

Public Abstract

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A Context-aware Notification Framework for Developers of Computer Supported Collaborative Environments

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To support user actions and interactions sufficient to create and sustain a sense of community, recent Computer Supported Collaborative Environments (CSCE) have been developed with notification systems to provide activity notifications to users. However, these notification systems typically transmit generic notifications as actions occur and do not provide mechanisms for analyzing and providing notifications based on user preference or social context. A challenge facing developers of CSCE is to create a notification system for delivering awareness information based on the ever-changing preferences, interests, and social contexts of users.

To address this challenge, this study articulated and advanced a theoretical framework for developers to use when integrating activity notifications into existing CSCE. The proposed framework is based on the importance of user preferences and social context and is derived from Geraldine Fitzpatrick's Locales Framework. The principles of this new development framework are Social Context, Awareness in Context, Activity Discovery, Trends in Activity, Meaning of Activity, and Notification Customization.

To evaluate the concepts of this framework, this study developed a context-aware activity notification system for an existing CSCE based on the framework's proposed principles. During the development process, it was determined that not only could the Framework for Notification be used to provide notifications based on user preference and social context, but the use of the proposed Framework afforded a richer understanding of the collaborative needs of users for both the theorists discussing the implications of activity notifications and the developers working to provide those notifications.