PROJECT FACTSHEET

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GOLIATH

Towards a smart habitat for user comfort

With GOLIATH, researchers from LIST intend to contribute towards the development of smart homes and buildings by developing a solution for connected environments to respond to the real-time comfort requirements of its users.

INSPIRATION

In the home of the future, objects will interact with one another to ensure that users' comfort expectations are met. Considering the new technological possibilities offered by the Internet of Things, such a situation can now be envisaged. "At present, it is now possible to interact with various items in the same environment remotely, to switch on the heating or activate an electrical device", says Benjamin Gateau, researcher at LIST. "Some equipment also responds automatically to a given environment, such as blinds which open and close depending on the sun level". Thanks to the GOLIATH project, LIST aims to contribute towards the emergence of a smarter indoor environment. "Better than automated processes responding to certain pre-established scenarios, the idea is to allow various elements in an environment to communicate, and be organised in a given context which develops so as to provide users with optimal comfort conditions", continues Benjamin Gateau.

INNOVATION

The GOLIATH project is working to develop a smart interface to allow a combination of interconnected objects to interact. "On the basis of factors such as temperature, light levels, air or sound quality, one of the challenges lies in defining models governing comfort. Once values have been assigned to each of these elements, it is possible to define how the variation of each of these will have an effect on the comfort conditions of a given location", explains Benjamin Gateau. On the basis of these models, GOLIATH is developing a smart application layer. According to the variations detected within a given environment, the solution will determine how each of the elements should be adapted to achieve the best comfort conditions and will define operations to be undertaken. "Below this smart layer, an interface developed by our partner allows for interoperability of various components present within a single room. This may be for ventilation, heating, lighting or blinds. They can be activated depending on the desired objective".

IMPACT

Given new developments related to the Internet of Things, the model and solution developed by GOLIATH can contribute towards the emergence of smarter environments, which are more energy efficient and comfortable. "In order to achieve optimal conditions of comfort, we now work on the basis of user expectations. Comfort no longer depends on pre-established and automated rules and operations, but rather on the context and way in which it develops as well as the environment's capacity for adaptation", continues Benjamin Gateau. "In the future, the challenge will be to take account of an increasing number of elements having an effect on comfort. It is also possible to imagine a system which takes account of user interaction with the environment, recording these so as to gradually adapt with the ultimate aim of ensuring continued comfort depending on the user context and habits".

Partners

Poznań University of Economics (PL)

Contact

5, avenue des Hauts-Fourneaux
L-4362 Esch-sur-Alzette
phone: +352 275 888 - 1 | LIST.lu

Dr Benjamin GATEAU (benjamin.gateau@list.lu)

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