BIMERR Newsletter # 7

September 2021 (M33)

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 820621

Call identifier: LC-EEB-02-2018

BIMERR RENOVATION 4.0

NEWS FROM THE PILOT SITES

Within the month of September, renovation works are set to begin in the Spanish pilot site. The overall duration of the renovation project is foreseen to be approximately 1 year (September 2021 to October 2022). The foreseen renovation measures are interventions in the roof and the thermal insulation of the facade as well as the exchange of windows. The main objective is to improve the energy characteristics of the building (according to previous Energy Performance Certificate standards, from class G to class C).

3D point cloud (with colors) as a result of the laser scanning campaign

BIMERR 2nd Round of Living Labs

Living Labs workshops are an important part of the BIMERR dissemination and exploitation strategy. In order to maximize the impact and the promotion of

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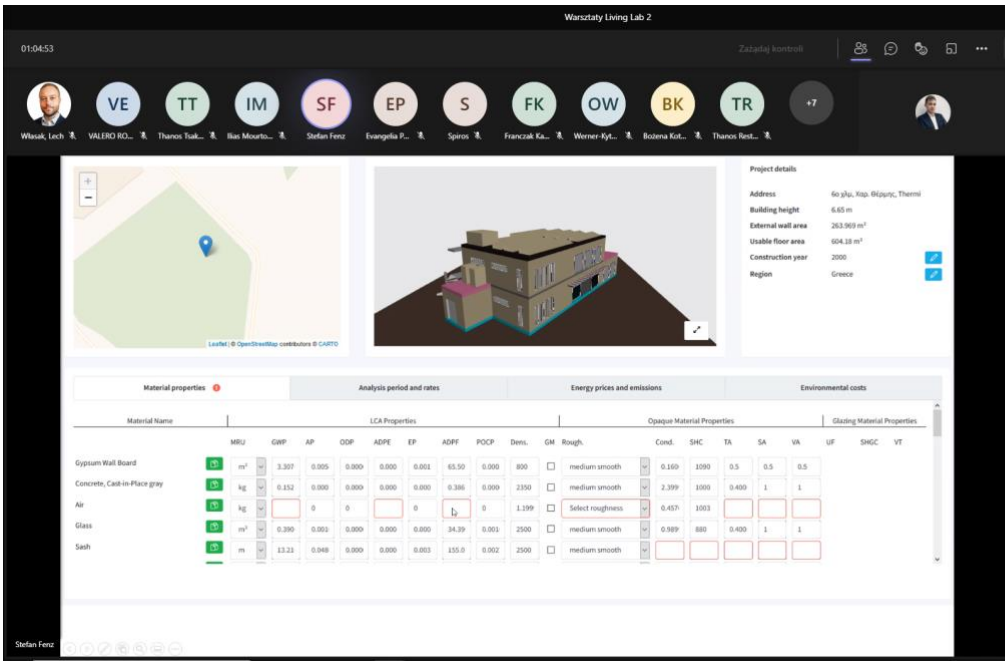
the BIMERR project results, the consortium uses a user-centric approach to incorporate all the user's needs and preferences to the final BIMERR result. To this end the second round of workshops was implemented in June and July were participants of the Greek, Polish and Spanish pilot sites were presented with live demos of the under development tools and end user feedback was subsequently gathered.



PUBLICATIONS

Two publications have been accepted and published in the past months involving work performed within BIMERR Project. These are:

1. **Converting UML-Based Ontology Conceptualizations to OWL with Chowlk, by BIMERR Partner UPM** (Serge Chávez Feria, Raúl García-Castro, María Poveda-Villalón)

Abstract: During the ontology conceptualization activity, developers usually generate preliminary models of the ontology in the form of diagrams. Such models drive the ontology implementation activity, where the models are encoded using an implementation language, typically by means of ontology editors. The goal of this demo is to take advantage of the developed ontology conceptualizations in order to accelerate the ontology implementation activity. For doing so we present Chowlk, a converter to transform digital UML-based ontology diagrams into OWL. This system aims at supporting users in the generation of the first versions of ontologies by reusing the ontology conceptualization output.

The publication can be accessed through the following link:

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2. **Wireless Sensor Network Topology Design for Building Information Modelling, by BIMERR Partner UOP (**Dimitrios E. Kontaxis; George V. Tsoulos; Georgia Athanasiadou**)**

Abstract: Building Information Modelling (BIM) is a critical element for the 'digitalization' of the construction industry and can be exploited for energy-driven renovation procedures of existing residences. BIM requires IoT data streams related to indoor/outdoor ambient conditions, as well as to energy consumption parameters of the residences. The data streams require the deployment of robust Wireless Sensor Networks (WSN), able to capture and transmit real-time data to appropriate Cloud-based renovation toolkits. The technology and topology of such networks is addressed in this paper. The paper sets the lines for similar installations, required by the construction industry for BIM production, since it is the outcome of actual WSN installations, after extensive site surveys and field trials.

The publication can be accessed through the following link: