



RA Doc In General

- Be brief.
 - >30 pages probably means you did something wrong
 - Don't include everything (shotgun approach)
 - "Crispness" and conciseness are important
- Be careful
 - Spelling counts
 - Clarity counts
 - ◆ use pictures and diagrams as needed



RA Doc In General

- Proof read and check
- Attribute sources (traceability)
 - "the prototype showed that..."
 - "direct customer questions revealed that..."
 - "we assume that..."
 - "the problem statement requires..."



RA Doc Introduction

- 1. Introduction
 - Brief introduction
 - Purpose of document
 - Identify sections in document
 - Keep it short.
- 1.1 Problem Description
 - Brief description of *problem* at a high level
- 1.2 Motivation
 - Why is this a problem?
 - What is being made better, or solved? Why is this a good thing to do?



RA Doc Overview

- 2. Overview
- High level description of requirements
 - Suitable for someone who wants a "executive view"
 - Hit important points, and main features
 - Leave out detailed scenarios.



RA Doc Requirements

- 3. Requirements
- Subdivide into sections covering major portions of requirements
 - Make logical divisions
 - ◆ by function, or by case, or by something that makes sense
- Provide prose detail of system requirements
- This is where the detailed scenarios are placed



RA Doc UML Analysis

- 4. UML Analysis
- 4.1 Use Cases
 - Provide Use Cases for important requirements paths
 - Make sure they are internally consistent
 - And consistent with class diagrams



UML Analysis - Class Model

- 4.2 Class Model (Object Model)
 - Class diagram itself.
 - ◆ should be relatively complete, without implementation detail classes
 - ◆ should include a description of the model
 - *Perhaps* an object diagram to show common instantiations
 - Data dictionary to define terms, attributes, methods, relationships



RA Doc Dynamic Model

- 4.3 Dynamic Model
- Dynamic model contains state diagrams and sequence diagrams
- One state diagram per important class
 - Composite states can be exploded on separate pages
 - Some classes don't require dynamic models
- Include sequence diagrams
 - Typical scenarios
 - Particularly difficult scenarios



RA Doc - SPIN Analysis

- 5.0 Promela Models
- 6.0 SPIN Analysis
- Contains verification of part of the dynamic model
- Selected set of scenarios
- More when we get to model checking