

# Story generation and co-creation with the Virtual Storyteller

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Human Media Interaction

UNIVERSITY OF TWENTE.

# Story generation



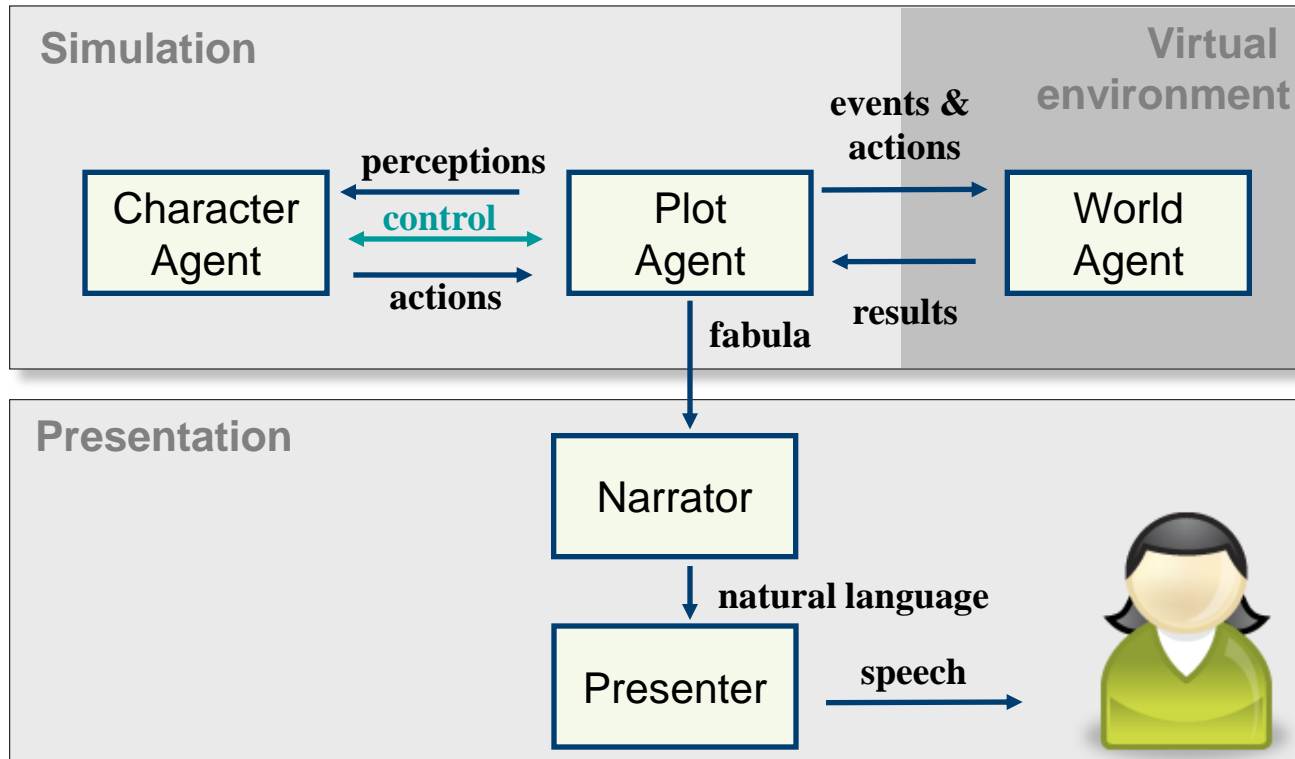
- Generate stories in natural language (Dutch)
- Based on events in a simulated story world
- Characters in the stories are autonomous intelligent agents (AI)
- *Emergent narrative* approach
  - No predefined plot
  - Character-driven

