Literature Review: Elrod et al, 1992

Title: Liveboard: A Large Interactive Display Supporting Group Meetings, Presentations, and Remote Collaboration
Author: Scott Elrod, Bruce Richard, Rich Gold, David Goldberg, Frank Halasz, William Janssen, David Lee, Kim McCall, Elin Pedersen, Ken Pier, John Tang, and Brent Welch
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Abstract: This paper describes the Liveboard, a large interactive display system. With nearly one million pixels and an accurate, multi-state cordless pen, the Liveboard provides a basis for research on user interfaces for group meetings, presentations and remote collaboration. We describe the underlying hardware and software of the Liveboard, along with several software applications that have been developed. In describing the system, we point out the design rationale that was used to make various choices. We present the results of an informal survey of Liveboard users, and describe some of the improvements that have been made in response to user feedback. We conclude with several general observations about the use of large public interactive displays.

Background

Groupwork research recognizes the need for large displays:

- Colab [3]
- CaptureLab [2]
- Project Nick [1]

Liveboard: Stylus-based interactive whiteboard. 46 x 32 inch display. 1 million pixels. Rear projection CRT.

Cordless pen provides natural point of focus for a meeting. Separate input devices tend to distract focus.

Pen emits optical radiation. Mimics 3-button mouse.

Software: BoardWalk uses concepts of planks (applications).

Supports whiteboard-like functionality including flipchart.

Supports slideshow / presentation software as well.

Informal survey conducted at PARC shows that people wanted:

- better image quality
- better pen accuracy
- better pen "feel".

Pen is different from a mouse and not all standard mouse interactions still work. Some new gesture-based features now possible.

Larger screen also necessitates new interface models.
• Fixed buttons hard to find
• Gesture-based / floating widgets may be better suited
• Font size too small
• UNIX complexities too much for meetings. People give up and revert to ordinary whiteboard when faced with problems.

References

