EUROPEAN PROJECTS

Light & Building 2012

Discover the applications and integration strategies that power the world's most intelligent buildings and environments.

LONMARK® INTERNATIONAL

About LonMark® International

LonMark International is a non-profit trade and standards development association supporting the commercial, industrial, and residential control markets through open integrated systems.

We are a global membership organization created to promote and advance the business of efficient and effective integration of open, multi-vendor control systems utilizing ISO/IEC 14908-1 and related standards.

ISO/IEC have approved LonWorks® to the highest level of international standards recognition.

We provide certification, education, and promotion of interoperability standards for the benefit of manufacturers, integrators, and end users.

LonMark is committed to energy efficiency through intelligent control

EUROPEAN PROJECTS – Light & Building 2012

Credit Lyonnais Bank Tower

WHO:

ARC Informatique
25 chemin de chaumetière
38240 MEYLAN - France
www.arcinfo.com

WHERE:

Paris, France

SUMMARY:

The building automation relies on LonWorks technology:

- Building automation: climatic control, HVAC, energy, access control, lighting, blinds and ventilation convectors
- Complies with LonMark recommendations
- PcVue has been chosen for native LNS support

Technical aspects:

- 2 PcVue stations
- 3,200 LonWorks nodes
- 1,500 Johnson Controls TCU ventilation convectors
- 1,500 infrared receivers
- 2,800 window blinds
- 1,400 STIBIL devices for lighting
- 28 Echelon routers
- 2 Ilon gateways (TCP/IP – LON)
- 220 remote controls
- Wago equipment for data on electrical services

EDF Tower

WHO:
ARC Informatique
25 chemin de chaumetière
38240 MEYLAN – France
www.arcinfo.com

WHERE:
Paris, France

SUMMARY:

Building management of 47 floors with an area of 59,500 square meters:

- Energy
- Chiller plant management
- Air treatment machines
- Fire and intruder detection
- Automated alarms

Technical aspects:

- Three PcVue stations (60,000 tags)
- Schneider Premium PLCs on an Ethernet network
- Johnson Controls equipment via OPC
- Tormax, Wago, Wieland & Woertz equipment via LonWorks

Aventis "Van Gogh" Head Office

Pharmaceuticals head office in Paris. 28,000 square meter offices and a 4-storey car park.

WHO:

ARC Informatique
25 chemin de chaumetière
38240 MEYLAN – France
www.arcinfo.com

WHERE:

Paris, France

SUMMARY:

The building automation relies on LonWorks technology:

- Optimum comfort
- Operational flexibility for setting up each level
- Open connectivity enables easily integration of devices from different manufacturers

Technical aspects:

- 1,700 Carrier HVAC regulators on the LonWorks network
- 64 LonWorks gateways into the VarioSys network for blinds
- 1,500 remote control devices
- 450 infrared interfaces
- 750 Philips LRC 5048 lighting interfaces
- 31 Echelon routers
- 10 PcVue stations on LON and Modbus
- 2 Satchwell 28 CTA Modbus gateways
- Remote acquisition I/O modules: TSX Nano, TSX Premium
- 3,000 Echelon nodes.

Crystal Park Building

Rebuilding of the former Peugeot-Citroën head office. 40,000 square meters of offices and 2 floors below ground.

WHO:

ARC Informatique
25 chemin de chaumetière
38240 MEYLAN – France
www.arcinfo.com

WHERE:

Paris, France

SUMMARY:

Re-organization of the building to improve communication and provide greater flexibility in the use of office space.

A LonWorks based solution:

- Optimum comfort
- Operational flexibility for setting up each level
- Open connectivity for integration of devices from different manufacturers

Technical aspects:

- Compliance with LonMark recommendations. PcVue has been chosen for native LNS support.
- PcVue SCADA software
- 2,400 Honeywell ventilation convectors
- 600 LonWorks devices for controlling blinds
- 2,300 infrared receivers
- 750 LonWorks devices for lighting
- 35 Echelon routers
- 4 Ilon gateway devices (TCP/IP - LON)
- 1,200 remote control units

Euro Athenes Building

Automation of a 5,000 square meter office building; seven floors and two underground levels.

WHO:

ARC Informatique
25 chemin de chaumetière
38240 MEYLAN – France
www.arcinfo.com

WHERE:

Paris, France

SUMMARY:

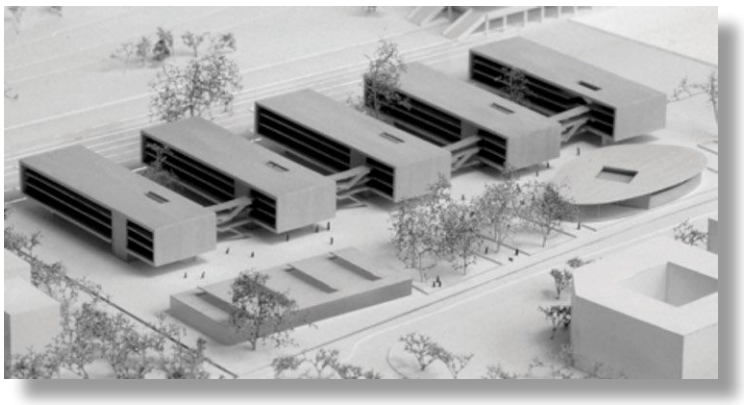
A LonWorks based solution:

