

KNX IoT Solutions

Content

- 4** From KNX city to IoT city
Interconnected properties in synergy with KNX and internet
- 5** Management of distributed Power Generation by KNX IoT
Secure and encrypted: Virtualisation of KNX Web Services IoT via mobile communication
- 6** Operation Level and virtual World
Interconnected sites in the age of the “Internet of Things”
- 7** KNX operation concept for visually handicapped persons with KNX IoT
Softer living with coloured buttons
- 8** LED Lighting by KNX IoT
KNX emphasizes the features of tomorrow’s LED lighting
- 9** When iWatch controls the KNX Smart Home
IoT Multiprotocol Gateway creates an overall concept in building automation
- 10** KNX of Things connects to Smart Things
KNX IoT opens for web designers the way to building automation by standardised interfaces.
- 11** Simple Connection of Intelligent Systems by KNX IoT
KNX Web Services for access control, security and room allocation
- 12** Global Monitoring based on KNX IoT
Quick reaction to failures and breakdowns
- 13** Augmented Reality and KNX IoT
Operating comfort by “augmented reality”
- 14** Secure Alarm System with KNX IoT
Synergies by multiple usage

FROM KNX CITY TO IoT CITY

Interconnected properties in synergy with KNX and internet

Task

The KNX Internet of Things (KNX IoT) points out options which KNX offers not only for present but also for future developments. With KNX buildings can be adapted to future requirements that are currently not foreseeable. The example shows the city of Flensburg where municipal buildings are equipped since 1992 with Home and Building Control Systems. The flexibility of the system was recognized already 20 years ago. Such it was possible to respond to technological developments with little effort. Whereas in the beginning mainly technical buildings systems had been controlled, now options for a central management are increasingly used.

Solution

The municipal KNX installations are working autonomously and many of them have a customised visualisation (Eisbär, Alexander Maier GmbH). They are interconnected via KNX/IP routers. Selected Datapoints of high importance like energy measurement or fault monitoring are forwarded to a superordinate central visualisation located in the "technical town hall". There, energy-savings are checked and evaluated taking into consideration technical and organisational measures in the properties.

Realisation

The components used on the sites differ from each other and reflect the development of the KNX devices offered to the market. Some bus devices are successfully in trou-

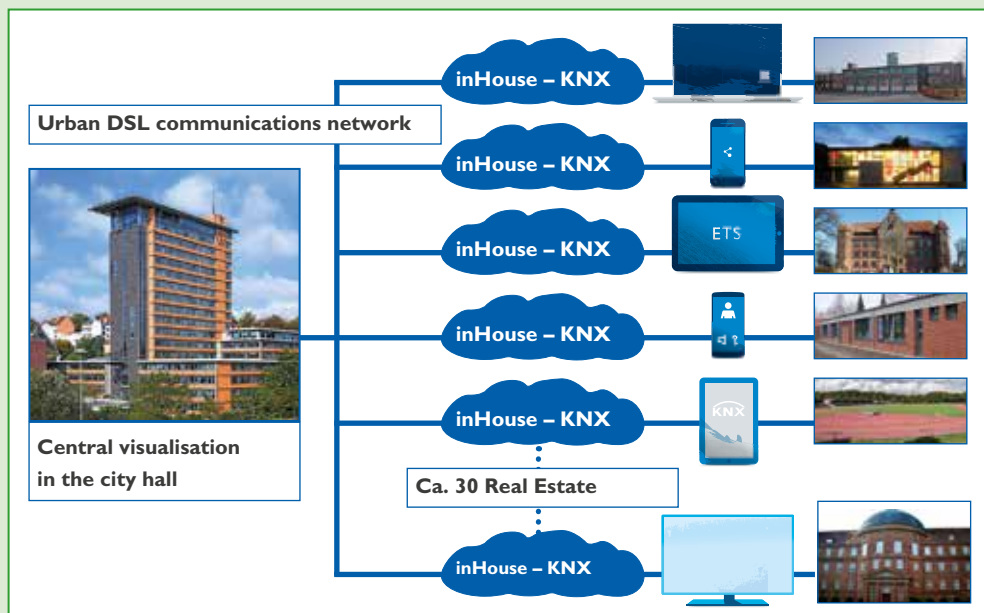
ble-free operation already since 20 years. The exhibition board shows the floor plan of the city of Flensburg. Push buttons on different positions symbolize public buildings like schools, museum, town hall etc. Visitors can call simulated energy values from the different locations just by a keystroke. A graphical visualisation shows their evaluation just like in real life.

Functions

The respective visualisation is available locally on site and thanks to KNX/IP also at a central place. Such the technical systems can be remotely monitored and if necessary also controlled. Today the concierges control "their" site via a tablet PC and if necessary they are able to act for a colleague. This was completely unthinkable in 1992 and years later.

