



Data Agent

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and Julian Togelius



Road Map

Adventure Games and Data Games

The Data Adventures Series

Data Agent

Generation in Data Agent

User Study

Adventure Games and Data Games

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The Data Adventures Series

Data Agent

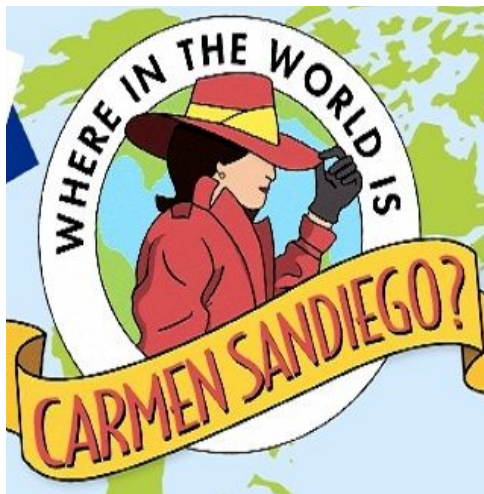
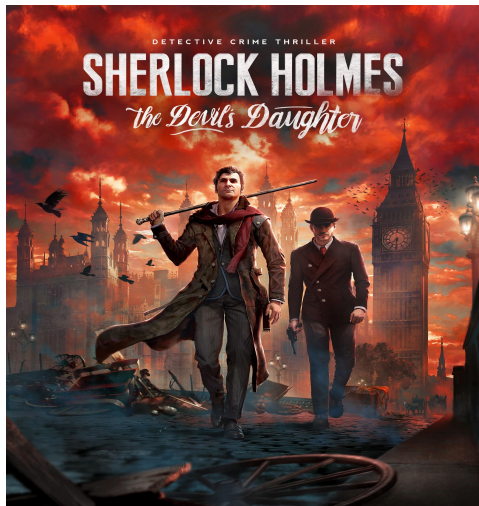
Generation in Data Agent

User Study

Adventure Game

a simulation in which the **player interacts with the rule system** of a fictional world, populated with **a series of concatenated puzzles** which structure the performance of the player*

*Clara Fernández-Vara. 2009. The tribulations of adventure games: integrating story into simulation through performance. Georgia Institute of Technology.



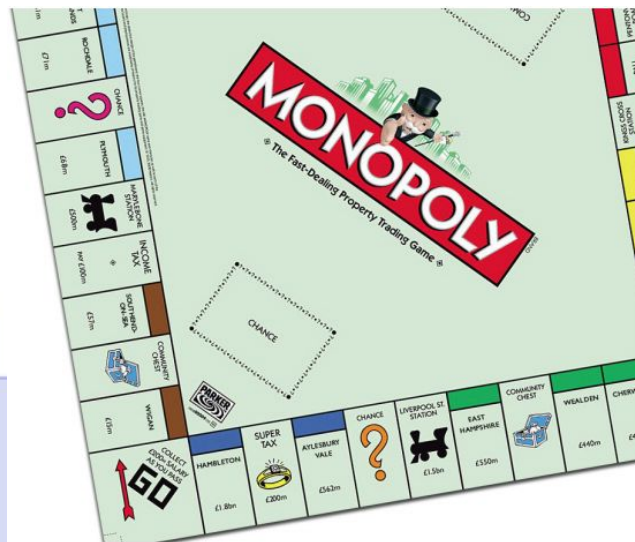
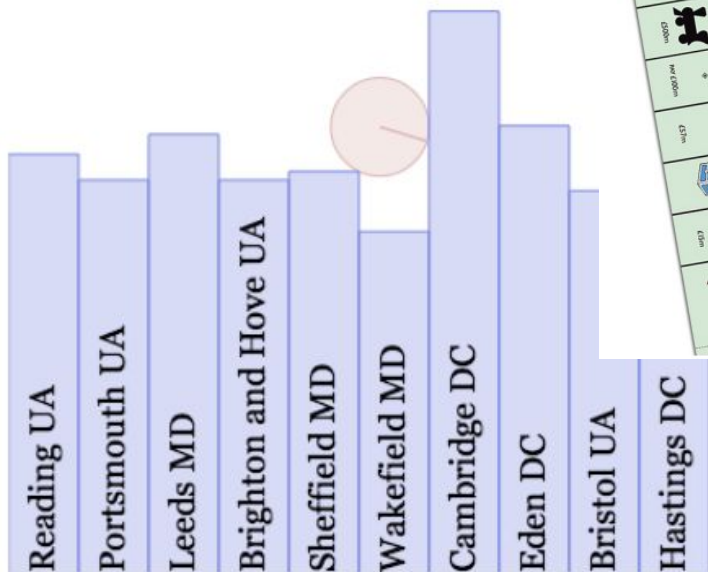
Data Game

a game which promotes the **visualization and interaction of freely available information** in creative and/or interesting ways*