- Optimal comfort.
- Operational flexibility for setting up each level
- Lighting management
- HVAC
- Control of blinds
- Presence of employees

Technical aspects:

- Johnson Controls regulators for 230 ventilation convectors
- 7 gateways LonWorks for the VarioSys blinds network
- 220 remote controls, 220 infrared motion detectors and 110 Comtec lighting interfaces
- PcVue SCADA software
- Remote I/O equipment from Wago
- 7 Echelon routers, 355 Echelon nodes

Technical School Center



WHO:

ARC Informatique
25 chemin de chaumetière
38240 MEYLAN – France
www.arcinfo.com

WHERE:

Munich, Germany

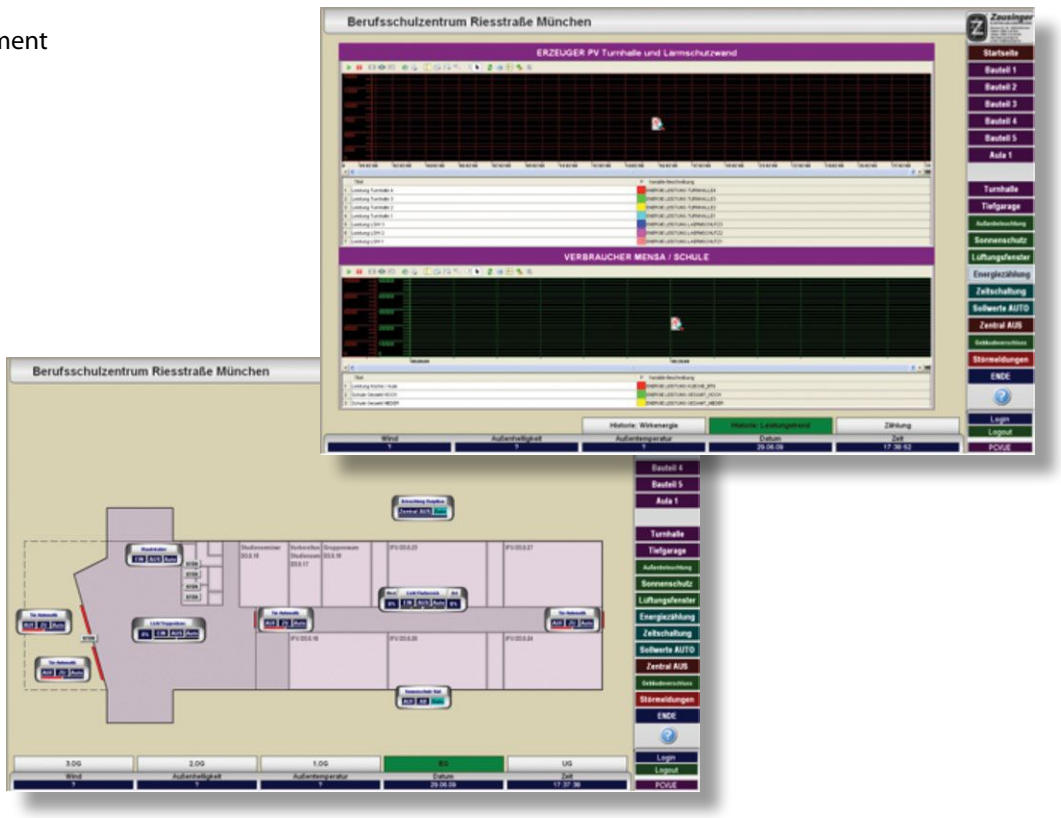
SUMMARY:

System Integration with PcVue SCADA

- SCADA Application in BMS with LON communication
- 600 LON-nodes with mixed
- Enocean-, Dali-, Messner-, Spega- and Regulex-Controller hardware
- More than 5000 datapoints
- Over 50 mimics
- LON communication
- HDS : Historical data management
- Automatic Scheduling
- Alarm Monitoring

Controling and Visualisation of:

- Access Control
- Lighting and Enviroment
- HVAC
- Energy Management
- Blinds
- Photovoltaic control



BAUER
ENERGIE UND VERSTAND

LONMARK® INTERNATIONAL

Leonardo Royal Hotel

WHO:

BAUER Elektrounternehmen GmbH & Co. KG
Kaspar-Graf-Straße 2
D-84428 Buchbach
Germany
Phone +49 80 86 / 93 00 – 0
www.bauer-netz.de

WHERE:

Munich, Germany

SUMMARY:

Lighting for a pleasant atmosphere and room automation in the rooms and suites to give a feeling of comfort:

- 424 deluxe rooms and suites
- 1800 square meter conference area with the Royal Ballroom which can accommodate up to 700 guests
- Rooms and suites with service and comfort

All rooms are tied into the Hotel Management and Reservation programme and are brought up to temperature at the start of the reservation process:

