

An Interface Metaphor and Mechanism for Learning History through Multimedia Stories

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Abstract

This paper describes "Tired of Giving In," a prototype computer-based narrative. TOGI is an experiment with the theatrical device of the Greek chorus, which serves as a model for user interactions. By interacting with the story, viewers can learn more and more about the early days of the Montgomery Bus Boycott, a key event in the American Civil Rights Movement. Much of the information is supplied by chorus members who comment on the action or address the main characters. The software is designed to keep track of viewers' interactions and to use them as bases for controlling aspects of the presentation as the story unfolds. No matter how often or in what ways a viewer chooses to interact, the story remains intact. Interaction has to do with richness in detail rather than fundamental changes in story structure.

1. INTRODUCTION

Reading a story, watching a movie, and listening to a storyteller are all activities in which readers, movie-goers, and listeners interact with the content and construct individualized meanings of a story. Computational media call attention to processes of interaction and raise dilemmas about continuity, point of view, temporal relationships, and other potential recastings of narrative form and content.

“Tired of Giving In” (TOGI) is a prototype application of interactive narrative as a mode for learning about history, ethics, and civics. Like many attempts at interactive narrative, TOGI is an experiment with narrative structure. Previous experiments have focused on the narrative element of plot, often fragmenting it as they address affordances of computational media. A typical example is offering a choice among multiple endings. Viewers of such stories report a sense of dissatisfaction, and producers complain about the plethora of scenes and relationships that must be anticipated: resulting overloads are cognitive as well as budgetary.

In TOGI, we focus on the narrative element of character more so than plot. We hold the storyline constant while enabling characters to reveal it progressively through dialog. These revelations are a function of viewer interactions.

Among the characters are representations of people who played a role in the historical events we recount. Characters also include personifications of attitudes and perspectives on the events and the social, historical, and political contexts in which they occur. These personifications are members of a “chorus” similar to the chorus in ancient Greek theater.

2. THE CHORUS MODEL

In plays from ancient Greece, the chorus serves as a buffer between the audience and the action. The chorus clarifies, amplifies, subdues, foreshadows, transposes, re-tells, or gives perspective to the narrative action. Chorus members may address the actors, the audience, or each other. By adapting this theatrical device, TOGI enables viewers to access varied perspectives and enriched detail about story events. Metaphorically, TOGI viewers become part of the chorus. Literally, viewers access the computer presentation by querying personifications of chorus members, who respond by expressing perspectives that are woeful, apathetic, or optimistic.

2.1 Narrative unfolding

People often say that a story “unfolds,” and that is the way we frame interactions with TOGI. By selecting areas of images and querying characters, viewers unfold details of plot and character.

Fold 0: Viewers who choose not to interact still hear this story, told by a chorus member who sees the events from today’s perspective. She thinks that those who organized and participated in

the Montgomery Bus Boycott set an example that remains relevant today. The story proceeds through four scenes: the town of Montgomery during the 1950s, the public bus on which Rosa Parks was arrested, the jail cell to which she was taken, and the church in which members of the community decided to proceed with the boycott.

Fold 1: Clicking on part of a scene reveals certain characters and chorus members. The base story is put “on hold” as additional aspects of the story unfold. The revealed characters begin a dialog about conditions of segregation, Parks’s refusal to give up her bus seat, and so on. If the viewer interacts no further, the dialog plays out and the program returns to the base story.

Fold 2: As the characters’ dialog proceeds, the viewer may click on one or more of the chorus members. Choral comments are interjected at appropriate moments within the dialog.

Fold 3: If the viewer clicks on a character, s/he turns to the most recently active chorus member, and they exchange remarks relevant to that part of the dialog.

Fold 4: One chorus member enables access to a “graffiti wall” pertaining to the scene. Here the program is truest to the chorus metaphor: by adding his or her own comments, the viewer in effect joins the chorus. Comments are marked by glyphs that subsequent viewers can query to see other viewers’ comments.

Fold 5: Another chorus member enables access to lists of references that cite sources of information and media used in the presentation.

2.2 Program mechanisms

We declared relevant chorus members for each segment of the story. These chorus members may or may not be active -- that is, eligible for query -- in a given showing. Their eligibility depends on how the viewer interacts.

The program keeps a record of which chorus members have been queried and uses the information to balance the perspectives offered to the viewer. If a viewer continuously queries a chorus member who speaks against the boycott, for example, the program will make available a chorus member who speaks for it.

This underlying set of mechanisms, combined with representations of the chorus members, comprise one approach to the use of interface agents (Laurel, 1990).

3. FURTHER WORK

Although this prototype is on a single-user platform, we envision other versions, and other instantiations of the chorus model, on multi-user platforms. As a chorus is most naturally a collective of active participants, the model lends itself well to net-based implementations.

4. ACKNOWLEDGMENTS

TOGI was developed in collaboration with Kevin M. Brooks of the MIT Media Lab. Larry Friedlander of Stanford University participated in initial conceptualizations. TOGI has been described at the General Assembly on Multimedia (Strohecker, 1996) and the ACM Multimedia conference (Boston, fall 1996). The prototype has been demonstrated at Liverpool John Moore University's MediaActive conference (spring 1996) and at the Prix Möbius conference (Paris, fall 1996), sponsored by UNESCO and the European Commission.

5. REFERENCES

Laurel, Brenda. 1990. Interface Agents: Metaphors with Character. *The Art of Human-Computer Interface Design*. ed. Brenda Laurel. Reading, MA: Addison-Wesley.

Strohecker, Carol. 1996. Tired of Giving In: Experimenting with the Greek Chorus as a Model for Interaction with Stories. *Nov'Art: Les États Généraux de l'Écriture Multimedia*. Paris: ART3000.