Advantages

By the use of KNX, technical data can be collected and made available at the desired location. When the decision for the bus system was made in 1994 energy monitoring was far from being a main issue. However due to the realised network the city of Flensburg was fast able to collect consumption data of their properties and to realize optimisations. Due to its flexibility and high durability KNX is the ideal solution. Thus, last but not least, the city of Flensburg is well prepared to use with little effort in future services of the "Internet of Things" via KNX IoT Web Services.



Ingenieurbüro Beyer
Gebäudesystemtechnik
Dipl.-Ing., Dipl.-Wirt.-Ing.
Dirk Beyer
Liegnitzer Str. 10
24537 Neumünster
Tel.: 04321 / 9938-0
Fax: 04321/9938-28
Mail: info@ing-beyer.de
www.ing-beyer.de

MANAGEMENT OF DISTRIBUTED POWER GENERATION BY KNX IoT

Secure and encrypted: Virtualisation of KNX Web Services IoT via mobile communication

Task

Solar systems produce energy depending on the solar irradiation. The unstable energy harvest causes problems with respect to energy usage and commercial exploitation but also with respect to the grid load. As a result operators of photovoltaic plants and wind power stations increasingly have the challenge to manage the current energy harvest. Dipl. Ing. Marco Koyne, Berlin, shows how the data from decentrally located plants can be securely brought together for a centralised evaluation by KNX IoT.

Solution

The generated power can be measured on site by KNX electricity meters without any problems. For a wireless transmission of the data the secure communication via mobile communication is an appropriate solution. The possibility to process the data via the KNX Web Service IoT is especially of interest. Thus they can be retrieved from the internet and further processed at a central point.

Realisation

Data like power, current, voltage and frequency are captured by KNX and forwarded via a KNX/IP Router (ABB) to a KNX Webserver Gateway (Raspberry Pi). There they are processed for the web services applications. By means of the Easy Gateway EG400-HE (Aartesy) the data can be securely transmitted via mobile communication.

In order to connect further devices interfaces for Ethernet, USB, S0 and RS485 are provided. The central element is a terminal PC with Windows visualisation (Agentilo Mobile). The multifunctional system for monitoring, control and visualisation in the „Internet of Things“ communicates via the portal of Aartesy.

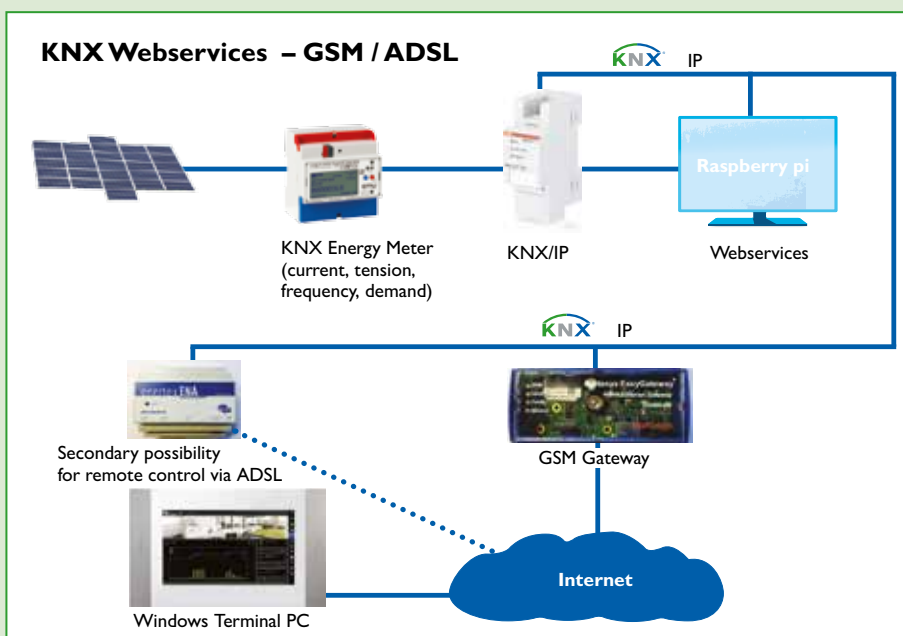
An alternative is an ADSL-connection between the KNX/IP Router and the „cloud“ with secure remote access (ENA, Enertex). It enables a secured and encrypted point-to-point data transmission. Further KNX devices like sensors and actuators help to simulate the functions.

Functions

The terminal PC processes and displays the data. It is also possible to have access to further web services, e.g. to manage the current energy supply. This is shown on the example of a single family house in cooperation with the „partner panel“ of Jürgen Katzenmeier.

Advantages

- Central energy management of decentralised power generators via KNX IoT.
- KNX Web Service IoT as solution for the communication via the internet
- At locations without direct internet connection secured and encrypted data transmission can be realised.



KOYNE
SYSTEM ELEKTRONIK

**Koyne-System-Elektronik
intelligentes Wohnen**

Marco Koyne
Dipl.-Ing. (BA) Elektrotechnik
Automatisierung
Duchrother Str. 38
D-12559 Berlin, Germany
Tel.: +49 (0)30 - 47 03 21 82
Fax.: +49 (0)30 - 47 03 21 83
Mail: info@koyne-system-elektronik.de

OPERATION LEVEL AND VIRTUAL WORLD

Interconnected sites in the age of the „Internet of Things“

Task

Terms like “Internet of Things” or even “Industry 04” suggest virtual worlds, where objects communicate with the Smart Home or industrial processes are interconnected with management or logistic systems. Until now it makes sense to interconnect decentrally located factories, offices, sports complexes, seaports. The KNX IoT application of GePro, Stralsund, shows, how decentrally located KNX installations can be coupled and how KNX IoT Web Services enable the connection of different subsystems. It shows the interaction of industrial and administrative processes with modern building technology. In doing so the important role of the operation level based on KNX becomes evident.

Solution

Single KNX systems are able to communicate via a network. Usually routers and gateways use KNX/IP for the interconnection. What is new is the KNX Web Service which connects KNX directly with the internet. This method is interesting because it is easy to recognize the ETS parameters from the part of the internet infrastructure. Thus the tasks of operation and control in all areas can be solved still better. Especially in public and industrial facilities robust and intuitive operation and control terminals are requested. The installed KNX operation and control panels comply with these requirements.

Realisation

Production, administration, high-bay storage and logistic symbolize the different sites as well as the subsystems to be integrated. The operation “on site” is realised by panels with push buttons and LEDs (GePro KNX-TAB 8, TAB 12/2, TAB15), partially they are also equipped with acoustic signaling devices and key switches. Several KNX components like FM actuator (Merten, Hager), dimming actuator (Gira), binary inputs for window contacts (ABB) and LED displays are used for the connection to KNX. “Ise Smart Connect KNX Secure” performs an SSL-protected connection to the mobile operation facility “smart-phone” as well as to the remote parameterization.

Functions

Status indications, fault signals and alarms are centrally displayed by the building management system. The BMS evaluates the alarms and informs the concerned persons. Consumption data are logged, evaluated and optimised. Via centralised panels at the factory gates messages can be acknowledged and lighting, gates etc. can be controlled. By KNX Web Services information from administration, production, storage and logistic can be used.

Advantages

- Central monitoring intended for the commercial administration of sites.
- Fast information and saving of time by mobile control devices
- Energy savings by optimisation of consumptions. KNX operation and display level for all systems and therefore retrofittable with robust and intuitive panels.




GePro – Gesellschaft für Prozeßtechnik mbH
 Geschäftsführer / Business manager:
 Dipl.-Ing Dirk Müller
 Heinrich-Heine-Ring 78
 18435 Stralsund, Germany
 Tel.: +49 (3831) 390055
 Fax: +49 (3831) 390024
 Mail: info@gepro-mv.de

KNX OPERATION CONCEPT

for visually handicapped persons with KNX IoT

Softer living with coloured buttons

Task

In the equipment of a house adapted to the needs of a disabled, a home technology controlled by KNX is not to be omitted. If correctly applied, electrical functions provide relief and more quality of life. GePro is facing the task to facilitate the life of visually handicapped persons. The solutions have to prove themselves especially in case of restricted visual perceptive faculty. Part of the task is the coupling of emergency phones and nurse call systems into the KNX operation concept.

Solution

The main focus is put on the operation of domestic functions. Unclear touch surfaces and tiny displays are a problem for visually handicapped persons. KNX buttons with different colours have proved themselves e.g. already in nursery schools. The KNX 4-fold buttons (GePro) have brightly illuminated touch surfaces in red, green blue, yellow, cyan-blue, violet and white colour with a clearly perceptible action point and thus they are a solution for buildings adapted to needs of the disabled. In contrast to the cover plates which are also available in different colours individual colour concepts can be developed. The new KNX Web Service IoT offers a solution for the integration of subsystems into the KNX system and for their operation concept.

