C. Rodríguez de Pablo, M. Loichate, N. Oses, M. F. González, C. Buiza, J.J. Yanguas. Technological assistance tool for elderly´s autonomy enhancing and care-givers support based on the use of portable devices and web. Gerontechnology 2008; 7(2):199. This paper presents the development of a personal assistance tool based on the use of a PDA (personal digital assistant) to support elderly people with activities of daily living (ADL). Most ADLs require the use of cognitive capabilities such as memory, attention and orientation which are often in decline in old age[1]. Thus, this tool firstly aims to compensate for these impairments and promote the autonomy and independency of elders. And secondly, it also aims to support their care-givers by means of a web portal. Periodical, automatic data synchronisations allow keeping the mobile device and web portal up-to-date with each other via Wireless communications. **Methods** First, a triple analysis of needs, interaction with NTIC's (New Technologies of Information and Communication) and an optimum interface for elderly people was carried out in collaboration with expert gerontologists and neuropsychologists. Also, the State of Art was analysed extensively. This project tries to stand out from the rest by being as complete and adaptable as possible, as well as taking into account not only the elder but also the people in their environment. The tool consists of a base platform and modules, which can be added or removed depending on the needs of the patient. The tool also provides different profiles to cater for the different disabilities of the users, i.e. for an advanced patient all the features will be available while some of them will be omitted for the less advanced ones. **Results and discussion** Specific software application modules have been developed both for the mobile device and the web portal. Being modular, the possibilities for the tool are endless. At the moment, besides the base platform, four modules have been developed: Memory assistance, E-health, Localization and orientation, and Communications (*Figure 1*). In order to design and validate the application, several discussion and application testing groups with potential real users (elders, doctors and care-givers) have been organized; some of them took the device home for a week. Technologically, the results were positive since the tool was found to be useful, robust and easy-to-use. In relation to the psychological aspects, the results were also positive as the tool was found to be non-invasive.

References

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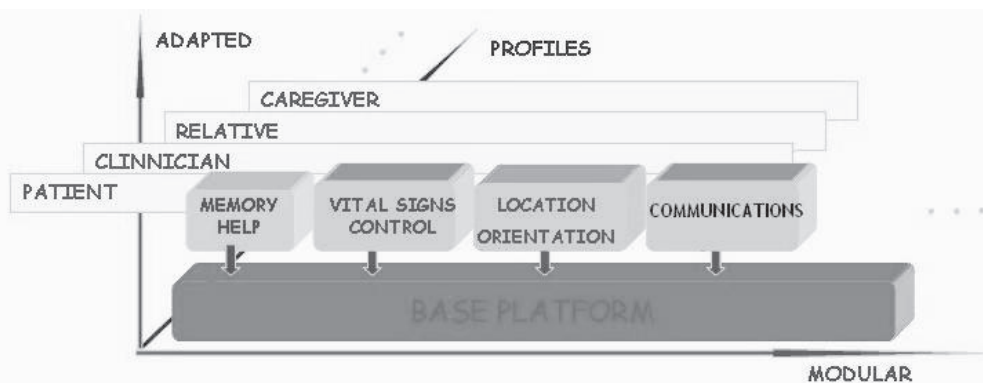*Address*: Fatronik Foundation, Spain; E: crodriguez@fatronik.com

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Figure 1 Conceptual Architecture of the entire system