Your Memory, Connected

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Abstract

"Your memory, connected" is a series of three images generated by a net.art generator we designed and implemented with natural language processing and common sense reasoning techniques developed at MIT Media Laboratory. This paper describes the concept behind the art work and the system architecture for implementation.

Introduction

Imagine a situation where you are an artist, and you are able to ask a question or give a statement to all the people in the world. What if you could check the memories that are being evoked when the people are confronted with your question or statement, and you could "steal" those memories to create an artistic collage?

This is the question we asked ourselves as we witness the proliferation of photo-sharing websites like Flickr.com [1] (as of May, 2005, Flickr has more than 37-million pieces of photos from its 1.2 millions members). The advances of digital camera and storage technology have made it easy to capture everything happens to people and save all those media online. Online spaces turn out to be the largest repository of people's memories. The fact that we are able to share our memories to the public, and access others' memories by browsing through those sites, is an unprecedented phenomenon worth addressing.

We respond to this phenomenon by developing a system that can read an artist's intention and statement and automatically generates a collage art work that fuses together online people's memory responses evoked by the artist. "Painting," as a result, requires only a subject of the piece (Inspired by Sollfrank's work [3]). The rest of the world online will contribute their memories to complete the painting process and the work.

System Implementation

Our system uses natural language processing, concept reasoning, and textual affect sensing techniques to collect all the related memories from people on Flickr. We create this computational "memory retrieval" procedure that simulates the process of evocation when people's brains are triggered with the typed-in statement from the artist. The machine then generates a collage based on all the images and text it finds. Instead of a montage assembled to create a visual image, our work generates montages that materialize concepts, statements, and memories. In order to create a feeling of "enormous amount of memories" were being retrieved; we use the Treemap algorithm [2] to fill the painting canvas with hundreds of images. Figure 1 summarizes this process in a block diagram.

Figure 2 is the work that is shown in Siggraph 2006 Art Gallery (2D work category). The image is generated by typing in Sonnet 18 by William Shakespeare: "Shall I compare thee to a summer's day."

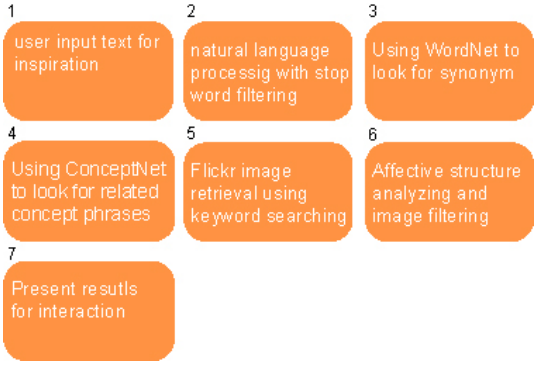

Figure 1. Block diagram explains the implemented net.art generator

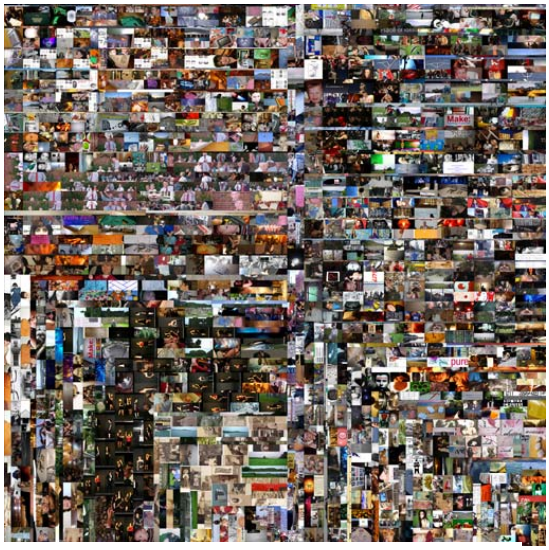

Figure 2. Generated with William Shakespeare's Sonnet 18

References

[1] Flickr. http://www.flickr.com

[2] Bederson, B.B., Shneiderman, B., and Wattenberg, M. "Ordered and Quantum Treemaps: Making Effective Use of 2D Space to Display Hierarchies" *ACM Transactions on Graphics (TOG)*, October 2002

[3] Sollfrank, C. "net.art generator" Distributed Art Publishers (DAP), 2006