Realisation

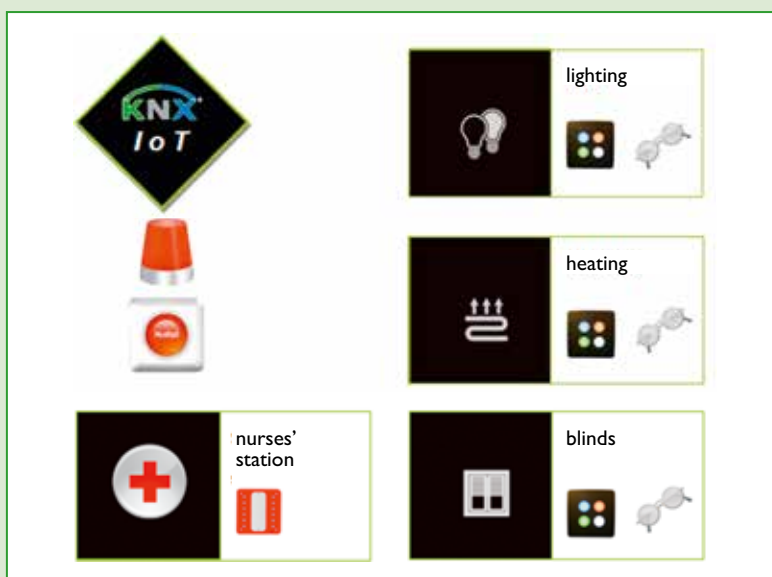
4-fold KNX buttons are installed where visually handicapped persons have to switch on and off lights, shutters, heating etc. The colours are consistently allocated to dedicated functions. A nurse call can also be made by KNX buttons. The acknowledgement of the nurses' station via a KNX panel (GePro) is signaled in the same way by a defined colour display. The connection to alarm functions preforms KNX IoT by an appropriate and an gateway and ETS App.

Functions

Functions like e.g. switching on or off and dimming can be performed with the push button. Emergency and nurse calls are forwarded to other systems. The possibility of a central monitoring is demonstrated by means of a mobile tablet.

Advantages

- It is easier for visually handicapped persons to operate domestic systems.
- More security by emergency call integration.
- Possibility to monitor remotely the functions in disabled households.
- Possibility to add KNX functions for a higher life quality.



LED LIGHTING BY KNX IoT

KNX emphasizes the features of tomorrow's LED lighting

Task

LED lamps replace conventional illuminants. They consume 80 % less energy than the incandescent lamps, which have been progressively withdrawn since 2009 by the EU. Thus the installation of LED lighting is an important step towards the envisaged 20 % reduction of greenhouse gas emissions until 2020. The filigree lamps are very versatile, shine in cold and warm white or even in any colour and provide focused or isotropic light. They are the ideal solution for modern lighting concepts in private houses, commercial rooms and outdoors. Peter Sperllich shows how LEDs can be comfortably controlled by KNX IoT.

Solution

In residential and commercial buildings several LED lamps are used: For instance, in the form of incandescent lamps or halogen spots, as LED strips or flat LED ceiling panels. Various KNX solutions are possible: Universal dimming actuators detect the load automatically and provide the relevant parameter settings for dimming the LEDs. DALI, which is an industry standard for lighting is used in residential buildings for ceilings spots and coloured light applications. DMX originates from stage technology and is popular amongst the lighting specialists. Furthermore, the direct control via KNX LED dimming actuators becomes more and more popular.

Realisation

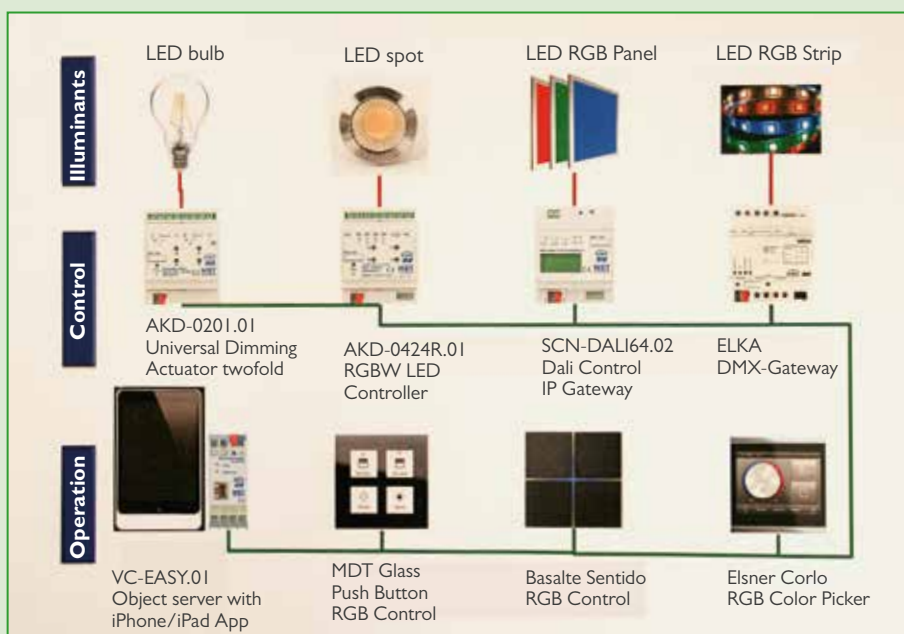
For the implementation, a Universal Dimming Actuator 230 V, an RGBW LED Controller 24 V, a KNX/DALI Gateway and a KNX/DMX Gateway are used. As example for comfortable operating concepts an MDT Glass Button, a Basalte Multitouch Sensor as well as an Elsner RGB Colour Picker are installed. The secured connection for mobile controls is realised by a VC Easy Object server with an iOS App. Thus, KNX is already able to perform today what will be possible in the future by KNX Web Services IoT under the term of "Internet of Things".

