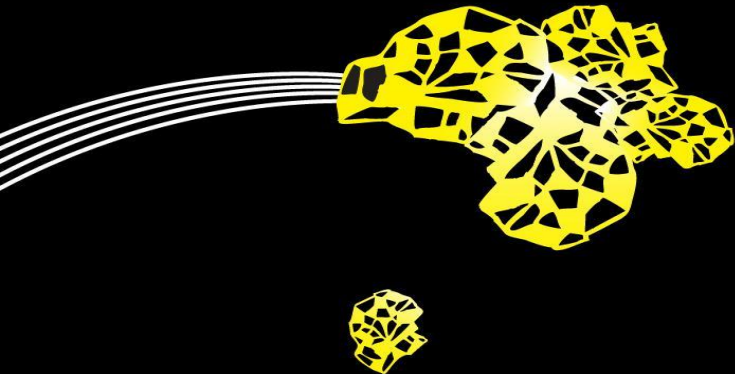


Increasing the Amount of Active Users on the Mastodon Server of the University of Twente by Designing and Developing a Multi-User Dungeon

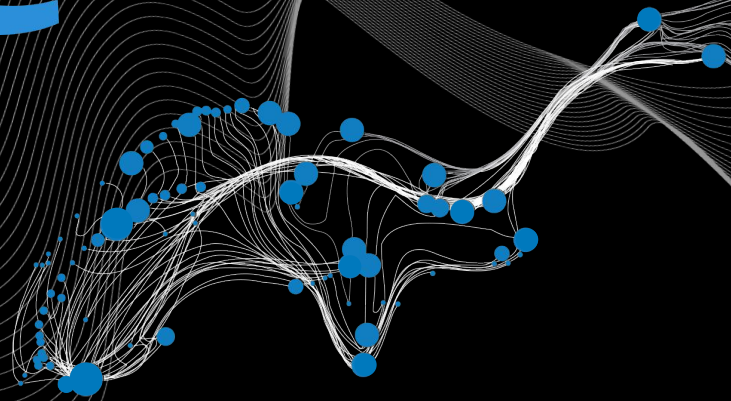
Kevin Booijink, Wouter Bos & Mathay Kahraman

Supervisor: Djoerd Hiemstra



Mastodon

- Social medium
- Open source
- Separate instances



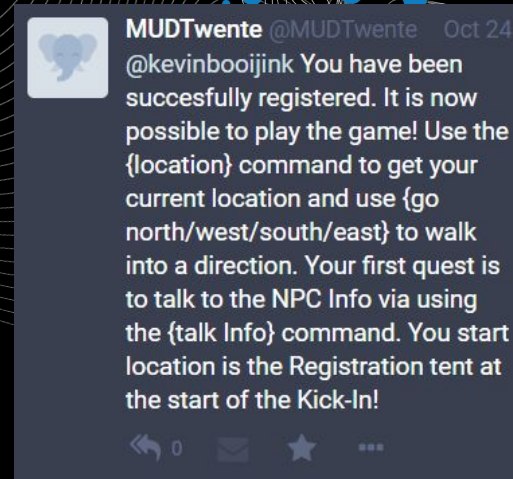
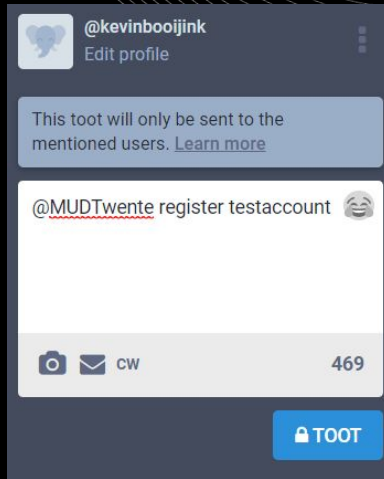
Multi-User Dungeon

