INTELLIGENT BUILDING CONTROL – UML (ZigBee)

Marek Bachúrik, Stanislav Števo

Institute of Control and Industrial Informatics
Faculty of Electrical Engineering and Information Technology
Slovak University of Technology
Ilkovičova 3, 812 19 Bratislava, Slovak Republic
Tel.: +421 2 60291111 Fax: +421 2 60291111

e-mail: m.bachurik@gmail.com, stanislav.stevo@stuba.sk

The article deals with the software design for controlling of intelligent buildings and houses. As a closer specification ZigBee wireless technology was selected. The whole system of house control was designed by UML diagrams. By those diagrams was developed and designed software which is possible to program and to use in practice. The software is suitable as an input proposal for future software development. Diagrams also help in dealing with client, which want to implement the given proposal. Intelligent heating control (proposed in mentioned manner) is able to decrease heat losses during heating season up to 12% per month (in the roughest average).

Keywords: Intelligent buildings, Zigbee, UML

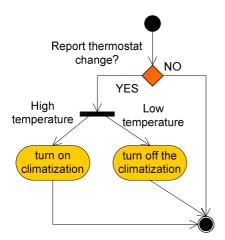


Figure 1a: Automatic regulation of cooling with the help of thermostat

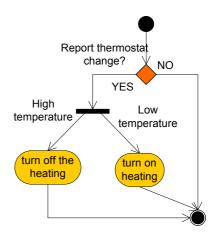


Figure 1b: Automatic regulation of heating with the help of thermostat