Functions

Besides a simple white dimming, LED controls provide colour schemes. By touching the appropriate buttons of the multitouch sensor and with the help of a display, the desired colours can be set. The colour picker's colour wheel provides the choice of the whole spectrum. The advantage of DALI is besides a simple planning, the direct dimming of the ballast with feedback and failure control.

Advantages

- Intelligent control of LED lighting.
- Versatile design options with light and colour.
- High energy efficiency in comparison to conventional illuminants.
- Mobile operating concepts.



ALL-COM

all-com ag
Peter Sperllich
Buchenweg 11
CH-8442 Hettlingen
Tel.: +41 76 7500 152
p.sperllich@all-com.ch
www.all-com.ch

WHEN iWATCH CONTROLS THE KNX SMART HOME

IoT Multiprotocol Gateway creates an overall concept in building automation

Task

KNX takes over more and more tasks in the building automation. In special areas, for example the wireless light design with Philips HUE, in home audio systems, like e.g. Sonos, or for social media services it may become necessary to ensure data communication between proprietary systems. The missing interoperability is the challenge here. Topic by Michael Eudenbach is how to bring together intelligent systems into a consistent overall concept. The system integrator has the task to interconnect across all systems different technologies like KNX, Sonos, Trado, Push Notification Services and Apple iWatch via KNX IoT.

Solution

The multiprotocol gateway “nomos Box” of the Nomos System AG, Switzerland offers the solution. The gateway supports different technologies and unifies the different protocols in the so-called “nOS” (nomos operating system) language. The access to this finally consistent protocol can be established by simple socket connections, a socket IO API (JSON) via a real time cloud access or a REST API with XML or JSON. Additionally, the new KNX Web Services IoT are also supported. The utilised hardware is based on Intel's IoT platforms.

Realisation

Exemplary solutions of the respective technologies are installed: Lighting with a Philips HUE lighting fixture, room temperature control with a Tado smart thermostat and window monitoring by means of wireless window contacts. All systems are interconnected via a local network infrastructure with internet access. A cloud access is not necessarily required. The bidirectional data exchange is realised via the local multiprotocol gateway.

Functions

The control of the different trades is realised by KNX sensors, via an App as well as via an Apple iWatch. The Philips HUE lighting fixture as well as the Sonos system can directly be operated via the KNX sensor. In the same way the functions of the Tado thermostat can be influenced. Different window states and messages are sent as push notification and/or posted in different social networks.

Advantages

The advantages of the presented solutions are obvious: The multiprotocol gateway opens the KNX technology for further trades and offers to the user the advantage of consistent applications across the systems by intelligent products being available in the Smart Home market. It offers as well to the manufacturers of IoT solutions a simple unified access to the world of the KNX Standard.



nomos system AG
 Neumühlestrasse 42
 CH-8406 Winterthur
www.nomos-system.com
info@nomos-system.com

KNX OF THINGS

CONNECTS TO SMART THINGS

KNX IoT opens for web designers the way to building automation by standardised interfaces.

Task

The "Internet of Things" opens new possibilities and challenges for the modern KNX building automation. The keyword (IoT) defines the interconnection of several decentralised intelligent components, which communicate directly and autonomously via the internet. In the same way they have to exchange bidirectional data with the KNX building automation respectively they shall be integrated into it. For that purpose a new interface has been created by the new KNX Web Service IoT (Internet of Things). The application of Michael Eudenbach and Bernhard Huessy, Nomos System AG, Switzerland, shows, how the world of KNX can nowadays be connected to the virtual world of the IoT.

Solution

The application shows exemplarily how a cloud based Smart Home System (Samsung "SmartThings") can communicate with the KNX System. The IoT eco system "nomos Box" serves as gateway between those two worlds. The multiprotocol gateway provides as one of a few systems of this type a KNX connection. As a new feature, the existing real time REST API of the "nomos operating System" (nOS) has been amended by KNX Web Services, by means of which both systems can exchange data.

