Chapter XII

SeamlessTalk: User-Controlled Session Management for Sustained Car Conversations

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Abstract

This chapter approaches sustained car conversations across mobile phones and in-car phone resources as a session management problem. Addressing this problem, the chapter outlines a session management model for user-controlled media switches during ongoing phone conversations. The model makes a distinction between the user and the infrastructure levels of session management. To illustrate and validate the rationale of the model, the chapter presents an in-car mobile phone
hands-free system, SeamlessTalk, developed to support sustained car conversations. The user-controlled session management model contributes to current research on session management by addressing the explicit/implicit session management dichotomy in multiple media situations.

**Introduction**

A considerable portion of all mobile phone calls is made in car contexts (Koslowiski, 2002). While the car context involves novel session management considerations, little has been done to specifically support sustained car conversations. We refer to sustained car conversations as telephone calls supported by whichever phone resource suitable for the ongoing activity of approaching, driving, or leaving the car.

Even though previous empirical studies acknowledge the ongoing nature of conversations (Whitaker et al., 1997; Wiberg, 2001a) and the frequency of media switches during these ongoing conversations (Nardi et al., 2000), however, media switches between mobile phones (brought into or out of the car) and in-car resources are poorly supported by current in-car conversation systems. This is both a convenience and a safety problem. First, considerable overhead work is required for transferring a call to the in-car phone resources when entering the car for driving. In order to use the in-car phone resources (such as in-car screens and dashboard buttons for phone manipulation), the call must be ended and restored using the in-car phone. Second, as Salvucci (2001) outlines, the car is a perceptually demanding and dynamic place. Secondary tasks, such as talking on the phone, must be subordinated the primary task of driving the car. The safety hazards of mobile phone use are widely reported (Brookhuis et al., 1991; Redelmeier & Tibshirani, 1997), and it can be suggested that the lack of support for media switches is part of that problem.

In this chapter, we approach seamless car conversations across media platforms (i.e., mobile phones and in-car resources) as a session management problem. Session management within CSCW refers to the process of starting, stopping, joining, leaving, and browsing collaborative situations (Edwards, 1994; Kristoffersen & Ljungberg, 1999; Wiberg, 2001a). While this research focuses on session management on single media platforms (e.g., Edwards, 1994), however, it does not address sustained media switches during ongoing sessions.
Location Guided System of Training Solutions and Learning Itineraries Based on Competences Adapted to Users’ Needs: The UOC eLearning GPS
www.igi-global.com/chapter/location-guided-system-training-solutions/76609?camid=4v1a

Maximal Pattern Mining Using Fast CP-Tree for Knowledge Discovery
www.igi-global.com/article/maximal-pattern-mining-using-fast/62586?camid=4v1a