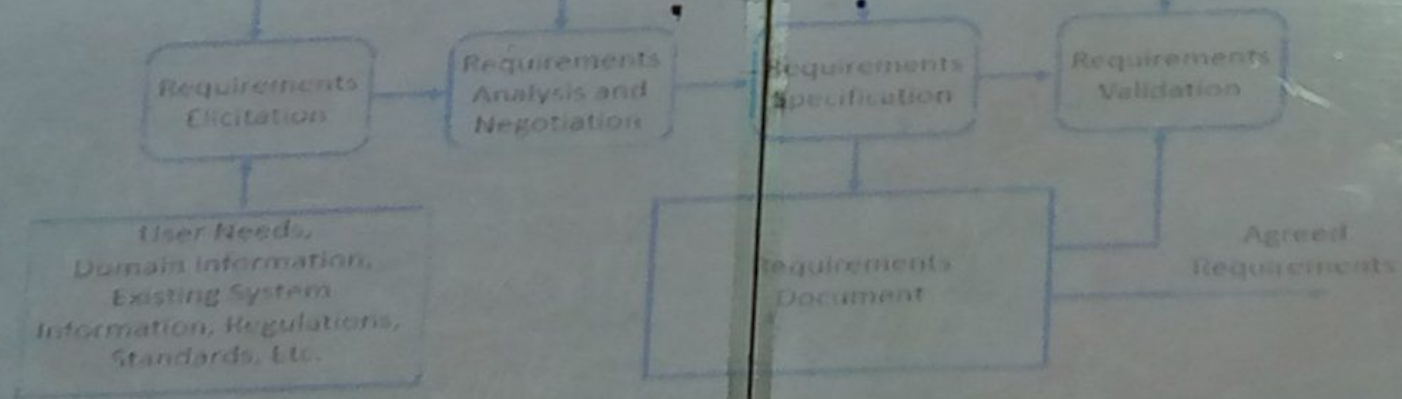


Requirements Engineering Process



Validation Objectives

- Certifies that the requirements document is an acceptable description of the system to be implemented
- Checks a requirements document for
 - Completeness and consistency
 - Conformance to standards
 - Requirements conflicts
 - Technical errors
 - Ambiguous requirements

Analysis and Validation

- Analysis works with raw requirements as elicited from the system stakeholders
 - "Have we got the right requirements" is the key question to be answered at this stage
- Validation works with a final draft of the requirements document i.e., with negotiated and agreed requirements
 - "Have we got the requirements right" is the key question to be answered at this stage