*Marie Gustafsson Friberger and Julian Togelius. 2012. Generating game content from open data. In Proceedings of the Foundations of Digital Games Conference. ACM, 290–291.

- Score:

1





The Data Adventures Series

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Goal:

Find out how semantically linked open data can be used to generate structured point-and-click adventure games.



Where is the data from?

- DBPedia: people, places, things (*i.e. game elements*)
- OpenStreetMaps: maps
- Wikimedia Commons: images

Data Adventures

- First of the series
- Single linear experience



You are in:
House of Thatcher, Margaret Hilda, Baroness Thatcher, LG, OM, PC, FRS (ne Roberts, 13 October 1925 – 8 April 2013), was the Prime Minister of the United Kingdom from 1979 to 1990 and the Leader of the Conservative Party from 1975 to 1990. She was the longest-serving British Prime Minister of the 20th century and is the only woman to have held the office.

Talk to

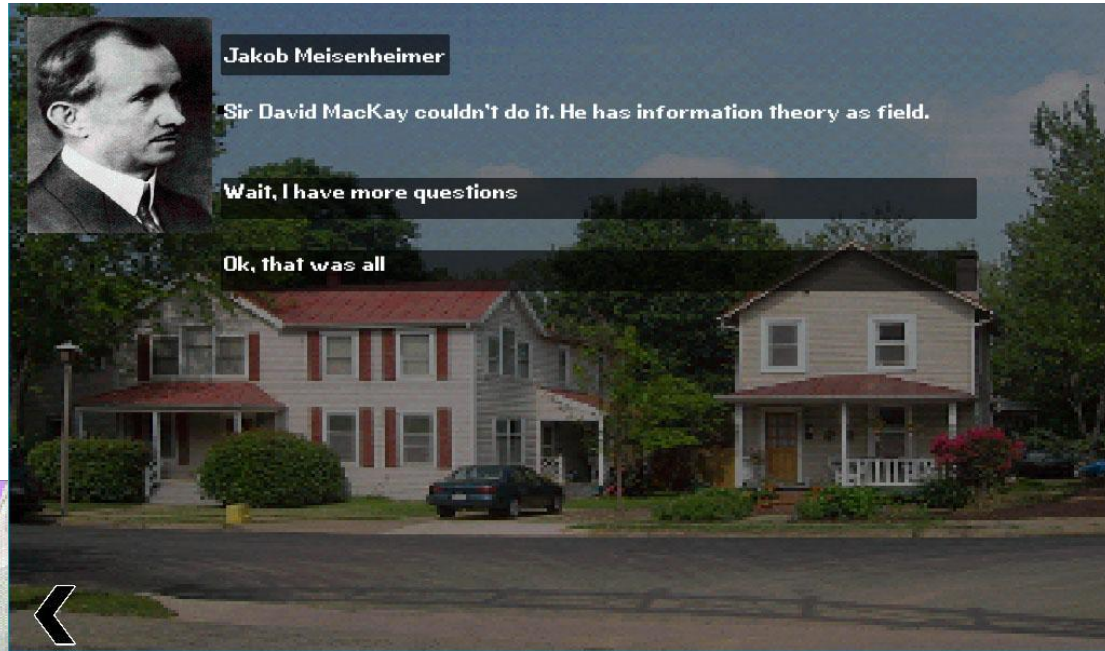
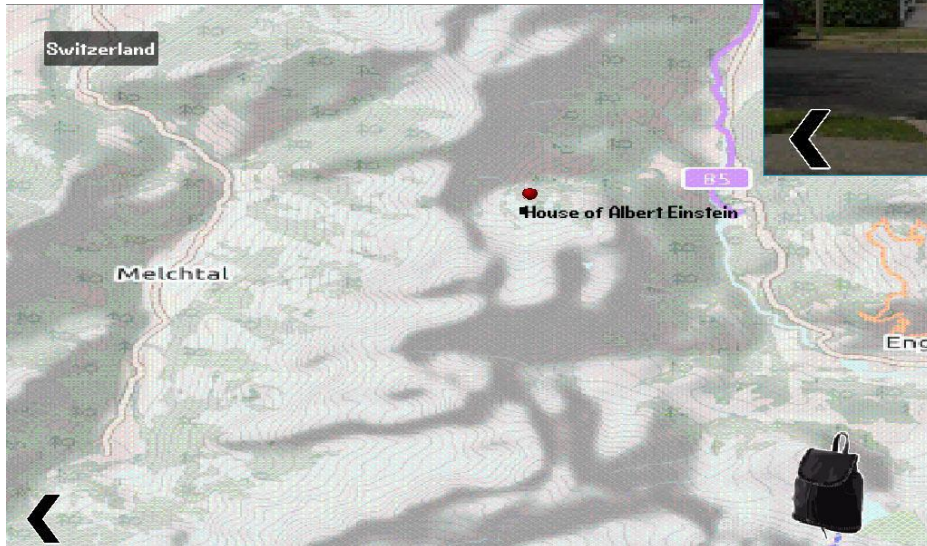


