

Announcements

- HW5:
- Q1: In a phrase, what is the UML?
 - If you wrote "standard diagramming notation" hand back for 1 extra points
- Q25: Coding starts after Elaboration.
 - False. If you said "false" and got marked off, hand back for 3 extra points

Non-Use Case Requirements

- Reference: Chapter 7
- Use cases are a *primary* requirements method
- But, use cases cannot handle *all* requirements
- Other requirements need different methods
- What are these other requirements?
 - The **URPS+** in **FURPS+** !
- What are these other methods?
 - Major ones are
 - **Supplementary Specifications**
 - **Vision**
 - **Glossary**

The **URPS+** in **FURPS+**

- F is for functionality
 - Functionality is expressible with use cases
 - U for Usability
 - R for Reliability
 - P for Performance
 - S for Supportability
 - + for "other"
- These often apply across different use cases

FURPS+ Requirements Apply Across Use Cases

- 1) It makes little sense to restate exactly the same requirement multiple times
 - Hence use cases are not the best place to put them
 - 2) Non-functional requirements are not procedure-like
 - Hence use cases, with their steps, are less suitable
- If not in use cases, then where do they go?
What are U, R, P, and S?
List on paper a possible U, R, P, & S for the use case assistant system.
List a legal issue (a "+")

Use Cases and Other Methods

- **Use Cases** are one method
- **Supplementary Specifications** are another
- **Vision Statements** are another
- **Glossaries** are another
- Let's look at these in more detail

Supplementary Specifications – U

- **Usability** issues (recall **FURPS+**)
- For POS, customer should be able to see the display (not just the cashier)
 - Therefore text must be visible 1 m away
- Color use should be color-blindness friendly
- Cashier must look at many things
 - – important output must include audible component

What usability requirements apply to the registration system? The Use Case Assistant system?

Supplementary Specifications – R

- Reliability issues (recall FURPS+)
- For POS, system should deal with external service failures using local backup solutions
 - Example: credit card authorization service unavailability
 - Example: inventory database system does not respond

What reliability requirements apply to the registration system? The Use Case Assistant system?

Supplementary Specifications – P

- Performance issues (recall FURPS+)
- For POS, customers are in a hurry
 - – speed is a requirement
 - Example: external credit authorization must be under 1 minute

What performance requirements apply to the registration system? The Use Case system?

Supplementary Specifications – S

- Supportability issues (recall FURPS+)
- For POS, different stores have different needs
 - Need pluggable code for customizing system to unique business rules

What supportability requirements apply to the registration system? The Use Case Assistant?

Supplementary Specifications: +

- Other issues (recall FURPS+)
 - For POS, must use Java
 - For POS, must be compatible with purchased 3rd-party tax calculator software
 - For POS, must have touch-screen monitor instead of mouse
 - (These are all listed on pp. 85-86)
- What is problematic about them, as requirements?

On Early Design and Constraint Decisions

“Early design decisions and constraints (“premature elaboration”) are almost always a bad idea, so it is worth being suspicious...of these, especially during the inception phase...”

Non-Use Case Requirements Artifact II: the Vision Statement

- Supplemental Specifications, **Vision Statement**, Glossary
- Includes the problem to be solved
- RUP suggests a table-based approach
 - (see figure, p. 94)

The Vision Statement – Example

- For POS system:
 - Consider the problem of keeping the store operations running
 - What might be the other table entries?

The Vision Statement – Registration Example

- For the registration system:
 - What is the problem?
 - What might be the other table entries?

The Vision Statement – Use Case Assistant Example

- For the Use Case Assistant system:
 - What is the problem?
 - What might be the other table entries?

The Vision Statement


- Includes a list of features
- Feature descriptions are terse
- They may or may not parallel use cases
- They should pass a linguistic test:
 - "The system shall do <feature x>" – p. 96

The Vision Statement – Features Example

- Features for POS system:
 - The system shall do payment authorization
 - The system shall do system administration
 - The system shall do real-time transactions
 - ...
 - Should be less than about 50 features!
- Some features for registration system:

The Vision Statement – Features Example II

- Features for Use Case Assistant system:
 - The system shall do _____
 - The system shall do _____
 - The system shall do _____
 - ...
 - Should be less than about 50 features!



Non-Use Case Requirements Artifact III: the Glossary

Supplemental Specifications, Vision Statement, **Glossary**

- For POS system, see figure on p. 99
- Are glossary terms one word long?
- How might the glossary help with requirements?
- Could the glossary help with the use cases?
- What terms are most important to put in the glossary?
 - (Not all terms need to be there! – p. 99)



More on the Glossary

- The glossary can evolve into a data dictionary later
- Some desirable properties of term definitions:
 - Aliases
 - Description
 - Data type, unit, or other format
 - Relation to other entities
 - Allowable range of values
 - Validation rules
- Give an example of a term and some or all of its properties above, for the Use Case Assistant system



Even More on the Glossary

- The glossary can evolve into a data dictionary later
- Some desirable properties of term definitions:
 - Aliases
 - Description
 - Data type, unit, or other format
 - Relation to other entities
 - Allowable range of values
 - Validation rules
- Give an example of a term and some or all of its properties above, for the POS system