- Unbooked rooms remain at the energy saving standby-setting
- Access to the rooms is with a room card reader which switches on the lighting and activates the comfort setting with the air-conditioning or heating
- All data points such as window contacts, occupancy, heating and cooling are shown on the central building control system

Lobby and Meeting with lighting regulation through Dali and DMX

- Connection to the audiosystem for the control of different scenarios for a feeling of comfort
- Temperature regulation for heating/cooling with fancoils
- The meeting rooms are tied into the hotel reservation system
- The LON network is switched on to the building control system through IP Router and OPC

Beluga Shipping

WHO:

Boos Klima und Kälte GmbH
Jan Boos
26316 Varel/Oldenburg
Germany
www.boos-varel.com

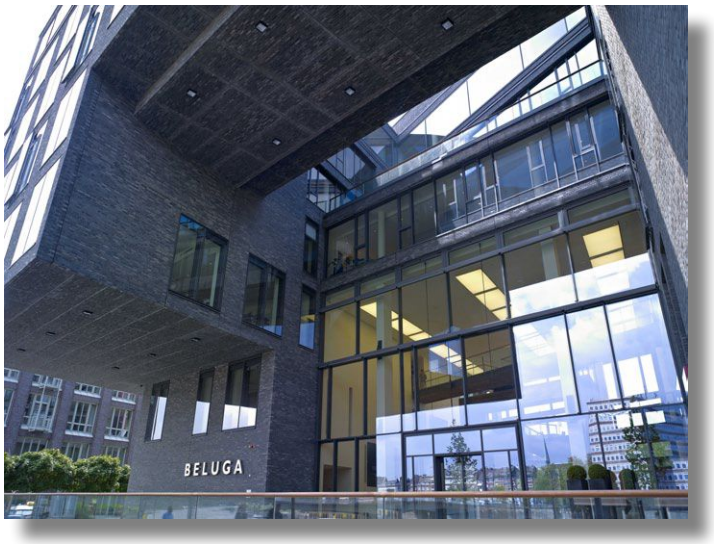
WHERE:

Bremen, Germany

SUMMARY:

This office building was originally built for Beluga Shipping, a former world market leader in heavy lift shipping. The building provides 10,000 square meter office space, an underground parking and a rooftop restaurant.

The LON-based integrated building management system consists of 892 LON-nodes and includes control of lighting, sunblinds, motorised windows as well as control of central HVAC systems and energy consumption via heat meters and electricity meters.



Bologna University - G.E.CO Project

WHO:

Casadei & Pellizzaro S.r.l.
Via A. Righi,1 - 47122 Forli FC, Italy
M:+393481518131
T:+390543773838
www.casadeipellizzaro.com

WHERE:

Bologna, Italy

SUMMARY:

The G.E.CO. building automation project for Energy Management and Remote Control by the University of Bologna results from the need for optimizing heating and air conditioning systems, monitoring and, therefore, reducing energy consumption and increasing the comfort offered by the facilities.

The solution offered by Casadei&Pellizzaro allowed matching these two targets freeing the University of Bologna from the proprietary systems using open protocols, i.e. LONMARK.

This building automation system allows the University of Bologna to optimize energy consumption:

- Collecting the data from the systems real time and constantly monitoring their functioning
- Reducing energy consumption
- Analyzing and controlling data
- Making a comparison between the consumption of the different system and in different time periods; analyzing the energy consumption – external temperature ratio
- Making the University independent from system manufacturing companies through the use of devices using standard and open protocols

Campus buildings that have been fitted (even partially) according to this project:

- **Faculty of Psychology** – V-le Europa 115 – Cesena
- **Faculty of Agriculture** – Vespignani Complex – Imola
- **Department of Biology** – Experimental Evolution – Via Selmi, 3 – Bologna
- **Campus of Forlì** – Gaddi Morgagni Building – Political Sciences
- **Campus of Forlì** – Celtic Building – Master Classrooms
- **Campus of Forlì** – Entry Building - Forlì – *UNDER RESTRUCTURING*
- **Campus of Forlì** – Bar and Canteen
- **Campus of Forlì** – Trefolo – *UNDER CONSTRUCTION*
- **Bigiavi Library** (4th floor) – Via Belle Arti – Bologna
- **Cliro** – Via Marconi – Forlì
- **SSLimit** – Becchi Building – Via Oberdan – Forlì

Gruppo Hera

Revamping of the city district heating station

WHO:

Casadei & Pellizzaro S.r.l.
Via A. Righi,1 - 47122 Forli FC, Italy
M:+393481518131
T:+390543773838
www.casadeipellizzaro.com

WHERE:

Italy

SUMMARY:

