Interactive Digital Narratives and the Narrative Paradox

a user modeling approach to reduce the narrative paradox.

Interactive digital narratives are a type of storytelling in which the user can influence the storyline, and thus the outcome of the story. One of the main challenges within interactive digital narratives is the narrative paradox. The narrative paradox theory claims that user interaction and the narrative structure are at odds with each other.

On the one hand, a strong narrative structure ensures the quality of the narrative and doesn't allow much interaction. On the other hand, as the level of interactivity within a narrative increases, the shape of the narrative becomes troublesome to maintain. Therefore, most digital, interactive narratives only give the reader some freedom to interact. Finding the right balance between the reader's control and the narrative's structure is considered to be one of the main challenges within interactive digital storytelling.

In an attempt to reduce the narrative paradox, the thesis presents the concept of a user model which learns from the reader. A user-model represents an individual user's characteristics which are necessary for an adaptive system to adjust to a specific user's needs. Accordingly, the following research question was addressed: *To what extent can user modeling reduce the tension between interaction and plot in an interactive digital narrative?*

The research's commercial relevance is found in the area of user centricity and user recommendation. The current digital book publishing market, driven by global players like Amazon, Apple, Barnes & Noble and Google, is consumer centered, and collecting as much user data as possible. However, none of them gather user data through books themselves. Being able to learn from users based on their reading and branching behavior, intends to offer a more user centered approach allowing to further personalize the user's experience.

The key to building good user models is to find the differences between users. Within interactive digital narratives, user modeling, could be applied by focusing on a user's mental features, reading behavior and branching behavior. The mental features included the user's traits (for need for cognition and openness to experience) because they define a user as an individual being, and the reading and branching behavior because they obtain unique data for a given interactive narrative.

To explore the relationships between the variables that compose the user's model and user's narrative experience, a cross–sectional research design

was wielded. Using a custom developed storytelling system that included a profile questionnaire, interactive digital narrative and experience questionnaire (see Figure 1).

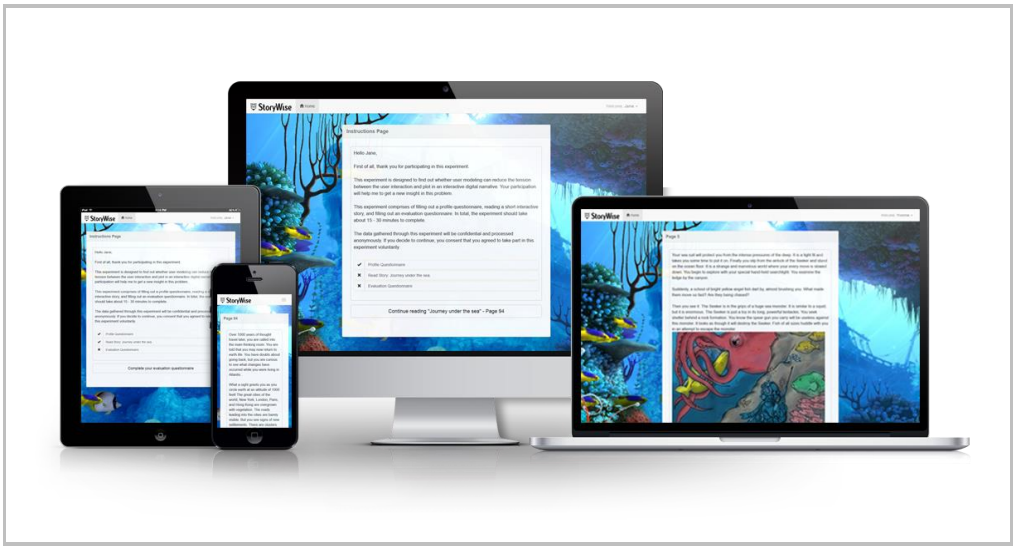

Figure 1: Visualization of the storytelling system, http://kaocean.com/in/.

Based upon the data retrieved through the storytelling system, this research's main finding is that the narrative paradox could be reduced by focusing on the user's prior interactive digital narrative experience, as well as on the need for cognition and suspense. By adapting the content of a narrative, based on the user's profile, the structure of the narrative becomes less pre-authored and the user gains more depth regarding the interaction, thus reducing the narrative paradox.

To find out whether other user characteristics could influence a user's narrative experience and/or reduce the narrative paradox, it is also recommended that future research should concentrate on other user characteristics. Another recommendation for future research is to put the user model to the test by means of an experiment to evaluate the user model and the narrative experience, when adapted to a specific user's behavior.