Framework for Service Composition Based on Ontologies for the Aggregation of Knowledge and Information for Intelligent Buildings (FCINT)

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Project Progress

The FCINT project, co-sponsored by the European Fund for Regional Development and Romania's Government (ID551, cod SMIS-CSNR 12038), is hosted by the Polytechnic University of Bucharest.

University Politehnica of Bucharest

During this quarter of its funded activity, the FCINT project focused on: tool design (partial), scenario implementation and demonstration and system evaluation in the lab (final), scenario demonstrations and system validation in industrial environments (partial), publication on portal and maintenance of language for ontology description (partial), publication on portal of services and interface protocols (partial), further development of wiki portal (partial) and testing and quality control.

So far, the FCINT team has successfully delivered partial solutions that include multiple components such as service composition and optimization, scenario implementation and demonstration, system evaluation through simulation, ontology modelling language, service portal, and wiki portal. Future activities are geared toward completing and enhancing those features to provide customers with services for smart building management.

FCINT Portal

A new version of the FCINT Portal (www.fcint.ro/portal/) was launched on February 25th , 2013. This new release allows users to find information about the applications developed during the project (Product catalog), how to install and operate these applications (Documents) and provides download links to applications (Downloads). Using our services (Our services) users can access their private environments, as well as the alarm management system and the service management system - which offers the possibility to search, publish and discover services.

Fig. 1. The main page of the FCINT Portal

One of the most important features offered by the FCINT portal to users worldwide is the community forum (Community), where they can exchange point of views, can ask questions to which the development team or other FCINT experienced users can answer

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Fig.2. The community forum

FCINT Publications

Monica Dragoicea, Laurentiu Bucur, Monica Patrascu, *A Service Oriented Simulation Architecture for Intelligent Building Management*, Proceedings of the 4th International Conference, IESS 2013, Porto, Portugal, February 7-8, 2013, pp. 14-28, ISBN: 978-3-642-36355-9.

> This paper introduces a proposal on developing a service oriented modelling and simulation architecture related to intelligent building management based on an existing open platform that is intended to allow different people to participate and contribute at developing a intelligent building management service ecosystem. In this way, both users and developers can compose new services, while the developer can focus on the most effective use of devices and data, instead of getting lost in upgrading to the latest device driver. The novelty of the proposed framework is the integration in the simulation loop of a Smart Building Controller that can control the real and virtual devices at the facility level. Therefore, the simulation model of the smart building integrates both real as well as simulated devices. The web-based service oriented software application allows to simulate the device-level and facility level behaviour of an intelligent building. It demonstrates a strategy to define an Intelligent Building Management solution that includes scenario simulation, testing of

the functionality of the Smart Building Controller (SBC), device monitoring and control, report generation, and implementation of device web services.

FCINT Info

FCINT project website: http://www.fcint.ro

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