Computer-Based Character Creation in Storytelling: Prototyping and Testing of Random Character Creator

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Abstract. Since the concept of "Digital storytelling" was first introduced, concepts such as "digital platform for storytelling" as well as "storytelling for digital platform" have evolved. This study evaluates a computer-based story development tool, called Random Character Creator (RCC). Using this tool, the types of variables that can be considered while building a character in storytelling are set, and a database for each variable is established. Based on each variable and database, we developed a prototype of the RCC program, which allows the user to create a character sample with a combination of randomly/selectively chosen variables. Examples of results are evaluated.

Keywords: Digital storytelling, Screenwriting software, Digital storytelling software, Digital storytelling technology.

1   Overview

Most of the previously developed methods of providing creative support to story-authoring tools focused on simplifying the story-writing process. The authoring programs provide only a rudimentary support to the creation process itself. [1] This paper presents the development of a new computer-based story-writing tool, called the Random Character Creator (RCC), which helps the creator build characters for plays, screenplays, fiction, etc., in the field of storytelling.

2   Objectives of the Study

This study aims to develop a writing tool that supports character creation in the story-writing process. It breaks away from the traditional perspective that centered on maximizing the efficiency of the work processes and provides a new perspective of using a computer program for a useful and valuable work process. This new perspective will enable the creation of richer and more interesting characters for storytelling.
The objectives of this study are detailed as follows:

- Set the types of variables that can be considered to build a character in storytelling, and establish a database for each variable.

- Based on each variable and database, construct a prototype of the RCC. program that allows the user to create a character sample with a combination of randomly/selectively chosen variables.
- Initiate the prototype and design a framework that can build up on the first character sample.

3   Method

3.1   Establishment and Classification of Variables for Character Creation

By referring to studies on factors influencing character creation by Adler [2], an American acting theorist, and Huh [3], we classified the variables to be used in the RCC. program as shown below Table 1.

Table 1. Classification of variables for character creation using a random module

Major variable	Dependent variable	Selective variable
(1) Occupation	(a) Social status	Age
	(b) Wealth	Gender
(2) Personality	(a) Animals that can be referred to for creating personality	Class location
		History
(3) Characteristic	(a) Disease	Periodical situation
(4) Motif [4][5][6]	(a) Action Verb	Place and background
	(b) Incident keyword	Habit, appearance

- Major variable: A variable that acts as the basic structure for character creation using the random module
- Dependent variable: A sub-variable that can be combined with other sub-variables according to the major variable
- Selective variable: A variable that can be used either as a major variable or a dependent variable depending on its genre or type; however, owing to the characteristics of this variable, the user can easily set this variable by observing the result of character creation

3.2   First Character Creation through Random Combination of Variables

When the user clicks the character creation button, random database values arbitrarily selected for the preset variables—occupation, personality, and motif—are combined to provide a result. Here, as many characters as the user has assigned are created. Among the first characters created, the user can choose the character where he or she wants to add variables or modify. Table 2 shows an example of the first character creation.

Table 2. Example of the first character creation

Random value	268 52 3 6 103	88 54 23 82 2	356 88 57 9 51	99 65 4 97 17	333 60 3 12 67
Occupation	Music producer	Animal trainer	Police	Carpenter	Paper-bag factory employee
Personality (Multiple selection)	Naive Arrogant Cowardly	Wicked Taciturn Think big	Good judgment Rough Messy	One-sided Old-fashioned Excellent	Narrow-minded Haughty Shy
Motif	Son	Family	Prostitution	Widow	disease
Random value	159 47 94 35 29	172 7 2 45 104	281 10 60 85 30	382 2 86 90 47	97 51 75 31 18
Occupation	Video shop staff	Ship maintenance Technician	High School Teacher	Computer programmer	Makeup Artist
Personality (Multiple selection)	Delicate Strong mind Frivolous	Straight Thoughtful Tough	Optimistic Petty Attentive	Easy-going Violent temper Poncey	Innocent Trustworthy Brazen
Motif	Miracle	Father	Dreams, Sea	Animals	Insanity

3.3   Second Character Creation through Selective Combination of Variables

After the creation of the first character discussed earlier, the user can move to the second character creation stage by qualitative selection or re-create the first character with more combination of variables. Once character selection is done for the second character creation, the user adds detail to the randomly built character through the below framework:

- Selective reproduction of chosen variables among the suggested variables
- Establishment of relationship between characters
- Connection with additional motifs for character and establishment of a plot
- Storytelling ideation using action verb variables and event keywords

3.4   Random Character Creator, RCC Prototype Result

In the prototype, three variables—occupation, personality, and motif—were selected. A total of 446 occupations [7], 136 personalities [8], and 160 motifs [4] were established in the database.

Using a computer program that generates a random value from a specified range, we generated a random value for each variable (range: 1 through the number of total variables). The character was then assigned attributes corresponding to the generated value, as shown in Table 3.

Table 3. Example of the prototype

	Total amount of variables	Randomly selected value	Substituting values with items (1st character creation)	Selective reproduction of selected variable (2nd character creation)
Occupation [7]	446	377	Computer programmer	Computer programmer (Random value 377) -> **Music producer** **(Random value 268)**
Personality [8]	136	52, 3, 6 (multiple selection)	Naive Arrogant Cowardly	Naive Arrogant Cowardly
Motif [4]	160	129	Cyborg	Cyborg (Random value 129) -> **Lost son (Random value 130)**

Through a qualitative variation in the combination of the final selection of variables, the user can obtain the character to be used in storytelling as well as the story line or the logline. This is illustrated in Examples 1 and 2 of Table 4.

Table 4. Example of results

[Example 1] 1st Character creation
Computer programmer, naive, arrogant, cowardly, cyborg
→ *I know that the naive and cowardly computer programmer Lisa who seems arrogant is actually a cyborg.*
[Example 2] 2nd Character creation
Music producer, naive, arrogant, cowardly, lost son
Arrogant yet naive and cowardly music producer Michael was visited by his son whom he has never seen before.

4   Conclusion

Previous studies on story-writing tools acted on the writing mechanism of the scenario itself, so it was difficult to apply their findings efficiently to the qualitative aspects of the story and to actual creative work.

However, in this study, the prototype of the RCC program confirmed the possible number of selective combinations using previous random combinations. Thus, the benefits of the prototype for creating richer and more interesting characters for storytelling were also confirmed. This study has thereby prepared an index for future studies on the development of the story-writing tool with an interface that allows the user to choose between random combinations obtained computationally and selective combinations obtained manually.

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