Design and Implementation of a Mobile Exergaming Platform

Ritsumeikan University [Kyoto, Japan] & University of Applied Sciences of Western Switzerland (HEIG-VD) [Yverdon-les-Bains, Switzerland]

Introduction

- Interactive entertainment systems traditionally offer a limited choice of user interface technologies and interaction styles that make little use of the human body and require low physical exertion.

- In Japan, excessive interest in entertainment media, including video games, is a contributing factor to social phenomena such as the *otaku* and *hikikomori* .

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Mobile Exergaming Platform (MEP)
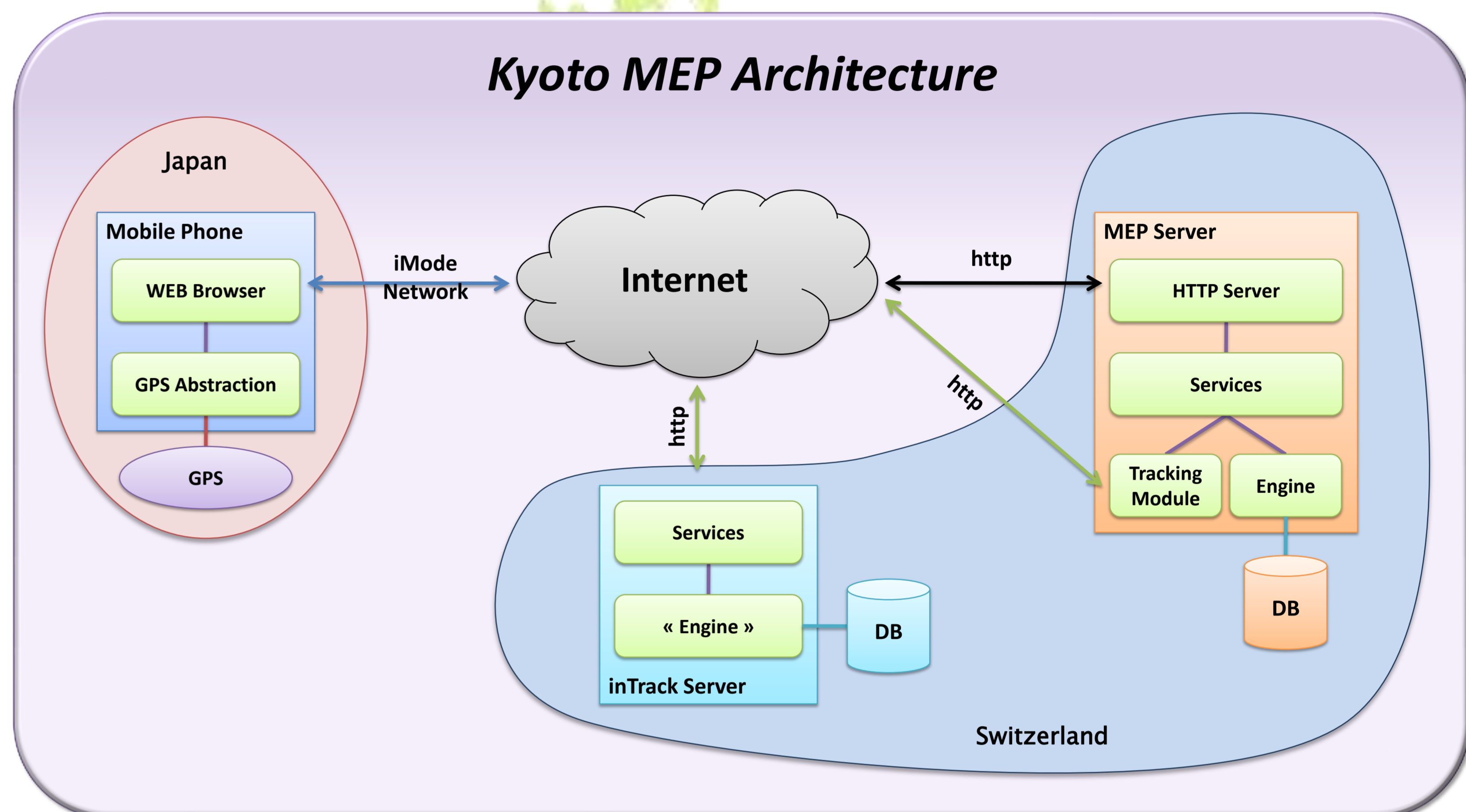
Major elements:
- Players
- Non Player Characters (NPC)
- Quests
- Items (Inventory)

