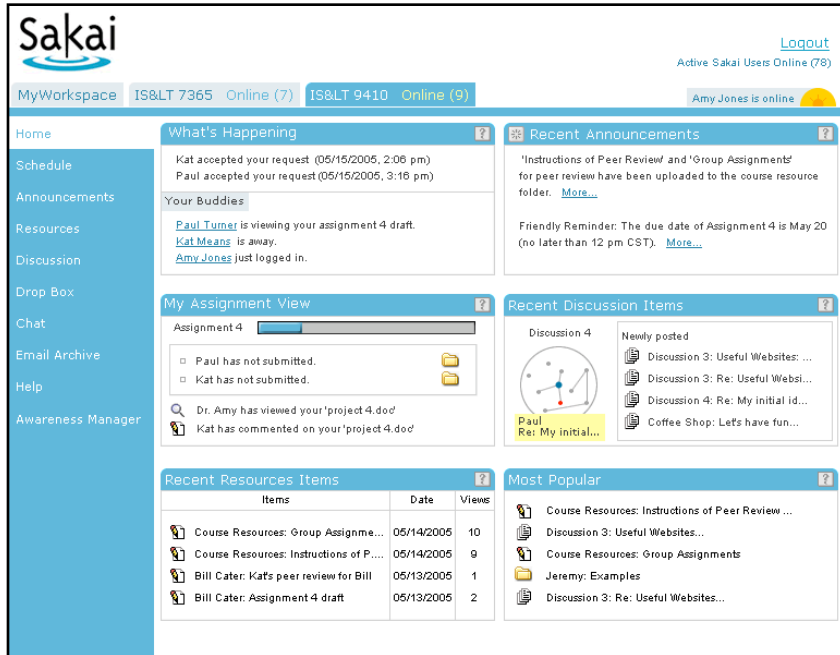


AWARENESS

SOCIAL LEARNING

Context-aware Activity Notification System for Sakai (CANS)



Social Context is Key

To address the need to present awareness information in Computer Supported Cooperative Work Environments (CSCWE), we articulated a framework for researchers to use when creating activity notification systems for CSCWE and then used that framework to design CANS. The framework is called the Framework for Notification.

This framework articulates Social Context and the need to consider why, when, and where users receive awareness information and how they can use that information to derive meaning from the activity occurring in the environment.

We believe significant work remains on how sociality and fluid user interaction develops in these environments. Through this work we may make Sakai a more social place.



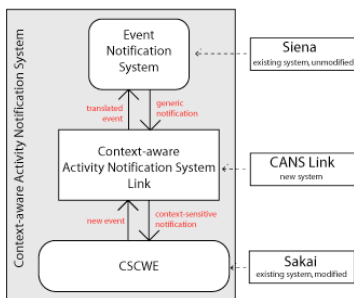
The Context-aware Activity Notification System (CANS) is a notification system designed around the importance of the user's social context and notification preferences to their actions and interactions in a CSCWE.

Social Context is defined by current membership, the collec-

tive goals of individuals, recent activity, and the communicative affordances of the technology.

The image above represents our current vision for how CANS might influence the design of Sakai and the collaborative work processes of users in this CSCWE.

CANS: THE ARCHITECTURE



CANS includes 3 layers: the CSCWE (Sakai), an Event Notification Service (Siena), and a middle-ware application (CANS Link) that records the activity and notification histories of users and traffics notifications to users based on current context and interests.

We are currently in the process of completing the development of CANS I.O. Over the next 6 months we will test CANS and work with various researchers in a series of usability studies and design research.

FRAMEWORK FOR NOTIFICATION

A challenge facing developers of Computer Supported Cooperative Work Environments (CSCWE) is to create a notification system to support sociality and fluid interaction based on the ever-changing preferences, interests, and social contexts of users.

To address this challenge, we articulated and advanced a theoretical framework for developers to use when integrating activity notifications into existing CSCWE. The framework is called the Framework for Notification.

The Framework for Notification is based on the importance of user preferences and social context and is derived from the Locales Framework and Dourish's concept of *embodied interaction*.

The principles of this new framework are Social Context, Awareness in Context, Activity Discovery, Trends in Activity, Meaning of Activity, and Notification Customization.

Social Context

The foundation of the framework is the social context. It's the place where user actions and interactions occur. Social context partially determines the salience of awareness information. Social context is defined by the current membership, the collective goals of individuals, and the recent activity in the context.

Awareness in Context

This principle advocates the need to deliver notifications to users when the notification is relevant to the user's current social context.

Activity Discovery

Just as users need to be aware of activity occurring within their current context, they also need to be notified about activity occurring in related contexts. This principle promotes the formation of new social contexts through the discovery of relevant activity.

Trends in Activity

Notification systems should maintain activity and notification histories to determine the impact notifications have on user actions and interactions. Through an analysis of these two histories, interaction trajectories may be uncovered.

Meaning of Activity

The notification system cannot impart meaning on actions. Users must derive meaning from activity. The notification system should provide mechanisms for users to construct meaning from the activity occurring in social contexts.

Notification Customization

A notification system must provide a flexible notification customization mechanism so the user has the final decision on the notifications received.

HOW MAY YOU CONTRIBUTE?

Are you interested in social computing, online collaboration, or notification systems for CSCWE? Do you have thoughts or concerns regarding the Framework or CANS? If you would you like to contribute to this effort please contact Chris Amelung at amelungc@missouri.edu. We're very interested in hearing from you!

CANS Calendar

June 9th, 2005

Demo CANS at SEPP Conference.

July - December, 2005

CANS development and testing.

September, 2005

Demo CANS to the IT Department at the University of Missouri-Columbia.

September 18th - 22nd, 2005

Demo CANS at ECSCW'05 in Paris.

October - November, 2005

Perform Usability Studies, Design Research and publish findings.

December, 2005

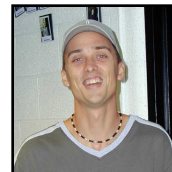
Demo CANS at SEPP Conference and submit system to SEPP Community.

January, 2006 and onward...

Implement CANS at MU, continue research, and begin 2.0 development.

Contributors

CHRIS AMELUNG



Chris designed the Framwork for Notification and is developing CANS.

JAMES LAFFEY



Jim has researched and developed a variety of CSCWE.

PAUL TURNER



Paul is exploring research ideas in social visualization, and implementation in Sakai.