Chapter 3.4

Asynchronous Communication
Fostering Social Interaction
with CollaboraTV

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ABSTRACT

With the advent of digital video recorders and video-on-demand services, the way in which we consume media is undergoing a fundamental change. People today are less likely to watch shows at the same time, let alone the same place. As a result, television viewing which was once a social activity has been reduced to a passive, isolated experience. CollaboraTV was designed to address this new mode of television viewing by directly supporting asynchronous communication. We demonstrated its ability to support this communal viewing experience through a lab study and a month-long field study. Our studies show that users understand and appreciate the utility of asynchronous interaction, are enthusiastic about CollaboraTV's engaging social communication primitives and value implicit show recommendations from friends. Our results both provide a compelling demonstration of a social television system and raise new challenges for social television communication modalities.

INTRODUCTION

Television is undeniably a major component of modern society. In the United States, it is not only the dominant media activity, but is also considered the most exciting and influential media type (FCC 2006; Putnam 2000; TBA 2006). Despite increasing competition from the internet, television usage has been steadily increasing, and is now at it's highest

level since viewing data was first collected, a 50% increase since the 1950s, and a 12% increase from 1996. The average person watches 4.5 hours of programming a day, with the average household tuned in for more than 8 hours (FCC 2006; Putnam 2000). This consumes almost half of people's total leisure time (BLS 2006; Putnam 2000).

Given the significant place that television holds, our research focuses on understanding the social aspects of television viewing – especially in today's age of social behavior-altering technological advances – and the utility of social television systems for meeting the new challenges that such advances bring about.

Declined Social Interactions Around Television

Television was once championed as the "electronic hearth" which would bring people together (Tichi 1991). Indeed, television shows provide a common experience, often affording even total strangers a social connection on which to initiate conversation. This effect blossomed in the 1950s, when two-thirds of all Americans tuned in to watch "I Love Lucy" (Putnam 2000). However, a fundamental shift in how we consume media is degrading such social interactions significantly – an increasing number of people are no longer watching television shows as they broadcast. Instead, users are favoring non-live media sources, such as Digital Video Recorders (DVRs), Video-On-Demand services (e.g. Apple's iTunes Video Store), and even rented physical media (e.g. DVDs via Netflix). To complicate matters further, televisions are outnumbering people in the average home; less than a fifth of households have a single television (Fairbank 1995; AP 2006). This is leading to a decline in ability for people to interact and is eroding once strong social ties. People are increasingly watching TV without their families, with some studies suggesting at least half of Americans usually watch alone (Putnam 2000). However,

all indications point towards a lack of ability to communicate, not a lack of desire.

The "Water-Cooler Effect": A Thing of the Past?

Television shows often act as a conversation starter, enabling the "water-cooler effect" (Putnam 2000), where groups congregate and discuss a television show, automatically assuming everyone in the group has seen it. For example, co-workers could discuss a show from the previous night at work the following day. However, this effect is heavily dependent on a property of live television: shows have a fixed broadcast time. This means that after a show has aired, everyone who wanted to see it, must have watched it (or missed it). DVRs enable people to watch shows days, weeks, and even years after they first air. This trend towards asynchronous viewing, although not omnipresent today, is becoming a dominant media consumption mode. DVRs are already found in 20% of American homes (Leichtman 2007) and worldwide adoption is predicted to reach 250 million users by 2011 (ABI 2006). On-demand commercial video downloads are also booming, jumping 255% from 2005 to 2006 (NPD 2006). Similarly, Netflix, the most popular DVD rental company, has experienced nearly 50% growth in subscribers annually since 2002 (Netflix 2006).

What does asynchronous viewing mean for water cooler talk? Many people will not have watched the most recently aired episode by the following day. In fact, some people may be multiple episodes or even seasons behind. This makes conversing about a show considerably more problematic. If a group of friends meet and talk about the latest episode, those who have not seen it are left out. It is even possible that some may avoid the conversation entirely, fearing that yet-to-be-seen episodes will be spoiled. Equally likely is that people will moderate their conversations in order to prevent revealing spoilers to friends that are one or more episodes behind. However, this

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