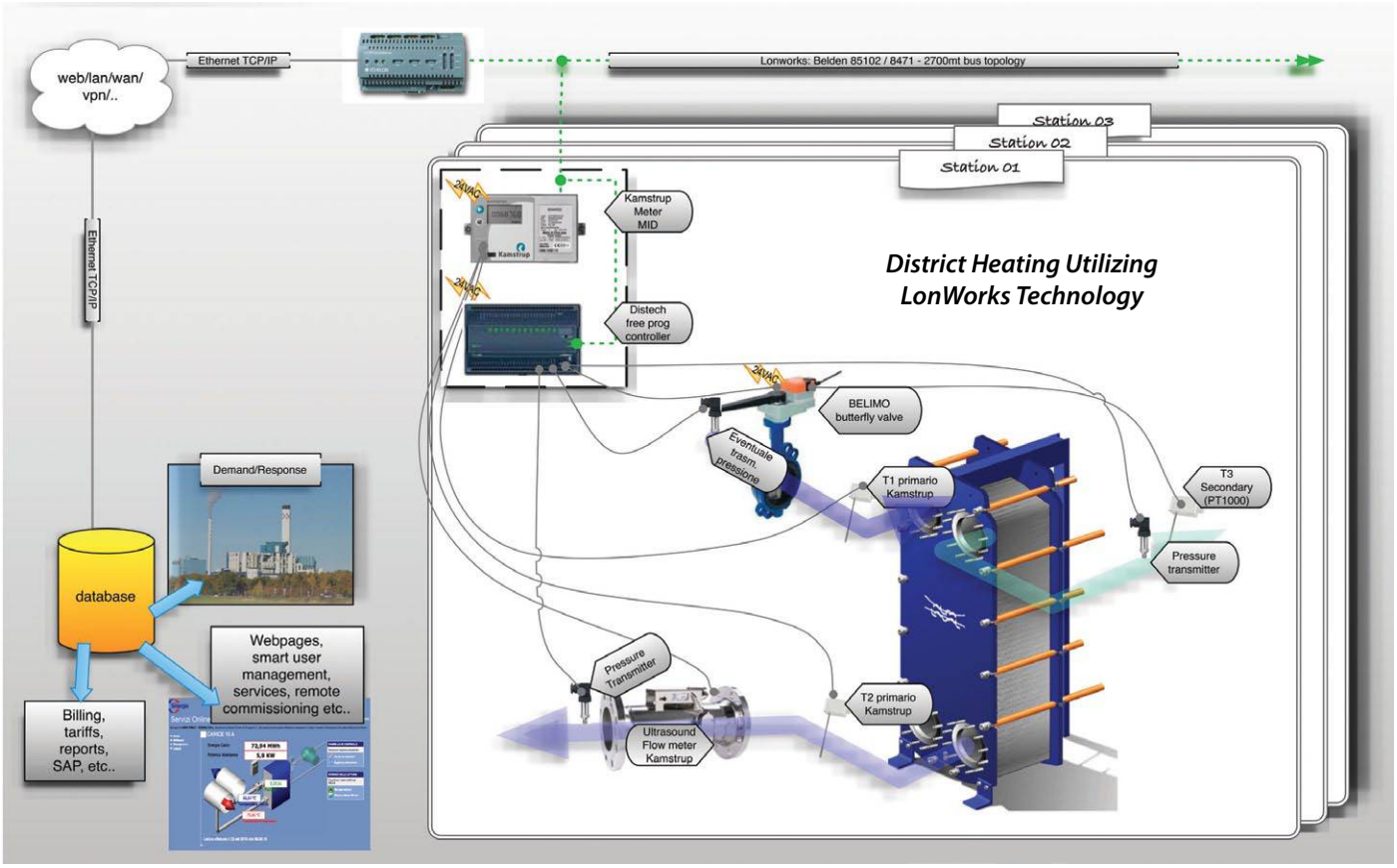
Revamping of the city district heating station, cogeneration, variable capacity fluid distribution, accounting and adjustment of thermal exchange stations in the geographic area.

The upgrade of the automatic control systems updated to the OPEN standards (LONMARK, BACnet,) allowed re-engineering the operation of the Hera "Ippodromo" district heating ad cogeneration station.

By implementing bus systems with open standards it was possible integrating the data of the 34 thermal exchange connected to the district heating network, with a "demand/response" production logic and a distribution based on the actual demand of substations according to the instant demand.

This solution led to an immediate heat production and distribution energy saving, the availability of useful energy for connecting other substations to the network when, before, the system seemed to be saturated.

Data coming from ultrasound heat meters installed in substations, transported by means of LONWORKS through the connection of three different bus on TCP/IP data network are linked to an SQL database through XML/SOAP, thus being available for different uses at the same time, such as recording, publication on different web pages dedicated to customers and operators, integration of the accounting system for consumption, export through ODBC for SAP integration, other options for future developments.



Querzoli Industrial plant

New plant utilizes BACS Open Standard.

WHO:

Casadei & Pellizzaro S.r.l.
Via A. Righi,1 - 47122 Forli FC, Italy
M:+393481518131
T:+390543773838
www.casadeipellizzaro.com

WHERE:

Forli, Italy

SUMMARY:

For the new plant of industrial prefabrication located in the Ronco area in Forlì a BACS (Building Automation Control System) system was chosen, based on open standard protocols (BACnet, LonMark, Dali, Enocean).

This technological choice allowed to:

- Integrate on the same platform the most advanced technological devices produced by different manufacturers.
- Create one single high energy performance system which can improve the liveableness of the working environment using technologies and the respect for the environment, giving to the customer the freedom to choose now and in a future the parts of its system without the constraints of a one-brand manufacturer.
- It is also possible to further develop the system in future years reducing maintenance operations on electro mechanic systems.

