

Solving the “*Navigation Problem*” in Ambient Intelligent Landscapes

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Motivation

- Navigation Problem
 - People use maps and signing to guide in exhibition areas in order to find what mostly interests them
 - Not that easy for big areas/exhibitions e.g.:
 - London
 - London Zoo
 - British Museum



Project Aims / Objectives

- Record and Analyze user navigation patterns
- Patterns observed in ubiquitous computing systems
- Test Case: Getting and analyzing user trails for The London Zoo



London Zoo: Test Case

- User tracking with GPS receiver
 - Data collected in SQL database
- Interested in
 - Where
 - When
 - How long



Expected Output

- Statistics
 - Most popular routes
 - Places that most users find interesting
 - When does that happen
- Validate The Statistics
 - Prediction
- Why these patterns appear

Previous research

- From Web Mining research field, trails are defined as a series of links that the user followed
 - Representing trails as Hypertext probabilistic grammar
 - Applying machine learning algorithms on the log data directly
- Drawbacks
 - Investigating one trail/user at a time
 - They do not interpolate time
- Looking for a more generalized data structure

- Any Questions ?