

# Human-Centric Computing

Group project: Design

Lingyun Yu

# Keywords

- Group project
- 10% of the final marks
- Submit your PPT in learning mall at least one day before the presentation (name it as PresentationID\_GroupID\_PresenterName.ppt, such as Pre1\_Group1\_LingyunYu.ppt)

# Presentations

- Five presentations (each one 10 mins, 20 points)
  - Introduction
  - Low fidelity prototypes
  - Design principles
  - Visualization and interaction
  - Evaluation

# Two possible topics

- An interaction technique
- An interactive visualization system

# Spatial interaction techniques

- Touch sensitive devices
- Tangible devices
- Mid-air gesture-based interaction devices
- Hybrid interaction techniques

# Spatial data exploration tasks

- 3D manipulation (rotation, translation and scaling)
- Navigation
- Selection
- Annotation
- 3D visualization widgets manipulation.

# Spatial interaction techniques

Multi-mouse

Wiimote

Kinect

Touch screens  
(big, small, both)

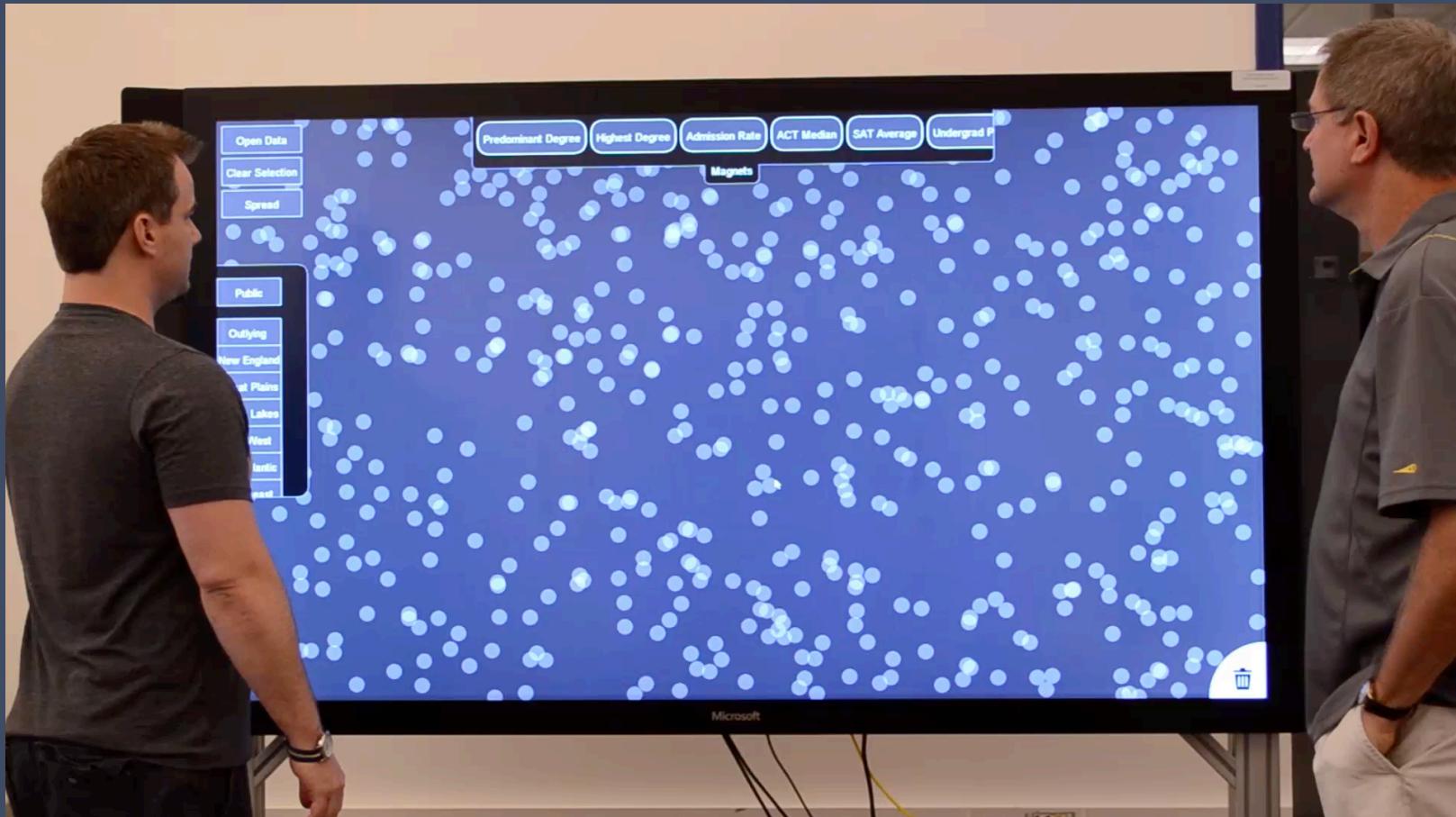
Pen  
interaction

Mid-air  
interaction

AR / VR

# Touch screen

- Dust & Magnet

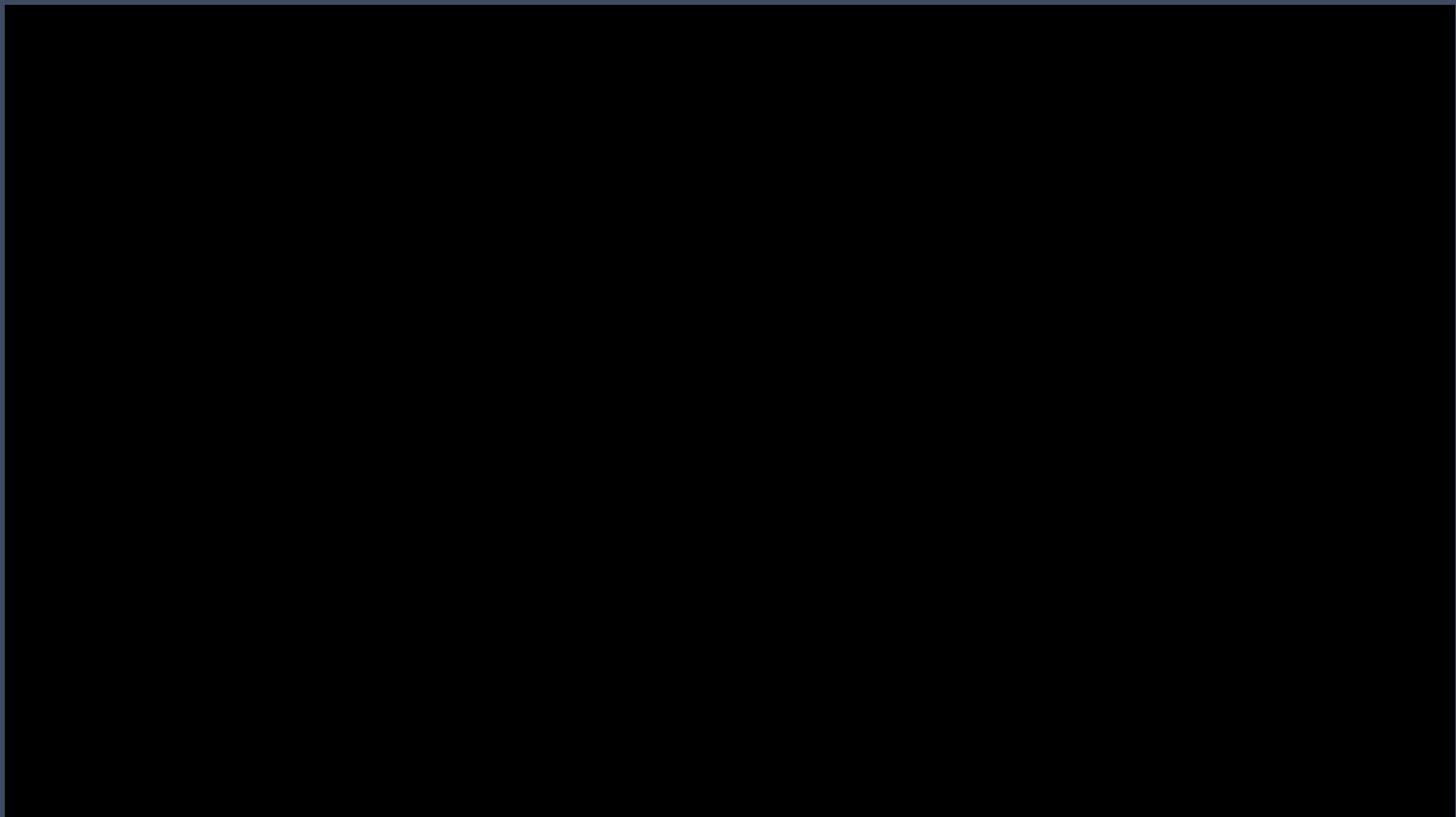


# Touch screen



# Mid-air interaction

# Mid-air Interaction



# Ideas for Novel Interaction Projects

## VR / AR

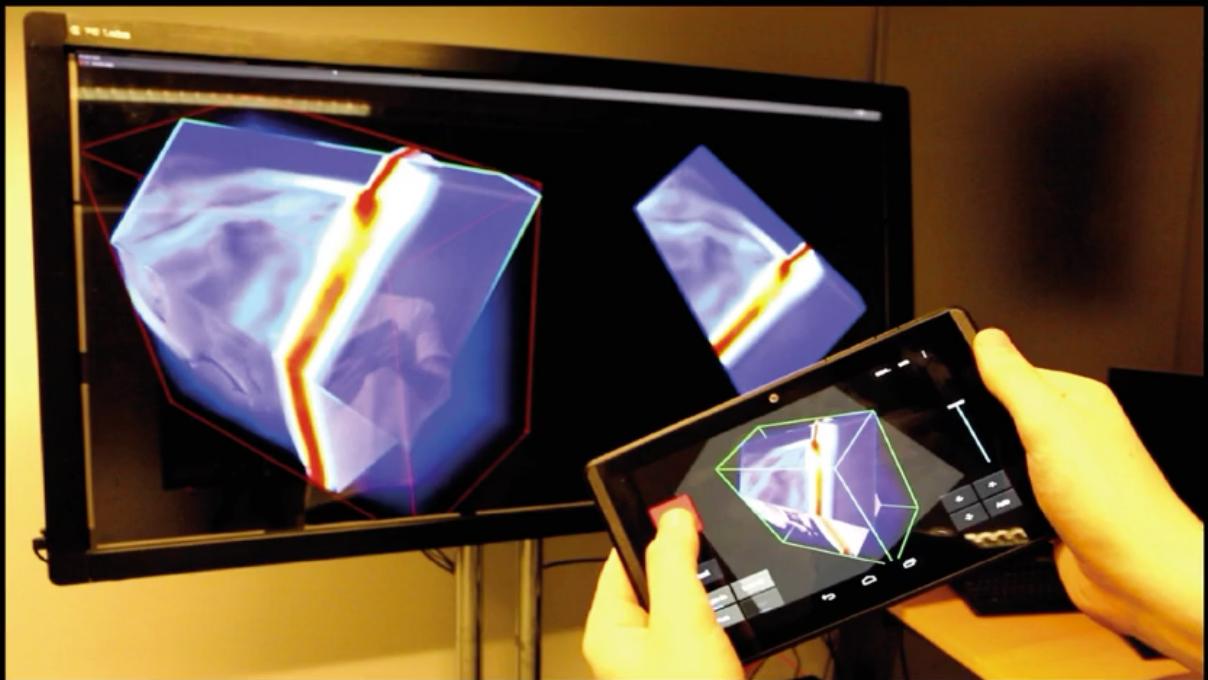
- Use VR / AR devices to interact with 3D space / objects.



