ABSTRACT
Increasing numbers of personal digital photographs are occupying our computers’ hard drives and require more time and thought to be organized. However, spare time is limited and the handling of digital photographs has to compete with other leisure activities. The placement of the system in the living space, the incorporation of a handheld controller and the development of ludic interface concepts are considered as promising approaches to improve the acceptance and enjoyability of products for photo management in the home environment. Three interface concepts were developed as interactive prototypes and an empirical usability study assessed the experience of the interaction.

Categories and Subject Descriptors
H.5.2 [User interfaces]: Interaction styles, Prototyping, Input devices and strategies, User-centered design

General Terms
Design, Human Factors.

Keywords
Interaction Design, Digital Photography, Usability

THE DEMONSTRATION
Sharing and organizing personal images at home should be as effortless and convenient as watching a movie. The software used for photo management and presentation should be designed to evoke the feeling of being entertained rather than doing work. Three interface concepts were developed as interactive prototypes and tested as part of a usability study. For the demonstration these three prototypes are available and can be tried out. The input device will be a handheld game controller (Xbox 360 game pad).

With growing photo collections, finding a particular photo series becomes a challenging task. An orientation interface assists this activity by clustering groups of photographs to reduce complexity. Chronological order and the visualization of events are essential elements. The Hour Cubes concept (Figure 1) is addressing the requirements of an orientation interface: Hourly clusters offer structure and overview for a one year photo collection and events where photographs were taken over time are recognizable by stacks of cubes. Each cube represents one hour during this year. In the usability study the prototype performed poorly with lowest rankings for all 6 categories (efficiency, enjoyment, appearance, desirability, input device, usefulness) assessed.

Editing the raw material is a necessary step before photographs can be shared. Unwanted images need to be removed or hidden and remaining images might be retouched. All these task-oriented activities are based on selection and comparison of individual images or groups of images. The Picture Plane concept (Figure 2), based on the concept of zoomable image browsers, displays a configurable grid of photographs on a plane. This approach allows the overseeing of a large numbers of images at one time as well as looking at a single image closely. Highest ratings for efficiency were given by all 4 participants in the usability study.

Browsing and presentation should be designed for an entertaining experience where individual images are fully displayed. The Picture Path interface concept (Figure 3) is based on idea of riding a roller coaster. The prototype provides effortless movement along a predefined path with variable speed. When detached from the path the user can explore the space freely by flying through. In our usability study this interface concept got the highest rankings for desirability and the use of the input device.

For a full description of this project please refer to: