Programme: Erasmus+

Key action: Cooperation for innovation and the exchange of good practices

Action: Strategic Partnerships

Field: Strategic Partnerships for higher education

Contract: 2014-1-RO01-KA203-002986

Partners: UPB - Universitatea Politehnica din Bucuresti, Romania

UL - Univerza v Ljubljani, Slovenia

CRES - Centre for Renewable Energy Sources and Saving, Greece

SC Softtehnica SRL, Romania

The project **Educational Laboratories Platform for Complex Engineering Processes with Remote Access (EduLabFrame)** addresses the development of sense-making skills through e-learning concerning the design, configuration and administration of complex technological settings, with a focus on security issues. European Union crosses a period of changing policies to reduce dependence on imported primary energy. Among other related directives, Directive 2010/31/EU stipulates: "Measures are needed to increase the number of buildings which not only fulfil current minimum energy performance requirements, but are also more energy efficient, thereby reducing both energy consumption and carbon dioxide emissions. For this purpose Member States should draw up national plans for increasing the number of nearly zero-energy buildings and regularly report such plans to the Commission". At the same time, in March 2007, the European Council adopted targets even more ambitious than that of the Kyoto Protocol. These aims were: to reduce emissions of GHG by 20%; to increase energy efficiency to save 20% of EU energy consumption; to reach 20% of renewable energy in the total energy consumption in the EU by 2020. Through this project we try to contribute to the fulfilment of commitments of EU by establishing as a general objective the development of multilingual educational open resource e-learning platform allowing easy understanding of complex processes in engineering. To this purpose, the project proposes:

OS1. The development of an advanced platform for real-time, high-performance video streaming and remote access to laboratories (through virtualization - open educational resources) operating cutting-edge technology, together with

OS2. Solutions for students' immersion in the remote experimentation environment through badge architectures and collaborative learning.

OS3. The development and implementation of four laboratories with remote access which will address to following domains:

Laboratory for pollution risk assessment for human and environmental health (RISK-Lab)

Laboratory for renewable energy sources (RNW-Lab)

Laboratory for sustainable technologies in buildings (STB-Lab)

Laboratory of refrigeration and district energy (RDE-Lab) and

OS4. Development of dedicated training modules/curricula and laboratory scenarios and applications.