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Exploring the Desire to Get in Touch through Social TV Applications

Sandra Schering, Steffen Budweg

Interactive Systems and Interaction Design, University of Duisburg-Essen

Abstract

Social TVs aim to offer people the possibility to stay in touch with family and friends, supporting intergenerational experiences of social presence and awareness. While multiple approaches exist to support the social experience of watching TV (virtually) together, many available systems have focused on classic features such as buddy lists for peripheral user visualization. In addition, research on Social TV has often treated 'watching television' as a generic situation instead of taking the various different genres into account. This paper presents a study that compares three peripheral visualizations of recipients at remote locations while watching TV depending on the genre. Our initial results show that peripheral awareness information can support the feeling of watching television (virtually) together. Furthermore, TV genre plays a central role and should be taken into account when developing Social TV applications for intergenerational exchange.

1 Introduction

Today, watching television is still a very popular activity, especially for people of higher ages. According to the figures of media control[1], the average viewing time per day of German citizens amounts to 242 minutes in 2012. People in the ages between 50–64 years are watching television 305 minutes, while elderly above 65 years use the television for even 336 hours on average. This suggests that television is an important medium and can be used as a basis for intergenerational exchange.

Watching television often has an inherent social aspect: people are sitting next to each other, talking and laughing together and have a sense of community. However, there also can be a different scenario when a person is alone at home and has no one watching together with him or her. For these people the social character of watching television can be lost. This risk is becoming increasingly important in future because of the growing number of elderly.

[1] http://www.media-control.de/dokumente/content/Sehdauer.pdf (Accessed 24.07.2012)

The growing domain of Social TV applications and services aim to address this problem. Social TV applications try to link the individual activity of watching television with the possibility to communicate with others. This is often realized through a voice or a text chat, as well as through different visualizations such as a "Buddy List" that shows the TV channels and programs that friends or family members are currently watching (Harboe et al. 2008). According to Metcalf et al., Social TV allows "remotely located friends and family to experience some of the benefits of sitting next to one another on the couch and watching a TV program together" (Metcalf et al. 2008, p. 2). Recent examples of Social TV applications include "ConnecTV" (Boertjes 2007), "AmigoTV" (Coppens et al. 2004), "Ambient Social TV" (Harboe et al. 2008) or "FoSIBLE" (Drobics et al. 2011). The FoSIBLE system has the goal to foster social interaction for a better life of the elderly through a TV-based community that offers various possibilities to interact with friends and family, counteracting isolation and loneliness in older age.

When addressing isolation and loneliness with (physically) distributed TV users, the concepts of social presence and awareness play an important role. In research literature, various approaches to both phenomena exist. In their very early work Short et al. define social presence as "the degree of salience of the other person in a mediated communication and the consequent salience of the interpersonal relationships" (Short et al. 1976, p. 65). IJsselsteijn et al. state that it is "the sensation of 'being together' in a mediated environment" (IJsselsteijn et al. 2000, p. 65) while Biocca et al. specify social presence as a "moment-by-moment awareness of the co-presence of another sentient being accompanied by a sense of engagement with the other" (Biocca et al. 2011, p. 2) and assume that different manifestations of presence come along with different behaviour and feelings.

The concept of awareness has a long-term tradition in the field of Computer-Supported Cooperative Work (CSCW) when addressing the analysis and support of physically distributed people working together, but is also relevant in the scope of Social TV, because people must be aware of others in order to get a feeling of watching TV together. According to Dourish & Belotti "awareness is an understanding of the activities of others, which provides a context for your own activity" (Dourish & Belotti 1992, p. 1). People must know "what others do, where they are, or what they say" (Markopoulos et al. 2009, p. v). This means, that awareness provides mutual information for the actors about each other (Gross & Koch 2007).

For Social TV systems, social presence and awareness therefore play an important role and need to be taken into account when designing new interaction services for intergenerational communication. While many studies have addressed the two concepts in regards to non-TV interaction or in work-related domains, only few studies exist in the context of the (common) leisure activity of watching TV (e.g. Huijen et al. 2004). In addition to many other interaction contexts such as (work-related) desktop-based communication (e.g. Instant Messaging) or Social media apps on Smart Phones, the TV situation addressed in Social TV studies commonly includes watching a specific programme and genre. However, many Social TV studies have only focused on "watching television" in general and excluded differences based on the TV genre (Dezfuli et al. 2011). Consequently, further research seems necessary regarding potential differences in the desire of watching a specific TV genre (virtually) together and the appropriate features and visualisations to support it. This would help Social

TV developers to build better systems that go beyond treating television as a generic situation and taking the current genre into consideration.

