

# An augmented surface environment for storyboard presentations

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## 1 Introduction

When people discuss a storyboard, they still love to sit together around a table, because it provides a convenient environment for them to meet, discuss, and to present ideas that require face-to-face collaboration. However, designers, modelers, and artists have to face the problem that the presentation of their prepared documents (e.g. scanned scribbles, rendered models of the characters, real mockups of the setup, or animated sequences) are hindered by various technical restrictions. Unfortunately, it is still too complicated to merge this information seamlessly into a traditional discussion environment. Inspired by the ideas of the Future Office from Henry Fuchs [Raskar et al. 1998] and the Augmented Surfaces presented by Jun Rekimoto [Rekimoto and Saitoh 1999], we have developed a multi-user shared tabletop application (Coeno-Storyboard) for storyboard presentations by allowing multiple participants to interact easily while discussing the same story in a different space at the same time. Thus, participants can either sit together at the same table or interact remotely (in this case they are represented by a "phantom" object).

## 2 Method and Results

Users bring their laptops and Tablet PCs into the environment, connect their devices to the system, and start exchanging their ideas by moving the digital data (e.g. images, videos, digital scribbles, short animation shots etc.) to the table. Consequently, they are moving their private ideas to the public surface. Coeno-Storyboard offers a smooth integration of portable computers into a meeting room, where the table and walls are acting as an extended public display.

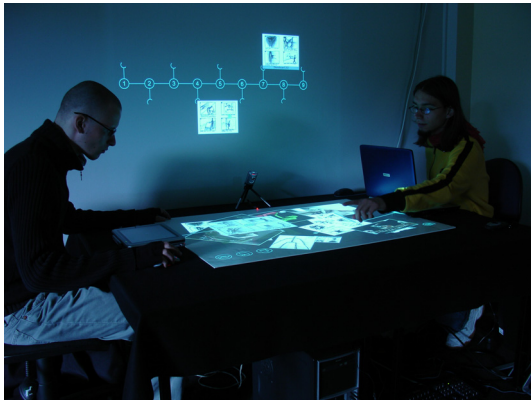


Figure 1: The setup of Coeno-Storyboard.

The projected timeline (cf. figure 1) on the wall allows ordering the different sequences of the storyboard. Equipped with a wireless multimedia mouse pointer, a coordinator has the possibility to

transfer the "unsorted" digital shots from the table to the projected timeline. Moreover, the coordinator can re-organize the data on the table as well, thus move the scribbles, scale them, and rotate them accordingly. The most important features of the system are:

- Direct manipulation of the digital data
- Support of remote users
- A discussion session can be stored and reloaded
- Combination and integration of different data sources

In addition, one of the primary goals of this project is to find out which of the implemented interaction metaphors will be accepted by the users. We want to eliminate the metaphors that are too tiresome and put more effort in those interaction techniques, which are compelling. Currently, we are evaluating the results with different users.

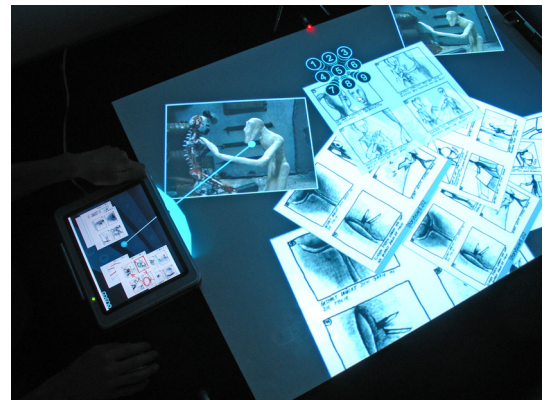


Figure 2: Designers can scribble their ideas onto a Tablet PC and move them to the augmented surface.

The hyperdragging metaphor, for instance, which allows users to move data from their private to the public space was intuitive, but too slow for most of the participants. Instead, people suggested to have a more intuitive interaction technique for direct data manipulation (e.g. a snipping metaphor for data movements or direct manipulation of the scribbles on the table without using the mouse or keyboard).

## References

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