Community-based immersive 3D-video
learning games in Streetview
Dr. Roland Klemke
StreetLearn - Background

- Game based Learning
- Open Educational Resources
- Mobile Learning

StreetLearn
Open Educational Resources
e.g. MACE Project

Situation:
Contents available, but:
- What is the learning scenario?
- How to involve learners?

Quelle: http://www.mace-project.eu
Game-based Learning

Confucius (500 bC)

"Tell me and I will forget,

Show me and I may remember,

Involve me and I will understand ..."

with Pulse!!!
Game-based Learning

Immersive learning, but high modelling costs for:
- 3d environments
- Game logic
- Learning content
Mobile Learning / Augmented Reality

Authentic learning situations, but
- Effort for mobile field trips
- Limited application scenario
- Not all players can be outside

Quelle: Specht 2009
Is it possible to create a 3D learning game with freely available technologies / contents at low modelling cost?
The Concept

Use Google Streetview and the real world as a playground for interacting with virtual items in location-based games
Features

- Based on Google StreetView
  - Streetview widget
  - Streetview API
- Interoperability with published google maps
- Switch between street and map view

Basic game engine
- Walking
- Finding
- Content access
- Taking / dropping
- Conditional activities
- Quizzes
- Persistent actions
- Player interactions
Benefits

• Low modelling costs due to existing environment
• Open API for content and application logic
• Integration with the real environment
• Easy to handle for teachers and students
Results

• Small scale evaluation performed with students from cultuurwetenschappen
• 6 students (3 on-site, 3 remote)
• Game-play scenario: police story in the Amsterdam Grachtengordel
• Learning objective: Grachtengordel as world cultural heritage
Next steps

• Use results as input for upcoming proposals
  – Creativity in learning
  – 3D environments for Science, Technology and Math
• Create a public showcase
Thank you!
Dr. Roland Klemke
Center of Learning Sciences and Technology
Open Universiteit Nederland
Roland.Klemke@ou.nl