

Story creation by intelligent agents.

(summary of the *The Virtual Storyteller: story creation by intelligent agents*
by Mariët Theune, Sander Faas, Anton Nijholt, DirkHeylen)

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New approach in automatic storyline development is proposed. It includes intercommunication between intelligent agents under the scope of rules defined by special director agent. Director has knowledge about general properties of the virtual world. Director can accept or decline any intended by an agent action. Focus of this paper is on automatic storyline development using intelligent agents. An agent in this sense of the word is an entity that is capable of perception and action.

In virtual storytelling, most stories are presented in the form of text or speech, or sometimes in the form of animated figures in a graphical environment.

There exists three different story levels:

1. Plot: a series of chronologically and causally related events that make up the story's content.
2. Narrative: a representation of the plot from a particular point of view.
3. Presentation: a realization of the story in a particular medium.

Good storyline must be consistent. It should be well structured, having beginning where some problem is introduced, middle containing the actions' highpoint, and ending where the action falls. This is so called "Freitag's triangle". Any good storyline almost always follows this basic rule.

There are two most well-known approaches to automatic storyline development:

	character-based	script-based
Pros	fairly consistent, allows interactivity	fast creation, determinism
Contras	resulting storyline often do not adhere to Freitag's triangle	bad consistency, static plots, unproductive - only a one-time experience, poor interaction possibilities, limited plot variation

In character-based approach storyline emerges from autonomous actions by a set of characters that are implemented as intelligent agents, with their own goals, personality, and emotions. In script-based approach characters have no autonomy or intelligence, plot is written either by human author or automatically generated.

There are also some intermediate approaches to storyline development, but they have characters limited

autonomy in determining the plot.

The general idea of Virtual Storyteller System is that the characters are not guided through a pre-existing plot, but create the plot together with a virtual director. Storyline is not predefined but created by the actions of the characters, guided by a virtual director.

This approach requires a separate director agent who has general knowledge about plot structure, rather than giving such knowledge directly to the characters. Both actors and director are implemented as intelligent agents, capable of reasoning within their own domain of knowledge

The characters can make plans to achieve their personal goals using ‘story world knowledge’: knowledge about their virtual environment and the actions they can take in it. The director is able to judge whether a character’s intended action fits into the plot structure, using both story world knowledge and general knowledge about what makes a ‘good’ storyline.

The content of the story is not known in advance, but determined by the characters pursuing their individual goals in their virtual environment.

The director can use the following methods to control the characters’ actions:

1. Environmental: introducing new characters and objects into the virtual environment
2. Motivational: giving a character a goal to pursue
3. Proscriptive: disallowing a character's intended action

Director makes use of control methods, how often is dependent on the contents of his knowledge base. For instance, his knowledge base contains rules specifying that a story must have a beginning where the characters and the environment are introduced, a middle part where the main action takes place, and a happy end. The director creates a setting and gives the characters a goal. Before performing any action, the characters must ask the director for permission, which is where proscriptive control comes into play.

REFERENCES:

1. *The Virtual Storyteller: story creation by intelligent agents* by Mariët Theune, Sander Faas, Anton Nijholt, Dirk Heylen
2. www.wikipedia.org