Mini games (Quests):
- Reaching a target location
- Collecting items (virtual object, real localization)
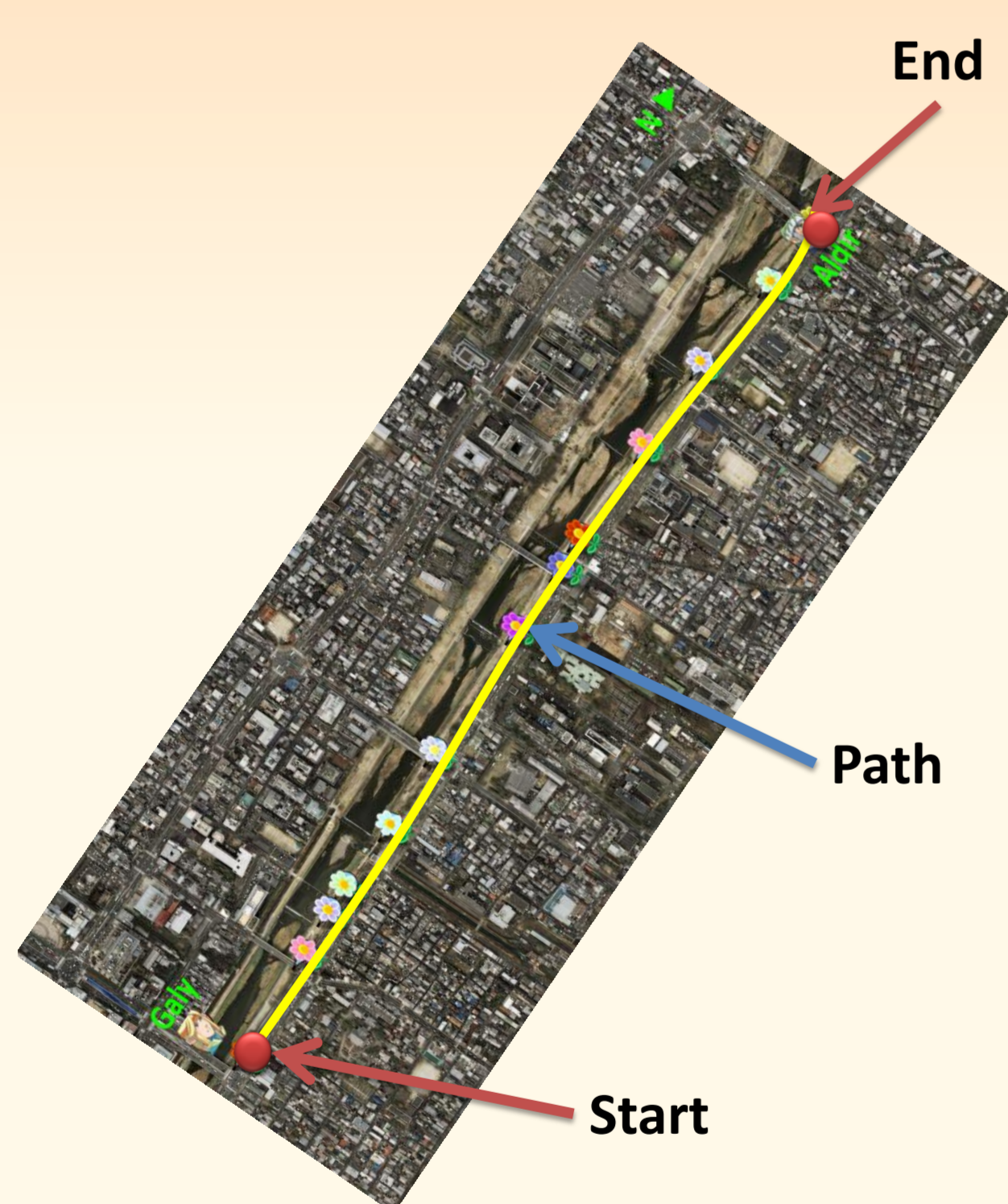- Solving a rebus (picture puzzle, multi-player)