Back

Thatcher, Margaret Hilda, Baroness Thatcher

Wiki Mystery

- Second of the series
- Branching path adventure



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SKIP

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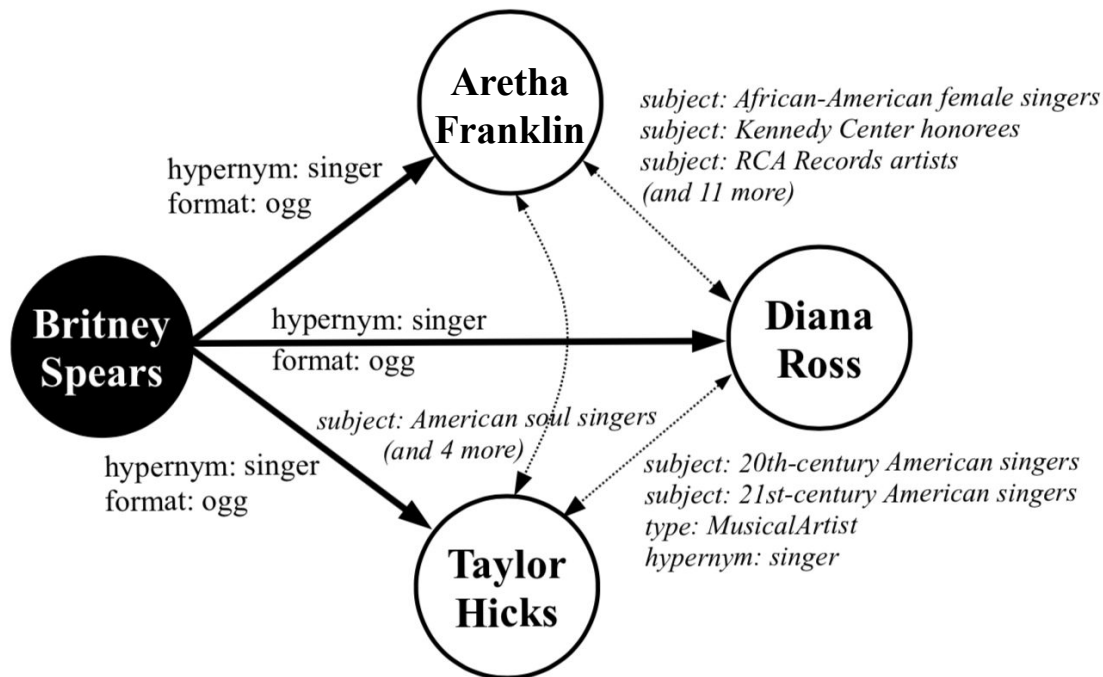
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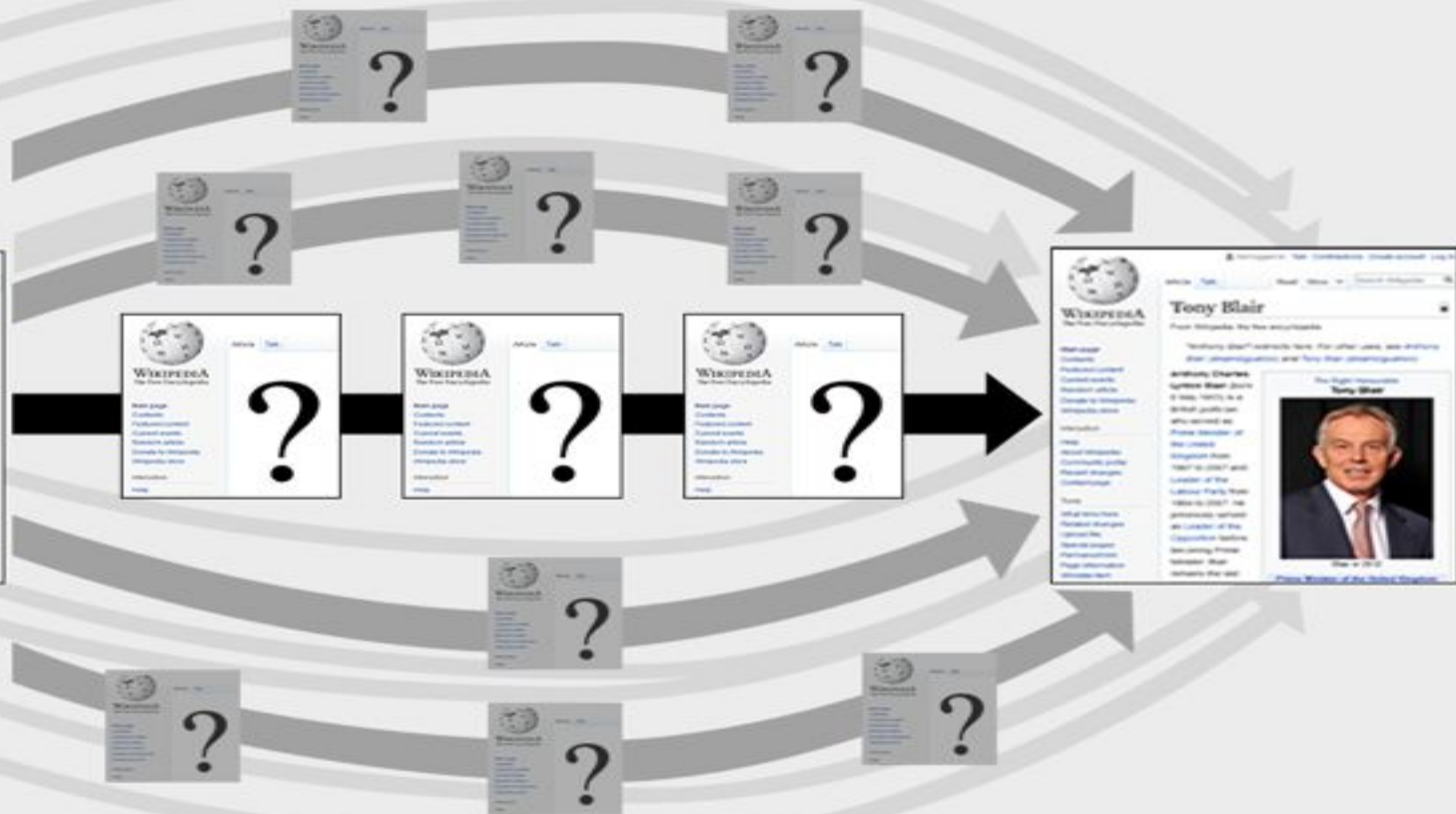
Generation Process

1. Select Suspects
2. Create Paths
3. Generate Dialogue

Suspect Selection

- DBPedia Queries for a **suspect pool**
 - Direct link to victim
- $\mu + \lambda$ evolution w/ cascading elitism
- Genome = set of N suspects





Dialogue Generation

- Tracery*
- 3 Dialogue Types:
 - Essential:
 - Me: "Did the victim ever say anything to you that you recall?"
 - NPC: "I think the victim talked about <building>."
 - Fact-giving:
 - Me: "Do you have any information about one of the suspects?"
 - NPC: "<suspect> has <attribute>"
 - Flair
 - Me: "Where do you currently live?"
 - NPC: "I live in <place>."