Realisation

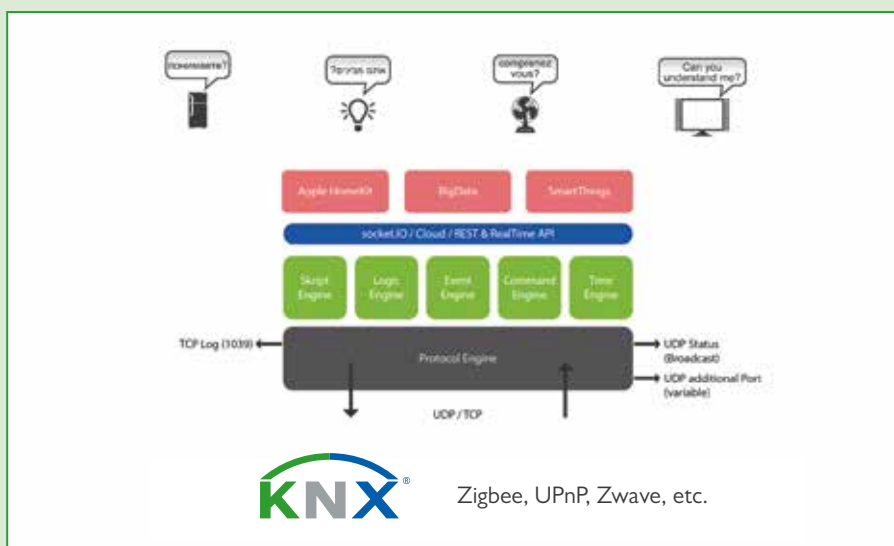
KNX applications for lighting, shutters and heating as well as a KNX/IP interface are installed in order to simulate a home automation. The "nomos Box" is integrated as central gateway and has access to the internet via the local network. The KNX object table, generated by the ETS WS Exporter App, is deposited in this web service/multiprotocol gateway. The "nOS" generates automatically from this object list web objects for the smart home system and ensures the bidirectional data exchange between both systems. The web services "SmartThings" have direct access to the KNX Web Services via the multiprotocol gateway. In turn the "nOS" transforms this protocol into the KNXnet/IP protocol.

Functions

The KNX functions of the exemplarily installation like lighting control, display and modification of the room temperature as well as shutter control are detected by the corresponding App of the smart home system and thus become operable. In the same way status changes in the KNX world are automatically sent respectively synchronised.

Advantages

With the new KNX Web Services a further interface has been defined, which enables web designers, to get easily access to the world of KNX building automation by common protocols like CoAP, HTTP etc.



ELEKTRONIK INNOVATIV

Technische Gebäudeausrüstung
+ Systemtechnik

Hochstraße 12
D-59425 Unna
Tel.: +49 (0) 2303 983 79 91
Fax.: +49 (0) 2303 983 79 97
E-Mail: m.eudenbach@mac.com
www.mremote.de

SIMPLE CONNECTION OF INTELLIGENT SYSTEMS BY KNX IoT

KNX Web Services for access control, security and room allocation

Task

Hotels, youth hostels, assisted living – in such buildings persons can be present or not. Data of the temporarily usage of the rooms are important for organisational tasks, monitoring functions, but also for heating and climate control, security systems etc. The application of Jochen Katzenmeier shows, how different systems for building control can be interconnected for their management.

Solution

Prerequisite: The electrical installation for lighting, room temperature control, shading etc. is realised with KNX. Due to the new possibilities of KNX IoT Web Services other intelligent systems can be easily interconnected. Thus, the door communication is not only used for access control, but provides also data for booking management and presence monitoring. KNX IoT integrates booking system, fire alarm and solar energy management systems.

Realisation

The installed door communication system consists of an outdoor station and a 10" panel that serves concurrently as indoor station. Access to the booking system is possible via web browser. A fire detector represents the fire and burglar alarm system. Different lamps symbolise states like room allocation, presence, alarm, local energy consumption or feeding solar energy into the grid. The

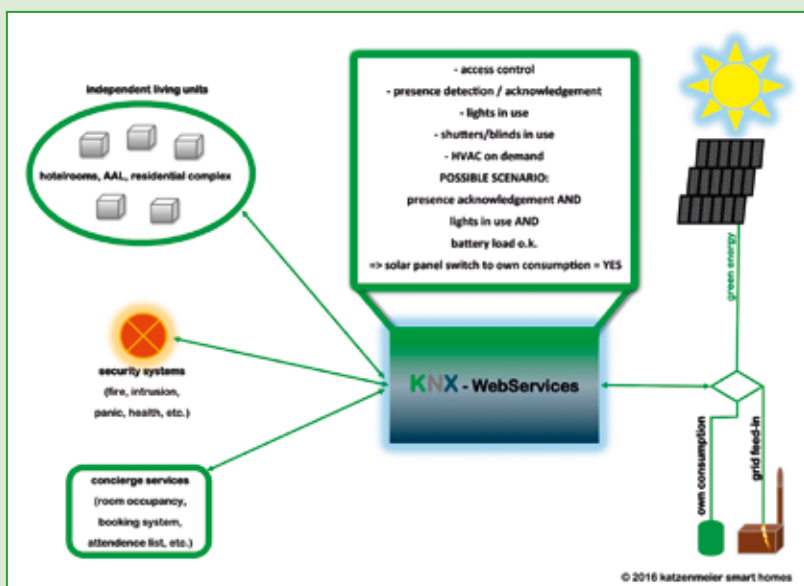
values of the heating system can be displayed graphically via visualisation. Contactless transponders respectively card holders serve for access control and presence monitoring. Operation and control of the functions is possible via push buttons and mobile devices.