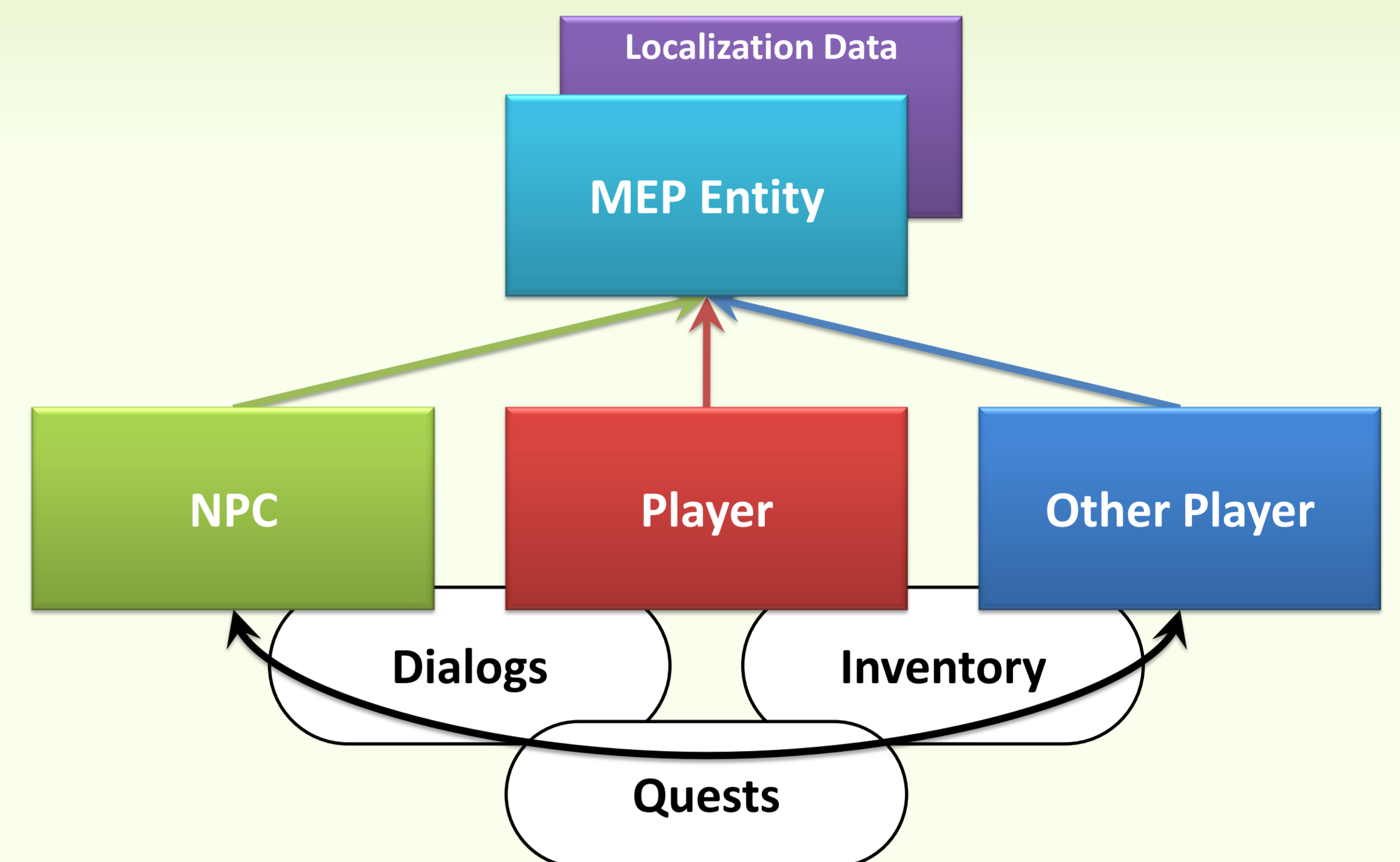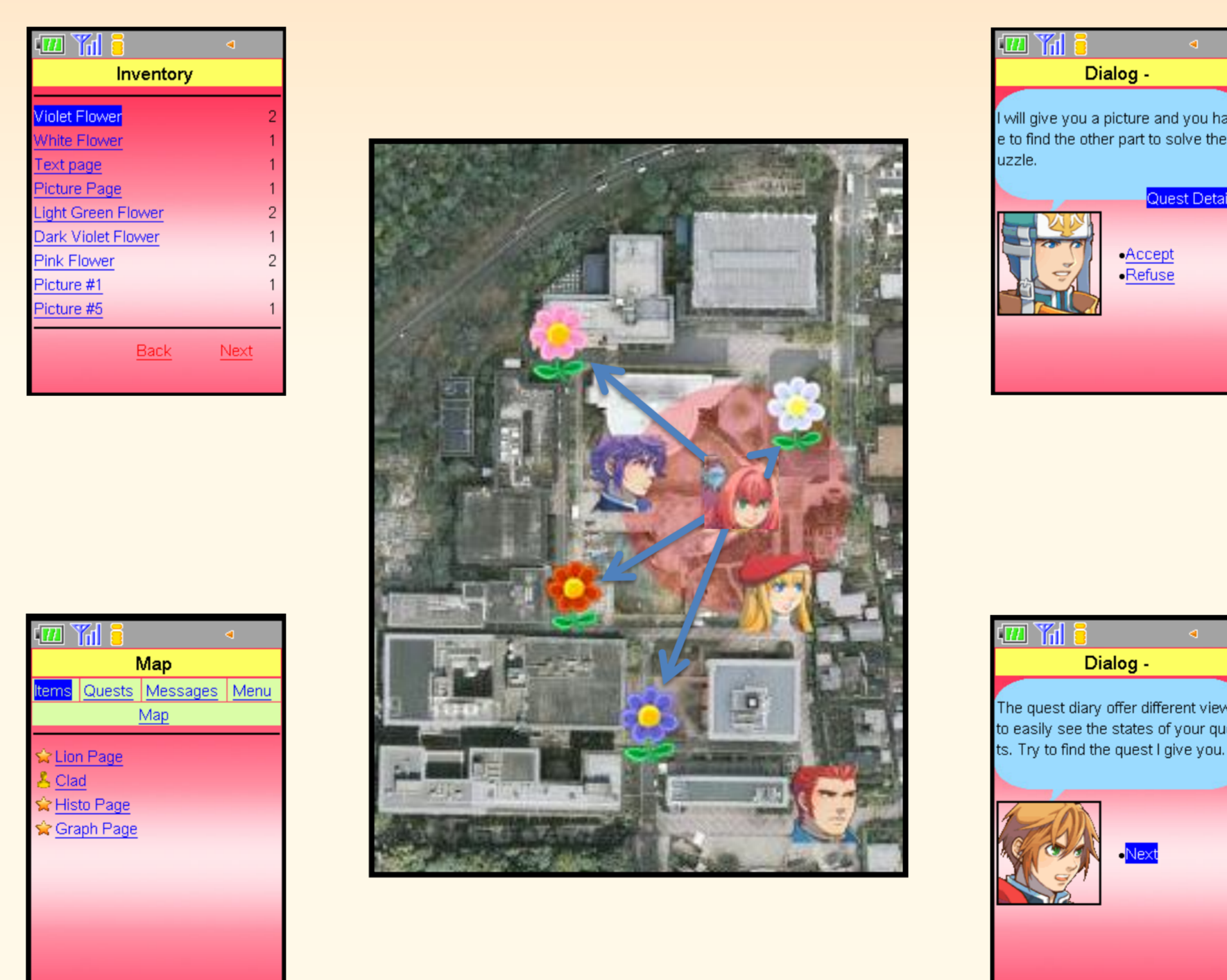

