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An Assisted Living Platform for Aging in Place Based on An Interdisciplinary Approach

Abstract: To address the many challenges of aging in place, we have been conducting an interdisciplinary research project aimed to design, develop, deploy, and assess an assisted living platform for frail older adults, named HomeAssist. This platform leverages expertise in psychology and aging, human factors, and computer science. HomeAssist offers an online catalog of assistive applications, covering daily activities, safety, and social participation. Using this catalog, the user and the caregiver determine what and how activities should be assisted by selecting the appropriate applications and configuring them with respect to the user's requirements and preferences. The resulting set of applications forms a personalized and evolvable assistive support.

HomeAssist was used in a field study; it was deployed over a period of 6 months in the homes of 16 community-dwelling adults, aged 80 years old on average, and matched with 16 control, non-equipped counterparts. Results revealed that participants found HomeAssist highly usable and had a highly positive user experience. Additionally, caregivers reported that HomeAssist prevents loss in everyday functioning of participants, compared to non-equipped individuals.

Biography: Charles Consel is a professor of Computer Science at the Bordeaux Institute of Technology. He served on the faculty of Yale University, Oregon Graduate Institute and the University of Rennes.

His research contributions cover programming languages, software engineering, operating systems, pervasive computing, and assistive computing.

He leads the Phoenix group at Inria that conducts interdisciplinary research to design, develop, deploy and assess assistive computing supports. This research combines (1) Human factors to study user needs and make a rigorous assessment of assistive services; (2) Sensor expertise to accurately monitor users; (3) Computer Science to support and guide the development of the assistive services.



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