Sync manual for Instant Messaging

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The Sync Instant Messaging tool is a simple utility for multiple users to exchange real-time messages in a chat environment. The interface is as follows: five ordered string bars represent the history, or the last five messages that have been sent from any party; an input field is where the user is able to type messages to be sent; and a user name field that allows each user to input their name – this will be inserted before their message string on any outgoing messages. Figure 1 is an image of the chat panel at work.
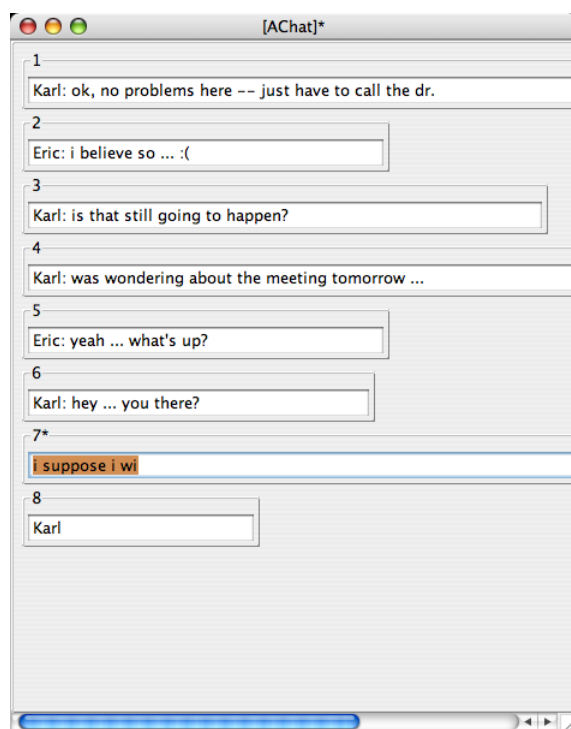

Figure 1: Sync chat. New messages appear at the top, so the chronology of events moves upward. Field 7 represents where users enter text; Field 8 is where user name is set.

Timeline is a chat application that extends current messaging tools by inte-

grating a timeline representing message events in a chronological spacing. This timeline also maps to a top-down ordered list of message events, so the traditional look and feel of messaging applications is preserved, as seen in Figure 2.
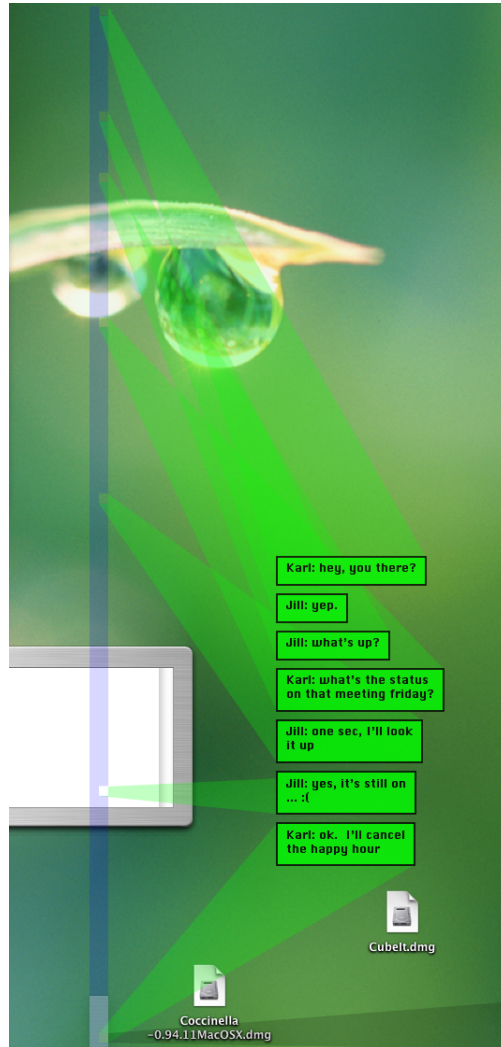

Figure 2: Timeline conversation. Points in the thin strip represent times at which messages are created; these map to the messages in green to encompass both a temporal view and a standard chat view simultaneously.