The BACS allows the integrated management of the systems of the building, adjusting them and supporting the management processes according to the actual energy needs.

The main sectors are integrated: HVAC Mechanic Systems (Heating, Ventilation, Air Conditioning and Cooling) and Power and Special Systems (Thermal Energy Distribution, Lighting, Irrigation, Tank Management).

It has been calculated that this system will lead to a primary energy need saving for winter air conditioning of 1,600,000 kWh/year, i.e. 34% compared to the hypothesis of the D.R. 156/2008, with a reduction of CO2 emissions of 337 t/year, together with the construction of a high performance casing with which the whole building will be classified as energy class A.

delmatic

LONMARK® INTERNATIONAL

The Gherkin

WHO:

Delmatic Ltd.
The Power House, 6 Power Road
Chiswick
London W4 5PY
United Kingdom
www.delmatic.com

WHERE:

London, UK

SUMMARY:

London's first environmentally-progressive building contains a Delmatic LON lighting management system.

The spiralling lightwells, which are such a feature of the façade, bring daylight deep into the building so the Delmatic system ensures energy efficiency through the use of Dali dimming and intelligent multi-sensors which relating lighting to occupation and adjust light levels to compensate for daylight contribution.

Delmatic's modules seamlessly merge with the building-wide Lon network enabling Swiss Re and their tenants to "hook" other devices onto the network to achieve fully integrated and interoperable LON services.

delmatic

LonMark® International

The Shard

WHO:

Delmatic Ltd.
The Power House, 6 Power Road
Chiswick
London W4 5PY
United Kingdom
www.delmatic.com

WHERE:

London, UK

SUMMARY:

The 83 storey Shard, designed by Italian architect Renzo Piano as part of the £2bn London Bridge Quarter development, is 310m high, and will be the tallest structure in the UK and Europe.

The structure comprises 600,000 square feet of office space on the lower floors, with mid-level restaurants on levels 31-33.

A five star luxury hotel occupying 18 floors is also planned towards the top along with private apartments and a public viewing gallery that will offer panoramic views across the city.

A Delmatic LON system controls Dali lighting throughout the shell and core areas as well as the office fit-out floors. In addition to this, the Delmatic system provides comprehensive emergency light testing and monitoring throughout the building.

"Le Molière" Building

WHO:

Distech Controls SAS
ZA Les Andrés
17 rue du Pré Magne
BP5
69126 Brindas – France
www.distech-controls.eu

WHERE:

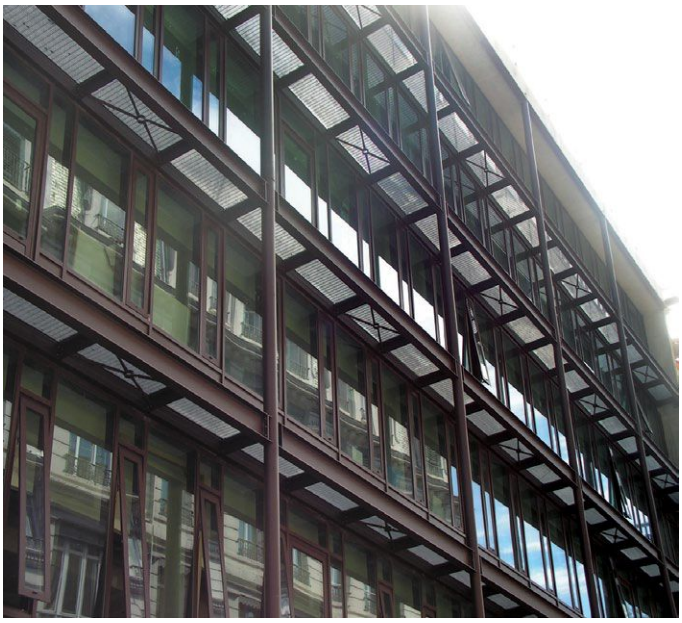
Lyon, France

SUMMARY:

Le Molière building is located at the heart of Lyon, in the 3rd district. It is dedicated to offices and open spaces renting.

Thanks to its equipments, Le Molière building is able to reach a famous French green certification called "Bâtiment Basse Consommation".

Information from HVAC (Heating, Ventilation, Air-Conditioning) devices monitoring and programming, energy metering and management (with additional solar-powered equipments), scheduling, monitoring (errors, alarms) are sent via the LonWorks network to the central monitoring console for data processing, sorting, history and analysis.



HERMOS

LONMARK® INTERNATIONAL

Clinical Center Minden

Europe`s largest new clinical building in recent years

WHO:

Hermos Systems GmbH
Niederlassung Berlin
Carl-Scheele-Strasse 16
D-12489 Berlin
Deutschland
Tel.: +49 (0) 30 23 60 77 65 - 105
Fax: +49 (0) 30 23 60 77 65 – 111
www.hermos.de

WHERE:

Minden, Germany

SUMMARY:

In the building automation project "Clinical Center Minden" HERMOS Systems GmbH integrated several technologies and subsystems into a LONMARK based backbone network.

