

A. Sixsmith, S. Müller, M. Klein, I. Bierhoff, A. van Berlo, S. Delaney, E. Avatangelou, V. Arnaudov. SOPRANO: An ambient assisted living system for supporting older people at home. *Gerontechnology* 2009;8(3):186; doi: 10.4017/gt.2009.08.03.010.00 SOPRANO (Service-Oriented PRogrammable smArt eNvironments for Older Europeans)¹, is a EU-funded project to develop an ambient assisted living (AAL) system to enhance the lives of frail and disabled older people. A major aim within the project has been to move away from technology-push and problem-focused approaches to user-driven approaches and map out an Ambient Assisted Living (AAL) system that provides practical benefits for users in their everyday lives. **Technical description** SOPRANO uses pervasive technologies such as sensors, actuators, smart interfaces, and artificial intelligence to create a more supportive home environment (Figure 1). **User studies** An extensive program of research was carried out involving users at all stages of the R&D process. This qualitative approach involved 14 focus groups (with more than 90 participants) as well as individual interviews. Themes emerging from the user research included: (i) Social isolation (loneliness, depression, boredom, social exclusion, disruption of patterns of daily living); (ii) Safety and security (falls, disorientation, control of household equipment); (iii) Forgetfulness (a challenge to independence and concerns, taking medication or finding objects in the house); (iv) Keeping healthy and active (physical and mental activity, exercise, good nutrition, daily routines, adherence to medications); (v) Community participation and contribution to local community; (vi) Accessing information, keeping up to date, finding help and tradesmen to do jobs around the home; (vii) Getting access to shops and services; (viii) Quality management of care provision in the home; (ix) Mobility inside and outside the home (personal mobility in terms of walking in the neighbourhood and use of public transport)². The next phase of the project was to use these themes to develop the overall architecture for the prototype system. These prototypes have been lab-tested at four sites with more than 50 users between November 2008 and February 2009. Prototype testing focused on refining usability of the different components. Results from this cycle of user involvement helped technical designers to improve the prototype components and overall system. Next will come the demonstration phase of the project, where the SOPRANO system will be deployed in two ways. First, full-function demonstration facilities will be set up in homes in the UK, Netherlands, and Spain. New feedback from users at this stage will be incorporated, either as input to the design process or as evaluation results on the functionality of the total system. Second, large-scale field trials of a more limited version of the system are planned to evaluate its impact in real-life situations with 600 users across Europe. The information from this demonstration phase will provide critical information on the practical and commercial deployment of this AAL system.

References

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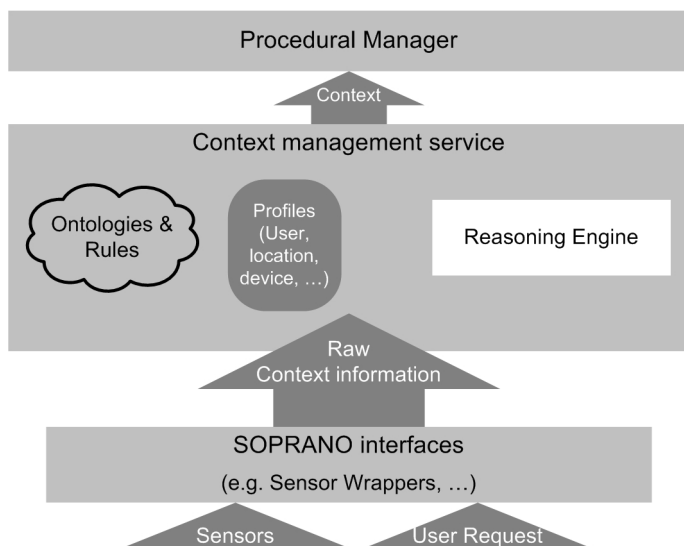


Figure 1. Architecture of SOPRANO; all elements in hardware / software