# Requirements

"Requirements are the things that you should discover before starting to build your product. Discovering the requirements during construction, or worse, when your client starts using your product, is so expensive and so inefficient, that we will assume that no right-thinking person would do it, and will not mention it again."
**Mastering the Requirements Process**, Suzanne Robertson and James Robertsion, Addison-Wesley, 1999.

# Requirements

Reminder: Requirements is the description of the problem to solve

- Product Constraints

- Functional Requirements

- Attributes (Non-functional Requirements)

- Project Issues

http://www.systemsguild.com/GuildSite/Robs/Template.html
or
http://www.guild.demon.co.uk/SpecTemplate8.pdf

# Requirements Gathering

- Good reading: "Exploring Requirements: Quality before Design", Don Gause and Gerald Weinberg, Dorset House, 1989

- RG is an extremely *social* activity!

- Common techniques:

  - Use cases
  - Scenarios
  - Reverse engineering of current solution
  - Interviews
  - Invent them!

# Fit Criterion

- Requirements documents are regularly ignored!

- Solution: design an objective, measurable goal for each and every requirement.

- Used as input to building verification and validation tests

# Requirements Analysis

- It's all about finding patterns!

- Christopher Alexander, *A Pattern Language*

- Abstraction

- Best way for effective reuse

- ex: Word Processor