Welcome to the ENTROPY Newsletter regarding the main platform of the ecosystem. ENTROPY pertains to an energy-aware IT ecosystem aiming to support energy efficiency in the buildings sector through behavioral change of the occupants with regards to their daily energy consumption patterns. The main adopted ICT technologies include Internet of Things (IoT), information fusion, semantic web, rule-based recommendations, big data mining, and analysis mechanisms, all evident in the ENTROPY platform. The aforementioned technologies of the integrated IT ecosystem comprise the basis for the consumption of existing services, as well as the design and development of further energy management and awareness services, personalized mobile applications, and serious games.
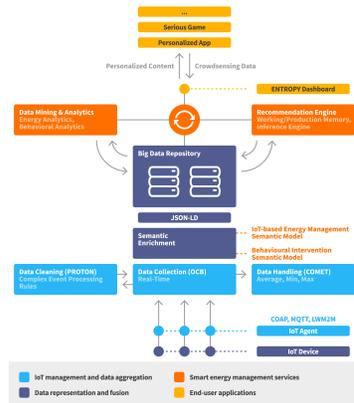
A high-level view of the ENTROPY energy-aware IT ecosystem architectural approach is provided in the following figure. As depicted, a layered architecture is followed with discrete layers for IoT management and data aggregation, data representation and fusion, smart energy management services and end user applications. The IoT management and data aggregation layer is responsible for IoT nodes registration, management and data aggregation and cleaning functionalities at the edge part of the infrastructure.

The data representation and fusion layer is responsible for representing the collected data based on a set of defined semantic models as well as supporting a set of data fusion mechanisms over active data streams. The smart energy management services layer is responsible for providing advanced analytics and recommendations to end users, as well as incorporating learning techniques for continuously exploiting the produced output by each service. The end user applications layer is responsible for the design of personalized mobile applications and web-based serious games able to take advantage of the set of services provided by the lower layers. Following this, detailed information is provided for the designed and implemented mechanisms per layer.

For more information and updates on the ENTROPY Project visit http://entropy-project.eu/

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