Storytelling is an important facet of human life: from entertainment to everyday communication, we are constantly telling and immersing in stories. Understanding how to make these more aesthetically pleasing is of interest to artificial intelligence (AI) research and can be used to improve video games. Specifically, research in interactive storytelling—responding to player actions while unfolding a narrative according to a model of experience quality—must tackle several challenges. One key challenge is to strike a balance between player agency (i.e., allowing the player to meaningfully influence the story) and authorial control (i.e., guiding the player’s experience through a desired story trajectory). Increasing the player’s agency can allow the player to take ownership of the story but is resource-demanding on the part of the developers. Additionally, it may be difficult to guarantee that the player will have a particular experience when they are given the freedom to change to the story.

FIG. 1: The text-based command line in PAST. In the left frame, a story state description; in the right, a series of player actions available.

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Player-specific Automated Storytelling (PAST) [1-3] is an interactive storytelling system that employs AI to tackle the aforementioned problem. In doing so, PAST relies on player modelling and automated planning. In line with previous work, PAST requires that the story developer describe the story world in a formal, computer-readable format. Subsequently, whenever the player exercises narrative freedom and deviates from the original story (e.g., the player as the Little Red Riding Hood kills the wolf on sight), PAST uses automated planning to shape the story on the fly so that it still meets authorial goals (e.g., another wolf appears to deceive and eat the Granny). Second, PAST shapes the story not only to satisfy authorial goals but also to accommodate the player’s play-style inclinations. In the example above, a player who has shown a tendency to play as a fighter will see another mean wolf replacing the former whereas a storytelling inclined player may witness a magic fairy resurrecting the original wolf. These inclinations are learned automatically from the player’s previous actions, using player modeling techniques.

To evaluate the efficacy of our approach towards improving perceived agency, we created an interactive version the Little Red Riding Hood story. The results of these user studies indicated that PAST’s approach to storytelling is more likely to increase the perception of player agency [3]. The playable interactive narrative experience developed for those user studies is hereby presented (Figure 1). A player can advance through the interactive narrative world by making narrative choices via a text-based interface and reading resulting narrative off the screen. The length of the experience depends on the players choices and reading speed, with 10-30 minutes being typical.

Technically, the program is a self-contained Windows executable—a Lisp code base running on Steel Bank Common Lisp—and can be executed on any modern computer running either a 32 or 64-bit version of Windows XP, Vista, 7 or 8.

