Narrative Hypermedia

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Narrative <-> Hypermedia

Contradiction in terms!
- Narrative:
  storyline with beginning, middle and end
  http://www.uni-koeln.de/~ame02/pppn.htm
- Hypermedia:
  collection of linked fragments,
  no required boundary
Hypertext community

- Experiments with stories ‘80s onwards
  - Michael Joyce: Afternoon, a Story 1990
  - Stuart Moulthrop: Victory Garden 1992
  - Shelley Jackson: Patchwork girl 1995
  - M.D. Coverley: Califia 1999

- Loops(choice points or events from different perspectives
  - Amanda Goodenough: Inigo Gets Out 1987

- Author can maintain some control by making new material accessible only after reader has read all required passages
Hyperlinks in Film

- Different forms of hyperlinks:
  - Choice points with different scenes
  - Different parallel perspectives (TV movie on different channels)
Hyperlinked comics

Scott McCloud:
Understanding Comics (1993)
Reinventing Comics (2000)
Making Comics (2006)

Juxtaposition of frames “forces” reader to fill in the gaps, thus developing a “narrative”

http://www.scottmccloud.com

Temporal flow

- A story has a beginning, a middle and an end.
- The events being talked about also have a temporal order – these do not have to be the same
  Arundhati Roy, The God of Small Things
- When constructing a hypermedia narrative challenge is even greater, since author has less control on what the reader reads next
- Luesebrink explains different temporal layers in a story: cognitive time and interface time
- Presentation itself also has time
  Do You Have the Time? Composition and Linking in Time-based Hypermedia, Hardman et al.,
  http://doi.acm.org/10.1145/294469.294515
Human->machine

- So far discussed stories/narratives created by humans

- What do we need to understand to allow a computer to do this too?
  - topic of the story
  - intended listener
  - representation of discourse

Discourse model components

- A discourse model has knowledge about:
  - genre composition;
  - discourse structure building;
  - discourse structure population.
- genre: a distinctive type of literary composition that defines characteristic attributes of this composition e.g. a flow of discourse.
- discourse structure: identifies the flow of discourse by specifying concepts and their order plus situation of these concepts within sections and subsections.
- order: a meaningful order based on semantic relations between items
- A generation process uses knowledge in the discourse model to generate a final presentation
The Role of Genre

Genres differ in discourse flows
- Essay, biography: informative genres, oriented on providing information
- Newspaper article: stronger narrative structure in which climax is essential

Different mechanisms are required to support different genres
- Essay, biography: find a set of relevant concepts, decide in what order they should be presented
- Newspaper article: identify climax, find relevant concepts

Falkovych & Bocconi, Creating a Semantic-based Discourse Model for Hypermedia Presentations: (Un)discovered Problems
http://www.cwi.nl/~media/publications/HTW05Falkovych.pdf

Rhetorical Annotations for Video Documentaries

Statements annotated:
<subject> <modifier> <predicate>
e.g. war best solution

Thesaurus contains:
- Terms 155
- Relations between terms: similar 72, opposite 108, generalization 10, specialization 10
- E.g. war opposite diplomacy

1 hour video annotated:
15 interviews, 120 statements
Argument generation in video

- Vox Populi
- Database of video clips
- Annotated with topic and agree/disagree
- Argumentation model (Toulmin)
- User specifies query and video sequence generated

Stefano Bocconi et al., ICME 2005
Using Rhetorical Annotations for Generating Video Documentaries

Analysis of the Example

Two billions dollar bombs on tents

I am not a fan of military actions

I cannot think of a more effective solution

War has never solved anything
Video Sequence Generation Process

- Using the thesaurus, generate related statements and query the repository
  e.g. “war best solution”
  “diplomacy best solution”
  “war not solution”

- Create a graph of related statements
  - Nodes are the statements (video segments), edges are either support or contradict

Vox Populi interface
Conclusions

- Hypermedia narrative is still an experimental art form
  Marc Bernstein
  http://www.eastgate.com/
  Online magazine Tekka
  http://www.eastgate.com/catalog/Tekka.html
  Online writing centre
  http://trace.ntu.ac.uk