Distributed Requirements Engineering

Group 1

31st October 2016

Overview

General remarks

Distributed RE occurs whenever requirements engineers are locally separated from stakeholders.

Challenges

- Synchronous communication impeded or impossible
- Possibly bad asynchronous reaction times due to time zones
- On-site elicitation (observation, apprenticing) impossible

Potential benefits

- Non-stop workflow because of time zones if you're perfectly organized which is so not going to happen because come on let's be serious
- Comprehensive documentation of communication is easier

Lloyd 2002: Effectiveness of Elicitation Techniques

An experiment to simulate a distributed elicitation process.

- 6 'customer' and 'engineer' teams
- Free choice of elicitation techniques
- Surveilled communication:
  - 4×90 minutes of audio conference
  - A document sharing platform
  - Email
- SRS graded by:
  - Manual score
  - Requirements evolution
  - Requirements errors
  - Original requirements included

Lloyd 2002: Findings

- SRS quality coincided with perceived customer participation
- SRS quality coincided with prior RE experience
- Usage of questionnaires had a negative impact
- Intensive use of the synchronous meetings yielded better quality

Yang 2003: Web-based information systems

Explores Web-based information systems (i.e. anything with a web component, which was a specific criterion at the time of publication), proposes a three-stage requirement analysis procedure:

1. Initial analysis (Regular purpose analysis)
2. Key user requirements elicitation (Identifying and questioning particularly relevant users to elicit additional requirements)
3. Regular user responses (validating step 2)

Yang 2003: Finding key users

- Graph analysis (degree, betweenness, closeness)
- Semantic analysis (gate keepers, opinion leaders, boundary spanners)

Discussion