Augmented Reality (AR) Navigation System for Commercial Spaces

Software Projects - Group 14

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Motivation

- ▶ Lack of maps and signage in museums.

- ▶ Old technology currently in use, e.g. portable audio guides

- ▶ Various applications to other scenarios, e.g. supermarkets or libraries.
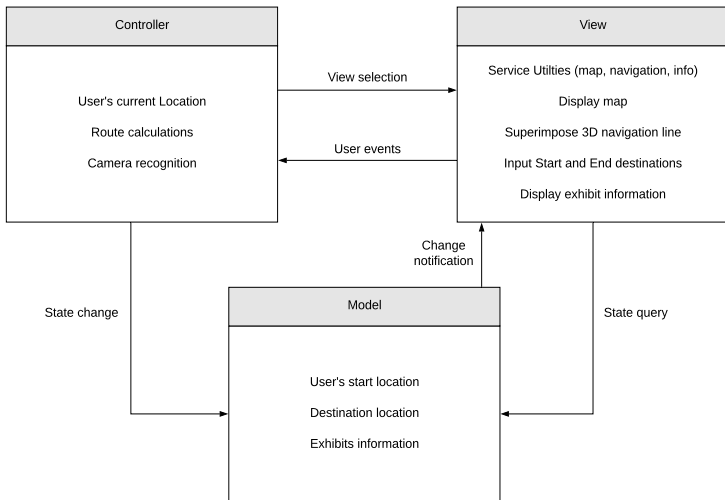
Scope

▶ Display navigational routes in real-time.

▶ Calculate the shortest route to the user specified location.

▶ Use AR to enhance user navigation routing.

Design

- Android Prototyping

- User flow diagrams

- Model-View Controller

Use Case Model
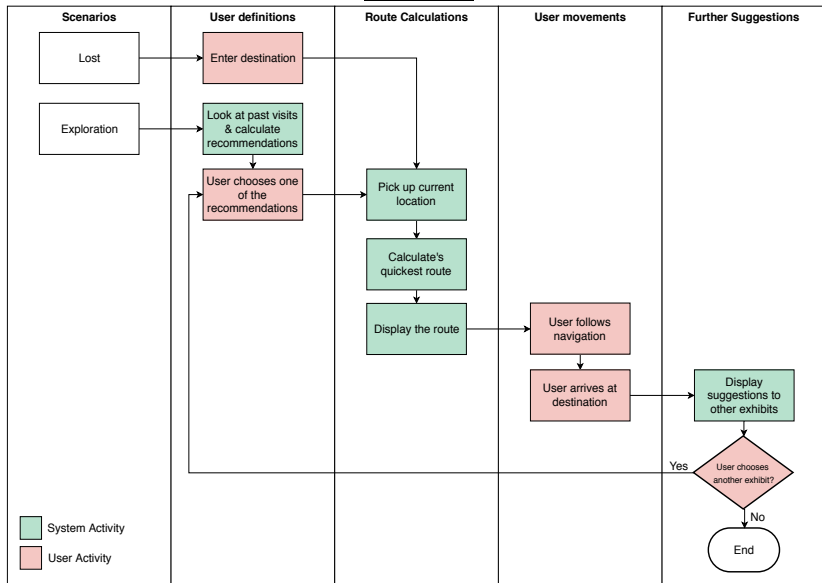
Model-View Controller

Development Process & Testing

- ▶ Used Agile/Scrum instead of Waterfall

- ▶ 4 Sprints Conducted

- ▶ TDD approach
    - ▶ Unit
    - ▶ Integration
    - ▶ Regression
    - ▶ Performance & Stress
    - ▶ User Acceptance (UAT)

Outcomes
Sprints Conducted

▶ Arduino hardware construction and Bluetooth

▶ Navigation using A* path-finding algorithm

▶ AR: Rendering objects on screen

Evaluation

- ▶ High technical standard in the back-end

- ▶ Very "agile" in moving things between sprints to accommodate changes

- ▶ Good feedback from industry professionals and users

- ▶ Executed plans as of our proposal according to stakeholders and user requirements

Questions?