Transparent interfaces

Designing digital creative tools

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Thesis

1. When comparing digital writing to traditional writing, we must notice that people of the digital age are dependent on the tools they are using.

2. In contrast to non digital tools, digital tools lack physical body. Concerning the software the physical appearance is irrelevant. It results that the only way one can obtain information of the inner logic of the system is the interface itself. The fields of usage are strictly specified by the designer of the tool.

3. A physical object by itself carries the possibilities of its usage. Its structure is clearly observable, it is open for combinations with other objects, it is even modifiable. A software designer must create consciously the possibility of interconnectivity into the system, hence the opportunity for creativity to arise.

4. In a system where the primitive elements are general enough, it is possible to solve almost any kind of problems, therefore the usage becomes difficult and learning becomes time consuming. On the other hand, where elements are too specific, usage is easy, but the system in general becomes restricted. The designer must balance those components depending on the goals and the target audience.

5. Creative tools must have a reduced tool kit and rule system. While simplicity creates limits, creativity often arises by stretching them.

6. It is always easy to build upon an existing knowledge. Carefully chosen metaphors can help users to understand the underlying operating principles, because they associate known concepts with new and unknown ideas.

Abstract

This thesis is about the challenges of designing creative digital tools. The problem itself comes from the fact that while non-digital tools rely on their physical body, digital tools are bodiless. Creativity often arises from the physical manipulation and interconnection of objects. Since digital tools has no physical representation, the software designers must implement the ability of creativity into their tools. In a system where primitive elements are general enough, it is possible to solve almost any kind of problems, therefore the usage becomes difficult and learning becomes time consuming. On the other hand, where elements are too specific, usage is easy, but the system in general becomes restricted. The designer must balance those components depending on the goals and the target audience. A creative tool must be easy to use, and it should offer a broad field of usage. When designing a new tool, it is always easy to build upon an existing knowledge. Carefully chosen metaphors can help users to understand the underlying operating principles, because they associate known concepts with new and unknown ideas.