Smart Home Models in VET Newsletter

Hybrid Meeting Held on 18-20 March

Three teams met in VTSNS, Serbia, and two other joined from their VET centres.

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From the Content

- Conclusions from the March meeting

- Students engaged in various project tasks

- What is the animated film "Home Smart Home" about?

- Making of the smart home model in ELPROS

- Step-by-step instructional video for building an original smart home model hanging on the wall

- Teachers and pupils from North Macedonia were presented the project results in VTSNS

Participants

There were 13 participants from all five partner organisations:

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Meeting Minutes

Moderator, Branka Petrović, opened the meeting and then VTSNS director, Branko Savić, greeted the participants.

All topics from the agenda were addressed. The first day of the event was dedicated to financial reports, which covered expenditures per work packages and their specific activities, as well as co-financing and in-kind contributions of the participating organisations. It was also a chance to have a closer look into different national and institutional administrative circumstances the teams within our partnership face.

On the second day, the participants dealt with activities providing the visibility of the project on a wider scale. They include the production of the short animated film (activity 4.6), which belongs to both teaching and dissemination means.

Then, there are webinars for VET teachers outside the partnership, Smart Home Open Days and Network formation (activities 5.5-5.7, respectively).

The meeting was concluded on the third day. It was pointed out that companies engaged in smart technologies should be invited to join specific events. In case of necessity, a brief online meeting can be organised before the summer holidays.

Most of the work has been completed on the project so far, and the final six or seven months are reserved for dissemination activities. Partners should share materials and present to target audiences all smart home models developed.

Students Involved in Project Activities

As dissemination of project goals and results starts within each of the partner schools, VTSNS has invited its students to take part in the project during their internship. Thus IT students, Srđan Dmitrović, Vladimir Korać, Nikola Kovač and Ivan Šmuk work on the video about the smart home model, upgrade the model and provide technical support at events, while their two colleagues studying design make posters, notepads, ID cards and banners.

Photos of participants taken by VTSNS students

ERASMUS+ PROGRAMME

Smart home models in VET

2022-1-HR01-KA220-VET-000086983
https://smarthomemodels.eu

An Original Concept

Instead of building a compact model of a house, the team of BMSC decided to take a different approach.

After brainstorming, the initial plan was put on paper.

The idea was to display each room of a family house separately by using a board with its illustration on the clasroom wall with all necesary electrical installations. This solution allows programming of smart appliances in the room and an acurate visual representation of the physical location of each piece of equipment. It also provides space-saving and better training in class as pupils can work individually or in pairs at one board and then swich places with other pupils.

ProfiCAD is free software that was used for the floor plan design.

Roomstyler is another free software for creating Interior designs of rooms that were printed and placed on the boards.

All joinery work was carried out in the school workshop.

Electrical installations that can be fully approached from the inner side of the board were performed by the help of pupils.
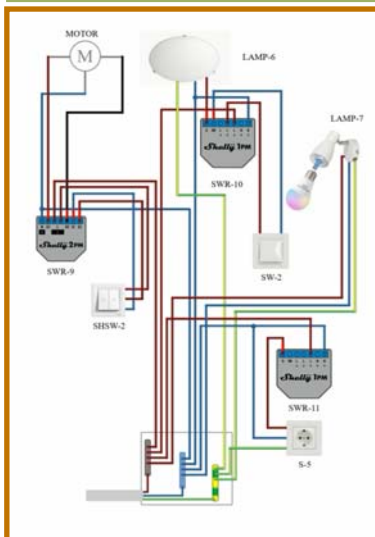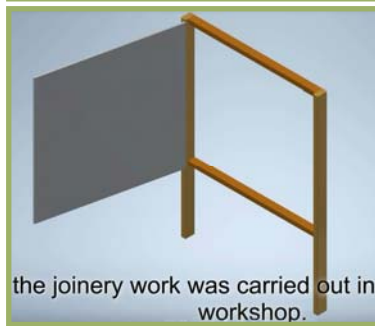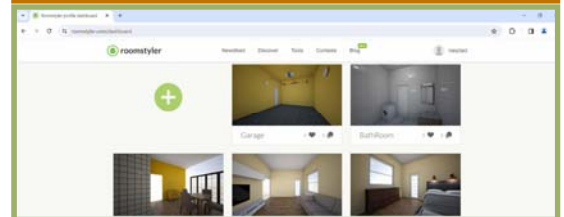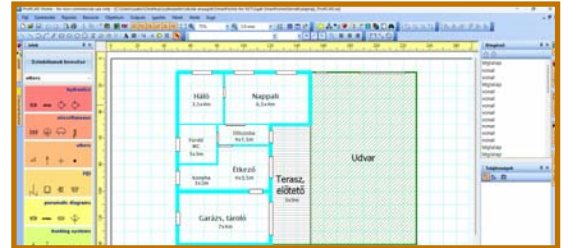
Google's Home Assistant is used to control smart appliances in the model.

