

## Chapter 3.23

# Social TV from a Computer-Supported Cooperative Work Perspective

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### ABSTRACT

Social TV provides co-located and geographically distributed TV spectators with facilities for jointly watching television and for social interaction. In this chapter the authors discuss Social TV from a computer-supported cooperative work perspective by introducing Social TV, presenting computer-supported cooperative work and its requirements for technological support of social interaction, and by identifying key issues of Social TV concepts and applications—thereby particularly focusing on group awareness, communication, and seamless integration. In particular, this chapter aims to provide users and developers of Social

TV systems with concepts and base technology from computer-supported cooperative work and ubiquitous computing as a basis of advanced Social TV.

### INTRODUCTION

Social TV applications provide co-located and geographically distributed TV spectators with facilities for jointly watching television and for social interaction before, during, and after watching television. The concept of Social TV can be defined as: ‘the increasing integration of television and computer technology to support sociable, computer-mediated group viewing experiences’ (Oehlberg et al., 2006, p. 251).

DOI: 10.4018/978-1-60566-656-3.ch004

There are many examples for functionality for Social TV such as instant messaging with text as well as speech communication, discussion forums and conferences, online status information, and neighbourhood information like recommendations based on information of spectators with similar viewing history or introduction to spectators with similar interests. These examples clearly show that there is a considerable potential for synergies with other, existing areas of human-computer interaction, computer-mediated communication, and computer-supported cooperative work. Particularly, in the latter area several relevant findings about the users' needs for technological support for social interaction, related requirements for systems and tools, and experience with technology that fulfils these requirements have been made. Looking into the computer-supported cooperative work area has the potential of considerable synergies for both sides: Social TV can benefit from existing experience and knowledge in computer-supported cooperative work, and computer-supported cooperative work can benefit from new findings in Social TV that flow back into computer-supported cooperative work.

In this chapter we briefly introduce some Social TV systems and prototypes that serve as examples where concepts from Social TV and computer-supported cooperative work have overlapping concepts and functionality and therefore room for synergies. We then have a closer look at Social TV from a computer-supported cooperative work perspective—we sketch a typical Social TV scenario, and derive computer-supported cooperative work concepts and functionality that are essential in this scenario. We continue with the a cooperative media space for Social TV that is an example of an advances concept and technology combining computer-supported cooperative work with ubiquitous computing to leverage Social TV. Finally, we present a general framework for advanced Social TV.

## **SOCIAL TV**

Social TV systems allow collocated as well as distributed spectators watching television together. The focus of such systems does not only lie on the presentation of the media to all spectators, but to allow the spectators to keep in touch with each other. This requires keeping the spectators informed about each other, providing them with communication facilities, and possibly with further support for their activity. For instance, Social TV 2 is a prototype system that extends a media center software with communication and ambient awareness facilities to connect distributed spectators (Harboe et al., 2008), and Telebuddies is a system that enhances IDTV set-top boxes with the possibility of annotating media content and user profiles to allow the realisation of enriched interaction with other spectators (Luyten et al., 2006).

The conjoint watching of television can happen at the same time and in real time, but a time-shifted shared experience is also possible. In the following we introduce four typical Social TV systems: a prototype system allowing for a shared television experience in real-time; a low-fidelity and a high-fidelity commercial systems allowing for a time-shifted communication and watching of television; and a system that uses the past media consumption history of the spectators to enhance distribution of media.

## **AmigoTV**

AmigoTV is a television broadcasting application with real-time communication and community support, which has been realised as a prototype implementation. It is based on the assumption that three components are essential for social television applications: personalised content, community support, and rich verbal and non-verbal communication (Coppens et al., 2005, p. 2.). It allows for real-time voice communication over television broadcast content channels. It provides basic presence and buddy management features,

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