Functions

The door communication system with call buttons is used for the access of third persons to the building. Registered persons can directly enter using their key, their badge or their keycard. The functions of the living units like security system, alarm triggering, lighting and heating control are controlled automatically depending on the presence/absence information from the booking system. Based on the presence/absence information, the energy flow of the photovoltaic system can be controlled, either local energy consumption or feed back to the grid.

Advantages

Simple integration of intelligent systems: Thus always up-to-date information on presence/absence of persons and the status of the living unit. Simplified organisation, high room comfort and energy savings due to demand controlled lighting control, heating control and shading as well as monitoring and security functions adapted to the current situation.




katzenmeier smart homes
systemintegration
 Jochen Katzenmeier
 Audifaxstr. 7
 78315 Radolfzell
 Tel.: +49 (7732) 89 29 087
 Fax: +49 (7732) 89 29 174
 Mail: joka@bus-i-joka
 Web: www.bus-i-joka.de

GLOBAL MONITORING

BASED ON KNX IoT

Quick reaction to failures and breakdowns

Task

The motor protection switch of the water pump has switched off, the differential switch of the door drive has tripped, fuel is running out, the heating system does not start even if the outdoor sensor signals low temperature, there is a smell of gas or water leakage in the basement – such bad situations have to be detected and resolved as soon as possible. Elektro Wagner has set itself the task of “Global Monitoring” of buildings and their functions. Thereby, it does not matter if the monitored object is located in the vicinity or thousands of kilometers away.

Solution

Due to the “Internet of Things”, “Global monitoring” gets a completely new relevance. However, up to now the decentralised bus system KNX with distributed sensors and actuators and interfaces to other systems is already used like an “IoT”. Local KNX installations and third party systems communicate via KNX/IP gateways and enable a central monitoring. The building control system shows graphically values and indicates faults, detects faults in systems by comparing the values to the normal ones and alerts the responsible service technician. Depending on the fault, local or remote reaction is required.

Realisation

The “Global Smart Home Service Desk” of Elektro Wagner operates as follows: A touch screen with visualisation (Divus) serves as central monitor. Intelligent devices, like e.g. a TFT display (Gira GI), a multisensor with voice control (Enertex Synohr) and a touch button (Elsner) show not only the comfort of a Smart Home but represent in this case the systems to be monitored. These are brought together via a KNX/IP router (Gira), which provides a high degree of security. Nevertheless: In future, KNX IoT Web Services would be able to undertake these tasks in a much simpler way.

Functions

Via the TFT Display a failure of the heating system can be simulated. The multisensor keeps the states of lighting, shading, as well as the values of temperature, humidity and ventilation – in the full sense of the word – ready for recall. But also on the pages of the touch button’s display prepared values respectively failure simulations are available. Threshold values and failures are evaluated by the centralised monitoring respectively by the BMS.

Advantages

Global monitoring by integration of local systems. KNX IoT extends these possibilities especially for third party systems. Faults are quickly detected, which is particularly necessary in case of unoccupied buildings or unattended sites. Thus a quick reaction to failures and breakdowns is possible.



Elektro Wagner GmbH
Bierhausweg 1
61273 Wehrheim, Germany
Tel./Phone: +49 (6081) 9525-0
Fax: +49 (6081) 95 25-95
Email: info@elektro-wagner.com
Web: www.elektro-wagner.com

AUGMENTED REALITY AND KNX IoT

Operating comfort by "augmented reality"

Task

Incomprehensible operation of systems can be frustrating. Intuitive operation is the prerequisite for the acceptance of a technical device. Who does really like to read the user manual often written in an unwieldy way? This applies for the own and especially for an unfamiliar living environment. The function of switches for lighting, shutters, heating or sound system has to be palpated in the full sense of the word. Christian Kiefel, Valbonne, France, faces the challenge of creating an easily understandable operation concept for the smart home. He uses the possibilities of a computer aided enhancement for the perception of reality, the so-called "Augmented Reality".

Solution

An application for the smartphone or tablet in combination with the built-in camera enables the detection of objects in the environment. The camera image is directly overlaid with the operating elements for the control of an object. Next to a lamp appear the control buttons for switching or dimming, if a window is detected, the control elements for moving the shutter are overlaid, while targeting a speaker the current music title is displayed and by an appearing slider the loudness can be controlled.

Realisation

A software package for a NAS embedded mini-server allows the local data storage of the different objects in the living environment. As a first step, they have to be

taught-in by the camera of a smartphone or a tablet and thereafter they are allocated to the devices being accessible via the KNX installation. When connected to the local WiFi the application of the customer's smartphone imports these data. As soon as the camera image of the application is activated, the application compares the current image with the imported data. In case of identification the respective device is connected via the KNXproServ Controller and it can be controlled by the overlaid operating elements.

