continue.

Technology

issues

TECH UPDATE

### Using Fiber Optics With Ethernet

In recent years the use of fiber optics in local area networks (LANs) such as Ethernet has grown due to fiber's advantages over copper wiring.

High data rates can be maintained with no electromagnetic interference. Greater distances can be achieved. For industrial or commercial users, fiber offers isolation from high-voltage and the elimination of ground loops in large installations.

A four-page overview, "The ABCs of Ethernet Fiber Optics," may enhance your understanding of how—if simple rules are followed—Ethernet can function over fiber with ease.

The document is now available online and addresses such issues as:

#### CABLING BASICS

- Single-mode Operation
- Multimode Operation
- Index of Refraction
- Multimode Signal Distortion
- Operating Wavelengths
- Fiber Optic Transmitters
- Transmitter Power
- Receiver Sensitivity
- Optical Power Budget
- Link Loss
- Overdrive
- Delay Budget

#### ETHERNET STANDARDS

- FOIRL
- 10BASE-FL and 100BASE-X
- 4B/5B
- 100BASE-FX and 100BASE-SX

## We Ride for Those Stricken with Multiple Sclerosis

You don't have to be super-fit to pedal for a cause. You just have to be able to brave the weather — like soaring temperatures or hard-hitting rain blinding your field of vision. And a team formed by Contemporary Controls did just that as they rode the MS 150 bike Tour in hot 90° temperatures along the Illinois countryside the weekend of June 25 and 26.

The cyclists were George Thomas, Kathleen Thomas, Rhiannon LaPointe, and Steve Bogolub. All four rode the traditional 75-mile distance to and from Northern Illinois University in DeKalb, Illinois. They were among 1650 riders who were helping to attain the Greater Illinois Chapter of the Multiple Sclerosis Society's goal of \$1,500,000.00. So far, the chapter has reached more than 80% of its goal.

Hundreds of volunteers stood along the route, providing a helping hand when needed and cheering the riders across the finish line on Sunday.

This year's event drew more riders and 120 teams, calling attention for the need of a cure and increased research advances for the 18,000 individuals in Illinois stricken with multiple sclerosis.

The Chapter's mission stresses their belief that there is hope for all stricken with this disease. With the help of teams like Contemporary Controls, this awareness will continue to grow throughout the state of Illinois.



**(left to right) Kathleen Thomas, George Thomas, Rhiannon LaPointe, and Steve Bogolub formed the Contemporary Controls team. Northern Illinois University was the team's halfway point of their adventure. Team members were glad to just relax Saturday evening. All enjoyed the good food, the exciting entertainment, and the awards ceremony. A celebratory barbecue was provided to riders on Sunday.**

## The U.S. Team Celebrates 30 Years in Control



Thirty years ago microcomputers were changing the way controls were built. And Contemporary Control Systems, Inc. opened its doors for business in 1975.

On June 23rd of this year, the company celebrated its 30th anniversary with a special luncheon followed by a video presentation. The video presentation showcased the company's history—from its storefront location on Curtiss in Downers Grove, IL, to its vision in becoming a global supplier of industrial networking products.

## There's A New Face in the UK Office



There's no other feeling in the world like being a new Mom and Katy Morrison, our Office Manager in our UK facility, can admit to that emotion. Katy is taking a one-year leave of absence as she bonds with her new baby boy, Charlie.

Of course, the office won't be operating itself. The office Sales Manager has hired Lisa Sims as Katy's replacement. Sims will feel right at home in the UK office. Years ago, she too, was a supervisor for a company called E-Squared Ltd. Sims commented that this was her most memorable position. "I worked very hard and received monetary rewards for my excellent and loyal service to the company," said Sims. "I learned much from this position, and I received several promotions."

Aside from work, Sims can be seen rooting for the Crystal Palace football team. "I'm a big fan, and I'll always be one," she said. She also enjoys swimming, cooking, reading, and entertaining family and friends.



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Contemporary Control Systems, Inc.  
2431 Curtiss Street  
Downers Grove, IL 60515 USA

Address service requested.

## Product Interest Literature

**NEW**



AI-SRVR ARCNET  
Server to Ethernet  
Client

ARCNET AI-USB  
Active Hub

CTRLink Industrial  
Ethernet Catalog



US fax back and e-mail:  
1-630-963-0109  
info@ccontrols.com

UK fax back and e-mail:  
+44 (0)24 7641 3923  
ccl.info@ccontrols.com

Germany fax back and e-mail:  
+49 (0)341520359-16  
ccg.info@ccontrols.com

China fax back and e-mail:  
+86 512 68095966  
info@ccontrols.com.cn

**2005  
News  
News**

Contemporary Controls is taking a proactive stance regarding the new European Union guidelines on hazardous materials used in electronic products.

Go back in time when Contemporary Controls adopts STD-BUS and how the company's membership in one organization proved a valuable experience.

This month's Tech Update may enhance your understanding of how Ethernet can function over fiber with ease.