*Kate Compton, Benjamin Filstrup, and Michael Mateas. 2014. Tracery: Ap-

proachable story grammar authoring for casual users. In Proceedings of the AIIDE

User Study

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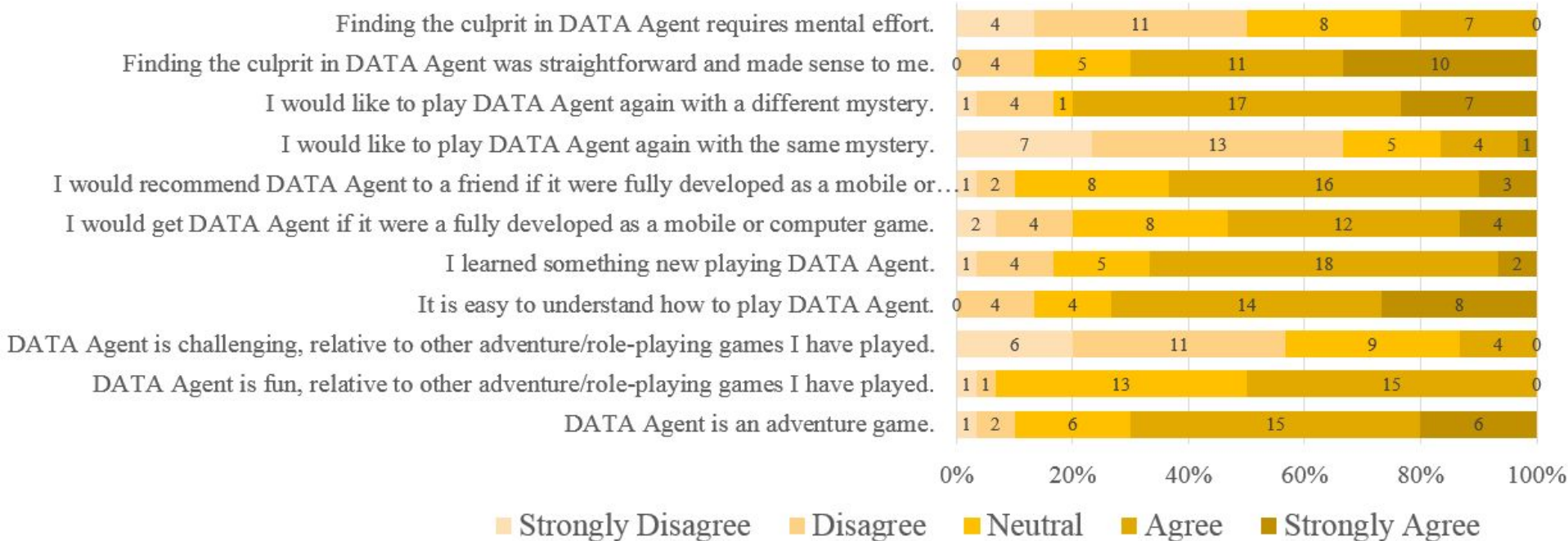
User Study

About the Study

- 30 Participants
- 2 Data Agent games
 - Albert Einstein
 - Britney Spears
- Pre-play questionnaire for demographics
- Encouraged to talk during play, recorded
- Post-play questionnaire for opinions

Post Questionnaire

Usability



One-tailed Binomial Test

DATA Agent is...	an adventure game.	✓
	challenging.	✗
	easy to understand how to play.	✓
I learned something new playing DATA Agent.		✓
I would...	recommend it to a friend.	✓
	like to play again with the same mystery.	✗
	like to play again with a different mystery.	✓
Finding the culprit was straightforward and made sense.		✓

Conclusion

- Designed to be easier to understand than previous games
 - Too simple?
 - More weight to choices?
 - Puzzles?
- Learning from open data
- Murder Mystery
 - Template characters
 - Alibis and motives

Computational Creativity.

*Gabriella A. B. Barros, Michael Cerny Green, Antonios Liapis, and Julian Togelius. 2018. Data-driven Design: A Case for Maximalist Game Design. In Proceedings of the International Conference on

Computational Creativity.

Computational Creativity.





<https://champchampchamp.itch.io/data-agent>