# Hybrid Interaction

## Hybrid Tactile/Tangible Interaction for 3D Data Exploration

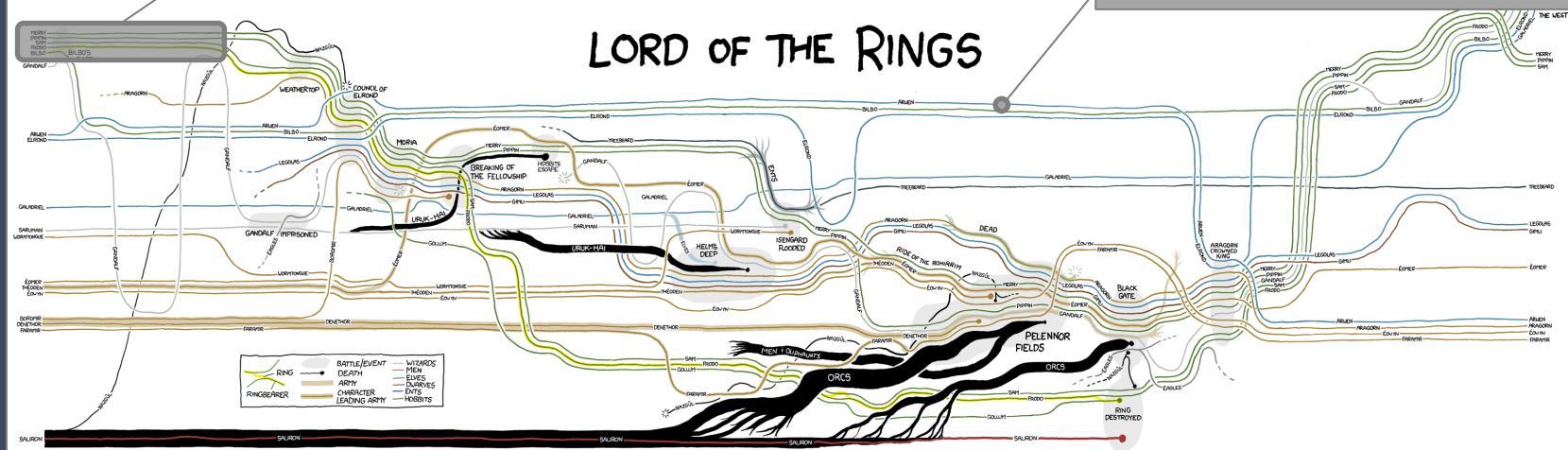
Lonni Besançon  
Paul Issartel  
Mehdi Ammi  
Tobias Isenberg



# An interactive system

The vertical group of lines indicate who are together.

Each line represents one character.



The horizontal axis is time.

R. Munroe 2009

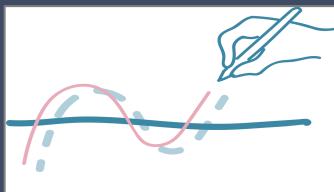
# iStoryline

- iStoryline is established on the state-of-the-art automatic method - StoryFlow.