*plot-based*

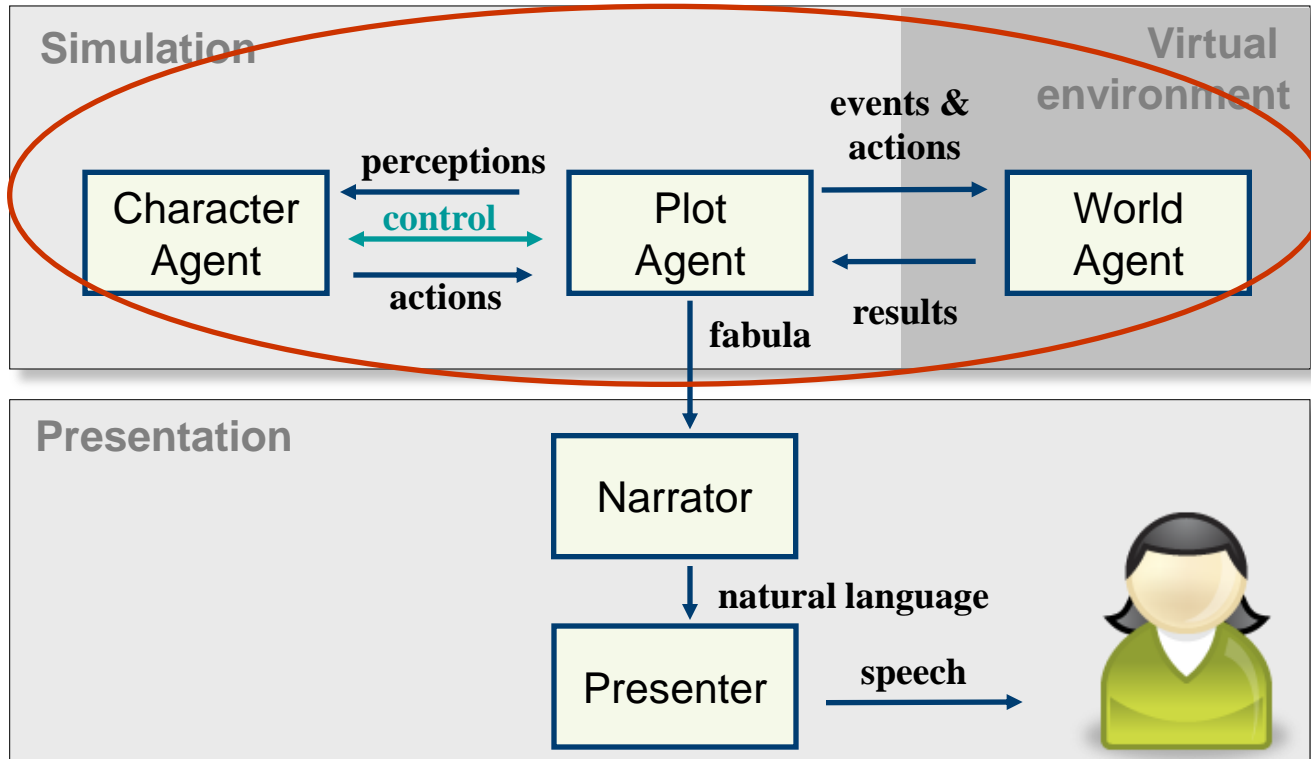


*character-based*

# Virtual Storyteller architecture



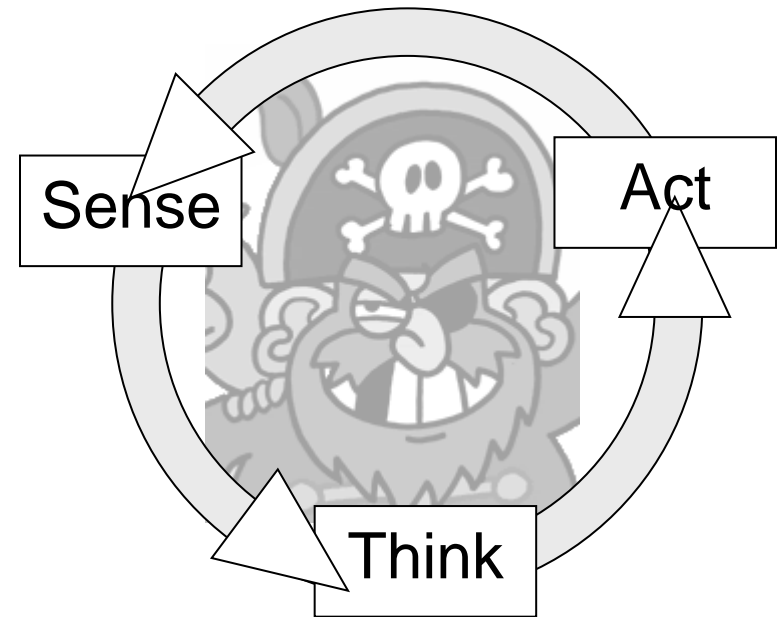
# Simulation layer



# Character Agent



- React to perceptions  
(beliefs, emotions)
- Form and pursue goals
- Plan and execute actions
  
- Out-of-character reasoning capabilities  
(based on improvisational theatre)



