

# iKNX goes OpenRemote

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# What is KNX?

- ✦ european (and meanwhile chinese) standard for building automation (EN 50090,ISO/IEC 14543,GB/Z 20965)
- ✦ standard evolved from several european standards: EIB, Instabus, BatiBUS, EHS etc.
- ✦ basically independant from media (twisted pair, wireless, powerline, ethernet)
- ✦ high reliability as a system as each device works independant from each other



# What is KNX?

- ✦ more than 100 manufacturers, components are tested for interoperability, industrial design, thus expensive
- ✦ one (ugly) software for configuration (ETS)
- ✦ rather complicated protocol, designed in 80th/90th, only information on bus not the type of data (e.g. 0/1 on the bus could mean light on/off but also shades open/close)



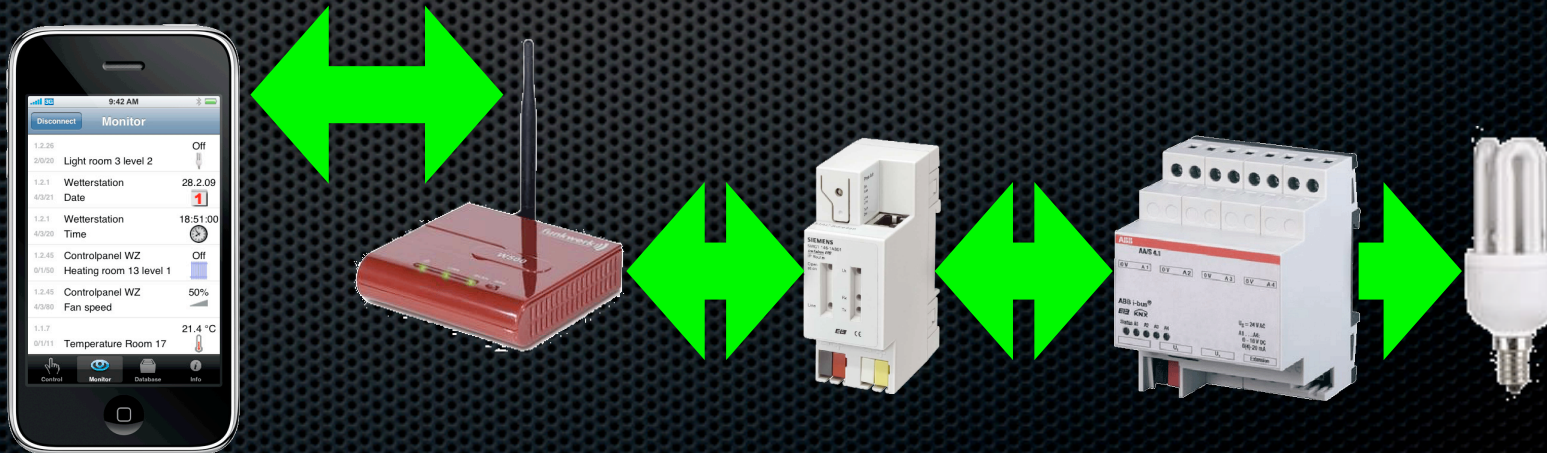
# What is iKNX?

- ✦ first (and up to now, the only) *native* solution to control KNX devices with the iPhone, i.e. needs no additional servers with visualization software
- ✦ needs gateway from WiFi/Ethernet to KNX
- ✦ started just for fun for *my* house
- ✦ supports the most common data types of KNX



