How can technology better support creativity in a flexible, collaborative environment?

Previous research has shown that in early stages of design and creative problem solving, analogue tools are used more frequently than digital for idea generation. Currently analogue tools provide a wide range of affordances that technology cannot match. For example, the flexibility, spontaneity and ease of use (little or no barrier to entry) of sketching, or writing, with pen and paper, cannot currently be duplicated by digital devices. Furthermore, in the context of a collaborative environment, "producing and comparing multiple representations is a form of interaction few computer systems are designed to support" (Coughlan & Johnson, 2009).

The basic premise of this research is that the use of technology to support collaborative creativity and problem solving could be improved. By looking at the strengths and weaknesses of current tools (analogue and digital), it is hoped that new combinations can be envisioned which will more seamlessly bridge the gap between analogue and digital tools.

WHY YOU?

Research suggests that many creative professionals participate in a continual analysis of their process and methods. This analysis of methods is frequently a part of the creative process. In their 2009 paper, Understanding Productive, Structural and Longitudinal Interactions in the Design of Tools for Creative Activities, Coughlan & Johnson refer to this as "Structural Interaction." In theory the continual review of and reflection on methods can lead to novel processes, which can in turn lead to original ideas. This project will attempt to extend this form of structural review beyond an individual context in an effort to identify areas of improvement.

This project aims to elicit insight into practitioners' interaction with tools during early stages of various creative processes. Interviews will be conducted with designers and creative thinkers in order to review their tools, and the environments in which they use them. The main focus of the interviews will be to look at current tools and to examine how they help (or hinder) the development, organisation, and sharing of ideas.

PROJECT STAGES

1   Thorough literature review of previous research on creativity and collaboration.

2   Review of currently available tools and technologies.

3   Interviews of creative professionals across a range of roles, disciplines, and industries.

4   Analysis of interviews with a focus on identifying key areas for further development.

5   Development of feature requirements list to address key areas.

6   Report of findings.

"There is a sharp contrast between the flexible way designers work and the formalised interaction required to use most current computer-tools."
Hoeben & Stappers

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