

**"Don't trust the marketing personnel,
always learn requirements yourself"**

Requirements Elicitation Techniques - An Overview

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Overview

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What are Requirements Elicitation Techniques?

— [Methods used by analysts to determine the needs of customers; the means by which analysts determine the problems and needs of customers. (Hickey & Davis)

— Goal: fully understand the needs and translate them into terminology understood by IT.

— Obstacle: Requirements elicitation is done in a variety of contexts.

— [The quality of requirements is greatly influenced by techniques employed during requirements elicitation. One elicitation technique cannot work for all situations. (Hickey & Davis)

How to Choose the Right Technique?

— [Depends on the situation: different social, political, legal, financial, psychological factors.

— [Selecting the right technique requires experience of the analyst: "requirements elicitation is where science stops and chaos begins" (Goguen & Linde)

— [Partially beyond the scope of this presentation.

Classification of Elicitation Techniques - An Essay

Information gathering techniques

- retrieving information to be used for requirements specification

Information analysis and requirements refinement techniques

- analyzing the obtained information, refining the requirements

Explorative techniques

- exploring possibilities, generating ideas for requirements

Second-order, process-related techniques

- related to the process of requirements elicitation, focuses on the social factors and structures

Information Gathering Techniques

Interviews & collaborative sessions

- gathering initial background information about a domain and/or organizational structures, getting to know the stakeholders and their desires

Observation of users

- gathering requirements when users are busy

Questionnaires

- often focused on marketing research

Analysis of existing systems

- do not over-analyze existing systems to avoid too much constraints on the new system

Information Analysis and Requirements Refinement

Classification

- ensure that all categories of requirements are gathered
- prioritize requirements
- determine what is in the scope and what not

Modelling

- different representation of information as a foundation for communication and instrument to find gaps

Interviews & collaborative sessions

- answer questions and eliminate different interpretations

Explorative Techniques

Creative techniques

- generate insights on the constraints of the system/environment, generate ideas for new requirements

Role playing

- used when key stakeholders are not available

Prototyping, extreme programming

- build prototypes of the system to show the possibilities and limits of the approach
- extreme programming introduces the omni-present customer, useful when the domain is constantly evolving

Second-order, Process-related Techniques

Team-building

- build communication and mutual trust among stakeholders for better efficiency of the first-order processes

Conflict-awareness and resolution

- understand the power structure, politics and political camps within an organization, the more stakeholders involved, the more conflicts

Observation

- identify the organizational structures, assess power structures

Issue-List

- keep the process focused and not following tangent problems

Combining the Techniques

— [There is no silver bullet, use of a specific technique depends on the situation

— [Approaches exist to integrate different techniques presented into a process

— Inquiry-based requirements analysis (Potts, Takahashi & Antón)

— Contextual Design (Beyer & Holtzblatt)

— Collaborative workshop (Gottesdiener)

Q&A

Thank you.

