

# The Bridge: An Environment for Collaborative Design Learning

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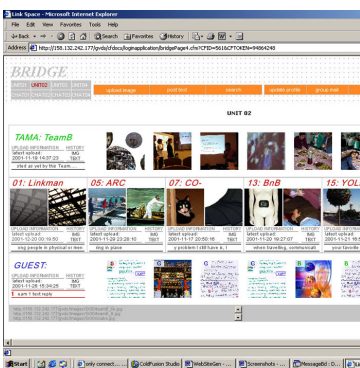
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## Bridging interactions

The idea behind the *Bridge* as a collaborative groupware arose initially with the need to find appropriate tools and environments to facilitate international design collaborations. In particular, this tool needs to support on-line collaborative activities in design learning where language is a barrier and conventional groupware fails to facilitate effective communication. Moreover, designers are inherently dependent on visual elements in all levels and phases of design development, something which current text-based groupware again fails to support.

The *Bridge* proposes to use images as the main mode of communication, with the aid of minimal textual descriptions. It aims to provide opportunities for active use of images as interactive agents for idea exchanges or collective concept development.

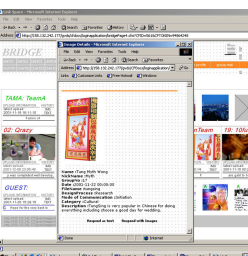


The *common area* of the *Bridge* environment mainly consists of the latest uploaded images by all collaborating participants. It is a dynamic environment that can be used to synchronously communicate and record the latest development in group communications as well as maintain a history of such communications.

Users tag simple attributes to an image while it is being uploaded. Such attributes are used both as reference anchors for the search engine, and also as loose pointers to the originator's idea for the image. Uploaded images are then displayed together with one line of optional textual information which is meant to facilitate the exchange and archival of design ideas and its progress. When the latest pictorial information from all participants is viewed together in the *Bridge*, current issues of concern or discussions or debate can easily be observed. The dynamic nature of the interface motivates participants to contribute ideas, while simultaneously promoting the social aspect of sharing within a community.

## Design Environment

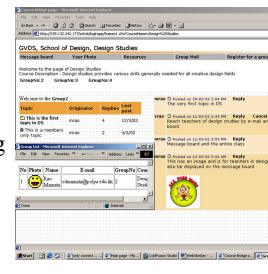
In international collaboration, language and sometimes cultural barriers, can easily discourage interactions. The *Bridge* tries to tackle this problem by using visual information as the basis for communication and interaction. Images are also the natural language designers speak. The *Bridge* provides an environment that designers can naturally operate in. It supports the use of images in different modes of communication. For instance, the *meeting area* within the *Bridge* facilitates image-based



on-line meetings in a synchronous communication mode, while the *image pin-up area* is used for asynchronous idea exchanges.

The idea behind visual information exchange is to be pursued further in the development of a visual-based chat system. This synchronous communication method is to be developed to cover the necessity of on-line synchronous meetings. In such a system, the participants should be able to express their ideas and thoughts by either selecting images from a pallet of existing images or dynamically uploading their new (scanned or drawn) images from the desktop to contribute spontaneous ideas in the design discussion. All new contributions during synchronous sessions will also be added to the image library and can be used to facilitate future communications or as references.

As it is very common for people to just have an e-mail client open in normal circumstances, the *Bridge* also provides an option for its messages to reach team members via regular e-mail clients for keeping everyone updated with the most recent contributions. Users could also conveniently send email to the *Bridge* to post messages without having to go through the hassle of logging on for full system access. The key here is that everything that is exchanged through the system will be retrievable and available in the environment. The *Bridge* thus operates also as a hub to channel all types of on-line communications.



A bigger vision is for the *Bridge* to become a generic environment that supports a variety of design and art disciplines. This will inevitably involve people who have no technical background. The *Bridge* therefore, is to be engineered in the most flexible manner so as to provide non-programmers with the ability to easily create and customize instances of distance learning environment.

See also the following web pages.

- for the original beta version: <http://158.132.242.177/>
- for the web page describing the project with original *Bridge*: <http://sdalpha.polyu.edu.hk/ds4/>
- for the current development of the project: <http://158.132.242.177/sdvds/loginapp/loginform.cfm>