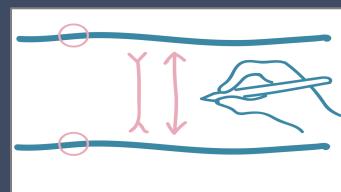
## Interactions



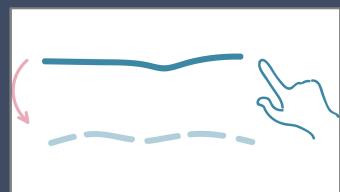
Bending



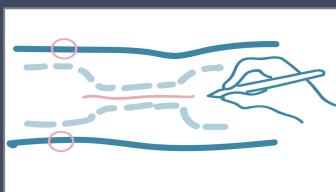
Curving



Scaling

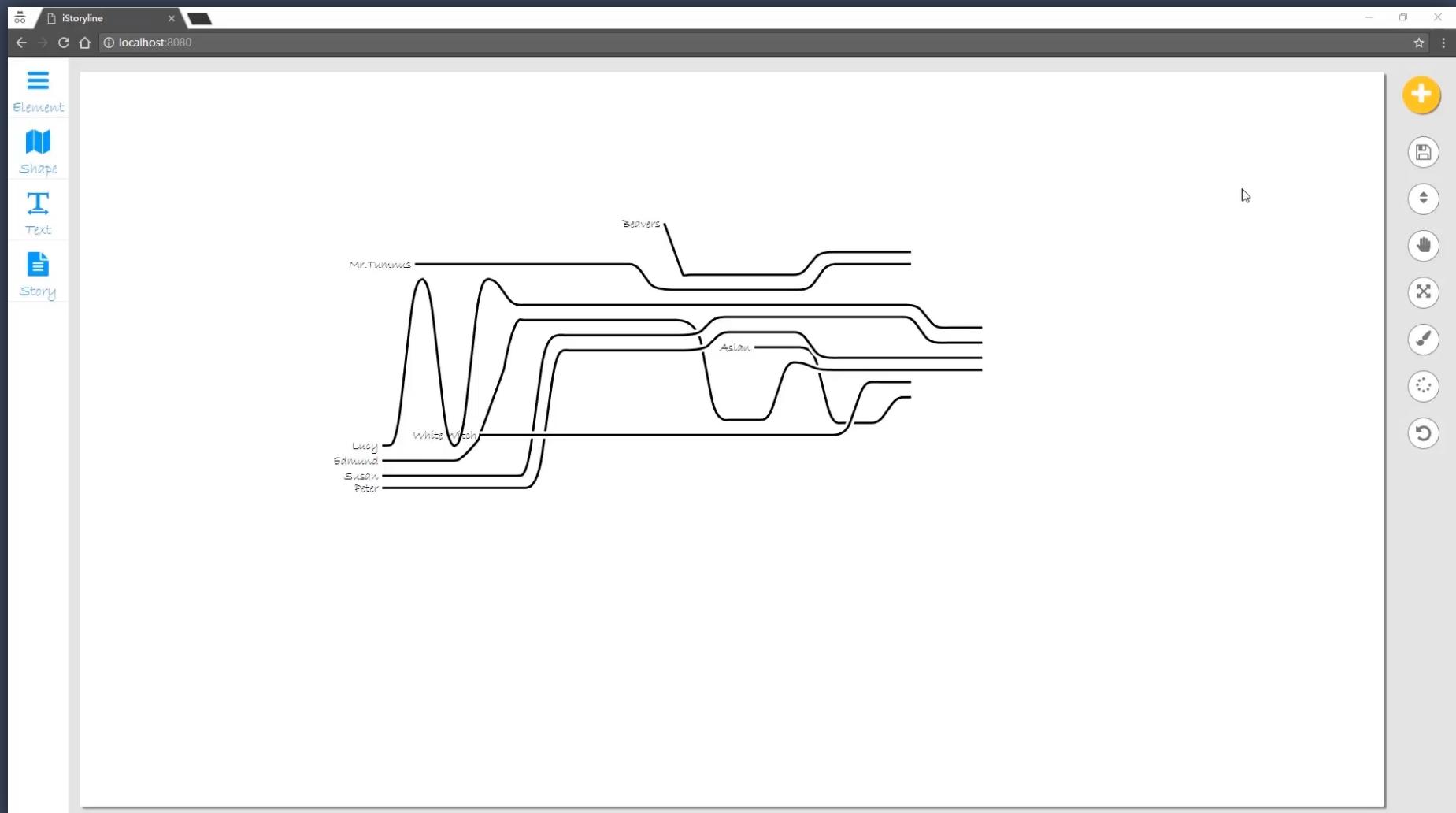


Shifting



Linking

# iStoryline: an authoring tool



# Previous students' work

# The first presentation

- March 19
- in this presentation, you are going to:
  - present the topic of your project. 4 points
  - discuss the issues in the existing work. 8 points
  - discuss how these issues will be potentially addressed in your work. 8 points