Envisioning a Toolkit for Storytelling with Garments

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This poster presents our early explorations of designing a toolkit that could enable sewers to tell stories through clothes. The clothes we wear are innately embedded with stories and social meaning, such as our origin, cultural connections, and social status, through encodings such as style, fabric, and color. These stories could belong to the wearer, the maker, or society. The concept of embedded meaning in clothes is ever-evolving, and in the past we have seen a broad spectrum of people from fashion brands, to local designers, and hobbyist-sewers explore new ways of making statements and telling stories through garments. Such examples demonstrate that storytelling in garments enables self-expression and information sharing. With recent e-textile advancements, wearable toolkits such as Lilypad and Loomia have also introduced methods by which individuals can create dynamic garments that convey stories. While storytelling in fashion, wearable toolkits, and hobbyist communities, have been studied independently, minimal research exists in which the three concepts are considered together.

In this project, we aim to explore how technology can support hobbyist-sewers in creating story-embedded garments. Hobbyist-sewers are a subset of the do-it-yourself (DIY) community and serve as a potential group for early-adoption of this concept as many already sew for purposes such as expressing themselves. We conducted a three-phase qualitative user study in which 12 participants (all women) engaged in a semi-structured pre-interview, a three-day diarying activity, and a semi-structured post-interview. The diary probe consisted of a series of worksheets that engaged participants in conceptual mapping, storytelling, and sketching activities. Through this user study we aimed to understand if and when people would tell stories through their clothes, what types of stories they would tell, how they conveyed stories on the garments they created (particularly what encodings they used, what aspects they tried to visualize, and how they incorporated electronics or interactions), and how technology might be able to support this overall process.

At this point in our project we have identified a series of stages in the garment-based storytelling workflow where technology could aid hobbyist-sewers. Some such examples include supporting the user in breaking a story into a series of scenes, providing automated suggestions for conceptual mappings, providing a drawing surface that allows for easy additions, erasing, and cloning, and providing templates that can aid in integrating designs onto physical objects and representations (i.e., providing instructions for working with electronics or translating on-screen designs onto a physical surface). As we continue developing this project, we aim to first, thoroughly understand and articulate the perspectives of hobbyist-sewers when considering storytelling in garments, second, create and explore some such examples of our own, and third, develop a hardware and software toolkit that can support these users at either one, or multiple, stages of this

process. Through this work we will contribute a set of considerations that encapsulate the garment-based storytelling workflow, and a hardware and software toolkit that supports sewers at one or more points in this workflow.

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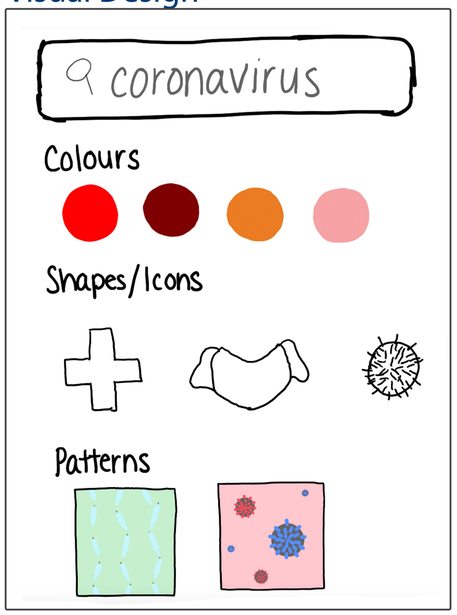
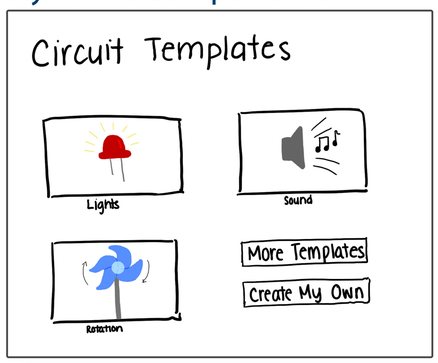
Step 2: Construct Garment Design

Visual Design



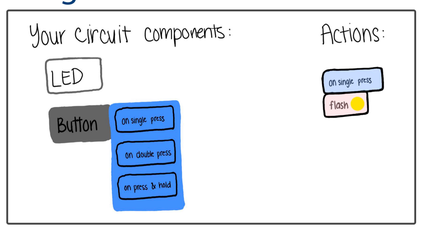
Sewers can scroll through options or get automated suggestions for visual encodings based on a search.