Key features:

- System visualization based on FIS# (Facilties Information System)
- Interface to building DCS (OPC data link)
- 200 freely programmable LON-Controllers
- 1,900 fire damper actuators (AS-i)
- 40 energy meters & analyzers (Modbus)
- Lighting control by DALI®-subsystem
- Integration of media control unit in the auditorium
- 2,100 alarms and notifications from switch cabinets
- 450 blinds and screens
- 600 lighting groups
- 500 m street lighting

Important steps while creating this system has been:

- Support in developing the customers functional specification
- Design and engineering of automation network, bus topology and visualization system
- Commissioning and startup of the whole building automation system
- Complete functional check

HGI
Heger Gebäudeautomation
Ingenieurgesellschaft mbH

LONMARK® INTERNATIONAL

RTL – Rheinhalle

WHO:

HGI - Heger Gebäudeautomation Ing. GmbH
Gutenbergstr. 8
48477 Hörstel
Germany

WHERE:

Cologne, Germany

SUMMARY:

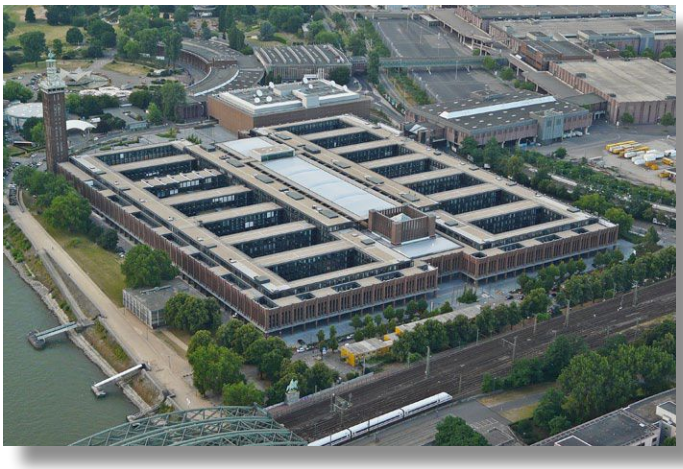
The historic fair halls Nos. 1-3 in Cologne, which are known as the "ancient Rhine halls", were completely gutted for the new construction. Mr. Adolf Abel built the ensemble from 1924 to 1928 by order of the former mayor of Cologne, Mr. Konrad Adenauer. The expressionist brick facade, the fair tower and the so-called Ehrenhof (courtyard of honour), an inner courtyard covered with a glass pyramid, are under monument protection. These building elements have been extensively reconstructed and integrated into the overall structure. The fair halls Nos. 4 and 5 were entirely dismantled and in their place the new 7-storey car park for 2,000 cars was built.

The office blocks were built on an area of 220 x 260 meters within the historic façade. The building volume amounts to 948,000 m^3 on a floor area of 250,000 m^2. The office blocks are divided into the sector called Rheinhallen (Rhine halls) in the northern part, and Rheinpark (Rhine park) in the southern part. The core tenant is the media enterprise RTL Group in the Rhine halls sector.

An automation system for a largely automated and efficient operation of all HVAC systems was sought. The specifications required a decentralized approach, with networking in the field using proprietary field buses and connection to the BMS with OPC via a fiber optic network.

Because of RTL, the established core tenant, the "highly available automation network," became the decisive criterion for winning the award.

Within the framework of bidding competition, the HGI company came out on top with a LON based solution and got the order for its execution.



Facts and benefits:

- 65,000 information points
- 200 redundant LON routers
- 4.000 motorized fire protection flaps
- 250 switch cabinet fields
- 12 million Euro project volume
- Optimized control strategy for cooling using Rhine water
- 1,000 individual room controllers for production rooms, server farms and technical rooms
- Meter network for 1,500 energy meters
- 80 kW redundant UPS unit for the automation network
- IT-network incl. 800 ports and router/gateway to enterprise network
- TABS (thermoactive component systems) control strategy for passive cooling with Rhine water and heating with re-cooling of the chiller
- Energy management using Vista for continuous supervision of the withdrawal of water from the Rhine and the related well water levels
- Provision of 5 dedicated operator work stations with right of operation, maintenance and control. Access via internet by means of safe hardware token concept.

kieback&peter
Technologie für Gebäude-Automation

LONMARK® INTERNATIONAL

Office building "Le Maire"

WHO:

Kieback&Peter GmbH & Co. KG
Tempelhofer Weg 50
12347 Berlin-Germany
Tel.: +49 30 60095-135
Fax: +49 30 60095-160
www.kieback-peter.de

WHERE:

Arnhem, The Netherlands

SUMMARY:

"Le Maire" was built in 2010/2011. One of the main requirements of the user was to have an ideal indoor climate with high energy efficiency. The air quality was of particular importance.

Kieback&Peter developed a plan for individual room control. The concept, based on technolon® automation systems was tested in a test facility prior to the application.

The room automation system encompasses 181 RCN-L room controllers. They monitor and control the heating and cooling of the under floor heating, induction equipment and ventilation. 82 of the controllers also monitor the CO_2 emissions and regulate air quality. Furthermore, lighting control and natural ventilation are integrated via RCN-L controller.

