Lecture 13
SRS: Software Requirements Specification

Com S/SE 409/509

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HW3 is posted; due 10/15

Wiki commons

Wikipedia

Q: How much to write?

How complete the written specification has to be:

- depends on project
- depends on development process

A: Use Robertsons' *Formality Guide* to distinguish:

Rabbit

Horse

Elephant

Formality Guide

Rabbit project is agile, with a small team & small increments
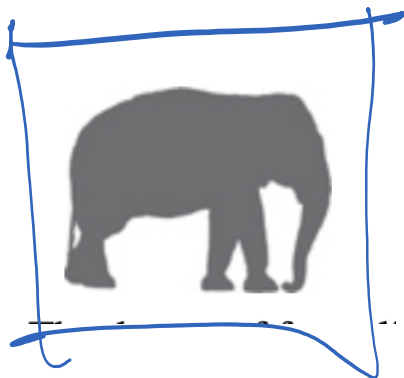
Less time writing requirements

Still must understand requirements & rationales

Often uses scenarios (stories) & rapid prototypes

Horse project has longer release cycle & many stakeholders

Needs some formal documentation since requirements are passed between distributed groups

Elephant project is larger and longer

Many developers, often distributed/subcontractors

Requirements are contractual so must be documented

Many developers, often distributed/subcontractors

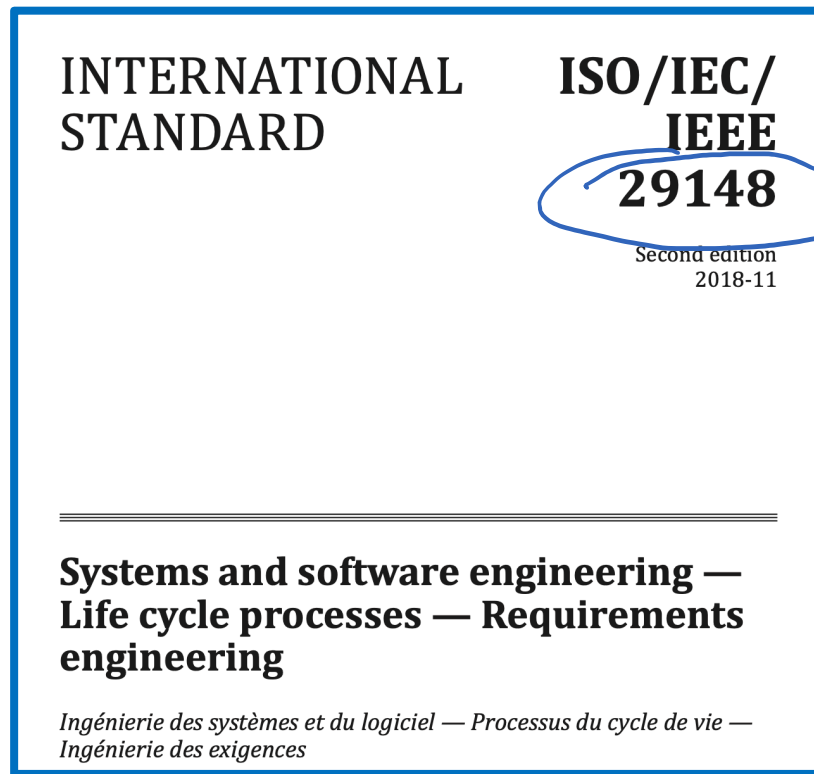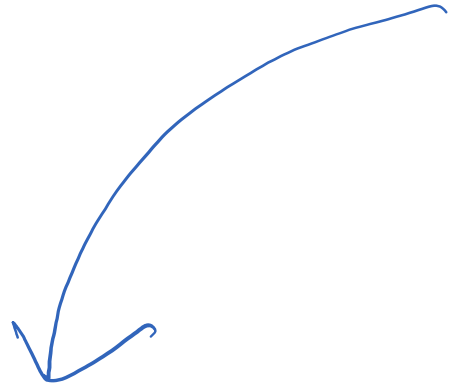Often safety-critical; may need certification by regulators

SRS*: Chap. 16

Specification: description of the product's requirements

- formalize to a point where all agree you have the correct requirements
- turn half-formed ideas (potential requirements) into precise, testable statements (fit criteria)
- Rabbit projects: may not need complete or rigorous specifications
- Horse projects need more complete specifications; use some of Chap. 16
- Elephant projects conform to template in Chap. 16
    - requirements specification is basis for the project contract
    - needs automated tool support to help manage requirements

traceability

SRS Standard template

INTERNATIONAL STANDARD

ISO/IEC/ IEEE 29148

Second edition
2018-11

Systems and software engineering — Life cycle processes — Requirements engineering

Ingénierie des systèmes et du logiciel — Processus du cycle de vie — Ingénierie des exigences

Available online through ISU Library

9.6 Software requirements specification (SRS) content

9.6.1 SRS overview

This clause defines the normative content of the software requirements specification (SRS). The project shall produce the following information item content in accordance with the project's policies with respect to the software requirements specification. Organization of the content such as the order and section structure may be selected in accordance with the project's information management policies.

Volere ("want")

SRS* template (Chap. 16; also Appendix A)

Standard guide to topics that belong in an SRS (p. 292 ff)

Template in Chap. 16 is similar to IEEE standard

Template has 5 parts, divided into 27 sections:

I. Project Drivers: Sections 1-2

II. Project Constraints: Sections 3-5

III. Functional Requirements: Sections 6-9

IV. Nonfunctional Requirements. Sections 10-17

V. Project Issues: Sections 18-27

*Software Requirements Specification

Semester project deliverable: SRS* for EverGreen

- Produce an SRS for project

- Use SRS template in Chap. 16

- Capture incremental requirements specification & analysis you've done in HW1, HW2 & HW3

- "Get the requirements right" (textbook's subtitle) & specify them in IEEE standard form

*Software Requirements Specification