

A Tour of TeamRooms

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ABSTRACT

TeamRooms is a groupware environment based on the metaphor of shared virtual rooms. The system contains user-defined rooms, each with a shared whiteboard, chat tool and customizable groupware applets. The system also supports a number of features to help maintain awareness, as well as a rich persistence mechanism that can act as a group memory.

KEYWORDS: Groupware, CSCW, shared electronic spaces

INTRODUCTION

Many groupware systems today are based on the metaphor of a meeting or telephone call, where users connect to each other, interact with a shared tool, and then disconnect, ending the interaction. Here we describe TeamRooms, a groupware system based on the metaphor of a shared space.

A physical team room is a shared space that can be used by a group for more than just meetings. Members of the group can perform individual work in the room, while taking advantage of equipment, documents and other artifacts that the team can permanently store there. The room serves as an archive of the group's work, and a convenient locale to leave materials for other team members.

Our TeamRooms system [2] uses the Internet to bring similar benefits to teams who are not physically co-located and therefore cannot share a physical space. Network servers can host a number of different rooms for a single community. Group members use TeamRooms to connect to these servers to interact with the rooms and each other.

USER INTERFACE

Figure 1 shows the user interface of TeamRooms. The large window represents a single shared room. The other windows show (top to bottom): the rooms available on the TeamRooms server (for navigating between rooms), the

connected users (to see who is currently around), and a business card (for more information on one user).

Standard Room Tools

One of our goals in building TeamRooms was to integrate a number of techniques for supporting awareness of other collaborators [1]. For example, telepointers within the application support gesturing. Idle indicators and periodic video snapshots give a sense of whether collaborators are attending to the work area. A radar view (top left of figure) provides a miniature of the entire room, which may be much larger than a user's view, and allows other users' gestures, locations, and manipulations of the applets to be tracked, even in a relaxed-WYSIWIS situation.

The bulk of the room is occupied by a shared whiteboard, supporting freehand sketching and text. Along the bottom is a textual chat tool provided for when voice connections are not available. Other controls particular to this room are along the left.

Applets

A number of special purpose groupware tools called applets can be embedded into the room. These applets allow a room to be customized according to the specific needs of the group using it. Some of the applets supplied with TeamRooms include:

- a database for holding address books, project task lists, etc.
- a tool to upload or download files
- a simple text editor for leaving short notes
- a concept map tool for organizing ideas
- a place to display images
- a tool to leave a URL for others

Group Memory

As with a real-life shared space, any objects placed in a room remain there, and are available the next time the room is entered. TeamRooms goes one better than this and keeps a detailed history of the changes in the room over time. Users can retrieve earlier versions of either individual applets or the complete room. Activities in a room are preserved as part of the group's memory, which can provide valuable information about the evolution of an idea or artifact.

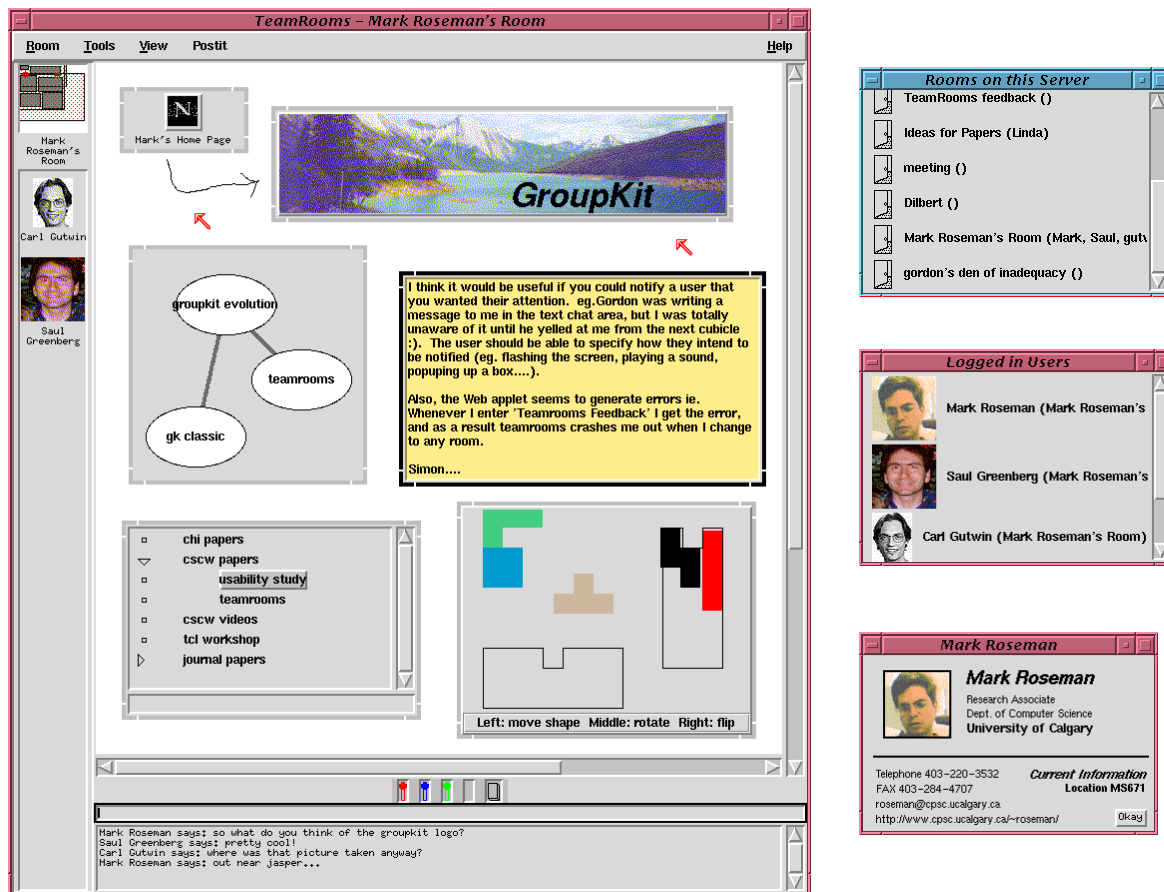


Figure 1. TeamRooms user interface.

CONCLUSIONS

TeamRooms has currently been in use for almost a year, with users located throughout North America, Europe, and New Zealand. We have found the shared spaces metaphor very effective for supporting collaborations. Most of the interactions we have seen have been asynchronous, typically people commenting on others' work. However, TeamRooms afforded many casual real-time interactions, when people connected to the server at the same time, saw each other and initiated conversation.

Status

TeamRooms is based on the Tcl/Tk language and our groupware toolkit GroupKit [3]. TeamRooms will run on Macintosh, Windows 95/NT, and a wide variety of Unix platforms. It works over either dedicated networks or modem connections, and requires no special hardware. For other papers, related information and projects, and for details on

obtaining the software distribution, see our World Wide Web pages:

<http://www.cpsc.ucalgary.ca/projects/grouplab/teamrooms/>

Note: Our "TeamRooms" system is completely independent of the "TeamRoom" product from Lotus Development Corporation.

REFERENCES

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