Based on the state of the art research and the concepts of social presence, awareness and implications of genre, we conducted a study aimed to explore these issues in greater detail and to inform the growing numbers of Social TV developers and projects. In the following chapters, we first provide an overview about related work and systems and show that peripheral visualization is an important design aspect for Social TV systems. We then present our study that explores the influence of three forms of peripheral visualizations on social presence and awareness while watching TV at remote locations. To fill the gap of genre-related Social TV studies, we also address potential influences of different genres on the desire to watch TV (virtually) together. Thereby, our study provides empirical insights for the design and evaluation of Social TV applications for intergenerational exchange.

2 Related Work

Research has often demonstrated how important social and family relationships are for a good quality of life (Victor et al. 2000, p. 407). According to Gill et al. the use of Social TVs as a communication device can improve the quality of life for elder people (Gill et al. 2003). Thus, supporting intergenerational use of Social TVs can maintain social contact and interaction between elderly people as well as within their families and friends.

In order to reach this goal, many earlier studies focused on the analysis of different communication tools within Social TV contexts. Geerts (2006) compared voice with text chat and concludes that audio communication is perceived as most intuitive because users would only have to listen, while for a text chat they have to pay attention to different actions. Baillie et al. (2007) analysed the differences between voice chat and a chat with graphical symbols with regard to social presence. While these studies have shown that communication tools seem to be important, only few studies (e.g. Huijen et al. 2004) provide insights into the peripheral visualization of the recipients although this could be a possibility to increase intergenerational connectedness and exchange.

In the context of Social TV systems, peripheral visualizations of recipients mostly play a role in form of a buddy list. Recent Social TV systems all provide a “buddy list” in some form (as commonly known from communication services like Instant Messaging clients) to display other watchers. In addition, the AmigoTV system integrates a visualization through avatars (Coppens et al. 2004). Huijen et al. add peripheral awareness information of the recipients while watching a football game on TV at remote locations in order to evaluate the effects on social presence. Altogether there were three experimental conditions: the visualization of the recipients through a video transmission, through the silhouette of the recipients and a control condition. As a result they found out that the feeling of social presence in the video condition was much higher than in the other conditions (Huijen et al. 2004). This supports our assumption that peripheral visualizations are important for Social TV applications. However, Huijen et al. did not analyse possible influences of the TV genre.

In this context, Dezfuli et al. (2011) showed that particular TV genres like news and films are often watched alone while quiz shows, sports and comedy are preferred in social situations. Geerts et al. (2008) compared different TV genres with regard to the communication behaviour while watching. They identified that the participants talked most during soaps, quiz shows and sports and less during films, documentaries and music programs.

The reported results support our approach to explore the influence of the TV genres on the desire to have a visualization of the other recipients and to get in touch with others through Social TV applications.

3 Study overview and method

In a pre-study the six different TV genres film, soap, comedy, documentation, sports and quiz show were analysed. The objective of this online study was to explore what TV genres would be preferably watched (virtually) together and with whom, as well as if people talk while watching, if they lean-back or observe the program and if the situations vary in which people want to watch the genres. The participants had to watch two of six randomly assigned extracts. Our survey included questions about the personal watching frequency of the subjects, with whom and in which situation they watch TV and how they act while watching. In addition, the different genre extracts had to be rated on the basis of 19 adjectives, including e.g. “funny”, “exciting” or “sentimental”. Every question is based on a five-point Likert-Scale (1 = strongly disagree, 5 = strongly agree).

In the main study, three different visualizations of remote recipients virtually watching TV together were evaluated: a buddy list, a video transmission and photos that are taken in specific intervals. The subjects took part in pairs and firstly had to watch the recorded TV program for 30 minutes in two separated rooms. Depending on the experimental condition, the respective co-watcher was represented either through a buddy list, a video or photos. After experiencing the remote TV situation, the participants were asked to answer a questionnaire for the measure of social presence and awareness. For this, parts of the “ABC-Questionnaire” (IJsselsteijn et al. 2009) and the “Networked Minds Questionnaire” (Biocca et al. 2011) were integrated into the survey. Then a semi-structured interview followed for the evaluations depending on the genre. Here both participants were asked simultaneously to evaluate the visualization, if they perceived it as mutually television watching and how they experienced it during the particular genres.

In the following chapter the empirical results of our pre-study and the interview data of the main study will be reported.

4 Empirical Results

124 subjects in the age of 15 to 69 years (Mean = 28) took part in our pre-study. The three genres chosen for the main study were film, soap and sports because they demonstrated sig-

nificant differences for 16 of the 19 adjectives. Furthermore, it turned out that the film genre as well as the soap genre are watched significantly more often alone than sports. The soap and sports genre are often watched together with friends, while films are watched mostly alone. Besides, the soap is watched more frequently for relaxation after work than the other two genres. With regard to the communication behaviour, we identified that people talk less during the film than during the other two genres. Additionally, communication seems to disturb the majority while watching a film. This goes along with our result that people concentrate most on the content while watching films and the least while watching sports. Another outcome was that people often lean back and relax while watching soaps. A comparison between younger and older viewers generally showed similar tendencies, but older people reported to watch the soap genre significantly rarer and films more often than younger persons.

