

Seniors and the uses of media and ICT: exploring social iTV and social media sites potential to improve sociability and participation

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Abstract: This position paper starts with a brief description of the uses of media and information and communication technologies (ICT) by Portuguese seniors over 65 years, which are characterized overall by a very high level of television consumption and a very low usage of internet and mobile communications, in comparison with the rest of the country's population. On the other hand, we find a very significant percentage of these older adults living alone, low levels of sociability with family and friends compared with neighbours and low levels of participation within community. Social iTV systems and social media sites can potentially improve seniors' sociability and participation. Yet, in order for such systems to be regarded as useful and satisfactory by this specific population it is fundamental to involve them in the development process, starting with the application of appropriate elicitation requirements: this paper will propose a research design composed by contextual, collaborative and creative requirements elicitation techniques.

Introduction and motivation

Can Portuguese seniors' sociability and participation be improved through social interactive television systems or social media web sites, namely to keep in contact with family and friends and to engage with people with common interests and practices? The motivation to address this question arose mainly from crossing two pieces of information: the fact that television consumption by the Portuguese elderly with 65 years or more is significantly above average and with tendency to rise and, also, the fact that this population is increasingly vulnerable to isolation, which is considered the specific problem of older Portuguese adults and not poverty, since they are excluded from the mainstream society independently of their income level (Costa, Baptista, Perista & Carrilho, 2008).

It should be noted that the Portuguese population with over 65 years represented 16% of the total population in 2001 (Carrilho & Gonçalves, 2005) and 17,4% in 2007 according to projections from the Portuguese National Institute of Statistics (INE, 2008). Also, it is estimated that in 2050 that this proportion will duplicate, representing 32% of the total population (Carrilho & Gonçalves, 2005).

In terms of media and ICT usage, seniors aged 65 years or more in Portugal are characterized by a very high consumption of television, with an average of 05h30 or 310 minutes of TV viewing per day in the 1st semester 2008 (Marktest, 2008), a very low usage of internet with only 3,7% of this population having accessed internet in 2007 (Marktest, 2007) and low use of mobile phones, in which 44,9% of non-owners were 65 years old or more in 2006 (Cardoso, Gomes, Espanha, Araújo, 2007).

Regarding sociability we find that one in five seniors (20,7%) was living alone in 2006 (INE, 2007). On the other hand, this population has a very high frequency of social and neighbour relations: more than 68% of seniors over 65 talk with their neighbours on a daily basis and 90% once or twice a week, while 36% engage in conversation daily with friends and family and 69% once or twice a week (INE, 2002). Also seniors with over 65 years have low levels of participation in cultural or social organizations (sport clubs, political parties, community associations, etc), with 18,7% of men and 5,2% of women claiming to have been involved in such activities during the last 12 months (INE, 2002).

Objectives of the study and related work

In order to address these issues, in the realm of the I&D project "MEDIACULT-PT - Participatory culture and media usage" of Universidade Lusófona (Damásio, 2007), an exploratory study will be conducted with the following objectives:

- a) to gain an holistic understanding of how seniors occupy their time, focusing on their usage of television, ICT and entertainment activities, as well as their sociability and participation practices;
- b) to explore if seniors sociability and participation can be improved through a social iTV system and/or a social media site.

The framework for such study draws generally on user centred design framework (Norman, 1988, 2004), by pursuing an iterative development of a social iTV prototype and a social media site with a small sample of senior participants using requirement elicitation techniques which are contextual, collaborative and creative (Dickinson, Eisma, Syme & Gregor, 2007; Eisma, Dickinson, Goodman, Syme, Tiwari & Newell,

2004; Gregor & Newell, 2001; Marquis-Faulkes, McKenna, Gregor & Newell; Rice & Carmichael, 2007, 2008; Rice & Alm, 2007).

Also, the study will draw on the ethnographic approach of audiences research (Katz & Liebes, 1990; Morley, 1992; Morley & Silverstone, 1992), by conducting a 'quick and dirty' ethnographical study (Hughes et al., 1995) in order to obtain an holistic and detailed overview of how a small sample of the Portuguese senior population occupies their time, focusing of sociability and participation practices as well as their media and ICT uses.

Finally, the study will also draw on social iTV related work as sources for concept and prototype development (Abreu & Almeida, 2001, 2008; Coppens Trappeniers & Godon, 2004; Ghittino, Iatrino, Modeo & Ricchiuti, 2007; Harboe, Massey, Metcalf, Wheatley & Romano, 2007; Luyten, Kristof, Huypens & Conix, 2006), as well on popular social media sites.

