Development of a 3D e-Tourism environment

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Tourism & Information Technology

- Number of booking platforms increases steadily
- Internet: main source for information gathering
- Tourists exchange their travel experiences and document their trips in online tourism communities
- Tourism demonstrates the importance of emotional aspects in commerce
- A tourism product can not be tested in advance, it is a confidence product
3D Virtual Worlds

- Realistic and immersive experience
- Implicitly address social interaction
- 10 Million people regularly connect to online 3D virtual worlds
- Example Second Life
Project Itchy Feet

• With “itchy feet” we provide a 3D e-Tourism environment
  – for providers and consumers that enables versatile interaction between participants including the trade in tourism products.
  – that is information-rich and multimedia-based to offer transparent and unified access to disparate information sources.
  – that uses 3D virtual worlds and agent technology to create a lively community and provide insights on the interaction between humans and agents
The Framework

- Based on a three layered architecture
  - 3D Virtual World
  - Middleware
  - Multi Agent System
- Use Multi Agent System to secure the environment and validate all tourist’s actions
- Every tourist is the principal of an agent
Some Challenges

• Causally connect the 3D Virtual World with the Multi Agent System
  – guarantee a causal relationship
  – timing constraints

• Human Computer Interaction
  – visualization of agents, human-agent communication
  – integration of heterogeneous information source in a single coherent interface
  – 3D product presentation, 3D location presentation
Hypotheses

• H1: Tourists quickly become familiar with the environment
• H2: Tourists are better informed about the product
• H3: Tourists reach a buying decision more easily than through traditional channels
• H4: Software agents simplify the information search
• H5: The regulation of the environment with the Multi Agent System does not affect the usability
Thesis Objectives

• Develop a framework for the connection of the 3D Virtual Worlds with the Multi Agent System
• Develop agents that provide tourism services within the environment
• Design a 3D Virtual World with replications of tourism products and destinations
• Conduct a usability study and evaluate the usability and acceptance of the prototype
• Evaluate the hypothesis with the usability study
Timeline

Requirements Analysis & System Design

Implementation 1st Prototype

Evaluation of 1st Prototype

Further Requirements Analysis

Implementation 2nd Prototype

Evaluation of 2nd Prototype

Usability Study

Thesis Writing

0 4 8 months

4 12 8 months

12 13 2 months

15 15 8 months

23 1 3 months

27 32 5 months

ENTER 2008 Research Track
# Team

<table>
<thead>
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<th>Role</th>
<th>Research Area</th>
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<tbody>
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<td>Project Manager</td>
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The End

Questions?