

IDtension – Highly Interactive Drama

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Motivation

IDtension is an Interactive Drama project initiated 10 years ago (Szilas, 1999). It aims at providing long term solutions to the problem of combining narrativity and interactivity. IDtension has been demoed in 2002 (COSIGN) and 2006 (IUI, TIDSE). Our motivation to demo IDtension again is twofold: 1) IDtension has never been demoed in North America; 2) The newest version has been improved and aims to be the « final demo ». Far from perfect, this « final demo » will leave place to the development of a new narrative engine – let's call it IDtension 2 – to push further the frontiers of Interactive Drama. Note that although integration of IDtension in a real time 3D environment has been performed in 2005, this demo is text-based, in order to focus on the core issue of Interactive Drama.

User experience

The demo consists of a playable interactive drama called « The Mutiny », written in collaboration with Olivier Marty (Szilas et al., 2003). The player is one of the characters in the story, a sailor jailed in a 17th century galleon with three other prisoners, after a failed plunder against the ship. His goal is now to take the leadership of the galleon by preparing a small riot (only four prisoners...). This story enables a high degree of interactivity. The user is given many possibilities of actions such as ask/trade/rob/rob armed with a knife an object, ask another character about his/her taste (in order to offer him/her the object he/she likes), try to flatter other characters to have allies, etc. Furthermore, the user is involved in dialogs in which he can refer to the above actions, for example, inform that he can/want to perform these actions or that he/she has failed/succeeded to perform them. As a result, the range of actions is higher than in other Interactive Drama systems. In the middle of The Mutiny, more than 100 can be found, which are interpreted by the system. Of course, not all of these actions are

equally interesting. The "Intelligent Narrator" driving the story aims at managing the narrative quality of the experience.

To be able to manage to quantity of choices provided to the user, a specific and innovative user interface has been designed, the "History-Based Interface" (see Figure 1). It allows the player to select possible new actions from the previous actions and events in the story so far.

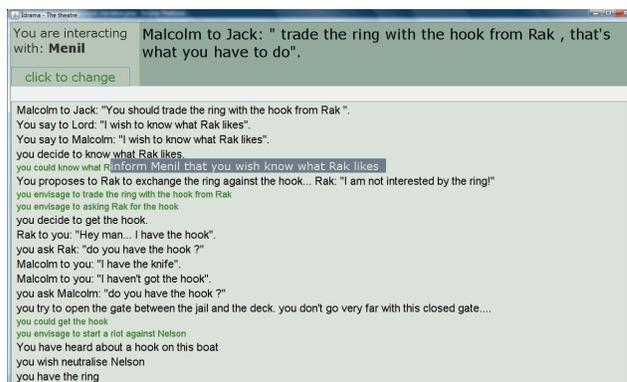


Fig. 1.: Screenshot of IDtension

Behind the stage

Fully developed in Java, IDtension's narrative management is characterized by the following distinctive features:

Atemporal structure: A story is not described as more or less pre-authored “chunks” of stories such as scenes but as an atemporal structure of goals, tasks, obstacles and values. This structure resembles a classical goal structure, but 1) it is described in narrative terms (obstacles, ethical values); 2) it is not attached to a character.

Second order actions: in order to obtain a large number of possible actions without demultiplying the authoring effort, actions are described according to a second order formalism. For example:

`inform(x, y, goal(z, g, u))` means that a character inform another character that a third character has a given goal, with a fourth character as a parameter. It could produce the following dialog line: *Mary to John: Did you*

know that Bill wished to be loved by Rachel? In the formula above, “inform”, and “goal” are hardcoded, while x, y, z, u and g are variables that can take any authored-defined values. Hardcoded elements correspond to narratology-inspired fundamental narrative actions and states. This mechanism ensures a large number of produced actions with a limited authored material.

Model of the player: The action selection mechanism for Non Playing Characters (NPC) is based on a general model of the player’s perception. Indeed, each action is evaluated according to a set of narrative criteria. While some roughly correspond to agent’s rationality (ethical consistence, motivational consistence), others are narratively motivated, such as “conflict”.

A complete description of the engine can be found in Szilas (2007).

Limits of the demo

While The Mutiny demonstrates the feasibility of highly interactive interactive drama, it is still limited in terms of the quality of the narrative experience. Indeed, the story designers were restricted in their creativity by the rigid narrative framework required by IDtension. Furthermore, the history-based user interface still requires

improvements, because in the middle of the story, the history becomes quite large.

We believe that the future of interactive drama relies on two key points:

- finding more author-accessible narrative models, while maintaining a degree of generativity similar to IDtension
- developing authored-centered engines, tools and methodology to make abstract generative models more usable to creative authors.

References

- Szilas, N. (1999). Interactive Drama on Computer: Beyond Linear Narrative. In Proc. AAI Fall Symposium on Narrative Intelligence, Technical Report FS-99-01, p. 150-156, AAI Press, 1999.
- Szilas, N., Marty, O. et Rety, J.-H. (2003). Authoring Highly Generative Interactive Drama. In O. Balet, G. Subsol & P. Torguet (Eds.) Proc. of the Second International Conference on Virtual Storytelling, ICVS 2003, LNCS 2897, Toulouse (France), Nov. 2003.
- Szilas, N. (2007). A Computational Model of an Intelligent Narrator for Interactive Narratives. Applied Artificial Intelligence, 21(8), p. 753-801, Sept. 2007.