© Cito Le Maire

kieback&peter
Technologie für Gebäude-Automation

LONMARK® INTERNATIONAL

Nordpfalzgymnasium

(North Pfalz Grammar School)

WHO:

Kieback&Peter GmbH & Co. KG
Tempelhofer Weg 50
12347 Berlin-Germany
Tel.: +49 30 60095-135
Fax: +49 30 60095-160
www.kieback-peter.de

WHERE:

Kirchheimbolanden, Germany

SUMMARY:

North Pfalz Grammar School is one of the first schools to achieve the passive house standard after restoration.

Among other things, the high energy efficiency is due to Kieback&Peter's building automation, which supports the energy-efficient operation.

The basis of building automation is the room automation with the technolon® system. Thanks to the openness of the technolon® system, LON® products from other vendors can be integrated easily. Intelligent room functions according to VDI 3813 in all the rooms provide high energy efficiency, comfort and good, a healthy learning environment.

A DDC4200-L automation station brings room automation onto the automation level. The Neutrino-GLT room operator for building management system is installed at the school. Remote control from other locations is also possible.

KROPMAN
INSTALLATIETECHNIEK

LONMARK® INTERNATIONAL

The TNT Centre

New Zero Emission building delivers quality, comfort and sustainability

WHO:

Kropman Installatietechniek
Lagelandseweg 84
6545 CG Nijmegen
The Netherlands
www.kropman.nl

WHERE:

Hoofddorp, The Netherlands

SUMMARY:

In 2007, TNT N.V. (now two independent companies, the TNT Express and PostNL) announced a strategy to move its operations to green office buildings. Designs for the new corporate headquarters began soon after, becoming the company's blueprint for sustainable buildings in the future.

From the start, the two companies identified the key objectives for the new building:

- to create an **open, flexible and inspiring work environment**
- to design and construct a **sustainable office** as tangible proof that TNT is serious about its ambition to significantly reduce CO_2
- **to lower costs**

Since its official opening in September 2011, the TNT Centre has been recognized as one of the most sustainable buildings in Europe. The use of LONWORKS and LONMARK standards-based products have improved room comfort with enhanced climate control and light, simplified and integrated room control, enabled full monitoring and remote maintenance and reduced engineering requirements because there is less protocol conversions needed. Building occupants are very pleased with the comfort and use of natural light. Modifying building parameters for occupants involving lighting and climate control is simplified using the software front-end. Detailed energy information is provided through energy meters tracking electrical and thermal energy flow.

Arlanda Airport

WHO:
Schneider Electric
Jägerhillgatan 18,
SE-213 75 Malmö
Sweden
www.schneider-electric.com/buildings

WHERE:
Arlanda, Sweden

SUMMARY:

Sweden's largest airport – Arlanda – it is a great place to work with a workforce of 15,000 employees and 250 companies. The airport is Sweden's largest employer and uses as much energy as a city with a population of 25,000.

Arlanda Airport has the world's largest Aquifer, a system for energy storage and energy management. An Aquifer is a huge energy storage unit that collects heat in the winter and cool air in the summer. Unlike other energy storage systems it does not require aquifer heat pumps or cooling devices (heat exchanger) to operate.

Instead, the aquifer is controlled by temperature differences in a water layer, in this case in an esker, creating a natural circulation causing high demands on the control and regulation system.

However in just five years after integrating Schneider Electric's energy management system, Arlanda reduced their energy usage and environmental impact by 30 percent.

Qpharma Production Facility

WHO:
Schneider Electric
Jägerhillgatan 18,
SE-213 75 Malmö
Sweden
www.schneider-electric.com/buildings

WHERE:
Malmö, Sweden

SUMMARY:
QPharma AB has more than 35 years developing and manufacturing drugs under contract to global and local pharmaceutical companies. The major production areas of 60,000 square meters is located in the outskirts of Malmö.

As QPharma had problems with an increasing energy consumption they wanted to look at the types of energy-efficiency measures that could be performed at the manufacturing site, both on the production process and the facility. They also wanted to modernize the equipment to ensure the value and technical standard of the property.

SOLUTION:
- Modernization of control and regulating equipment
- Cooling the processed air by the recovery system
- Recovery of condensation for heating the building,
- Recovering heat from the cooling unit and regeneration of air
- Replacement of the dryers
- Training of operating personnel.

RESULTS:
- Energy savings of 1000 MWh per year
- Cost savings of 700 000, - SEK per year according to the 2009 tariffs
- Modernization of technology and hence reduced need for maintenance

Gavlefastigheter

WHO:
Schneider Electric
Jägerhillgatan 18,
SE-213 75 Malmö
Sweden
www.schneider-electric.com/buildings

WHERE:
Gävle, Sweden

SUMMARY:

Gavlefastigheter AB owns and manages properties for both industrial and municipal activities. The company is owned by the municipality of Gävle and is part of the group Gavle City Hall AB. The properties, which corresponds to a floor space of about 450,000 square meters, accommodating everything from kindergartens, schools and cultural buildings to industrial and business premises.