PLC and Arduino were used in automation.

The model has been in function during regular VET classes, smart home club activities and dissemination events.

Ablaknyitás érzékelés (window opening detection)

Construction of the Model in Pictures

the joinery work was carried out in workshop.

back of the OSB boards with adjusta[ble] clamps,

The video showing all phases of the building process is on the project website

"Home Smart Home" Animated Short Film

Last year in a survey students and their teachers from partner schools were asked to suggest characters and content for the short film on the smart home advantages. There were all kinds of ideas, from introducing the famous Flintstones into the smart home, using the planet Earth as a narrator talking about pollution, to a proposal to rename the film into "A Smart Life".

Activity 4.6 is nearing to its end, and soon we shall see what proposals have been adopted. The authors of the film are students from EL-PROS who have selected DaVinci Resolve application to work in.

The scenario is known, and the scenery is being developed as well as characters. They will speak with synchronized voices in English, but there will be subtitles in other languages.

Our smart home is the house of the future from an urban area. It is made of sustainable materials, thermally insulated, with solar panels on the roof and a rainwater collection system.

Logo of DaVinci Resolve Studio

Collaboration on various grounds with VET organisations outside the partnership is always a good opportunity to present our models of smart homes.

Presentation of the Model in VTSNS

To colleagues from two VET schools and their pupils studying courses in electrical engineering, professor Božo Ilić explained the control of smart home functions by using the application WeLink.

Guests from North Macedonia

On 5 March 2024, two teachers, Maja Naumovska and Marija Barutovska with four pupils from the electrical engineering secondary school "Mihajlo Pupin" from Skopje, North Macedonia, visited VTSNS in order to see the smart home model. They made a video recording of the model and its basic features to show their principal and colleagues.

The guests were part of a larger group of visitors coming from another similar VET school from Novi Sad they cooperate with. VTSNS has also traditionally good relations with it and this was the third class organised for its staff and pupils during our project. The first was in April 2023, and there was one more in February this year.

It is interesting that both schools were named after Mihajlo Pupin, born not far from Novi Sad in the 19th century, who made his name in the USA as a scientist and inventor. More about him can be found at www.britannica.com/biography/Mihajlo-Pupin

Shelly Smart Control

The model In ELPROS was designed as a set of booths each representing a room of the smart home. Smart devices largely belong to Shelly products and are monitored by way of Shelly wall screen and further controlled by the company's software.

Shelly Smart Control is a home automation application for managing and controlling Shelly home automation devices. The application is used via a mobile phone, tablet, or PC. It allows you to create scenes for automatic control of devices at predefined hours or based on other parameters like temperature, humidity, light, etc. A device can be grouped with other devices in the application. It can also be set to trigger actions on these devices. A user account is required to access, include, and control devices through the application.

It is possible to monitor energy usage of the connected devices through the application. The Consumption page allows the user to view current and overall consumption from a specified time frame. The data are given for each room and by appliance type. The user can then adjust the energy usage and save.

https://kb.shelly.cloud/knowledge-base/shelly-smart-control-guide

Pupils from ELPROS Helped Build the Model
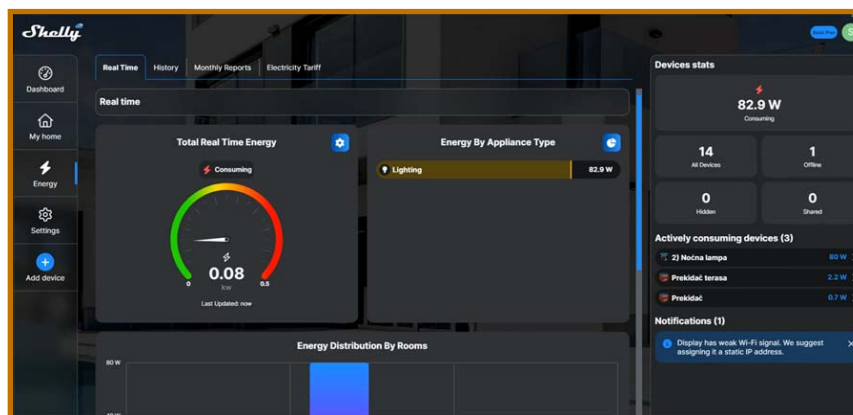
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