- Text-based
- Adventure
- Predecessor to modern-day RPG

Project: Create MUD for University of Twente Mastodon

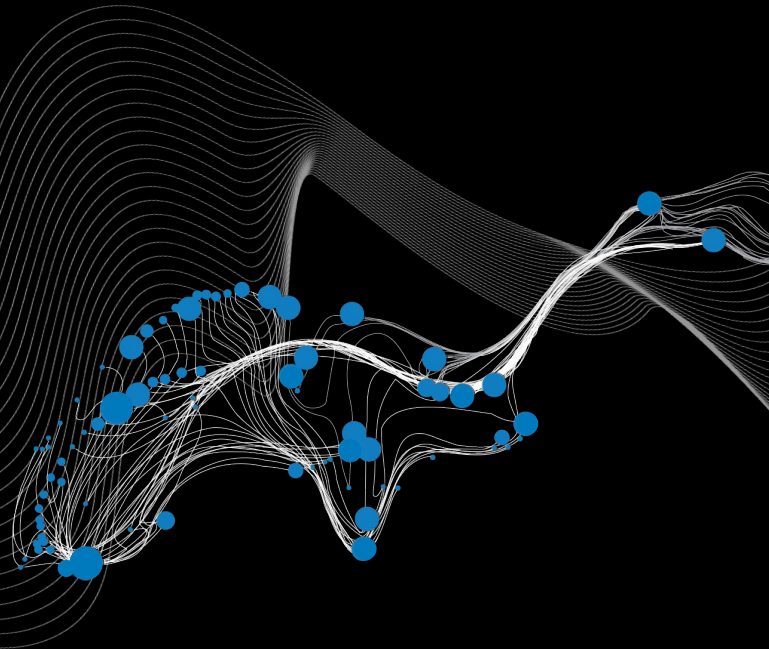
Front-end: Bot account on Mastodon

Back-end: Java application & Database



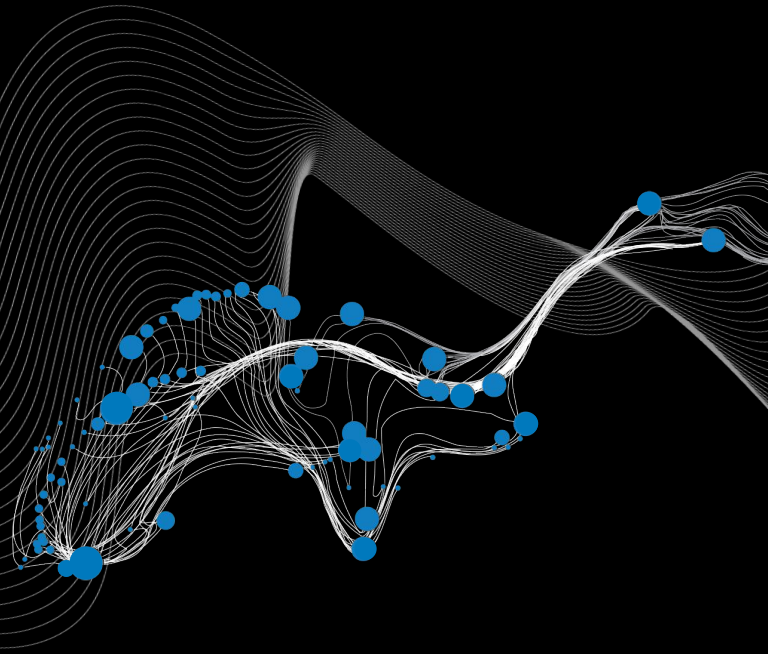
Demo

- <https://mastodon.utwente.nl>



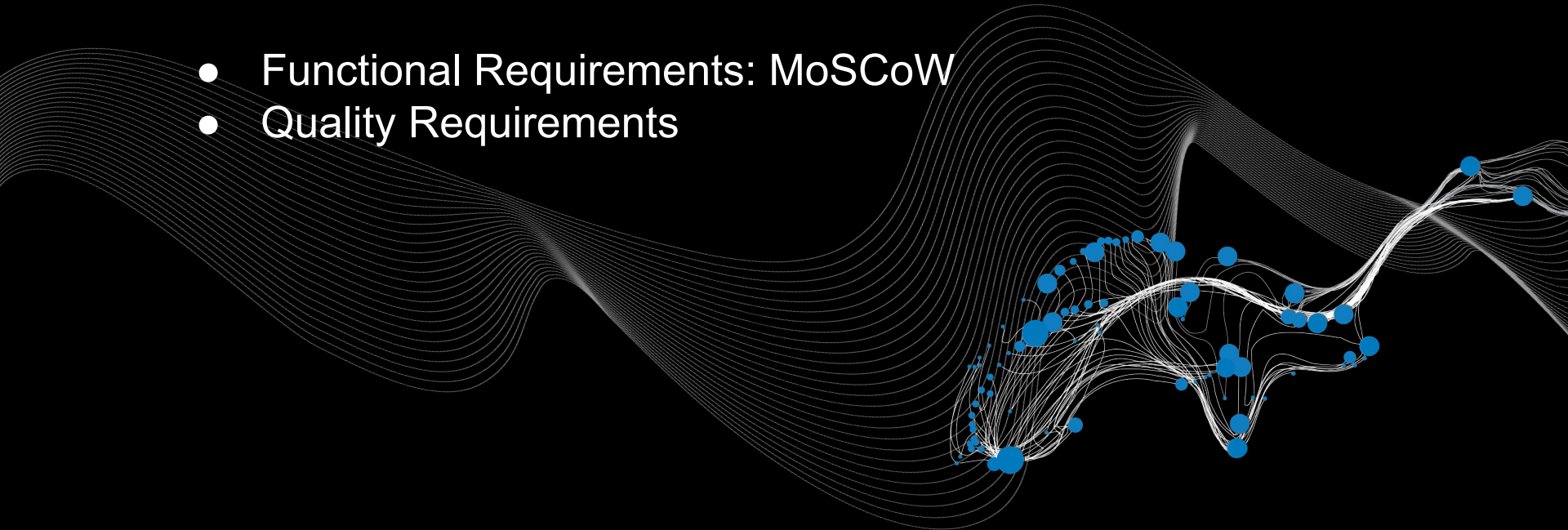
Numbers

- 48 locations
- 24 non-player-characters
- 21 different items
- 9 different enemies
- 6 shops
- 4 puzzles
- 4 songs
- 1 safe



Requirements

- Functional Requirements: MoSCoW
- Quality Requirements



MoSCoW - Must

- As a player, I must be able to walk around in a world with other online players
- As a player, I must be able to interact with the world
- As a player, I must be able to follow a storyline
- As a player, I must be able to solve puzzles or riddles by interacting with the world in a certain way and order

Approach

- Planning
- Agile
- Sprints (one every week)
- Releases (one every two weeks)
- GitLab

<http://git.snt.utwente.nl>

Realisation & Tools

- Java
- Mastodon
 - API
 - Library
- Maven
- Spring Boot

<https://github.com/tootsuite/documentation/blob/master/Using-the-API/API.md>

<https://github.com/sys1yagi/mastodon4j>

Realisation & Tools

- Hibernate
- Flyway
- Lombok
- SonarQube / SonarLint

<http://farm15.ewi.utwente.nl:9000>

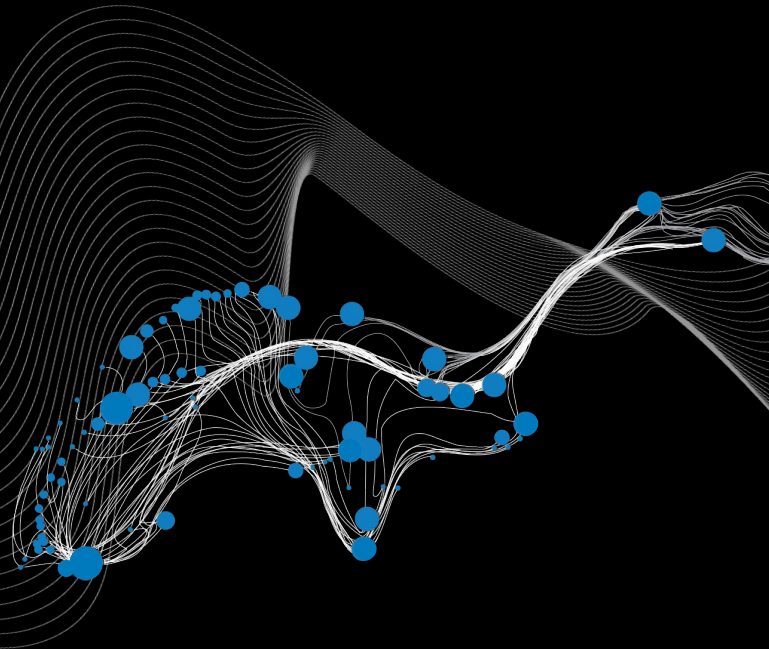
Testing

- Unit Tests
 - Mockito (338 tests)
 - JUnit (73% coverage)
 - Jacoco
- Integration Tests (3 tests)
- Usability Tests (5 respondents)

<http://farm15.ewi.utwente.nl:8080>

Future Work

- Extend storyline
- Multiple characters
- Player versus Player
- Multiple universes
- Events



Questions

