

What's Happening?

The Community Awareness Application

Qiang Alex Zhao, John T. Stasko

Graphics, Visualization, and Usability Center

College of Computing, Georgia Institute of Technology

Atlanta, GA 30332-0280 USA

{azhao,stasko}@cc.gatech.edu

ABSTRACT

This article introduces the “What’s Happening” desktop application for maintaining and enhancing community awareness. “What’s Happening” uses a small visualization display and animation to provide unobtrusive information delivery and lightweight chat-room support. The article also discusses our early experiences with the system.

Keywords

Community awareness, peripheral information delivery, informal communication, CSCW, visualization

INTRODUCTION

It is often difficult to keep up with the happenings in an organization when the community grows large and spreads out to separate geographic locations. Community building efforts typically try to raise people’s awareness of current affairs through mechanisms such as email, newsgroups and newsletters. However, these communication channels are not always effective because they are primarily “heavyweight”, requiring explicit user action that can distract from other tasks and activities. Furthermore, these mechanisms are not always timely, resulting in information that is often discarded or forgotten.

By supplementing email and news with more peripheral information delivery mechanisms, community awareness can be enhanced. Many artifacts in the physical world reflect this thinking, such as posters on doors and bulletin boards in hallways. Extending this idea onto the computer desktop opens up new opportunities to reach distant users and foster spontaneous discussions.

In the following sections we describe the “What’s Happening” (WH) community awareness application that demonstrates this design focus, and we present some early observations of its use.

THE ANATOMY OF “WHAT’S HAPPENING”

The WH interface is a small (500×70) window designed to fit in the corner of a user’s display (see Figure 1). It has a few control widgets, but its main area is reserved for presenting “articles.” These articles include the community calendar of events, news about public media coverage of community members and their research, the latest weather forecast, and popular Web sites that

community members visit. All these articles are automatically collected and presented by WH. They form the initial information content in the system and potentially lead to topics that people can talk about.

Unless otherwise specified, the program cycles through the available articles in a relatively deliberate manner. The user also can move forward or backward an article by using the arrow buttons at the bottom-left of the interface. The user can choose to stop or restart the cycling, bring up a list of headlines to select a particular article to show, or adjust the information cycling speed by accessing the appropriate commands in the application menu.

In addition to automatic posting of articles, WH supports user contributed content. Such information tells more about the author as a person and is the most important ingredient in knowing the community. WH makes submitting messages easy by placing the corresponding “Post” action button prominently in the left of the interface. This button brings up a simple form in which the user can fill in a message, choose the message expiration interval, and customize a descriptive image for the message. The image helps convey a sense of what the message is about or where it comes from without requiring the user to stop and read the text portion of the message (Figure 2). Furthermore, the image provides a space for self-expression in similar ways that the “zsig” in Zephyr do for its users [1].

When a new article or message arrives and is displayed for the first time, a red flag is superimposed on the top right corner of the associated image.

The button that immediately follows the message title brings the user to a topic-specific chat room where the user can add to the discussion by typing in the text-input field (Figure 3). In addition, the chat button behaves like a rudimentary activity indicator [2], displaying different images depending on the level of activity in the chat room.

The document button on the article title line directs the user to detailed information about the current article on a Web page.



Figure 1. The "What's Happening" interface displaying a calendar entry.

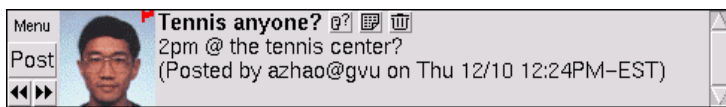


Figure 2. A user submitted message.

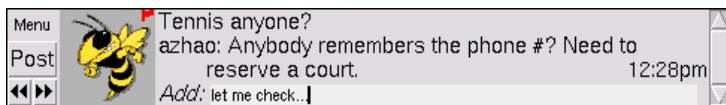


Figure 3. The chat room associated with the user message.

The last button on the article title line, which resembles a trashcan, removes the message from the information cycling schedule.

STAYING IN THE PERIPHERY

Since maintaining awareness of what is happening in the community is usually an activity of secondary importance, the tool should not distract the user from their focus or primary tasks. To achieve this goal, WH uses little screen real estate as described above and smooth, slow-changing animation to minimize the attention-grabbing nature of the interface.

Animation helps present a large amount of information in a small display area and lessens the user's need to actively traverse the information space. However, empirical evidence on the distracting characteristics of different animation styles is currently unknown. Consequently, we have devised a simple heuristic to base our choice of animation on the amount of pixels changed in one unit of time. The "wipe down" transition style found in popular business presentation software fits our criteria better than the scrolling animation used in other awareness-and-communication tools such as Tickertape [3] and Zephyr.

INITIAL DEPLOYMENT AND OBSERVATIONS

In November 1999, the first version of WH was deployed in our local community. The tool runs on Unix, Windows NT, and MacOS platforms. Approximately 60 people tried the application in the first several weeks with about 25 becoming regular users who keep the application running on their desktops at all times. We estimate that another 20 people are casual users.

Anecdotal evidence suggests that people enjoy keeping up with community activities. Many followed links to the Web pages associated with the information of interest. Furthermore, users did not feel that the program was

distracting — some did not even notice that the information was changing as they focused on primary desktop tasks.

We observed several types of user postings:

- Announcements such as congratulations for a student passing the qualifying exam, invitations to attend a demo event, and interesting or useful information found on the Web and passed along.
- Requests and offers such as those seeking tickets and selling used computer parts.
- Random opinions and calls for discussion such as guessing the outcome of a football game.

Although a generic chat room was available through the WH interface, chat messages tended to relate to the content in a specific article, frequently involving comments or criticisms. For example, an automatically posted article about user identification in a software package spurred a debate on the controversies of privacy in ubiquitous computing.

The most frequently suggested improvement to WH was the display of more automatic content, especially content local to the community. Some examples were news articles from school and city newspapers, announcements about happy hours and sports competitions. In addition, several users wanted to know about other people with shared personal interests such as backpacking and mountain biking. These represented an opportunity in which the right application could enhance the awareness level in the community.

CONCLUSION

The "What's Happening" tool implements a lightweight communication mechanism for helping people to maintain community awareness. Initial use suggests that WH fills a niche left open by other communication tools. Future work will focus on content generation and a more thorough assessment of the tool's utility and value.

REFERENCES

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