Ambient Assisted Living (AAL) with KNX

Augmented reality and voice control as most intuitive methods for HVAC interaction

A private villa in Eze (France): complete HVAC control with KNX components, configured exclusively with ETS

BLEU COMM AZUR SARL KNX allows the control of lighting, media, shutter and shading devices especially the integration of all types of HVAC functions in the home automation environment.

In the early days of KNX, some expensive and complicated software was needed to visualise the heating, cooling and electrical circuits. Today there are more intuitive ways to control the installed HVAC system. One of the most common ways is the use of smart phones and tablets. Already in 2012 it was possible to configure the whole smartphone user interface in ETS software using KNX proServ from Bleu Comm Azur. Independent of the screen resolution and operating system, the best display results are achieved with the iKnix apps. The same KNX proServ (product and ETS configuration)

Siri voice control: An extremely intuitive user interface is vocally and visually answering spoken requests

may now be used as the basis for even more powerful and intuitive control together with the new realKNX miniserver. The most impressive way is certainly using augmented reality. Actual values, setpoints and texts are shown by pointing with the smartphone camera to the object that has to be examined. Directly in the picture of the camera the messages are shown, or the buttons or sliders will appear to allow interaction. The links of web pages become accessible with even more information just by pointing the camera to a gauge, a control button or a regulator. Text information about states or critical situations are shown and parameters of heating and climate systems may be edited. Another method of intuitive control is using speech recognition. A very advanced development today is the world of "SIRI", which understands more than 40 languages and is a rising trend. Ask Siri about states, values or let her (or him) change parameters. No need to touch the phone, the pad or the watch – just say: "Hey Siri" and continue with your question or command. Siri is even capable of examining semantic contexts. You start to ask about the temperature in the living room, and then continue with other commands without specifying the room, as Siri remembers what you have been talking about. In the South of France, an exceptional villa has been equipped with these techniques. The heating and cooling system is based on a reversing heating pump, that acts on invisible fan coil units in every room. In winter time, the underfloor heating will guarantee a stable basic temperature and the fan coil will allow a fast temperature change if necessary. In summer, the fan coil units will work for cooling purposes. The residents are not interested in techniques. They just define a comfortable temperature according to the season. The room controllers come with a smart user interface from Elsner Elektronik (Corlo Touch) and are the size of a standard switch. They allow the control of lights, move the curtains, start music playlists and adjust the temperature. Additionally and completely intuitively all these functions are available on the smartphone app from iKnix. The augmented reality and HomeKit speech recognition functionality have been included with the standard software on the realKNX server by Bleu Comm Azur. All devices are completely configured in the ETS software, no export of data to third party software is necessary! The realKNX embedded miniserver works as a blackbox – and interacts directly as a bridge between KNX proServ and HomeKit.   *Contact: www.proknx.com*