In the main study in the Fraunhofer InHaus2 smart living room environment, 42 participants in the age of 19 to 60 years (Mean = 25) took part. Regarding the analysis of the three different forms of peripheral visualization, the main study provided the following results: The buddy list was described by 58% of the participants as helpful because it allows seeing what others are watching as well as it creates the opportunity to talk about the program afterwards (follow-up communication). However, all participants mentioned that communication tools in addition to buddy list visualization are necessary to support the feeling of watching together. The second form of visualization, the video transmission, was described by 78% of the participants as very interesting. Half of the participants concluded that they experienced a feeling of watching TV together because emotions were shared and a direct interaction was possible. The third visualization, the photo transmission, has been rated more negative for overall confidence in relation to buddy list and video because a direct feedback wasn't possible so that a targeted communication couldn't occur. Only 29% of the participants liked it. The results of the elder persons who participated in our study in the video and buddy list condition were again similar to the results of the younger participants.

In relation to the TV genre, we found that 93% of the subjects are of the opinion that a buddy list isn't useful during the film because the genre itself was too exciting. The similar result arises in the photo and video transmissions. Most of the participants blank out the visualization completely because they are concentrated on the TV program.

During sports events 71% of the participants estimated the buddy list as not practical because football fans would already know who is watching the game, while 64% of them experienced the photos as not useful because of the time shift between the photos. In contrast to this, 71% described the video transmission as good. Reasons for this are the possibility to interact directly, to share mutual emotions and the rise of a feeling of connection.

Regarding the soap genre, 79% of the subjects stated that the buddy list wouldn't be useful when no communication is possible: they had the wish to laugh together. Nevertheless, 21% liked to know who watches which soap regularly in order to talk about it together afterwards. In this context, the photo transmission was rated the best in overall confidence in relation to the other two genres sports and film. 64% experienced it as a good solution for watching the soap mutually. With 79% of the subjects the video transmission was liked the most during

the soap. The main reasons for both two visualizations are similar: the possibility to laugh together and the general wish to watch it mutually is essential.

In the final chapter we provide an overview of results, examine implications for the development of Social TV applications and give an outlook on future work.

5 Conclusion

The results presented in the chapters before provide insights into user preferences and needs for an intergenerational use of Social TV systems. We identified that many of the previous studies had focused on the comparison of different communication tools but didn't address peripheral awareness information. Through our analysis of the three visualizations buddy list, photos and video in relation to the genres, we could identify that peripheral awareness information plays an important role for Social TVs and that assuming "watching television" as a generic situation can be problematic.

Consequently, developers of Social TV applications should consider genre as relevant and important for the development of Social TV systems in general but also for elderly. Soaps, for example, can be suited for Social TV apps enabling a joint experience. However, based on our initial results, not all genres seem to be suitable to a high extend for Social TV systems. In this context, our results support the findings of Dezfuli et al. (2011) that people want to watch films alone while for example sports transmissions are preferred in social situations. This indicates that also elder people don't have always the desire to watch television (virtually) with others.

Furthermore, peripheral awareness information can support the experience of watching TV (virtually) together. Based on our findings, an integration of different visualizations into the applications, especially a buddy list and a video transmission, should be taken into consideration. Nevertheless, Social TV support should integrate the option to be faded out, to also allow an "undisturbed" individual TV experience. This is associated with our result that people don't always prefer watching TV together with others. Often, users just want to lean back and consume TV for relaxation and entertainment. This implies that also the single, non-interactive TV experience is still relevant.

Although peripheral awareness information can be important for a feeling of mutual (virtual) television watching, communication shouldn't be disregarded. As the presented studies (e.g. Geerts 2006; Baillie et al. 2007) as well as our results have shown, people need interaction and communication possibilities in order to increase this feeling. As a conclusion, verbal or textual communication tools should be integrated with peripheral visualization.

Our results have contributed some deeper insights into the understanding of genre-related Social TV use as well as user requirements and needs for Social TV contexts and can be taken into account when developing such applications. As an outlook, we expect additional perspectives through the further analysis of social presence and awareness from our main study. These analyses will provide more hints how Social TV can get even more social.

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Contact

Sandra Schering, Steffen Budweg
Interactive Systems and Interaction Design
Dept. of Computer Science and Applied Cognitive Sciences
Faculty of Engineering
University of Duisburg-Essen – D-47057 Duisburg
Sandra.Schering|Steffen.Budweg@uni-due.de | http://www.interactivesystems.info