

The Photo Pyramid: a device with a graspable user-interface for shared viewing of digital images

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Abstract: In this paper we present the Photo Pyramid, a device with a graspable interface to retrieve and navigate through digital photo collections. The user selects a set of photos by attaching the triangular shaped photo filter(s) to sides of the pyramid. Filters help to organize and retrieve photos in multiple ways.

Keywords: Digital photos, photo filters, graspable user interfaces, information filtering, browsing photo collections.

1.Introduction

The Photo Pyramid intends to use the benefits of the user's knowledge about manipulating real objects to make the system intuitive and easy to use. Also, the system supports the quality of social activities to a greater extent.

2.Design Process

User-centered design (UCD) process was followed to design The Photo Pyramid. 19 user observations were carried out in total. We investigated the process of storytelling while the users showed their pictures. 12 user tests were conducted to evaluate the Prototype.

3.Look and Functionality

The Photo Pyramid consists of three parts.

- Trihedral selection pyramid
- Operational base equipped with touchscreen
- Set of triangular shaped filters of three photo categories: *people, locations, and activities*.

3.1 Annotating and structuring photos before the system start

For the purpose of user tests, photos were annotated by hand and stored in the database.

3.2 Photo set selection (filtering)

Photo set selection is performed by attaching triangular filters, distinguished by the colour, to the appropriate category side of the Photo Pyramid. More than one filter can be attached to the one side of the pyramid at one time.

3.3 Acting in different view modes

This system works in three modes of viewing:

- Thumbnails and Full Screen
- Slide Show
- Movies

Rotation of the Photo Pyramid while it stands on the operational base switches between modes. The behaviour of the system depends on the mode selected.

3.4 The usage of the touchscreen

Touchscreen represents itself push-button style interface to control the process of viewing photos. If the Photo Pyramid is not connected to the external screen, then touchscreen is used to show pictures on its surface.

4.Conclusions

Future development of the Photo Pyramid will focus on the problem of annotation of the digital photos, which was not studied during this project.

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