

Creativity in Story Generation From the Ground Up: Non-deterministic Simulation driven by Narrative

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ICCC 2014 - June 13th 2014 - Ljubljana

the idea

**RICH INTERACTIONS
PRODUCE GOOD STORIES.**






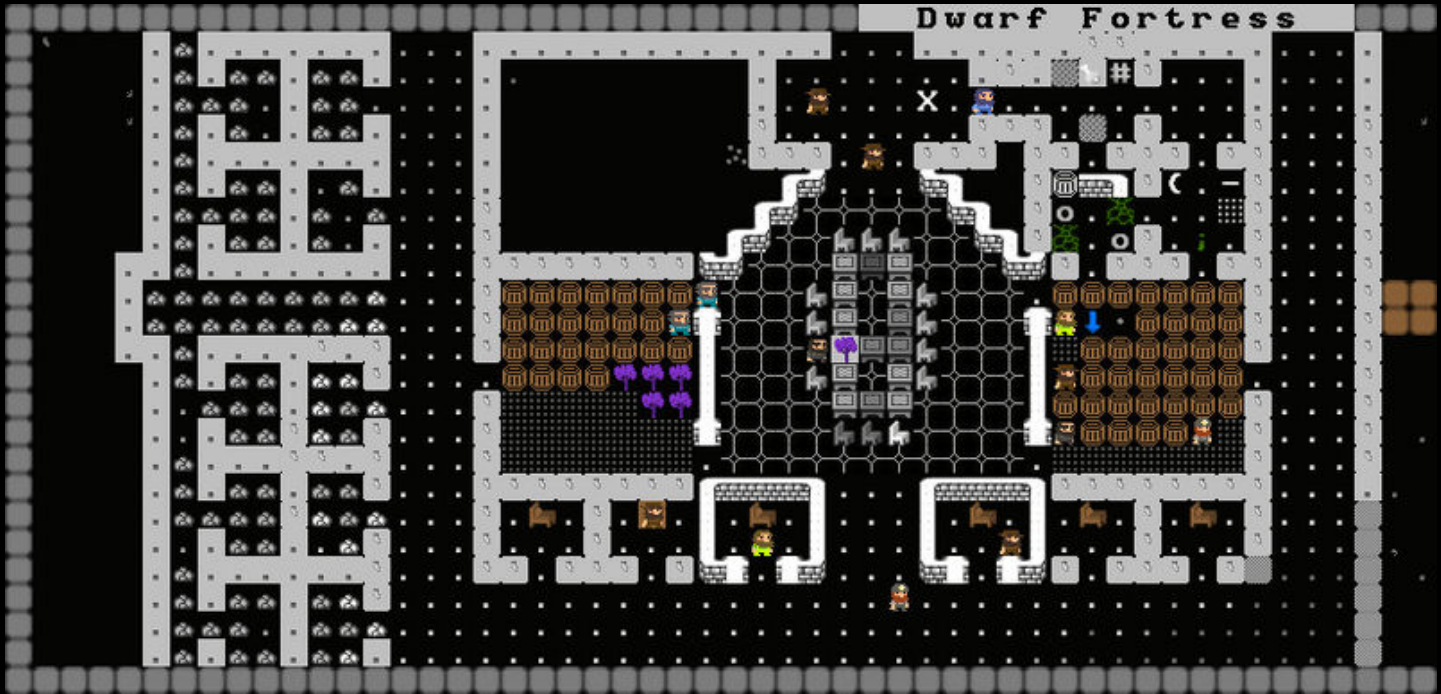
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MeldarthX

- ▶ these parts for a long time. Then adventurers were lured here by tales of riches to be found inside the old cathedral.
- ▶ Villager: New Tristram started when some traveling merchants decided to set down here to sell to the adventurers. It grew quickly...
- ▶
- ▶

 Villager
New Tristram started when some traveling merchants decided to set down here to sell to the adventurers. It grew quickly...





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New Nuremberg 68



PIONEER BUILDINGS

I

II Companies

III Fields

Service

Farm: Grows field crops and raises livestock.

currently

**HUMANS CREATE THE CONTENT
AND SELECT BEST CANDIDATES.**

the objective

**EXPLICIT COMPUTATIONAL
CREATIVITY
IN NARRATIVE GENERATION.**

the challenge

**HOW TO EXPLORE DIVERGENT
STORIES
AND IDENTIFY GOOD ONES.**

our solution (part one)

**RICHNESS:
NON-DETERMINISTIC
GENERATION.**

- for each state in the generation

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 - all possible next states are generated

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- for each state in the generation
 - all possible next states are generated
 - next states are generated by all combinations of
 - all deus ex machina events
 - » all character perceptions
 - all character desires
 - all character intentions
 - all physical results from all that

that gets you a lot of states

**IT IS EXHAUSTIVE AND SLOW
BUT IT IS COMPLETE.**

our solution (part two)

**CONTROL:
IDENTIFYING CANDIDATE
STORIES.**

- state probability

- state probability
- feature curves

- state probability
- feature curves
- generation constraints

- state probability
- feature curves
- generation constraints
- narrative objectives

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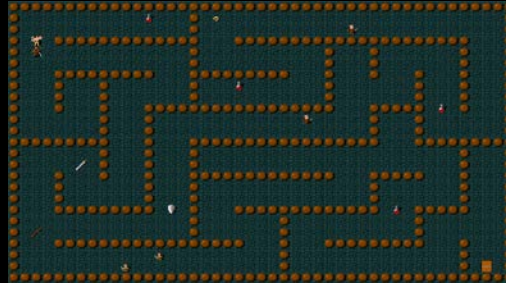
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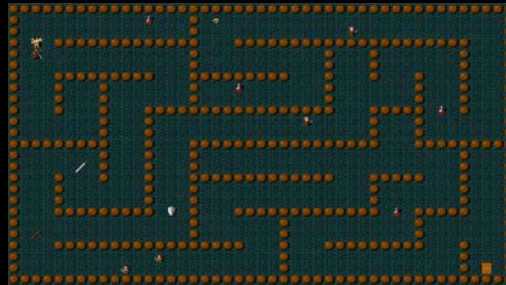


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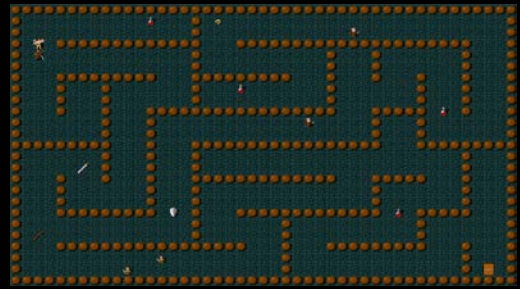


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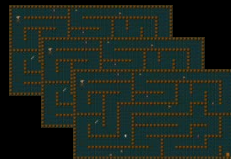
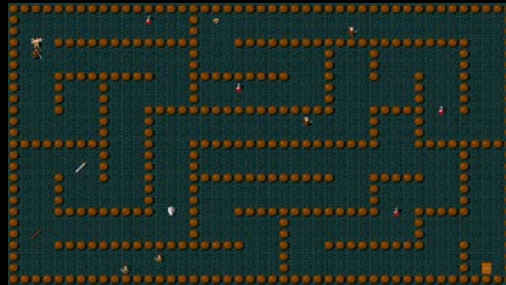


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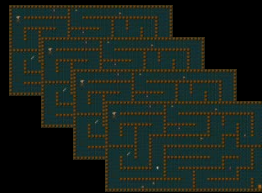
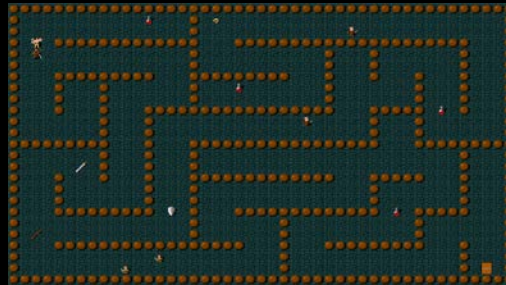


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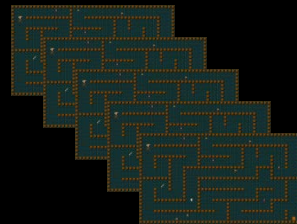
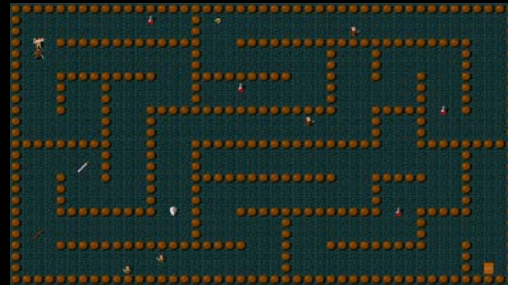


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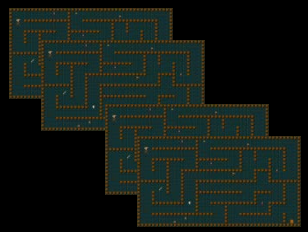
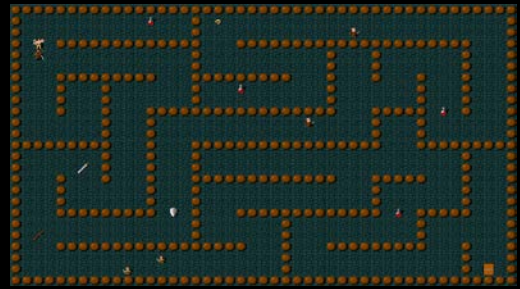


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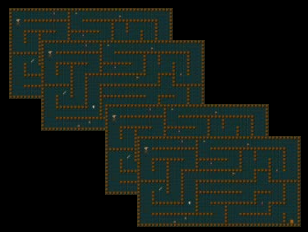
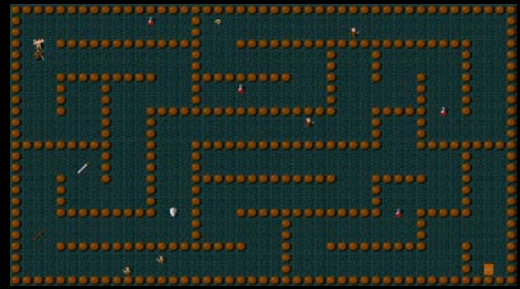


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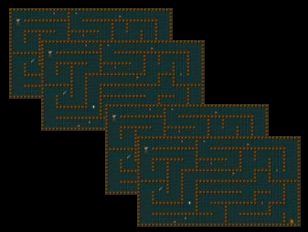
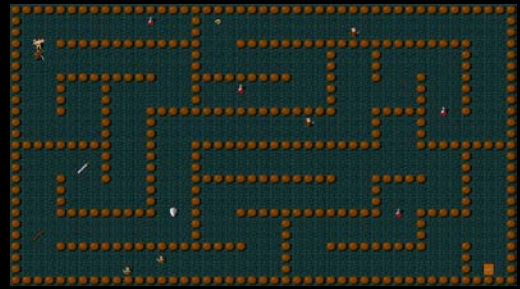
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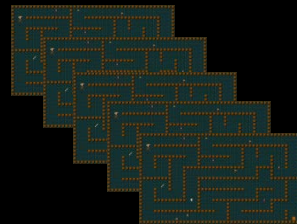
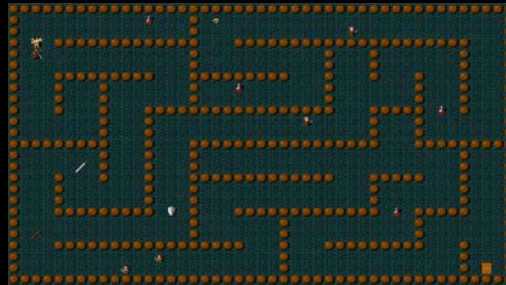


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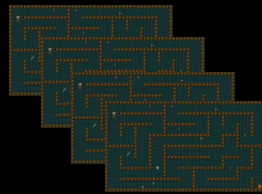
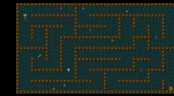
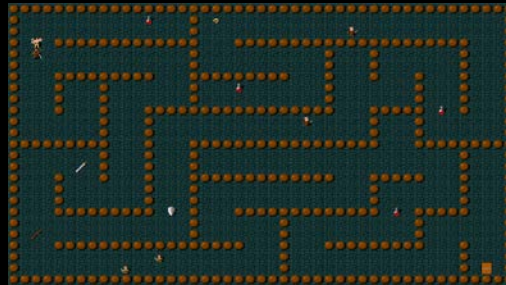


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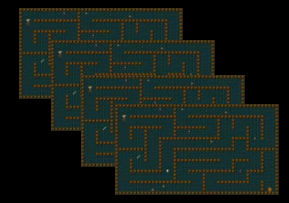
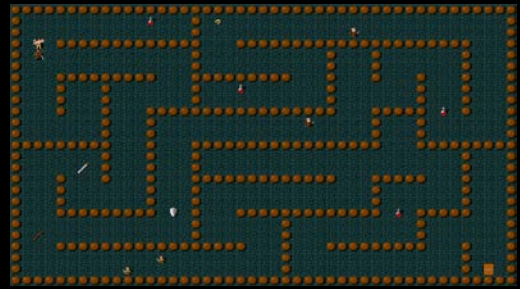


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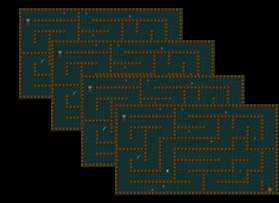
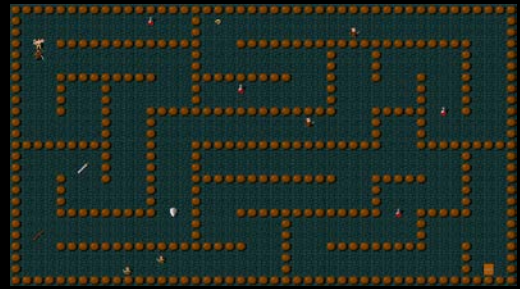
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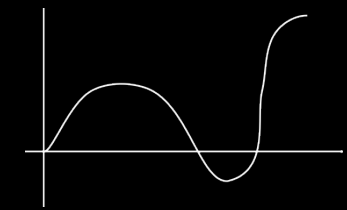
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is the mystery
solved?

feature evolves as
desired?



STeIIA DEMO.

Aragorn started to want to own the One Ring.
Boromir started to want to own the One Ring.
Pippin started to want to own the One Ring.
Merry started to want to own the One Ring.

Boromir started to dislike Aragorn.

Aragorn got to to take the One Ring.

The orcs started to want Pippin to die.
The orcs started to want Merry to die.
Pippin started to want to run away from the orcs.
Merry started to want to run away from the orcs.

Azog started to want Boromir to die.
Uglúk started to want Boromir to die.
Balcmeag started to want Boromir to die.
Aragorn started to want to protect Boromir.

Boromir started to like Aragorn.

Boromir got to to attack Balcmeag.
Aragorn got to to attack Uglúk.
Uglúk got to to attack Boromir.
Balcmeag got to to attack Boromir.
Azog got to to attack Boromir.

Balcmeag died.

Uglúk got to to attack Boromir.
Aragorn got to to attack Uglúk.

Boromir died.

Aragorn got to to attack Uglúk.
Azog got to to attack Aragorn.

Aragorn got to to attack Uglúk.
Uglúk died.

Aragorn got to to attack Azog.
Azog died.

some conclusions

**KNOWLEDGE REPRESENTATION
SETS A LIMIT.**

some conclusions

**QUALITY METRICS ARE HARD TO
FIND.**

WE ARE ON IT.

some conclusions

**WE MUST STUDY HOW
PROBABILITY
AFFECTS QUALITY AND
NOVELTY.**

the end