To advance to the desired extent and speed, a collaboration with Schneider Electric (formerly TAC) was engaged. The work has been performed in two stages, starting in spring 2008.

The project focuses on both the outer and inner environment. A complete abolition of the use of oil and the use of bio fuels, combined with the overall energy savings, reduce greenhouse gas emissions from Gavle Real Estate's facilities significantly. The reduction in CO_2 emissions equivalent to the emissions 7 percent of Gävle municipality's total car fleet generates in a year.

In addition to significant environmental benefits, organizational and skills development, the goal was to generate 20-percent energy savings per year. This was achieved or exceeded in 10 out of 13 facilities already in 2010.

CUSTOMER BENEFITS:

- Decommissioning of oil consumption and reduced environmental impact
- Extensive organizational and operational development, increased energy and operational expertise
- Certification as a GreenBuilding Partner by exceeded savings targets

Malmö Arena

Interacting systems lowers energy bill for Malmö Arena

WHO:
Schneider Electric
Jägerhillgatan 18,
SE-213 75 Malmö
Sweden
www.schneider-electric.com/buildings

WHERE:
Malmö, Sweden

SUMMARY:

Malmö Arena, with seating for 15.000 people, located just south of downtown. Malmö is the home of the Malmo RedHawks which means more than 26 hockey games per season . It also hosts also a series of concerts and events with Swedish and foreign entertainers.

Minimizing energy consumption and providing a platform for the effective operation of the property. A major challenge in the project was the sheer size of the arena, 61,000 square meters, and the need to adapt and control the indoor environment for distinctive various events and activities in a cost effective manner.

By implementing interoperable systems such as:

- Central control and monitoring
- Energy efficiency
- Fire Alarm
- CCTV

the Malmö Arena lowered their projected energy consumption by 40 percent. The property management has been streamlined – one person can control and monitor systems for heating, ventilation, fire and safety from a laptop.

Equinix Datacenter AM3

WHO:
Schneider Electric B.V.
Postbus 836
2003 RV HAARLEM
The Netherlands
www.schneider-electric.nl

WHERE:
Amsterdam "Science Park", The Netherlands

SUMMARY:

This is now the third data center that Equinix built in Amsterdam, a clear indication of the growing demand for data center services from this supplier. The new data center, with a LEED certification, uses heat and cold storage in the ground to prevent the use of mechanical cooling where possible. Excess heat from the data center will be used to heat neighboring buildings and is made available for other use by third parties. In addition, for the cooling towers hybrid technology was used.

By Equinix 'use of sustainable technologies, customers can reduce their CO_2 footprint or carbon footprint significantly. The new data center will be built in phases, the first phase will provide capacity for approximately 1,400 cabinets. If the second and final phase is completed, the IBX can accommodate approximately 2,800 cabinets. "This data center is the most sustainable data center that we have ever built," said Eric Schwartz, president of Equinix EMEA.

LON technology has been chosen as the backbone of the overall monitoring and control system, all fully redundant. System: Schneider Electric TAC Vista V.

Floriade 2012

WHO:
Schneider Electric B.V.
Postbus 836
2003 RV HAARLEM
The Netherlands
www.schneider-electric.nl

WHERE:
Venlo, The Netherlands

SUMMARY:

This highly sustainable building uses CCA and has a fully integrated GBS based on LONWORKS technology. The installation includes 14 control boxes, 180 room controllers and the following disciplines: climate, lighting, blinds and security. The communication system (parts) each with LONWORKS plays an important role in the optimization of the 'behavior' of the installation and the energetic performance in particular.

Barts Hospital

Healing Effectively

WHO:

Somfy GmbH
Felix-Wankel-Straße 50
72108 Rottenburg/N.
Germany
Fon: +49 7472 930-0
Fax: +49 7472 930-179
www.somfy.de

WHERE:

London, United Kingdom

SUMMARY:

Barts is the oldest hospital in Great Britain. By 2016, the project should be completed and thereby ensuring medical care for half of London`population, as well as a good part of Essex County. Following the building`s completion, there will be, among other things, room for 343 beds on almost 30,000m^2.

With highly complex buildings such as hospitals, the LON Standard Bus system will provide the controls for individual, technical-building elements such as operation-room lighting, or in the integrating of intelligent hospital beds. In addition, sun protection technology is also integrated in the network. Linked with lighting, air-conditioning, heating and security systems, all the installed controllers, manufactured by Somfy, provide for high cost-efficiency, user-comfort, and include a wealth of different functions.

The system messages a variety of sensor values for sun, wind, rain, frost, dampness or temperature and designates these to appropriate commands for the exterior Venetian blinds and interior roller blinds used in the hospital.

Project Facts: *Completion of a part-area of the new building project, Barts Hospital*	
Contracting body	National Health Trust
Architects	HOK / London
Building time	2006 to 2010 for completion of first half of Barts Hospital
Surafce area	30,000 m^2
Investment	Approximately 1.15 billion Euro total (Barts and London Hospital)
Total building costs	59.1 million Euro
Sun protection technology	Animeo LON by Somfy for exterior Venetian blinds and interior roller blinds

www.lonmark.org