Interactive Narrative

Welcome to IEEE Computer Graphics and Application’s special issue on interactive narrative. Often the most interesting and innovative research is the result of collaborations between fields of study that, on the surface, seem to have little or no intersection. Interactive narrative is just such an area of research, bringing together technical fields such as artificial intelligence and computer graphics as well as the humanities (including literature, cinema, and interactive media). Even nonacademics—including designers and programmers from the video game industry—work together in this interdisciplinary domain.

Collaboration among such a diverse group of experts poses many challenges and requires everyone to learn a little (or a lot) about each other’s fields to develop a common language and shared context. Guest editing this special issue has been an interesting and rewarding process as it has given me an opportunity to learn how different groups around the world are addressing not only the central research challenge of interactive narrative but also the challenges involved in collaboration across such a wide variety of fields.

The central challenge of interactive narrative is how to address the conflict between story and interactivity. Narrative is defined (by Merriam-Webster’s online dictionary) as “the representation in art of an event or story.” Implicit in this definition is the idea that a narrative consists of an authored representation of a story with the intention that the audience will experience this story in a certain way. Everything from ancient myths told around a fire to novels, plays, movies, and jokes are based on this concept of a predefined set of events and ideas that are entertaining when experienced by an audience in a specific sequence. The standard Western plot structure of exposition, rising action, climax, falling action, and conclusion describes, in general terms, a well-understood (by authors and audiences) way to structure a story.

Interactivity gives the audience some aspect of control over the experience. The conflict between story and interactivity occurs when the audience’s choices in their control of the experience conflict with the carefully authored narrative sequence. The movie The Matrix would be far less entertaining if Neo were to choose the blue pill and carry on with his life unchanged. The tale of Little Red Riding Hood wouldn’t be very good if Little Red Riding Hood chose to skip Grandma’s house and left the Big Bad Wolf waiting. Romeo and Juliet would be far less tragic if Romeo decided to get on with his life rather than drink the poison when he thought Juliet was dead.

Modern computer games—especially single-player, first-person shooter and role-playing games (which tend to be story oriented)—encounter this challenge at a fundamental level. A great deal of the enjoyment of games comes from being immersed in an environment where a wide range of interesting choices, if made well, lead to outcomes that give a sense of achievement. However, there are strong incentives to control the player’s experience and keep him or her on track as much as possible. From a gameplay perspective, the designers want the player to experience and enjoy their carefully crafted story as it was designed. From a quality assurance perspective, the game testers want to ensure that the player can proceed through the game with an appropriate level of challenge if the player makes reasonable choices. From an economic perspective, the publishers want to make sure that the player experiences the full range of content that was so expensive to produce.

As a result, games have explored a number of solutions to the story and interactivity conflict. More restrictive solutions allow the player to interact freely with the environment between important story events but don’t allow the player to affect the story events, often shown as cut scenes, in any meaningful way. A less restrictive solution is to let the player choose from a limited number of options that can affect the details of how the story plays out but not the central plot. More recent sandbox-type games, such as Grand Theft Auto and the Elder Scrolls series, put the player in a fairly open environment with a central story that the player can either choose to follow or ignore in favor of more free-form exploration. Finally, games like The Sims do away with the concept of a story altogether, instead making a game out of playing with the interactive environment and even allowing the players to come up with their own stories.

The three articles in this special issue present three approaches to resolving the conflict between story and interactivity. Riedl and Young compare two different approaches to branching narrative, which represents a...
story not as a sequence of events but as a branching tree of events with the user’s choices as the branch points. Nelson et al. present an approach to implementing a drama manager that guides the player through the story and modifies the experience based on the user’s choices. Aylett et al. explore emergent dramas that are not pre-authored but emerge from the interactions of intelligent autonomous characters.

Each of these articles was originally published in the Proceedings of the First Artificial Intelligence and Interactive Digital Entertainment International Conference (AIIDE 2005). The AIIDE conference is intended to provide the definitive point of interaction between entertainment software developers interested in AI and academic and industrial AI researchers. Sponored by the American Association for Artificial Intelligence, the conference targets both the research and commercial communities, promoting AI research and practice in the context of interactive digital entertainment systems with an emphasis on commercial computer and video games. More information on AIIDE, including details on AIIDE 2006, is available at http://www.aiide.org.

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