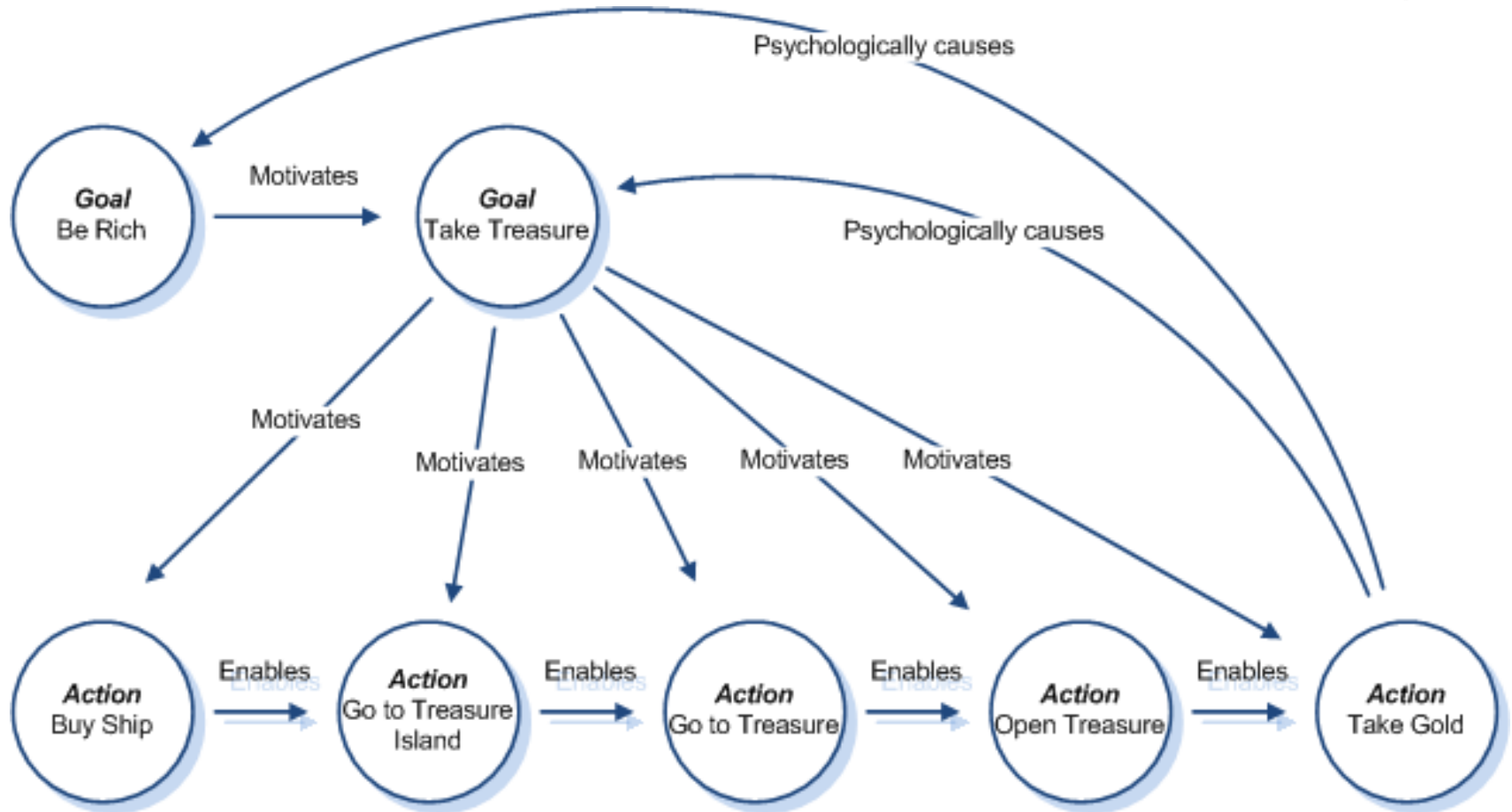
# Plot Agent



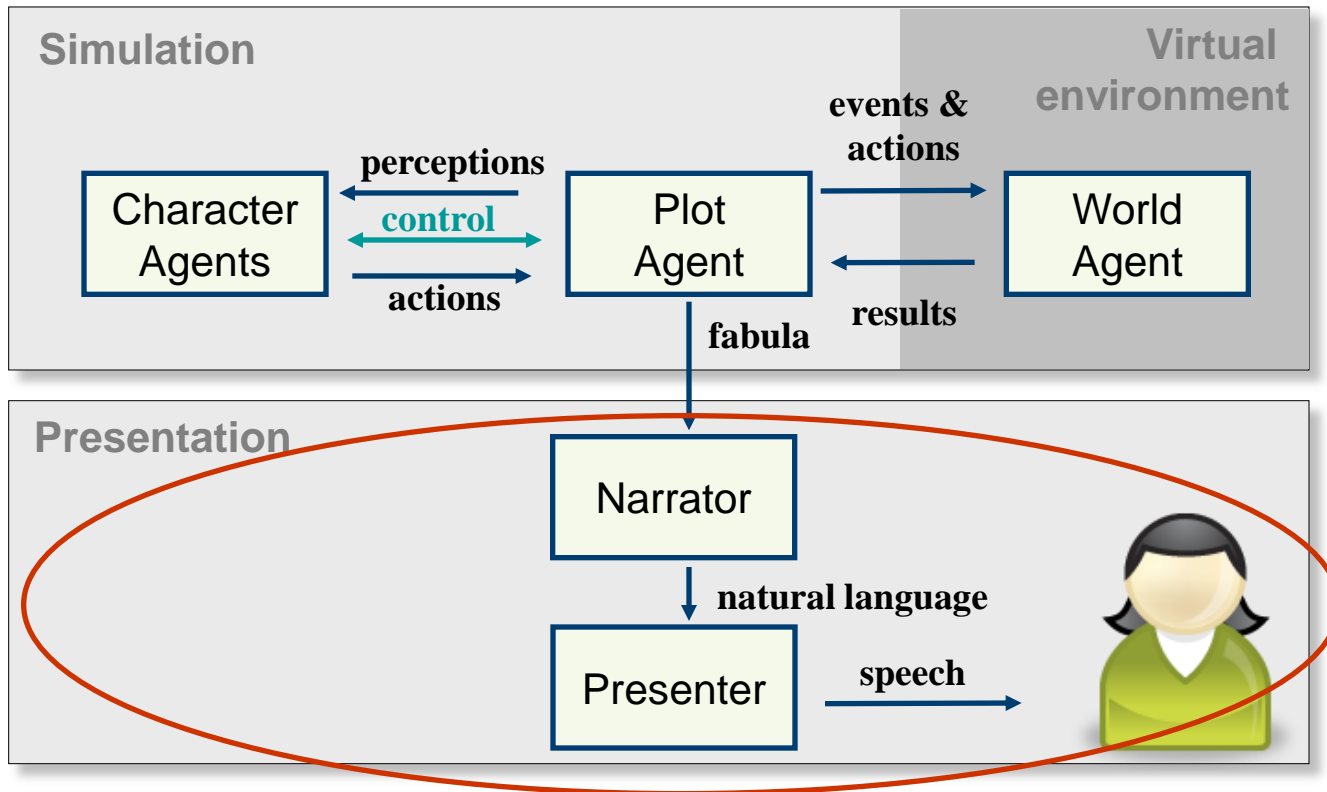
- Facilitate the simulation
  - Cast characters
  - Manage turns
  - Introduce events
  - Intermediate between characters and world
- **Collect & store fabula**  
(causal network representation of what happened and why)