# So, how does it work?

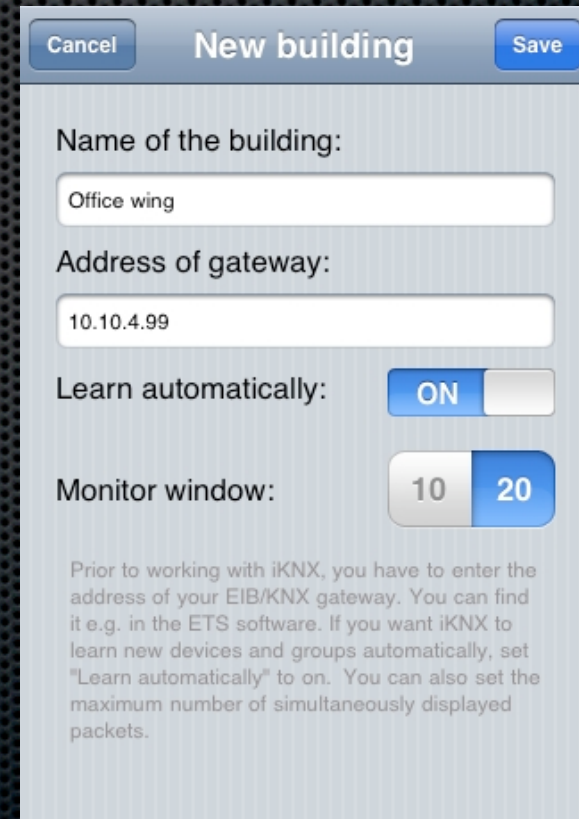
- ✦ iKNX opens a tunneling connection with a KNX ethernet gateway, thus enabling bidirectional transmission of KNX packets
- ✦ iKNX then collects all packets from your building, displays the content and sorts device and group information into a database





# Setting up a building

- ✦ on first start, iKNX asks you about some information about your building
- ✦ you need the IP address of your gateway
- ✦ decide if you want iKNX to learn automatically



The screenshot shows a 'New building' dialog box with a title bar containing 'Cancel', 'New building', and 'Save' buttons. The dialog contains the following fields and controls:

- Name of the building:** A text input field containing 'Office wing'.
- Address of gateway:** A text input field containing '10.10.4.99'.
- Learn automatically:** A toggle switch currently set to 'ON'.
- Monitor window:** A range selector with '10' and '20' buttons, where '20' is selected.

Below the controls, there is a paragraph of instructional text:

Prior to working with iKNX, you have to enter the address of your EIB/KNX gateway. You can find it e.g. in the ETS software. If you want iKNX to learn new devices and groups automatically, set "Learn automatically" to on. You can also set the maximum number of simultaneously displayed packets.



# Watching bus traffic

- ✦ after successful connection with your gateway, iKNX will display what it sees on the bus
- ✦ after first start, you will see lots of question marks and raw data beside it

Disconnect		Monitor
1.2.35		\$00
4/2/51		?
1.2.21		\$00
4/2/50		?
1.2.1		21.5.09
4/3/21	Datum	1
1.2.1		22:09:00
4/3/20	Uhrzeit	
1.2.45		\$00
4/1/14		?
1.2.1		22:08:08
4/3/20	Uhrzeit	
Control		Monitor
Database		Info



# Edit the database

- ✦ after iKNX collected some information about your building, you may edit the objects
- ✦ each group (i.e. object) can be assigned a type of data it represents
- ✦ select if you want to control this object with iKNX and if its status should be read on app's start

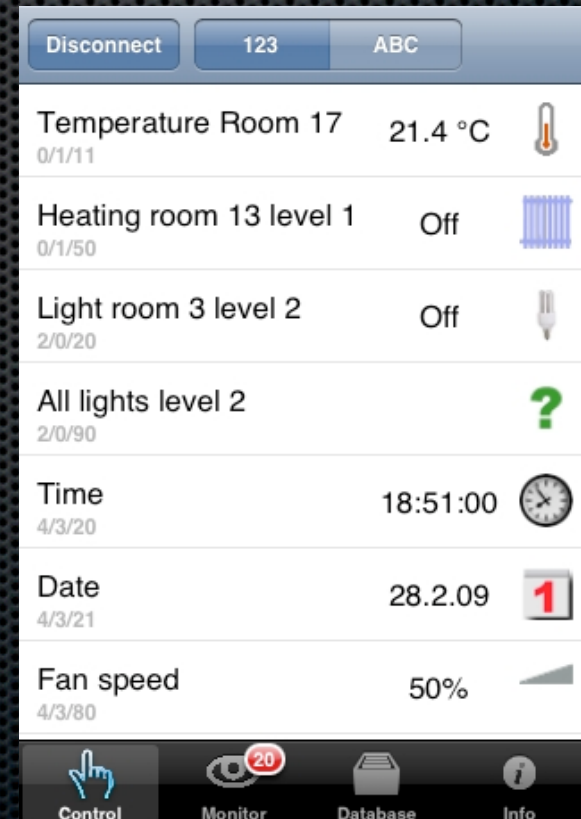
The screenshot shows a 'Group' dialog box with a title bar containing 'Cancel', 'Group', and 'Save' buttons. The dialog is divided into several sections:

- Group address:** A text field containing '0/1/11'.
- Controllable:** A toggle switch labeled 'ON'.
- Group description:** A text field containing 'Temperature Room 17'.
- Depends on:** A text field containing 'One/more group address...'.
- Readable:** A toggle switch labeled 'ON'.
- Object Type Selection:** A list of object types with corresponding icons:
  - Water (faucet icon)
  - Alert (warning triangle icon)
  - Temperature (thermometer icon) - This option is highlighted with a blue background.
  - Speed (wrench icon)
  - Brightness (gear icon)



# Control your building now I

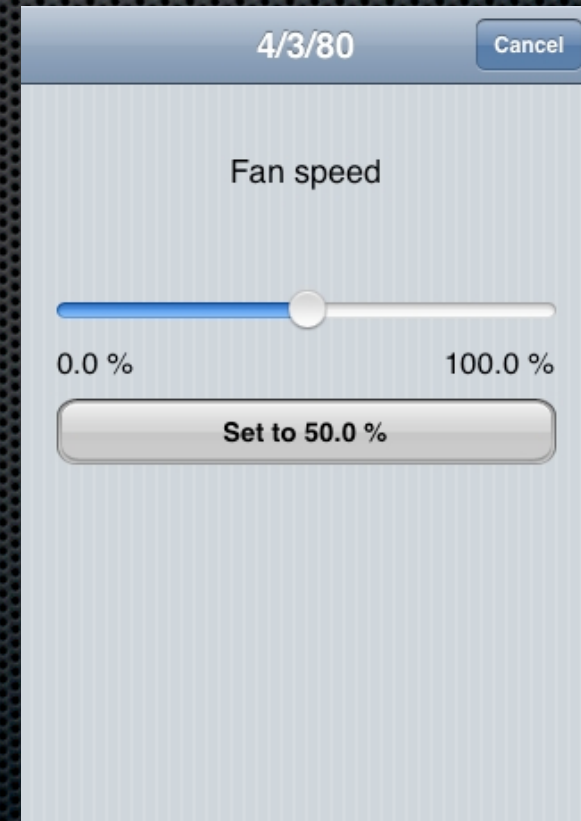
- ✦ when you've selected which objects you want to control, switch to the control view
- ✦ iKNX will display the actual state of each object, to change simply tap it





# Control your building now II

- ✦ as an example, we set the fan speed of the building's ventilation
- ✦ just set the new value and tap the send button





# New features

- ✦ next version (soon in the AppStore) supports sorting groups into folders
- ✦ creating folders in database is simple - just select which objects belong to folder from a list of all groups



The screenshot shows a dialog box titled "Edit folder" with "Cancel" and "Save" buttons. It contains a text field for "Folder name" with the value "Global". Below this is a label "Enter an describing name for this folder here". A section titled "Groups" contains a list of items:

Groups
0/0/85 EG Licht Grundbeleuchtung
0/1/11 test
1/0/90 Alles Licht OG
4/2/81 Rollläden EG
4/2/90 Alle Rollläden ✓




# iKNX and OpenRemote?



- iKNX is now part of OpenRemote



# Additional information

- ✦ App is available on the App Store 
- ✦ two versions: test version with a maximum of 10 objects, plus full unlimited version
- ✦ requests: [knx-sales@openremote.org](mailto:knx-sales@openremote.org)
- ✦ the low-level KNX stack for iPhone (working on Macs too) is available in the subversion repository, the UI is not yet released



# Live demonstration

- ✦ let's try if it works :-)
- ✦ questions