Functions

Nowadays image recognition is very reliable. Especially tablets with 3D cameras allow the detection even under adverse lighting conditions. Also the direction, from where an object is targeted by the camera, does not influence the recognition. Teaching-in the objects is very simple and the allocation to the devices in the KNX installation can be made even by a layman. The KNX proServ Controller operates object oriented. The KNX Datapoints of a device are already grouped in ETS. Thus a device can be addressed as a whole.

Advantages

- Intuitive operation in a previously never enjoyed way.
- Contact-free control is also possible for persons with restricted mobility.
- Later adaption of objects also possible by layman (e.g. when changing a pending lamp)



PRO
by BleuComm'Azur

Bleu Comm'Azur SARL
Christian KIEFEL
180, imp du Baou
06560 Valbonne
France
Tel +33 607 50 25 06
Fax +33 9 55 27 50 25
realknx@proknx.com

SECURE ALARM SYSTEM WITH KNX IoT

Synergies by multiple usage

Task

Measures for intrusion protection and barrier-free access are still better subsidised in Germany since November 2015. This draws the attention on the integration of alarm systems into the KNX installations. The bus system already controls the technical trades starting from lighting, via heating/climatisation up to sun protection and thus ensures comfort, safety and energy efficiency. A further application is evident. Dipl. Ing Holger Schult shows, how this can be realised.

Solution

From the technical point of view alarm systems can be realised by KNX – yet the requirements of the insurance companies are in contradiction to such a solution. Thus, not everything that is technically feasible can be realised. But there are synergies by multiple usage. Therefore it makes sense to realise e.g. a burglar alarm system according to the requirements of the insurance companies (VdS). When doing so attention has to be paid that KNX does not affect the alarm system. On the other side the signals of the sensors and/or alarm information can be used for further functions of the KNX system.

Realisation

The presentation shows, how to burglar alarm systems use the above mentioned possibilities. One burglar alarm system (Telenot) offers an RS232 interface to the building management system and an extension module RS232 to

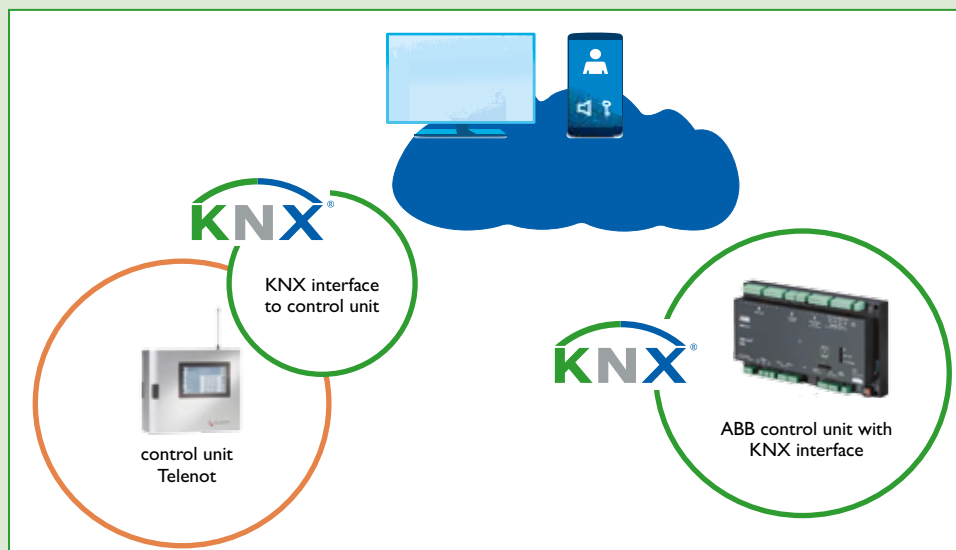
KNX. A further burglar alarm system (ABB) can directly communicate with KNX. It depends on the required safety classification of VdS what and how detailed information can be exchanged. Thus e.g. the existing window contacts can be used for further purposes. It is also possible to display alarms on mobile devices like smartphone or tablet via KNX Web Services and other applications.

Functions

All sensors required for the function “perimetric protection” of the burglar alarm system can also be used for KNX functions: Examples are: Setting the system switches centrally off the lighting or changes the heating from “comfort mode” to “standby”. When open windows are detected, the heating valves are – with a time delay – automatically set to “frost protection”. Motion detectors of the burglar alarm system provide simultaneously presence information for several kinds of KNX functions. Further technical alarms provided by smoke detectors, leakage detectors and gas detectors can easily be integrated.

Advantages

- Up-to-date information on the state of the house
- Increased sense of security
- Information on alarms
- Information can be selectively retrieved at any time



HSEEG

HSEEG – Ingenieurbüro
für Elektroplanung und
Gebäudesystemtechnik

Dipl.-Ing. Holger Schult
Waidmansweg 7
16548 Glienicke
Tel.: +49 33056 89632
Fax.: +49 33056 89633
Mail: info@hseg.eu



www.knx.org