# Example (simplified) fabula



# Presentation layer

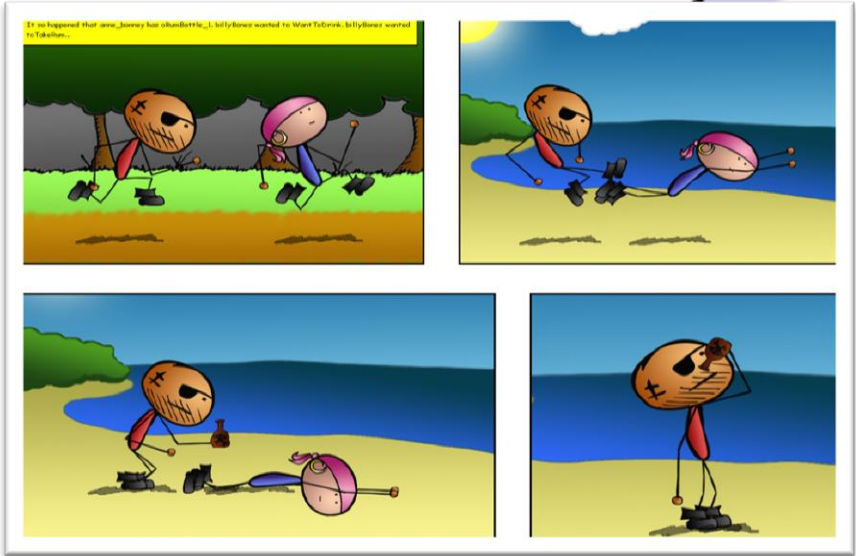
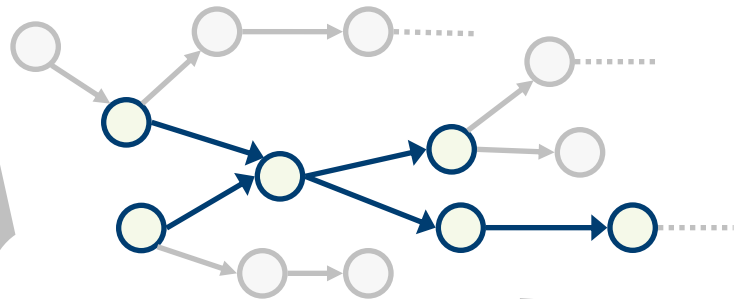