Progress and timeline

Regarding the research design, the study field work will begin with a requirements elicitation workshop with at least ten seniors in a community meeting place, followed by a series of workshops at home of five of these participants, with at least one family member or friend present. Both these workshops will be grounded on contextual, collaborative and creative requirement elicitation techniques. In summary, this study is exploratory, following a qualitative methodology of ethnographical nature. After the development of the prototype (social media site, social iTV system) and respective experimentation by the senior users, it will be conducted a conclusive study based on extensive interviews and face-to-face quantitative inquiries, which is not detailed in the paper.

For the exploratory study, the activities to be conducted during these sessions will encompass:

- traditional children's games to generate opinions, comments and personal stories;
- production of artefacts (such as digital photos, print photos, live path illustrated with photos, videos, and so on) to experiment first-hand the usefulness of digital devices and ICT for content creation and sharing;
- storytelling supported on pictures and other small objects of personal significance as both a mean of gaining knowledge about the participants trajectory of life as well as a content creation activity by capturing these stories on videotape;
- role-playing to generate opinions and comments about prototypes, storyboards or use cases.

Finally, a 'quick & dirty' ethnographical study will be held at the households of five of these families, combining observation with semi-structured interviews to further explore sociability and participation dimensions of their lives and, also, how they occupy their time, particularly, what uses they make of media and communication technologies in everyday life.

Regarding this position paper contribution, the focus will be on the discussion of social needs and

participation deficits of older adults and on the proposal of creative, collaborative and contextual requirements elicitation techniques for the future development of a social iTV system and a social media site which specifically address the above mentioned needs of this population.

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References

- Abreu, J. A., Almeida, P., Mealha, O & Branco, V. (2001). Plataforma para investigação em televisão interactiva teletrabalho: o sistema 2BeOn. In *BOCC - Biblioteca On-line de Ciências da Comunicação*, Covilhã: Universidade da Beira Interior. Retrieved 28 August, 2008, from <http://www.bocc.ubi.pt/pag/abreu-ferraz-sistemav-2Beon.pdf>
- Abreu, J. A. & Almeida, P.(2008). From scratch to user evaluation - validating a Social iTV platform. In *Adjunct Proceedings of the 6th European Interactive TV Conference (EuroITV2008)*, Salzburg, Austria.
- Cardoso, G., Gomes, M. C., Espanha, R. & Araújo, V. (2007). Portugal Móvel -Utilização do Telemóvel e Transformação da Vida Social - research report,. Lisboa: Obercom.
- Carrilho, M. J. & Gonçalves, C. (2005). Dinâmicas Territoriais do Envelhecimento: análise exploratória dos resultados dos Censos 91 e 2001. *Revista de Estudos Demográficos* nº 36. Lisboa: Instituto Nacional de Estatística. Retrieved June 21, 2008, from <http://www.advita.pt/download.php?9f48570b4ace0350276de156556aa6a2>
- Coppens, T., Trappeniers, L. & Godon, M. (2004). Amigo TV: towards a social TV experience. In *2th European Interactive TV Conference (EuroITV 2004)*. Brighton, England.
- Costa, Alfredo Bruno; Baptista, Isabel; Perista, Pedro & Carrilho, Paula (2008) *Um Olhar Sobre a Pobreza: Vulnerabilidade e Exclusão Social no Portugal Contemporâneo*, Lisboa: Gradiva, pp. 63-64.
- Damásio, M. J. (2007). Resumo do projecto MEDIACULT-PT/ Projectos de Investigação Científica e de Desenvolvimento Tecnológico em Todos os Domínios Científicos - Concurso 2006. Fundação para a Ciência e Tecnologia. Retrieved January 11, 2008, from http://www.fct.mctes.pt/projectos/pub/2006/Painel_ResuIt/vglobal_projecto.asp?idProjecto=70893&idElemConcurso=906
- Dickinson, A., Eisma, R., Syme, A., & Gregor, P. (2007). Methods for human-computer interaction research with older people. *Behaviour & Information Technology*. 26 (4).

