

**KNX Association**

Bessenveldstraat 5
B - 1831 Diegem-Brüssel
www.knx.org

Fire Station in Obergrafendorf in Spitzenklasse

Students installed KNX as final exam



Picture 1. View into the vehicle hall of the new fire station in Obergrafendorf

The new fire station in Obergrafendorf was opened in September 2005 after a two year long planning and construction period. The new construction was necessary as the existing fire station could not meet current demands. The entire fleet, offices, common rooms and training center have found a new place in a single bright new building. Good contacts between the designer and the fire department allowed two students of the University of Applied Sciences in Pölsen to deliver their final exam in the form of a several month long practical assignment. Christian Thallauer and

Martin Ringseis, both voluntary members of the fire department, planned and installed the KNX system into the new building in approximately 640 work and training hours with support from their teachers of the HTL St. Pölsen. All building and fire station systems are controlled and administered by KNX. Particularly the integration of the radio controlled siren in case of an alarm allows for smooth operation. The entire building is visualized with floor plans on seven pages. The visualization integrated all malfunction and status messages and allows the control of single systems.

Benefit of KNX for this Project

- The integration of the radio controlled siren in case of an alarm allows for smooth operation
- SMS and email messages to people in charge in case of an alarm from the fire protection system, intrusion detection system or any other technical malfunctions
- All building and fire station systems are controlled and administered by KNX.

Project-Nr.: Y1-08-D

Country: Austria

Type of Building

- RESIDENTIAL
 - Single Family Home
 - Apartment Building
 - Senior citizen home
 - Assisted living
- COMMERCIAL
 - Office / Public Administration Building
 - Business
 - Entertainment (Cinema, Theater, Museum, etc.)
 - Health Care
 - Educational (School, University, etc.)
 - Recreational (Sport, Wellness, etc.)
 - Industrial
- OTHER

Trade / Systems

- Lighting
- Shading / Daylighting Control
- Heating, Ventilation, Air-Conditioning
 - Household appliances
- Alarm Systems
- Monitoring
- Energy Management System
 - Smart Metering
 - Audio/Video
- Visualization
- Interface to other Systems
- RemoteControl and Administration
- Other Application

Size

- Number of Areas / Lines: 1/2
- Number of KNX Devices: approx. 104



Picture 2. Thanks to the integration of different trades, the doors open and the lights are switched on by the fingerprint terminal of the access control system.

KNX Technology for an Optimized Operation Procedure

The large number of overriding functions, the technical systems and the automatic courses of action of the new fire station could be integrated thanks to the KNX building technology. The standardization, the high level of convenience and the possibility for future expansion through expert members of the fire department were deciding factors in using KNX.

The garage door opens and the vehicle exhaust systems turns on when the first fireman enters the building through the access control system. At the same time

the air heating system in the changing rooms turns on, and all other heating circuits switch to comfort mode. The temperature and ventilation is individually controlled in every room. The status of all systems can be visualized and administered through the central control panel or a PC; if necessary, even externally through an Internet browser at any time.

KNX Ensures Safety and Convenience

The lighting and shading systems are additional systems that are controlled by KNX. The lights in the training rooms can be dimmed, and pre-defined light scenes can be turned on. The integration of the radio-controlled siren allows the activation of interior and exterior lights before someone is even at the building. The shading system control, which is connected to a weather station, and the intrusion alarm system keeps the building shaded and secure. The skylights in the shop and the lobby are automatically closed during bad weather and when people leave the building. Thanks to the integration of the fire alarm system, the siren control, heating and ventilation system, emergency power generator and garage door controller through KNX interfaces, the firemen now have an easy-to-operate integrated system at their disposal which provides a high reliability of service.



Sophisticated Features

- The fingerprint or magnet chip scanner activates the opening of the garage doors, and the lights and heating system are switched on. If nobody is in the building anymore, all entrances close automatically after 15 minutes.
- The exhaust system for the vehicle exhaust is switched on at the same time the garage doors are opened. The monitoring of the vehicle batteries is performed with KNX.

Involved Parties

Owner:
Volunteer Fire Department,
-3200 Obergrafendorf

Architect:
KWI Consulting & Engineers GmbH,
A-3100 St. Pölten

Electrical Engineer:
KWI Consulting & Engineers GmbH,
A-3100 St. Pölten

KNX system integrator:
HTL St. Pölten,
Students Christian Thallauer
and Martin Ringseis,
Workshop Electrical Engineering,
A-3100 St. Pölten

Picture 3. The firemen have all systems under control thanks to the visualization for all systems



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Award



KNX Award 2008
Category Young