



LONWORKS® Control Technology Protects Museum Exhibits, Keeps Visitors Comfortable

In September 2003, after three years of construction, Kunsthaus Graz (Exhibit Hall Graz), located in the Austrian city of Graz, was opened to the public. The building has since been featured in almost all international architecture magazines for its aesthetic design and sophisticated building automation system.

Named "The Friendly Alien" by project architects Peter Cook and Colin Fournier due to its biomorphic shape, the building is famous for its striking appearance. Like a bubble of air, the bluish, shimmering skin of the Kunsthaus floats above its glass-walled ground floor. From the surface of the acrylic glass outer skin, strikingly shaped "nozzles" project outwards to admit daylight. Visitors enter the museum on the ground floor where a long moving ramp leads to the upper exhibition rooms. Isolated, transparent window areas in the skin allow visitors to look out, while a projecting, glass-enclosed structure offers a spectacular view of the Old Town of Graz. However, the building owners did not merely want an eye-catching design. Behind the facade, the building automation system needed to meet the demanding requirements for museums on the international loan circuit. Important art lenders must be certain that the environmental conditions inside the museum will properly care for their artwork. In addition, the museum must offer a comfortable environment for visitors across its entire 11,100m² (120,000 ft²) of exhibition space.

Beauty and Brains Reveal Work of Art

To meet these demands, a building automation system based on Echelon's LONWORKS technology was installed in the building. HGA, an Austrian home and building system integrator, led the system deployment.

The LONWORKS building automation network consists of heating, ventilation, air conditioning, lighting, sun protection, and sanitary systems. Frequency converter pumps, fire dampers, CO plants, and power supply systems were also integrated into the network. Installing a LONWORKS network requires less cabling and significantly reduces the cost of the switching cabinets and hardware.

Two TAC Vista IV building management systems were installed as open interfaces to the LONWORKS network. These servers act as communication centers and collect technical information about the entire building. An LNS database is fully integrated into the system, allowing direct access to data in the LONWORKS network.

The system can be accessed over the Internet/intranet from any standard PC. The TAC Vista Web station provides simple operation through an Internet browser.

A total of 26 LONWORKS based TAC Xenta® 400 and TAC Xenta® 300 DDC automation stations were installed in the museum. The controllers and I/O modules communicate over the LONWORKS network. Faults are transmitted automatically and reliably to the building management system where they are displayed. Selected alarms can be forwarded for remote messaging by SMS, e-mail, or fax.



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Products and suppliers

Echelon

- *i.Lon*® 1000 Internet Server
- LNS® Network Operating System
- VNI – Virtual Network Interface

TAC

- 2 TAC Vista IV building management systems
- TAC Vista Web station
- 26 LONWORKS based Xenta® 400 and TAC Xenta® 300 DDC automation stations

Highlights

- Higher operational reliability and lower operational costs
- Maximum user comfort and convenience
- Minimal servicing and maintenance
- Over 30% saving on cabling costs

Contact:

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