

A Computer-aided System for Narrative Creation

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Abstract

It is difficult to find elements or topics for many people when they are writing a story. The goal of this research is to design a computer-aided system for narrative, which can stimulate user's creativity on finding story elements. Many computer-aided systems (e.g. CAD, CAI, ITS etc.) have noticed the importance of assisting creative thinking. Liu (2000) reassembled a shape to provide different shapes for users, so their creativity can be stimulated through seeing more variables. This study uses pictures and texts as the elements and tries to use Liu's method to reproduce more elements. However, it is difficult for computer to automatically generate pictures and texts that can deliver appropriate meanings and contexts. Nevertheless, people's divergent thinking is a good source for computer to leverage. For instance, Huang, Li, Wang & Chang (2007) proposed a method to assist creative learning by brainstorming and cooperation.

This study have developed and implemented a computer system, based on the concept of pictures-and-attributed-notes (PAN), aims to stimulate creativity and imagination when user is creating a story. The attributed notes are in the form of *Character, Location, Object, Situation, Action* and *Theme* (CLOSAT), which were proposed by Rabiger (2000).

To know how a user uses the PAN system for story writing, we have designed a pre-test and a main experiment in this study. The main goal of pre-test is to find participants whose level of divergent thinking has no significant difference by Guilford's Alternative Uses Task (Guilford, Christensen, Merrifield, & Wilson, 1978). We got four participants whose divergent thinking has no significant difference and then invited them to take part in the main experiment.

In the main experiment, the four participants were asked to create a story, one without the PAN system. We used content analysis to analyze participants' video/audio protocols through four main categories: *Conceptual, Operational, Perceptual* and *Evaluation* (COPE) coding system, proposed by Chen (2002), to analyze and compare their creation process. The analysis on our experimental results reveals that the PAN system can help stimulate user's creativity and does not change the writer's main creating process. In addition, the user interface of the PAN system can allow the user to concentrate more on the creating process.

Keywords: creativity, computer-aided system, digital narrative, cognition process

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