Moving a slider along the timeline exposes past messages corresponding to the area the slider covers. History messages are exposed in a separate area so that new messages can be seen when they occur, depicted in Figure 3.
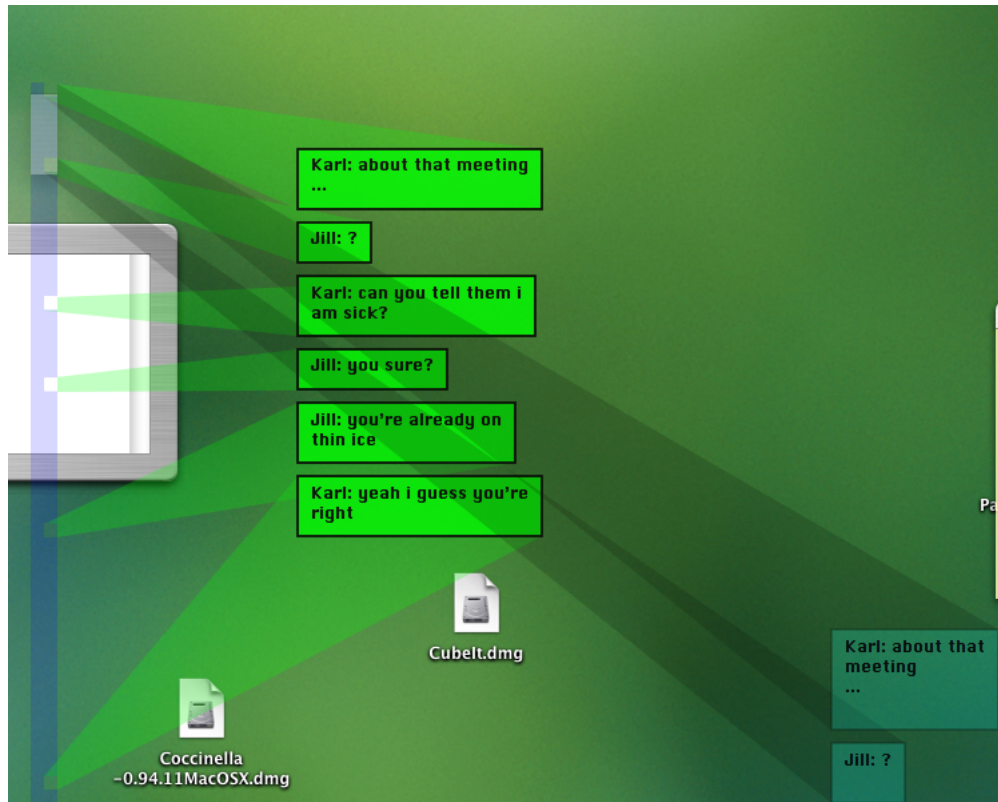
Figure 3: Timeline history. The slider towards the top of the bar covers two messages in time, which are displayed in the darker green to the bottom right of the screen. As the history messages appear in a separate thread, the main line of chat is undisturbed.

Fine-grained status control is another feature in Timeline. Fine-grained status control offers more sophisticated information about the availability of another user. This includes:

- Instant away. Most messaging clients today must guess that the user has gone away by comparing the time since an input device event with a configurable value of time that approximates how likely a user is to be away given that idle time. Timeline uses a camera at the users machine that constantly compares the current image of the user to a training sample of the user when not at the keyboard. When the differences in images are significant, Timeline registers the user as "away". This occurs immediately.

- Shades of busyness. Messaging clients today offer little that specifies how

busy a user is. Most offer the user the ability to specify this in a message, but this requires explicit action by that user. Timeline offers others more information about exactly what the user is doing while at the computer. First, it gives information about how long that user has not been using input devices (is he reading?). Second, it gives information about how often that user is switching applications (logged over the most recent minute, currently) – a higher number indicates more work intensity. A third feature (soon to be implemented) offers others the ability to see how frequently the user is chatting, how many people the user is chatting with, and who that user is chatting with.

The fined-grained status control is currently represented by a color box that changes dynamically as status changes. Red indicates the user is away; different shades of orange indicate they are present but presumably somewhat busy (the brighter the color, the more busy), and green indicates the user is somewhat inactive at the computer.

Appendix A: Sync interface

```
interface Chat {
    // Invoked to send new text message to all participants
    void setInput(String input);

    // Sets the user name
    void setUserName(String userName);
}
```