Memory Bricolage Table for Elderly

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Abstract. In this paper, we explored the possibility of a new media approach for elders' self-review and inter-family sharing. Acknowledging to the new phenomenon of ageing society, we base our interactive design on daily practice of using a tabletop with the purpose to help elders evoke and enrich their memory life through objects they use every day.

Keywords: ambient technology, interactive design, slow technology, poetic space, documentary photography, ubiquitous computing.

1. Design Concept

Serving other than purely practical communication purpose, our design aims to create an everyday scenario providing a companion experience in which elders could evoke and share their memory with their family [1, 6]. In order to create a natural sharing environment, we base our design on a tabletop that triggers an everyday interaction among people using it.

2. Implementation

We went into elder's memory and explored how and what ageing people review their life. In order to present this diversity of memory, we poetize the living space and memory process [2] with the metaphor of water and embed users into two interface modes, an ambient mode and an interactive mode.

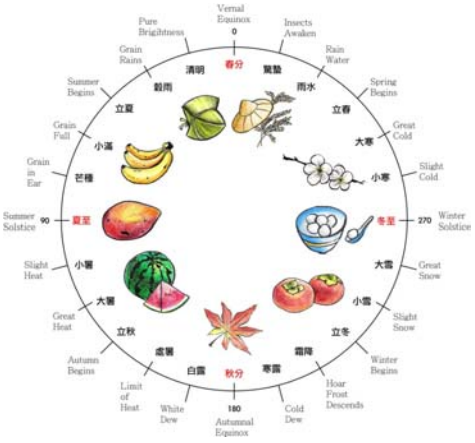
2.1 Ambient Mode

This ambient mode evokes users' memory by releasing system-driven elements into their tabletop. These elements are categorized by the solar terms. Since the twenty-four solar terms show the relationship between universe, season, climate, agriculture, and medicine, many elders in Taiwan still follow these terms in their everyday activities including health care, folk festivals, foods, and so on (Fig. 1). Therefore, our system will automatically pick up photographs of the same solar terms in the past for elders to recall.

2.2 Interactive Mode

Inspired by the notion of bricolage [3], we try to trigger an interaction that was born in users' feel of memory and how they want the memory process to be. This interactive mode aims to serve as a portal that builds connection between objects and memory and presents the memory bricolage through users' manipulation of objects. Rather than using a memento as a proximity-triggered token [4], constructing and

arranging everyday objects with novelty and aesthetics, an elder becomes a bricoleur of both digital and material forms as a whole [5]. (Fig. 2)



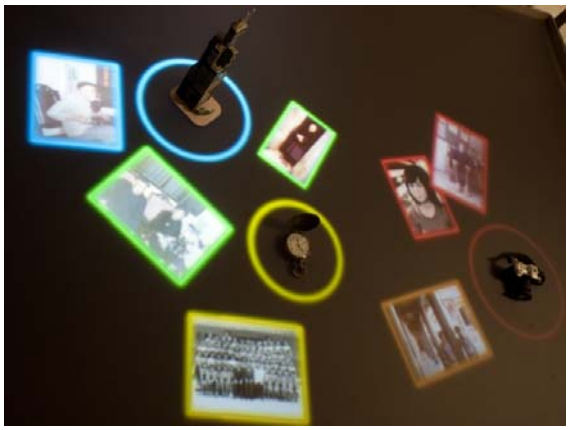


Fig. 1. The 24 Solar Terms.(left)
Fig. 2. physical objects and digital media on a tabletop form a hybrid bricolage of memory

We classify objects into four categories: time, place, people and event, which provide sufficient variety of material for bricolage. Placing multiple objects will bring out photos which have relation with objects. These photos will be shown on the center of objects, others will be shown on periphery (Fig.2).

2.3 Technologies

We use computer-vision and image recognition technologies to build a multi-touch tabletop. Our software will catch the image via a webcam and recognize position of tags which stuck on the back of objects. And then the projector will project the relative photos to the screen.

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