# Presentation

Comics generator

the virtual storyteller



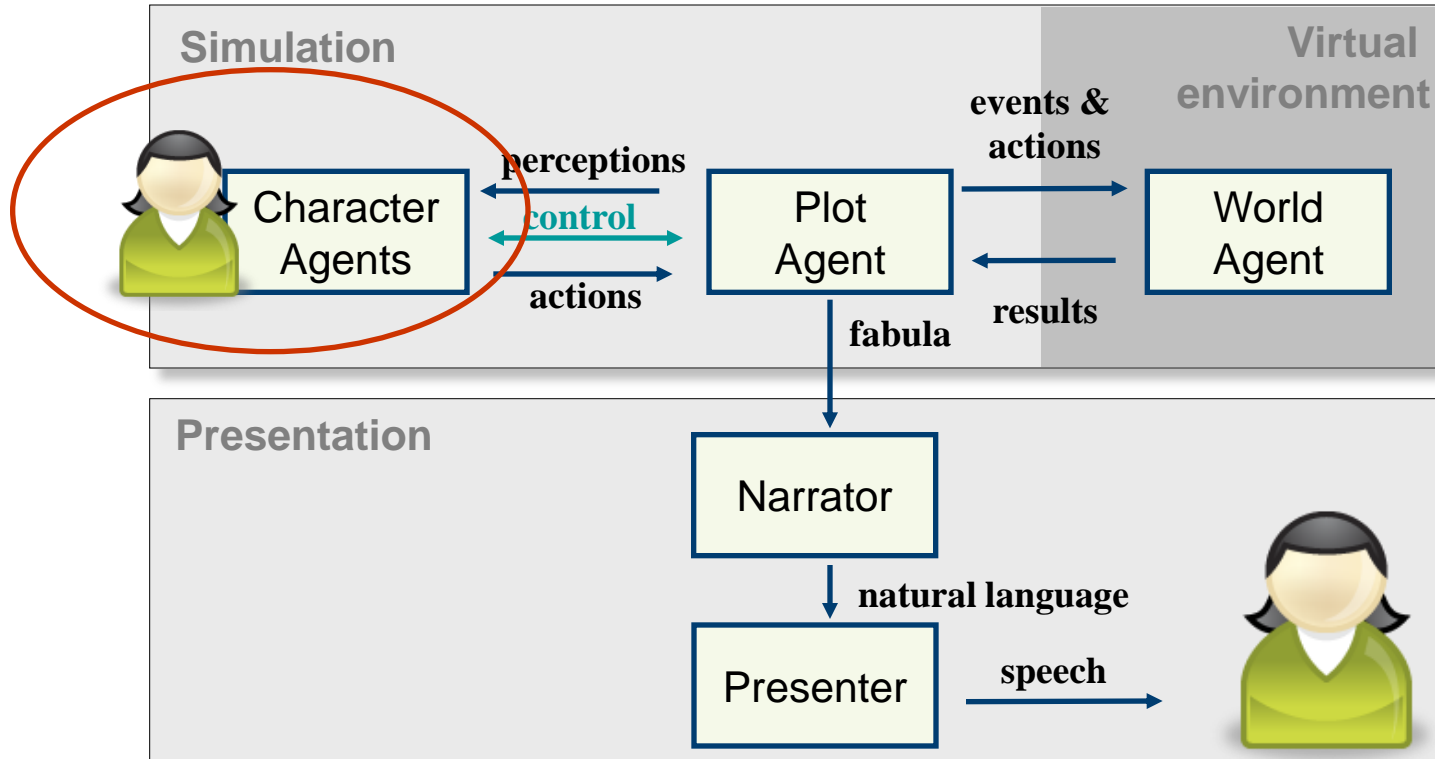
Narrator

*Billy Bones was thirsty and wanted to drink rum. Therefore he chased Anne Bonney. He kicked her and took the rum bottle.*

Presenter

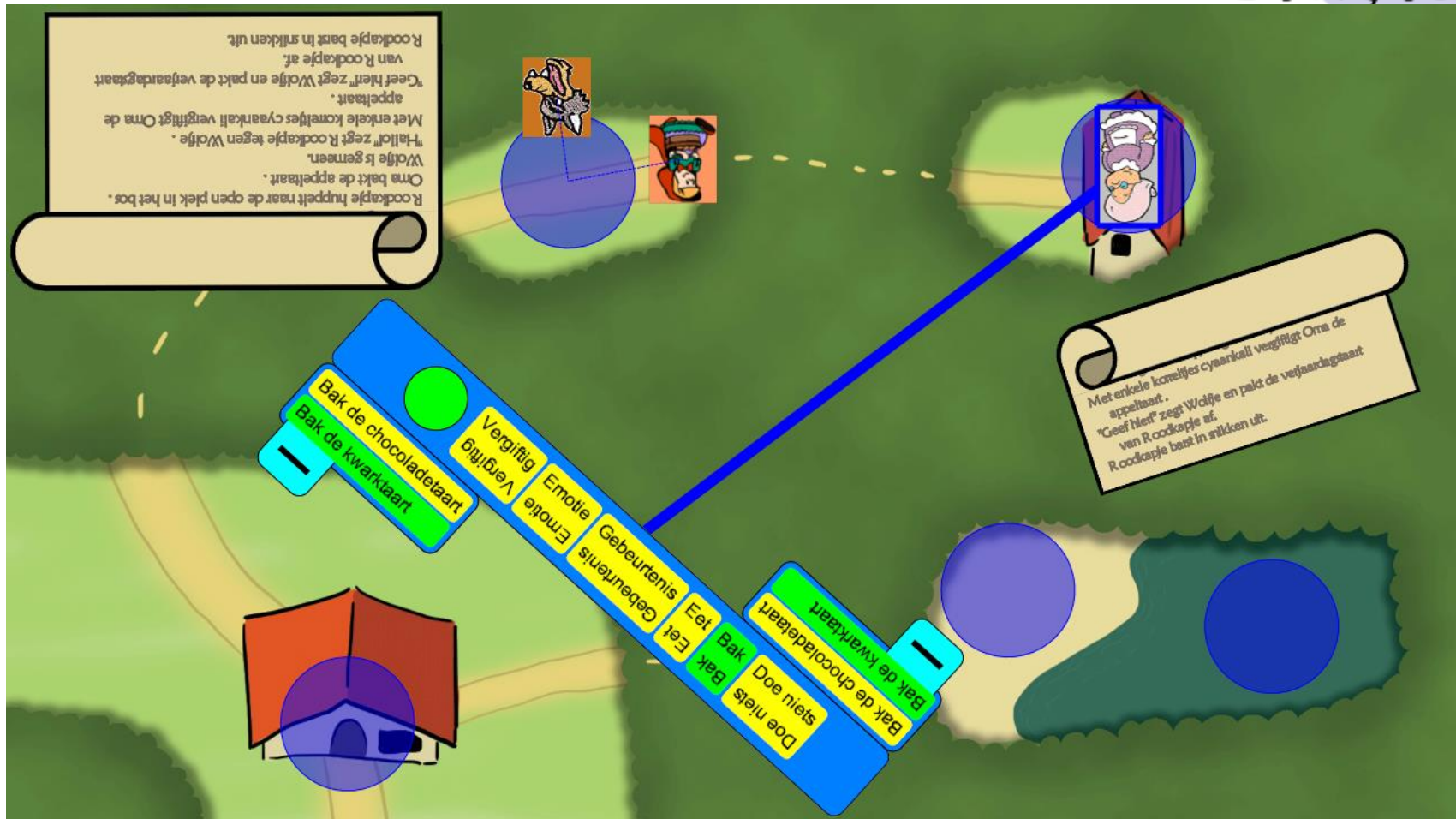


# Interaction / co-creation



# Interface

the  
virtual  
storyteller



# Children co-creating a story

the  
virtual  
storyteller



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# Now: serious games

the virtual storyteller

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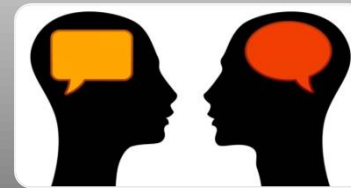
Awareness

Game

Environment

for Natural

Training



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T-Xchange

POLITIE

Politeacademie  
Police academy of the Netherlands

RE-liON

More information, publications and videos:

[www.virtualstoryteller.info](http://www.virtualstoryteller.info)

- Thanks to: Ivo Swartjes, Sander Faas, Sander Rensen, Feikje Hielkema, Nanda Slabbers, Koen Meijs, Jasper Uijlings, Joost Vromen, Niels Bloom, Edze Kruizinga, François Knoppel, Jasper Bragt, Pjotter Tommassen, René Zeeders, Thijs Alofs, Ferry Jonkman, Hans ten Brinke, Marissa Hoek, Jeroen Linssen, Thomas de Groot, Katri Oinonen, Dirk Heylen, Rieks op den Akker, Anton Nijholt and many others.



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