End-to-End Personalized AAL services for elderly with chronic conditions

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In the recent years, the number of the elderly living with chronic diseases (e.g., high blood pressure, diabetes, etc.) is continuously growing, potentially affecting their independence. Therefore, many efforts have been given in AAL applications for supporting the monitoring activities and, particularly, focusing to the issue of gathering continuous information at home, standardizing formats, extracting further information from raw sensors data using different techniques to reconstruct a context. One aspect that is rather important but less developed in current investigation is the design of personalized end-to-end services for classes of users of such technology being them either primary user (old people) or secondary users (medical doctors, caregiver, relatives).

This abstract describes the current effort in the EU GiraffPlus project (http://www.giraffplus.eu/) for designing and implementing such services on top of a state-of-the-art continuous data-gathering infrastructure, i.e., Universaal, an open platform and reference specification for AAL. The GiraffPlus project aims to develop and evaluate a complete system able to collect elderly's daily behavior and physiological measures from distributed sensors in living environments as well as to organize the gathered information so as to provide customizable visualization and monitoring services for both primary and secondary users. In this regard, a Data Visualization, Personalization and Interaction Service (DVPIS) has been realized to manage interaction with the different actors in such AAL scenario. In particular, two different instances of the DVPIS have been provided: one for use "outside the home" (DVPIS@Work), and another dedicated to the primary user (DVPIS@Home). The benefit in using the GiraffPlus system is twofold: primary users can access the information on their own health condition, enabling them to better manage their health and lifestyle; secondary users are supported by a flexible and efficient monitoring tool while taking care of old persons (relatives/patients) living with chronic disease.