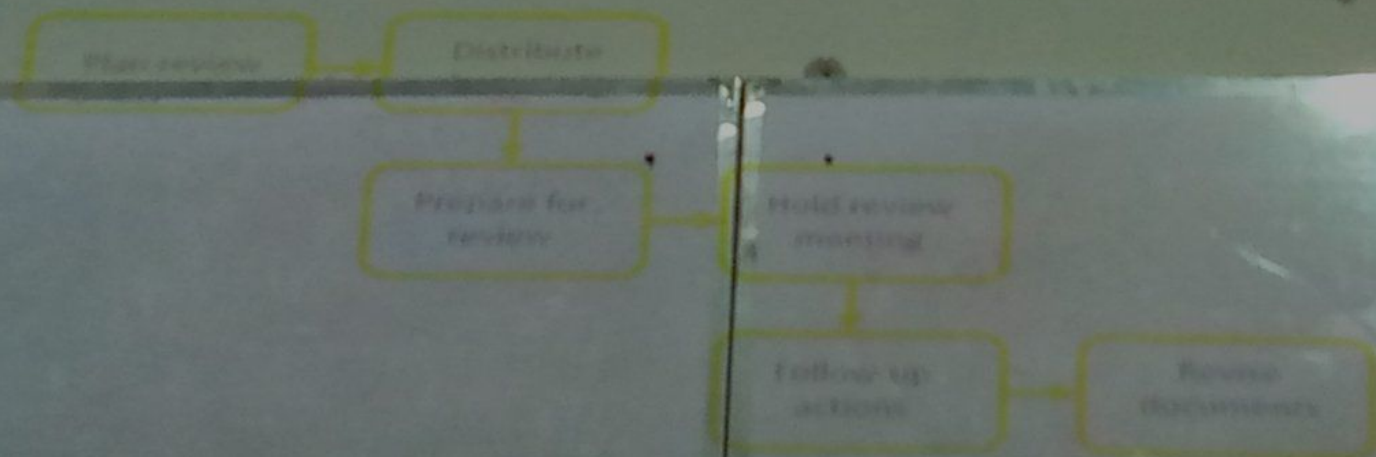
Validation Inputs and Outputs




Requirements Reviews

- A group of people read and analyze the requirements, look for problems, meet and discuss the problems and agree on actions to address these problems


Requirements Review Process





Review Activities

- Plan review
 - The review team is selected and a time and place for the review meeting is chosen
- Distribute documents
 - The requirements document is distributed to the review team members
- Prepare for review
 - Individual reviewers read the requirements to find conflicts, omissions, inconsistencies, deviations from standards and other problems
- Hold review meeting
 - Individual comments and problems are discussed and a set of actions to address the problems is agreed
- Follow-up actions
 - The chair of the review checks that the agreed actions have been carried out
- Revise document
 - The requirements document is revised to reflect the agreed actions. At this stage, it may be accepted or it may be re-reviewed



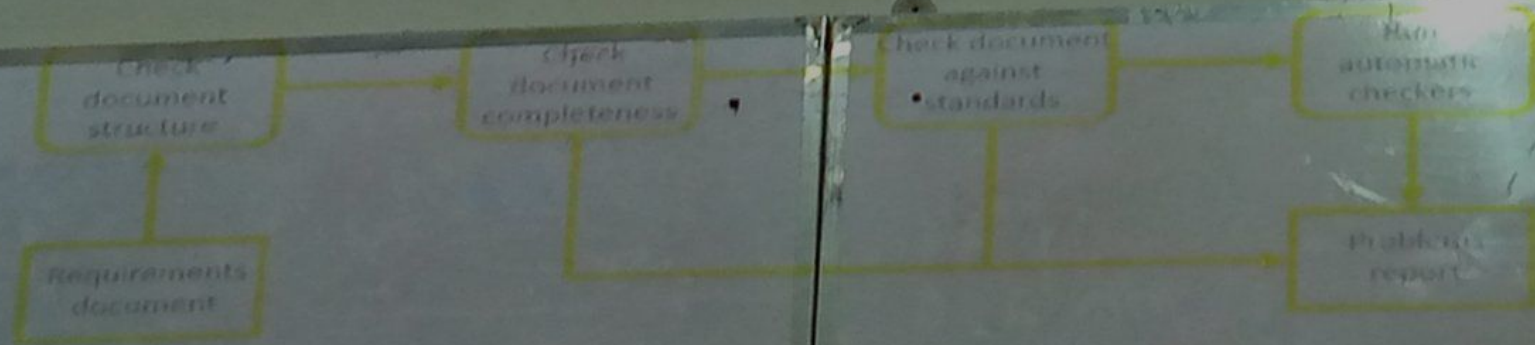
Problem Actions

- Requirements clarification
- Missing information
- Requirements conflict
- Unrealistic requirement

Pre-review Checking

- Reviews are expensive because they involve a number of people spending time reading and checking the requirements document
- This expense can be reduced by using pre-review checking where one person checks the document and looks for straightforward problems such as missing requirements, lack of conformance to standards, typographical errors, etc.
- Document may be returned for correction or the list of problems distributed to other reviewers

Pre-review Checking Stages



Summary - 1

- Requirements validation should focus on checking the final draft of the requirements document for conflicts, omissions and deviations from standards.
- Inputs to the validation process are the requirements document, organizational standards and implicit organizational knowledge. The outputs are a list of requirements problems and agreed actions to address these problems.

Summary - 2

- Reviews involve a group of people making a detailed analysis of the requirements
- Review costs can be reduced by checking the requirements before the review for deviations from organizational standards. These may result from more serious requirements problems