
Lantern Field: Attention and Deceleration Through Communal Making and Interaction

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In the age of high-speed, technologically mediated spaces and pedagogy, can technology create a space that encourages deceleration and attention? The installation Lantern Field aims to slow down our sensory experiences using interactive technology. This presentation demonstrates and critically reflects upon the temporal and attentive nature of a piece that engages the public in making and experiencing the work.

Lantern Field was designed by a team faculty and students in architecture and engineering over the spring semester of 2013 and installed in the courtyard of the Smithsonian's Freer Gallery in Washington, DC. The lanterns were produced in a day-long public workshop in which the visitors to the museum folded the mulberry paper lanterns under the guidance of design team. The field of lanterns grew over the course of the day as they aggregated on the bamboo grid frame suspended in the courtyard loggia and captured the qualities of natural light during the day and LED lights at night.

A line of 15 ultrasonic sensors and 5 speakers were located along the east wall of the loggia opposite of the arches. As the sensors captured presence of people entering the space, they activated the shift in light hue and sound. At first, bamboo chimes were heard, but listeners who paid attention noticed that the chimes had a surreal metallic reverb. At the same time, change in hues of the LED fixtures along the floor was projected onto the field of paper lanterns overhead. Those who actively

tried to explore how they could affect the sound and light were rewarded by the appearance of deeper notes and hues, which could also emerge in response to a general flurry of activities by multiple participants. The communal interaction jointly elicited results that were otherwise unattainable through the actions of an individual.

LED luminaires of varying color temperatures were used to achieve the desired level of warmth and hues. The RGB LEDs located on the east side of the loggia emitted varying tones of pink by gradually oscillating between cool white and deep magenta, and the white LEDs on the west side were set at the constant color temperature and intensity to maintain the warmth of the light color on the mulberry paper.

We believe the installation encouraged what Harvard art history professor Jennifer Roberts calls 'immersive attention'. Roberts advocates creating "opportunities for students to engage in deceleration, patience, and immersive attention...these are the kind of practices that now most need to be actively engineered by faculty, because they simply are no longer available 'in nature,' as it were."¹

Integrating both the analogue and the digital with paper folding and custom interactive technology, the installation created a place of immersive attention through vision and sound by two means: bringing viewer's attention over time to folded mulberry paper which captured the varying light qualities; and rewarding deceleration and encouraging

exploration through the complex aural and visual feedback generated by participant presence and motion.

ENDNOTES

1. Jennifer L. Roberts. The Power of Patience: Teaching students the value of deceleration and immersive attention, <http://harvardmagazine.com/2013/11/the-power-of-patience> (Nov. 2013).

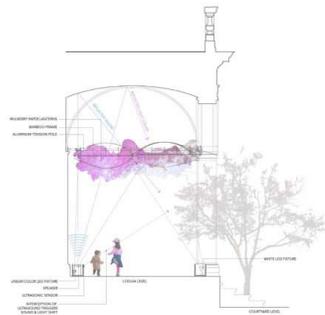
Audio-Visual Lantern Field: Attention and deceleration through communal making and interaction



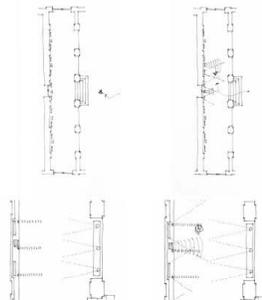
Mulberry paper captures shifting colors of LEDs in response to human presence and activities



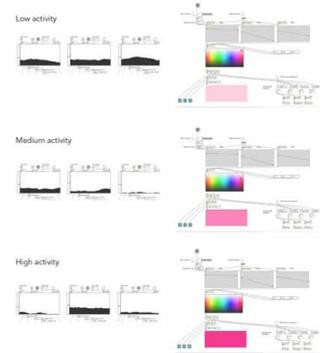
Daylight transmitted through mulberry paper lanterns



Section showing LEDs, sensors, and speakers along the floor. Children's movement trigger sound and light color shift, and light and sound bounce off of vaulted ceiling.



Top: Plans of loggia with and without people present
Bottom: Enlarged plans of one of five bays. Light and sound are activated when human presence is captured by three sensors



Screenshots from Max/MSP which controlled light and sound with input from sensors. Each of the five bays has three ultrasonic sensors that calculate the amount of activity in each space and changes the light color output accordingly.

