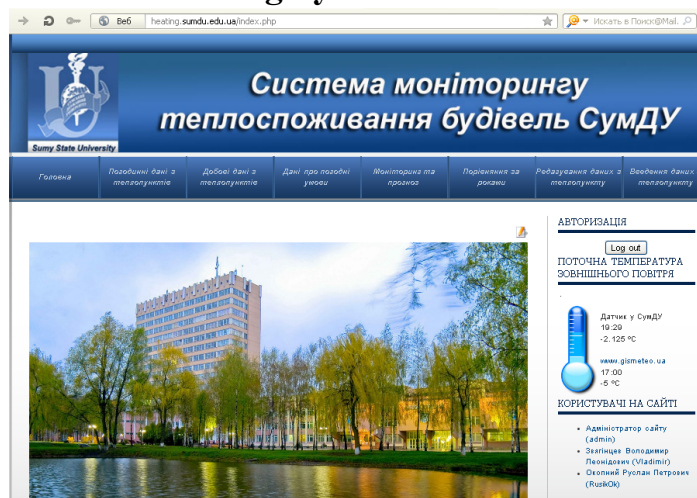




(0542)68-76-73, 33-41-08

E-mail: info@cnti.sumdu.edu.ua, dkurbatov@sumdu.edu.ua

Monitoring System «HeatCAM»



Shendryk Vira Victorivna, Associate Professor of the Computer Science Department, Nenja Victor Hryhorovych, Associate Professor of the Computer Science Department, Parfenenko Yuliya Victorivna, Leading Specialist of the Computer Science Department, Okopnyi Ruslan Petrovych, Postgraduate Student of the Computer Science Department.

The project aims for solving applied problems to reduce the cost of energy in the heat supply system for buildings of public sector (kindergartens, schools, medical facilities, houses, etc.). The «HeatCAM» system is developed as a information systems' software for control heating in building of public sector in automated mode. It implements the method of monitoring and decision support model that provides analysis of the current state of heat consumption of buildings and adoption decisions on its improvement. The system monitors the state of the distribution network, considering weather conditions, calculates the necessary amount of heat energy and presents the monitoring data in energy audits' reports.

The registration certificates of copyright are obtained:

1. А. с. 47753 Ukraine. Computer program « The Automated Data Collection Subsystem «Heat Data Collector» / Р. П. Окопний, V. G. Nenja. – № 47753; registered 21.01.2013.
2. А. с. 51760 Ukraine. Computer program «Heat Data Storage» / V. V. Shendryk, V. G. Nenja, Yu. V. Parfenenko, R. P. Okopnyi– № 51760; registered 18.09.2013.
3. А. с. 51229 Ukraine. Computer program «The Information-Analytical System for Monitoring and Prediction of Heating Buildings «HeatCAM » // Yu. V. Parfenenko, V. V. Shendryk, V. G. Nenja. – № 51229; registered 16.10.2013.

Analogues of the monitoring system «HeatCAM» by its functionality are:

- The MiCON System, the Teplocom system software and the software "SEMPAL Device Manager", which carry out remote monitoring using GSM technology for data transmission.

Similar systems use a closed protocol for transfer data to the server and are applicable for one of the following types of heat meters. The proposed system «HeatCAM» uses an open protocol for interaction with the computer and can be applied to all types of heat meters with digital output.



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The «HeatCAM» monitoring system has a significant potential of commercialization in various organizations interested in improving their own energy saving and minimizing of the cost of energy consumption. The economic effect of the implementation can be assessed indirectly through the cost-effectiveness of energy-saving measures. The «HeatCAM» system can be implemented by combination of a software and hardware platform.

Introduction of «HeatCAM» system for buildings of the public sector (including educational and culture institutions) is planned. The system «HeatCAM» can be applied to any business or organizations with centralized heating and work according to a fixed schedule.

At this stage, the «HeatCAM» system is implemented for monitoring state of the heating network in the Sumy State University based on weather conditions, calculates the necessary amount of heat, and formulates summary reports.

The usage of the "HeatCAM" system for the monitoring of heat consumption building in the Sumy State University during the heating season 2012-2013 has allowed reducing amount of heat consumption by 15%.

Missing