

A Rogue Dream: Web-Driven Theme Generation for Games

Michael Cook
Computational Creativity Group
Imperial College, London
mtc06@doc.ic.ac.uk

ABSTRACT

A Rogue Dream is an experimental videogame developed in seven days for a roguelike development challenge. It uses techniques from computational creativity papers to attempt to theme a game dynamically using a source noun from the player, including generating images and theme information. The game is part of exploratory research into bridging the gap between generating rules-based content and theme content for videogames.

1. DOWNLOAD

While A Rogue Dream is not available to download directly, its code can be found at:

<https://github.com/cutgarnetgames/roguedream>

Spritely, a tool used in A Rogue Dream, can also be downloaded from:

<https://github.com/gamesbyangelina/spritely>

2. BACKGROUND

Procedural content generation systems mostly focus on generating structural details of a game, or arranging pre-existing contextual information (such as choosing a noun from a list of pre-approved words). This is because the relationship between the mechanics of a game and its theme is hard to define and has not been approached from a computational perspective.

For instance, in Super Mario eating a mushroom increases the player's power. We understand that food makes people stronger, therefore a mushroom is contextually appropriate. In order to procedurally replace that with another object, the system must understand the real-world concepts of food, strength, size and change. Most content generation systems for games are designed to understand games, not the real world. How can we overcome that?

3. A ROGUE DREAM

In [1] Tony Veale proposes mining Google Autocomplete using leading phrases such as "why do <keyword>s..." and using the autocompletions as a source of general knowledge



Figure 1: A screenshot from A Rogue Dream. The input was 'cow' - enemies were 'red', resulting in a red shoe being the enemy sprite. Abilities including 'mooing' and 'giving milk'.

or stereotypes. We refer to this as 'cold reading the Internet', and use it extensively in A Rogue Dream. We also employ *Spritely*, a tool for automatically generating sprite-based artwork by mining the web for images.

The game begins by asking the player to complete the sentence "Last night, I dreamt I was a...". The noun used to complete the sentence becomes a parameter for the search systems in A Rogue Dream, such as Spritely and the various text retrieval systems based on Veale's cold reading. These are subject to further filtering - queries matching "why do <keyword>s hate..." are used to label enemies, for example.

This work connects to other research being conducted by the author currently in direct code modification for content generation [?]. We hope to combine these two research tracks in order to build technology that can understand and situate abstract game concepts in a real-world context, and provide labels and fiction that describe and illustrate the game world accurately and in a thematically appropriate way.

4. REFERENCES

- [1] Tony Veale. From conceptual 'mash-ups' to 'bad-ass' blends: A robust computational model of conceptual blending. In *Proceedings of the 3rd International Conference on Computational Creativity*, 2012.