

Elicitation of Requirements on Site

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Relation to this Sessions Topics

- Ethnography and Observation techniques (Zogwhi2005)
 - Study people in their natural setting
- ART-SCENE mentioned often times (Zogwhi2005, Maiden2004)
- Contextual Design (Beyer1999)
 - Heavy use of observation and interviews with users in their work environment

Paper 1: Requirements on Airports

- Goal: Improve environmental impact of aircraft operations
- Stakeholders walk through scenarios to discover requirements
 - In workshops and in their workspace
- Usage of PDA's for on-site usage of the ART-SCENE software variant (MSP)



Results

- Better / More requirements for the workspace
- More availability- and usability-type requirements in the work-context version
- Requirements for a specific role (dispatch coordinator) were not generated in the workshops
- Basic problems discovered -> lack of functioning radios



Results

- Requirements with themes were generated
 - Weather condition, Mobile Computing
- Geographical features in requirements are mentioned more
- More context triggers than scenario triggers for requirements
- Relevant documents and data
- 1.1 vs. 8.2 requirements per stakeholder hour



Threats to Validity

- The walkthrough in the workspace was the last one
 - Facilitator gained domain knowledge
- The scenario lend itself very well for observation compared to the others
- The facilitator might have wanted the workspace walkthrough to succeed
 - Problems reported in earlier uses of the MSP
- They argue the focus of getting the requirements was in first place

Paper 2: Mobile Technologies in RE

- Observation and ethnographic techniques lack of software support
- Empower analysts to understand stakeholder needs in their work context
- Arena-M: requirements negotiation tool
- Mobile Scenario Presenter: a scenario-based RE tool

Mobile Scenario Presenter

- Based on ART-Scene: discovering and documenting requirements
- Walk through scenarios that are automatically generated from use-case specifications
- Better at identifying commission than omission
- Analysts observe system behavior and stakeholder interactions
 - Example: Conference presentation support system
 - Example: London bus stop information system
- New features: adding new requirements, audio recording

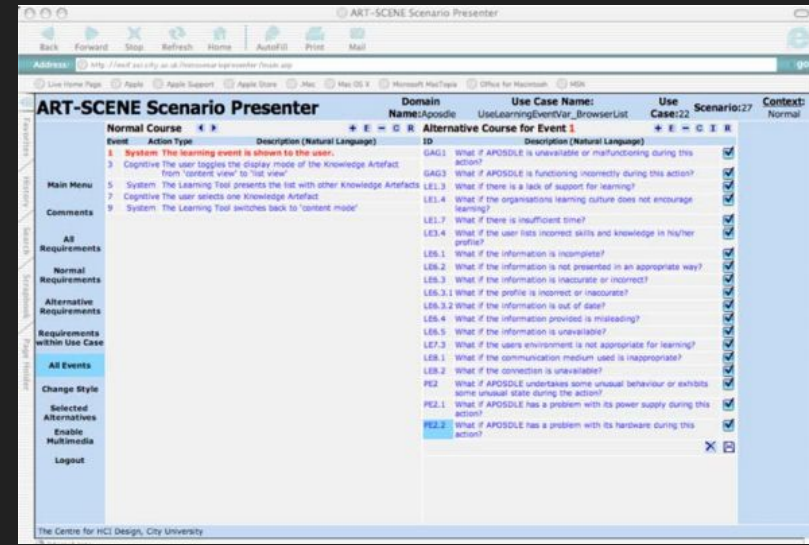


Benefits

- Consider mobile tools where stakeholder needs emerge
 - scenarios aiding the analyst by freeing its cognitive resources
 - physical location, tailoring the questions to the specific domain
 - embed mobile technologies in established requirements methods
- Use RE-specific tools instead of general-purpose tools
 - seamless use by integrating mobile tools capabilities
 - apply other frameworks to generate requirements delivered through mobile tools

Benefits

- Know the mobile tool's target users
 - users- simpler tools
 - analysts- more features, control the tool's behavior
- Ensure the usability of the requirements application
 - usability challenges in contrast with desktop applications
 - usability improves efficiency and effectiveness



Benefits

- Provide a sound technical infrastructure
 - mobile RE tools are tested in development environments
 - plan carefully the use of mobile RE tools
- Capture cues rather than fully specified requirements
 - sketch the requirement only later to return and improve the specification
 - capture enough information to enable the completion at a later time
 - adapt the technologies to your environment

Latest Research and Future Improvements

- Similar techniques
- Different examples
- Not much innovation
- BYOD (Bring Your Own Device)
- German BITCOM- 43% of ICT Companies

Literature

- Zowghi, Didar, and Chad Coulin. "Requirements elicitation: A survey of techniques, approaches, and tools." Engineering and managing software requirements. Springer, Berlin, Heidelberg, 2005. 19-46.
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Thank You for Attention

Any questions??