
The SocialCube: Social Interaction Through Visual Interest Reflection



Figure 1. *SocialCubes* visualizing different personal interests.

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Abstract

The *SocialCube* is an ambient information artifact, which reflects different interests of its owner to the environment via colored lights. Through simple cube gestures like tilting, pushing and stacking the *SocialCube* enriches public social interactions with playful personal light exchange.

Keywords

Ambient, Light Interface, Interaction Design

ACM Classification Keywords

H5.m [Information interfaces and presentation]:
Miscellaneous.

General Terms

Design, Human Factors

Introduction

Schivelbusch [1] presents the historical context of personal lights, in which people in medieval times carried personal lanterns “to make their presence known” at night. Seitinger et al. [2] drew from this work to explore today’s lightning spaces within their Light Bodies project, which encourages people to shape their surrounding lightscapes.

Within our project, we want to reinforce the historical social significance of the personal light and extend the idea of shaping lightscares. The *SocialCube* is able to reflect its owner's interests to the environment via personal light messages and it further enriches the social interaction experience by enabling users' personal lightscares to playfully interact.

Implementation

We selected the cube, a simple geometric artifact, because it is easy to place and familiar to use. The *SocialCubes* are built out of white, 2mm thick cardboard with frosted transparent plastic windows at each side, through which red, green and blue (RGB), light emitting diodes (LED) emit a soft glowing light. Additionally, we employed three tilt switches to determine *SocialCube's* orientation and installed reed sensors for proximity detection of other *SocialCubes*. For sensor value measuring and controlling of the LEDs, we chose the Arduino microcontroller platform¹.

Use Cases for SocialCubes

Our original concept is a bar scenario, where a lot of social interaction occurs, providing many opportunities for people to show themselves and to enrich ongoing conversations. In order to identify people with similar interests, we assigned different patterns to each side of the cube via self-explanatory symbols, such as a stop sign or a heart (see Fig. 1). *SocialCube* emits a different color depending on which side faces up, each color representing a certain pattern. For this scenario we selected "Talk to me" (green), "Please do not disturb" (red), "I'd like to order something" (blinking light orange), "I'd love to flirt" (cyan), "Rendezvous"

(violet) and "Join the party" (blue) for the six sides, to reflect typical bar interactions. To further enrich the social experience in a playful way, we added two additional features, which benefit from the cubes ability to detect each other. First, when two cubes inheriting the "rendezvous pattern" are pushed together, they both automatically take on a new, more saturated color. Second, when "Join the party" *SocialCubes* are stacked upon each other, they share a common blinking signal, inviting more people to join the party.

Further possible use cases for the *SocialCubes* may include social games for meeting new people with common interests, point of sales agent availability visualization, distant health monitoring or interactive art installations.

Conclusions

With the *SocialCube* we explore a technological as well as aesthetical approach towards enriching public social interactions. Through personal light messages, people have long interacted over distances. *SocialCube* adds an additional playful dimension to those interactions by exploring proximity and symbolism. Beyond that, *SocialCube* employs a one-to-many communication paradigm, similar to those presently utilized by Facebook and Twitter, but often missing in face-to-face encounters.

Citations

- [1] Schivelbusch, W. *Disenchanted Night*. *University of California Press*, Los Angeles, CA, 1988
- [2] Seitinger, S., Taub, D. M., Taylor, A. S. Light bodies: exploring interactions with responsive lights. In *Proc. TEI 2010*, ACM (2010), 113-120

¹ www.arduino.cc