1 Introduction

This paper presents a prototype generative system that visualises possible sequences of information, often called scenarios, narratives, stories, or contexts, out of existing information so that (1) information designers and audiences of information can explore and discover possible contexts that otherwise could be missed; and (2) the generated information artefacts can stimulate creative thinking. The generated sequences are expected to work as: (1) final products that a user (audience) can enjoy; and (2) draft materials that a user (information designer) can modify.

We are currently working on the Generative Website Project supported by Australasian CRC for Interaction Design (ACID), in collaboration with International Federation of Arts Councils and Cultural Agencies (IFACCA). They are renewing their web site in order to provide more dynamic contents to audiences of the web site.

The generative website is expected to be a place for following aims:

- Audiences of the web site can post their articles, comments, and video clips
- The web site provides dynamic contents so that audiences can enjoy different contexts each time when new information artefacts are added by the content provider and / or audiences

2 A Prototype System and Usage Scenario

The system is an implementation of a conceptual system called Knowledge Nebula Crystallizer, developed based on a concept called “Knowledge Liquidization & Crystallization” [Amitani and Hori 2003]. It dissolves information artefacts into small segments with preserving the local semantic relationships with using the criteria called Term Dependency and Term Attractiveness [Akaishi et al. 2006]. Then it restructures the relationships among the segments in a contextual way with Main Topic Term Dependency that we have developed.

In this example, 10 text data of articles on the web site of the IFACCA were used. The articles are actual reports from art conferences and news. The system segmented them into 57 segments.

A user enters a topic term that the user thinks is a main topic for what the user is searching. Figure 1 shows the search result with keyword “musician”. The circled segment (labeled “right0”) is a segment containing the search term “musician”. The text area on the right side indicates the content of a selected segment.

The segments connected with the first segment with lines in Figure 1 (labeled with “presentation”, “Organization”, and “work”) are suggested as the second segment of a sequence based on the value of Main Topic Term Dependency. By selecting one of them, further connections are visualised (Figure 2).

By double-clicking with holding down the shift key, the system shows the entire selected sequences so that the user can actually read and understand the content of the sequence. Users can open as many text areas as they want so that they can compare multiple sequences with each other. Our first impression is that generated sequences are consistent and seems to be “a story”. We are going to (1) evaluate the quality of generated sequences and interactions between the system and users; and (2) extend this system for non-text-based information such as videos and music.

References


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1Current IFACCA web site is: http://www.ifacca.org/