

User Study for tangible programming using Cellulo

Juliette Challot

Supervisor: Aditi Kothiyal, Sina Shashmoradi

MOTIVATION

This project is the continuation of Tangible programming using Cellulo. It aims at providing a proof of concept as well as improving the existing design visually as well as in terms of possibilities. Finally it aims at making the interface more robust and better suited to the learning goals.

METHODS

The project first relies on a literature review providing new insights on the possibilities and limitations offered by tangible user interfaces (TUI) compared to graphical user interfaces (GUI) as well as new ideas for the design of the tangible blocks and of the global set up. The project then tackles the issue of adapting the previously existing design of cellulo tiles to the needs and learning goals of this activity and then making it (3D printing, laser cutting,...). Finally this project provides observations based on a user study on adults as well as preliminary remarks over the on-going user study with children.

the design is engaging as well as well suited to the target learning goals and range of age. Improvements were made on the interface and in the code to add new functionalities. The user study was very satisfying although troubles with reading the tiles were encountered at first. The oriented object programming part, although barely tackled, presents great potential and should definitely be investigated.



In addition this project sets the ground for a probable future project : oriented object tangible programming with Cellulo robots

RESULTS

This project highlighted the potential of tangible programming with cellulo robots. It proved that