C. Leonardi, C. Mennecozzi, E. Not, F. Pianesi, M. Zancanaro. Designing a familiar technology for elderly people. Gerontechnology 2008; 7(2):151. Much effort has recently been paid to explore how technologies can promote older adults' well-being and independent living. The work presented in this paper is based on the findings emerged within the NETCARITY European project on the design of technologies supporting services for social inclusion for elderly people. Specific accessibility and acceptability issues have been investigated by means of focus groups and individual interviews to understand of the factors preventing an effective access to digital and information technology from older adults. Two major factors appeared to have a high impact. First of all, the lack of engagement: for a large part of the old population, technology is unfamiliar and "alien" and is associated with feelings of hostility and anxiety. Second, even when elderly people perceive the potentials of IT technologies, they consider the investment of personal resources needed to use a new artefact too high. Drawing on the results of this analysis, familiarity and meaningfulness emerged as major issues to be addressed in the course of the design of interfaces for e-inclusion. Current applications and products marketed to elderly people either derive from standard products adapted to their particular needs, or are artefacts expressly designed for targeting their deficiencies. These approaches might typically handle accessibility, but fail in terms of familiarity. We therefore decided to explicitly aim at designing a familiar artefact[1] in order to secure accessibility and acceptability. The results of the first formative evaluation confirmed that putting familiarity at the centre of the design process produce technologies that avoid the fears and prejudices found in our initial survey. **Familiar design** In this paper we show how we used the concept of familiar design as a unique answer to a wide range of issues, from a physiologic (cognitive decline, sensory thinning), social (perceived value) and personal (motivation, engagement) point of view. This approach dictates that the design of artefacts should start with a deep analysis of the familiar world of the users: how they manage and conceptualize their everyday activities and the objects they use. We aimed at designing an artefact that users could immediately understand because its syntax and semantics are common to their experience. This means that the interface has not only to appear familiar; it also has to allow for a familiar style of interaction (for instance, by means of familiar action), fitting the elders' sensorial abilities. Building on Norman's concept of directness, implying short semantic and referential distance and a high degree of engagement[2], we have developed an interaction modality based on direct manipulation, using natural gestures recalling real world motor patterns as the main mean to act at the interface (for instance scrubbing with the finger an object in stand of the 'erase' command). The interface avoids the usage of standard computer tools, such us contextual menus and provides to every object or property a concrete shape that suggests an affordance. The tasks to be performed are represented by mimicking real world tasks; the objects mimic real world objects too, the whole creating a recognizable and consistent context for the tasks, so that the user feel she owns the resources to interpret and act in this fictional world. The context was based on metaphors recalling users' everyday life and experience (for instance, representing a discussion forum as a town square), and through aesthetics fitting their criterions of pleasantness (for instance, classic style, no stunning shapes and colours), in order to evoke personal interpretations and memories during the interaction.

References

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2. Norman D, Hollan J, Hutchins E. Human Computer Interaction 1985;1:311-338