

Designing A Conferencing Interface: Bridgit Conferencing Software

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ABSTRACT

The design process of Bridgit Conferencing software demonstrates the challenges inherent in maintaining a strong focus on interface design when developing a commercial product.

INTRODUCTION

At SMART, we wanted to create a conferencing solution that would give people the power to conference with others without the overhead of a complex UI. Throughout the entire development of the product, the user interface was always a top consideration. Balancing feature requests with a simple UI was an ongoing struggle. With many design iterations and usability tests along the way, we arrived at our current design. I will be demonstrating this software and showing how we arrived at some of the design decisions that were made.

INTERFACE GOALS

There were two main goals of the Bridgit interface.

1. To be easy to use. This is the ultimate goal of any good design. In the conferencing market, it is especially crucial - sharing data remotely is becoming as important as everyday speech, and to be effective, it has to be simple.
2. Not to interfere with the goals of the user: to share information quickly and easily. The interface can't become the focus of the conference. It should be available in the background but not interfere with the content of the conference.

To achieve these goals, we went through many iterations of the interface, doing usability testing on each one to find the problems and strengths. What we wanted in the end was an interface that would require no training and could be used by anyone, anywhere. The Bridgit client is an executable that is less than 1 MB and does not require an install. Someone who has never heard of Bridgit before can be

having a Bridgit conference in about 30 seconds (including download time!).

TOOLBAR

The center of the Bridgit UI is the toolbar. The toolbar is consistent throughout the interface whether you are viewing in a conference or presenting. When you are sharing your desktop, a colored border surrounds your desktop with attached toolbar. See Figure 1.



Figure 1: Bridgit Toolbar

This design is meant to be unobtrusive while still providing quick access to the tools and functionality provided. Earlier designs consisted of a floating toolbar but user studies showed that people found this to be annoying and often in the way of the information they were trying to show. Usability studies have also shown that targets on the edge of the screen are easier for people to hit with a mouse. The gripper bar at the end of the toolbar allows it to be dragged anywhere along the edge of the border but cannot be detached, so it is always out of the way. Together the toolbar and border take up virtually no valuable real estate on the desktop.

When the conference presenter moves the toolbar, all viewing participants will see their toolbars follow. This helps maintain the focus of the conference on what the presenter is trying to show.

AWARENESS

An important feature of conferencing is presence and state awareness. Several aspects of the interface incorporate these features.

Border

The border itself is as an important state reminder. A blue border surrounding the desktop indicates the desktop is being shared. Studies found that people can often forget that they are sharing in a conference without some visual clue. We extended the meaning of the border colors to indicate different states. Viewing participants in a conference will see a green border surrounding the shared area. A red border indicates to the presenter that his desktop is being remotely controlled. When controlling the presenter's desktop, the viewing client's border is orange. The standard warning colors of orange and red are used to produce a higher level of awareness, which is important in a remote control session.

The border also serves as an easy way to manipulate the shared desktop and provide added functionality in a direct and natural manner. By simply grabbing the border and resizing it, the shared area of the desktop can be changed immediately. This can be useful if there is sensitive information on the desktop that the presenter does not want to share.

Tooltips

During the conference, tooltips will appear on the toolbar to inform the participants of important events without interrupting the flow of the conference. For example, whenever a participant joins or exits the conference, a tooltip will pop up with this information and fade away after a few seconds.

Performance Awareness

As the presenter of a conference it is important to know if the other participants are receiving the conference data. In designing Bridgit, we wanted to remove completely the need to ask "Are you seeing what I'm seeing?". The presenter is provided with constant feedback regarding the

performance during a conference. An hourglass will appear on the toolbar to indicate participants have not yet received the data being sent. This can allow the presenter to judge the speed of his presentation accordingly. In such a case, the participant list can be expanded from the toolbar to see more details of which participants are lagging behind.

COLLABORATION

Collaboration is key to effective conferencing. The Bridgit interface makes this straightforward and easy. A pen tool is readily available for all participants directly on the toolbar. At any time, participants can use the pen tool to make notes or highlight items on the shared desktop. Bridgit software also integrates seamlessly with the SMART Board, adding even more collaborative power through the use of the SMART Board tools.

Individual screen pointer tools are also available. Each participant can have a pointer tool that will be tagged with his or her name. This pointer tool can be moved around the desktop to bring highlight points.

WEB CAMERA INTEGRATION

Video can be added to a Bridgit conference simply by connecting a web camera. The web camera button on the Bridgit toolbar allows all users to participate in the video portion of the conference by sharing their web cameras. The toolbar will simply expand to show the web camera image (177x144 pixels in size). A picture-in-picture design is used to allow multiple web camera images, up to a total of 4 at once. The video window can be shown or hidden at any time. This design allows video to be added to the conference without detracting from the data content.

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