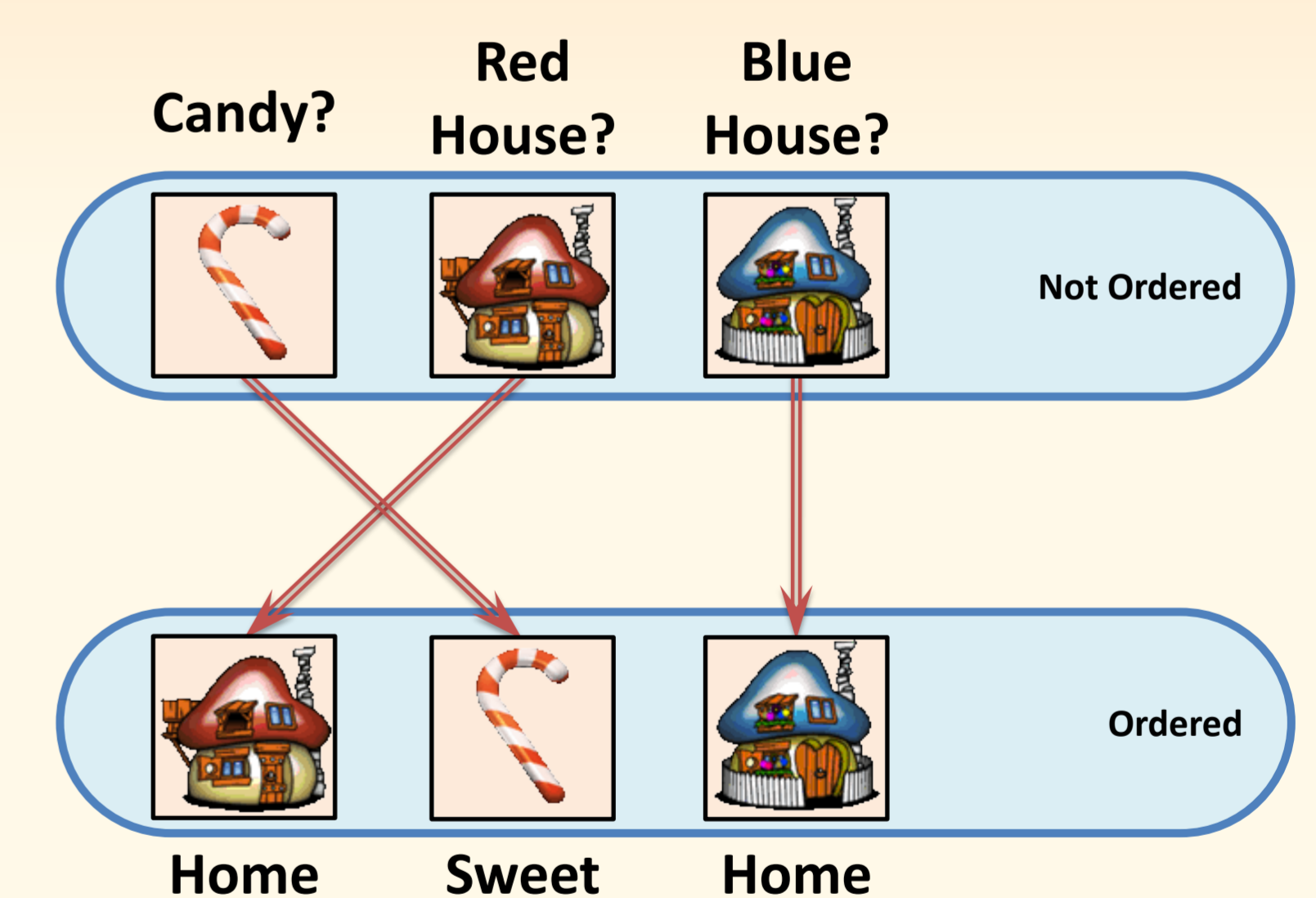## Kyoto MEP Architecture

Samples of Game Design Elements

Finding a specific location

Interaction with virtual elements

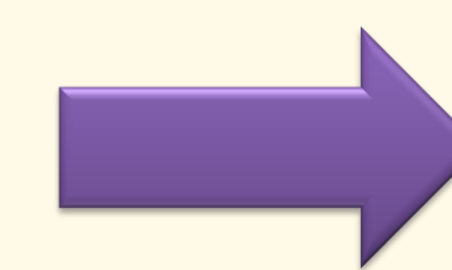### Cooperative activity: solving a rebus for three players

Interaction between players
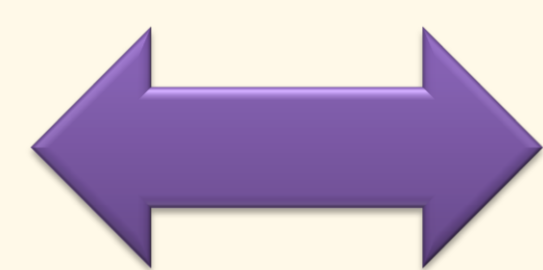
BoyCow? — **discussion** — **Cowboy!!!**

Conclusion & Future Work

- Use inTrack, a middleware platform developed at HEIG-VD to facilitate the development of Location-Based Services.

- New platform to create and manage quest based games in geo-localized context.

- User friendly authoring tool is required to provide easier method for the creation of new content.

- Implementing new quest types to improve the user experience and real life interaction between players.

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