- Eisma, R., Dickinson, A., Goodman, J., Syme, A., Tiwari, L., Newell, A.F. (2004). Early User Involvement in the Development of Information Technology-Related Products for Older People. *Universal Access in the Information Society - Special Issue on Design Principles to Support Older Adults*. 3 (2). pp. 131-140.
- Eisma, R., Dickinson, A., Goodman, J., Mival, O., Syme, A. & Tiwari, L. (2003). Mutual inspiration in the development of new technology for older people. In *Proceedings of Include 2003*. London: England.
- Ghittino, A., Iatrino, A., Modeo, S. & Ricchiuti, F. (2007). Living@Room: A TV-Based Social Experience For Multimedia Content Streaming. In *5th European Interactive TV Conference (EuroITV 2007)*. Amsterdam, The Netherlands.
- Gregor, P. & Newell, A. F. (2001). Designing for Dynamic Diversity - interfaces for older people. In *Proceedings 2001 EC/NSF Workshop on Universal Accessibility of Ubiquitous Computing: Providing for the Elderly*. Alcácer do Sal: Portugal. pp. 90-92.
- Harboe, G., Massey, N., Metcalf, C., Wheatley, D. & Romano, G. (2007). Perceptions of Value: The Uses of Social Television, In *5th European Interactive TV Conference (EuroITV 2007)*. Amsterdam, The Netherlands.
- Hughes, J. O'Brien, J., Rodeen, T., Rouncefield, M. & Sommerville, I. (1995). Presenting Ethnography in the Requirements Process. *Proceedings of the 2nd IEEE international Symposium on Requirements Engineering*.
- INE (2008). População residente (N.º) por Local de residência, Sexo e Grupo etário (por ciclos de vida). site Instituto Nacional de Estatística. Retrieved June 28, 2008, from http://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_indicadores&indOcorrCod=0000611&Contexto=pi&selTab=tab0
- INE (2007). Nos próximos vinte e cinco anos o número de idosos poderá mais do que duplicar o número de jovens. site Instituto Nacional de Estatística. Retrieved June 21, 2008, from http://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_destaques&DESTAQUESdest_boui=5546132&DESTAQUESmodo=2
- INE (2002). O envelhecimento em Portugal. Situação demográfica e socio-económica recente das pessoas idosas. site Instituto Nacional de Estatística. Retrieved June 21, 2008, from http://www.ine.pt/ngt_server/attachfileu.jsp?look_parentBoui=107198&att_display=n&att_download=y
- Katz, E. & Liebes, T. (1990). The Export of Meaning: Cross-Cultural Readings of Dallas. In Brooker, Will & Jermyn, Deborah (Ed.). *The Audience Studies Reader*. London: Routledge.
- Luyten, K., Kristof, T., Huypens, S. & Conix, K. (2006). Telebuddies: Social Sticking with Interactive Television. In *ACM Conference on Human Factors in Computing Systems (CHI 2006)*. Montreal, Québec, Canada. Retrieved 26 August, 2008, from <http://uhdSPACE.uhasselt.be/dSPACE/handle/1942/1729>
- Markttest (2008). "Idosos vêem 5h30m de TV, por dia", site Markttest.com. Retrieved June 28, 2008, from <http://www.markttest.com/wap/a/n/id~10fe.aspx>
- Markttest (2007). 3,8 milhões de utilizadores de Internet. site Markttest. Retrieved September 5, 2007, from <http://www.markttest.com/wap/a/n/id~e34.aspx>
- Morley, D. (1992). *Television Audiences and Cultural Studies*. London: Routledge.
- Morley, D. & Silverstone, R. (1992). Domestic Communication: Technologies and Meanings., In Morley, D.. *Television, Audiences and Cultural Studies*. London: Routledge.
- Norman, D. A. (1988) *The Design of Everyday Things*, Cambridge/ Massachusetts: The MIT Press.
- Norman, D. A. (2004). *Emotional Design: Why We Love (or Hate) Everyday Things*. Basic Books.
- Marquis-Faulkes., F, McKenna, S., Gregor, P. & Newell, A. (2003) Scenario-based Drama as a Tool for Investigating User Requirements with Application to Home Monitoring for Elderly People. *HCI International*, Crete: Greece.
- Rice, M. & Carmichael, A. (2008). Discovering older adults' user perspectives on undefined TV applications. In *6th European Conference on Interactive Television* (pp. 61-62). Salzburg, Austria.
- Rice, M. & Carmichael, A. (2007). Effective requirements gathering for older adults. *Computing and Accessibility Special Issue on Accessible Europe*. SIGACCESS Newsletter.
- Rice, M. & Alm, N. (2007). Sociable TV: Exploring user-led interaction design for older adults. In *5th European Conference on Interactive Television* (pp. 126-135), Amsterdam: Netherlands.

Brief bio

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