Dynamic Components



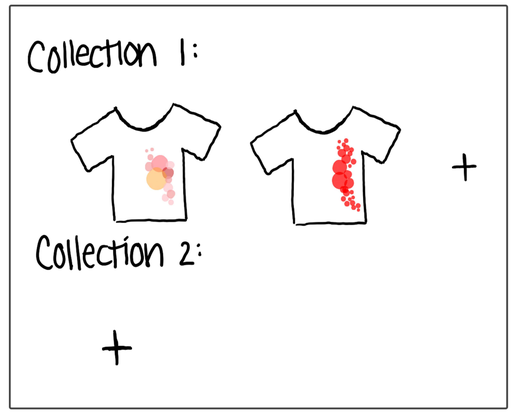
Sewers can also integrate dynamic components and the tool would facilitate users to build circuits.

Program



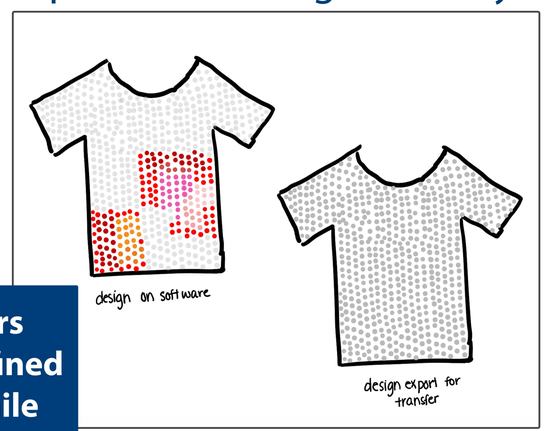
The programming interface would guide end-users in defining actions and responses for their integrated electronic components.

Step 3: Generate Option Previews



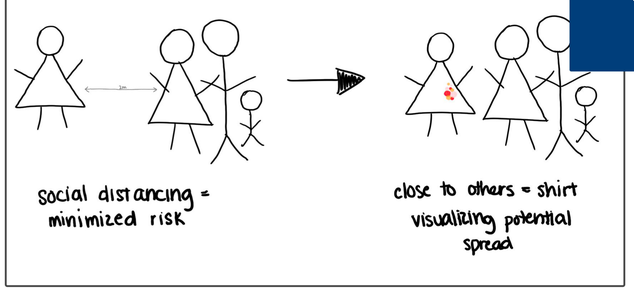
Sewers can generate and preview multiple design variations before working with physical materials.

Step 4: Transfer Digital to Physical



Sewers can transfer their design from the software onto their physical form using tool-generated transfer templates (e.g. iron-on mediums or for cutting on a CNC) and assembly instructions for seamless integration.

Step 1: Define Story



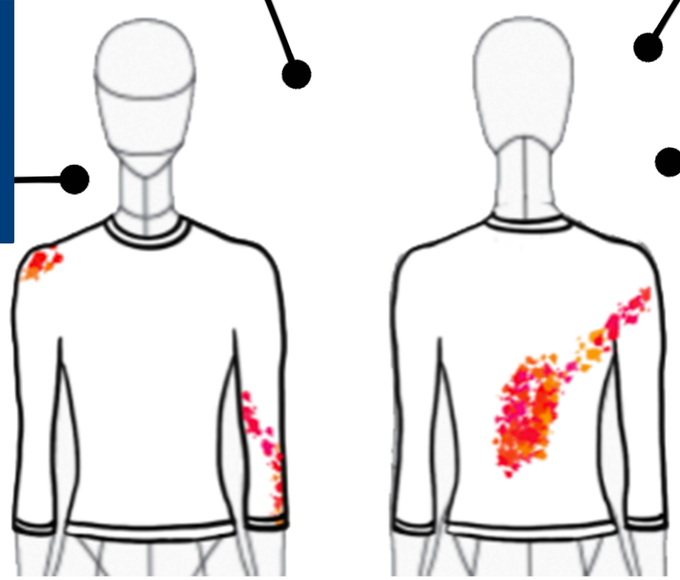
Sewers can enter keywords, sketches, or storyboards, and the tool could generate a potential garment design, or let end-users build and design from scratch.

Help sewers construct different types of stories to tell through the garments they make.

Facilitate storytelling through clothing to enable self-expression and information sharing.

Help sewers preview how their conveyed stories will look on the garments they create.

Guide sewers through a defined workflow while introducing a set of integrable elements



An example of a storytelling garment that tells the story of the invisible spread of coronavirus.