Poster

Timelight – Using Light to Keep Track of Time Dedicated to Children

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Introduction

In today's daily life parents are often sidetracked by other events or devices when really they promised their children to spend some time with them, e.g. playing or reading. While being sidetracked, it is easy to lose track of the time intended to be dedicated to interaction with the child.

We are introducing Timelight. A means to help parents and children keep track of time dedicated to interaction and play. Timelight is a tangible, portable timer displaying the progress or remainder of time in a quiet, unobtrusive way by using light. We plan on investigating the design space present our initial research questions.

Related Work

Ever since Weiser and Brown reported on the concept of "Calm Technology" (Weiser & Brown, 1996), scientist have tried to develop systems displaying information in the periphery of the user's attention to assist people in an unobtrusive way (Ishii, et al., 1998). Light has recently been used to display upcoming events in the office environment (Mueller, Kazakova, Heuten, & Boll, 2013) as well as to display spatial information in control room tasks (Loecken, Mueller, Heuten, & Boll, 2014).

The Design Space

We envision Timelight to be a tangible device emitting light to show the progress or remainder of time periods that parents and their children dedicate to playing. Timelight could be anything from a "magic wand" to an illuminated "hour-glass". The lighting design is meant to display either the progress or remainder of dedicated time. Over the course of our investigations we will need to answer the following research questions:

1. What is a child's intuitive understanding of light to show the progress of time?
2. Can the time duration displayed with light be variant or does the time period have to be fixed?
3. Does the form factor play a role and are there gender-specific differences to be accounted for when designing the light?

With these questions in mind, we aim to construct a number of prototypes designed to answer the individual questions as well as help solve the problem overall.

We plan to evaluate various parameters of light such as hue, saturation or brightness for their suitability to convey information as well as evaluate the use of single or uniformly controlled light sources over a multitude of individually controllable light sources to create more complex lighting patterns to show the progress of time.

References

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