



## Lightboard: Taking Chalkboard Video Capture to a New Level

Used by: Barton Zwiebach, John Hart, Peter Dourmashkin, Bradley Olsen, Peter Singhe, Otto Scharmer, Anshul Singhal, Ankur Gupta, and others.

### Overview

The Lightboard is a lighted glass plane which leverages one's natural mode of lecturing: writing on a vertical surface. It allows an instructor to look at the material as well as make virtual eye contact with the audience, thus providing multiple contextual clues that naturally occur in a conversational mode.

### Educational Challenge

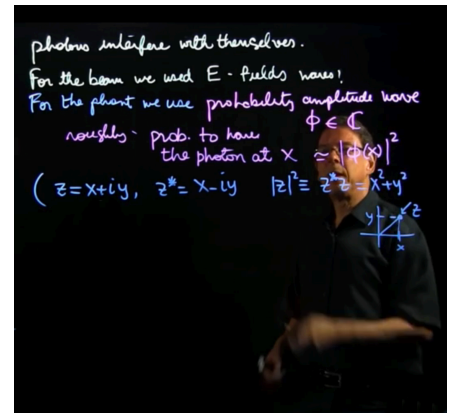
**Problem:** Despite the onslaught of thousands of digital 'improvements', video capture of chalkboard lectures remains in use by many of MIT's best instructors. But as any of them will tell you, its greatest limitation is that one must have their back to the audience when writing.

**Solution:** The Lightboard allows the instructor to face front while writing. Students watching a video captured on the Lightboard receive the benefit of visual cues such as the instructor's facial expressions, where they are pointing, what they are looking at, etc.

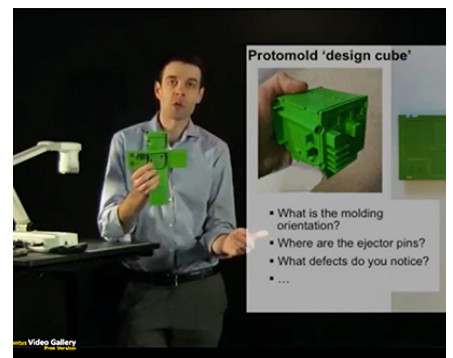
Writing on the Lightboard is displayed (with very high contrast) on a transparent plane in front of the instructor. The technology used in the Lightboard interactively flips the image and adds (composites) auxiliary images and video inputs into the captured video. One can incorporate PowerPoint into a portion of the screen and annotate these during the video capture, thereby reducing the need for post processing.

### Key Take-Away

With its low learning curve, the Lightboard facilitates more engaging delivery, and minimal video post processing. One can typically create a 5-minute video in 20 minutes of studio time. To schedule a visit to experiment with the Lightboard, instructors are welcome to contact Jim Cain (elcl-consult@mit.edu). We encourage scheduling a short session to try out ideas, take time to reflect, and return later to record a final version. There is no cost to professors or instructors for using the Lightboard.



Barton Zwiebach



John Hart

Examples are found at:  
<http://learning-spaces.mit.edu/room-4-035/projects>