Preface

- We will develop a (simple) example test plan – based on assumptions
- Reference is
  KU-Bangkok_SW-Test_08_2007.08_Spreadsheet-Exercise_VERSION*
- Proceeding
  - You create mixed groups of 5 people
  - One of you should take a spreadsheet to document the working results
  - We will proceed in 6 steps
  - After every Step we will compare and summarize

VERSION on 21st Dec. is 1.0

Preface

- Reference:
  KasetClock_Spec1.4.doc, Use Case.doc
- Topic: KasetClock
- Milestones:
  - December, 21, 2007
  - January, 18, 2008
- Specification:
  - 21 Use Cases
  - 4 Business Scenarios (Business Use Cases)

To be confirmed

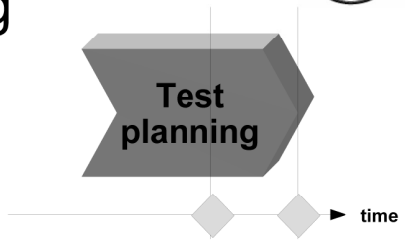
Test Planning Proceeding

At a time for
- Test Preparation
- Test Execution
- (Test Completion)

Iterative approach

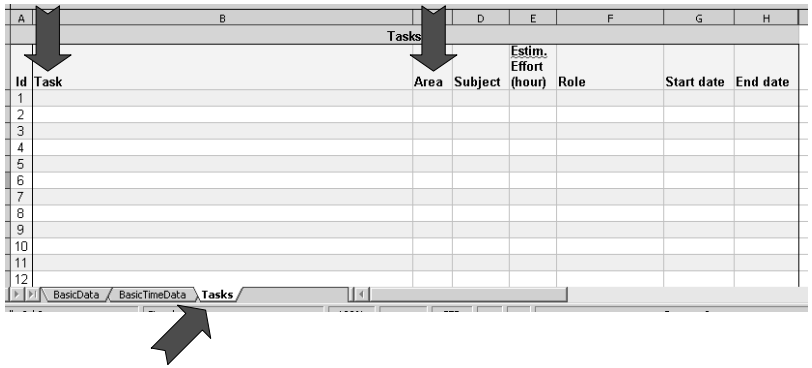
1. Collect tasks
2. Cluster tasks
3. Estimate effort
4. Allocate resources
5. Plan milestones with expected results
6. Plan sequences of tasks

⇨ **Agreement**



Test Planning Proceeding

1. Collect tasks



Test Planning Proceeding

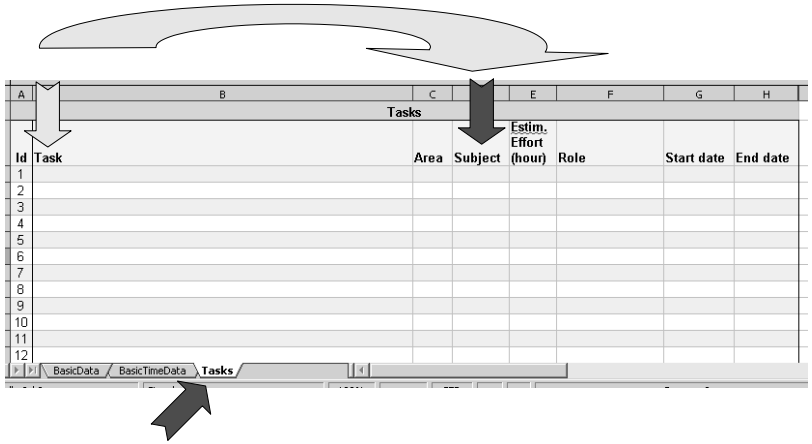
1. Collect tasks

Collect Tasks of the areas, where Area is one of

- (Test) Prep(aration)
- (Test) Exe(cution)
  - **Exe 02-1** (Functional) **S**(ystem) **T**(est)
  - **Exe 02-2 S**(ystem) **I**(ntegration) **T**(est)
  - **Exe 02-3 N**(on-) **F**(unctional) **R**(equirements)
  - **Exe 03-1 U**(ser) **A**(cceptance) **T**(est)
- (Test) Compl(ition)

Test Planning Proceeding

2. Cluster tasks



Test Planning Proceeding

2. Cluster tasks

- In clustering tasks you decide, if tasks belong together and have a same subject.
- Find for this subjects corresponding fitting title.
- Enter the fitting title for each task in the Subject column

Test Planning Proceeding

2. Cluster tasks, for example

Task	Subject

...

Workshops	Communication
Regular communication	Communication

... and so on

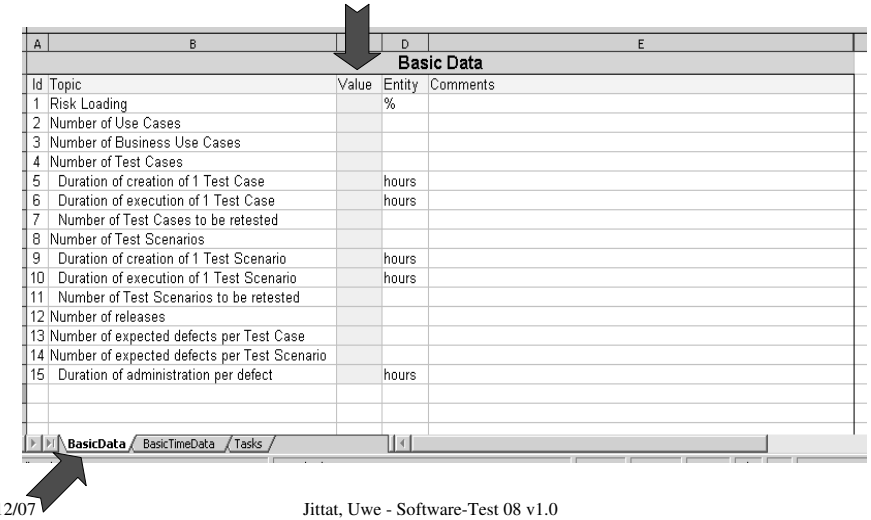
Test Planning Proceeding

3. Estimate Effort for
   - 3.1 Basic data
   - 3.2 Tasks

  - Always try to use experience out of similar and / or older projects
  - Estim(ated) effort (in hours) could either be calculated out of BasicData combined with BasicTimeData or guessed

Test Planning Proceeding

3.1 Estimate Effort – Basic data



Basic Data

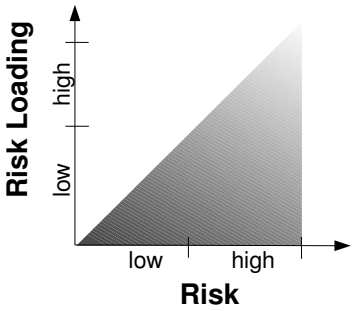
Id	Topic	Value	Entity	Comments
1	Risk Loading		%	
2	Number of Use Cases			
3	Number of Business Use Cases			
4	Number of Test Cases			
5	Duration of creation of 1 Test Case		hours	
6	Duration of execution of 1 Test Case		hours	
7	Number of Test Cases to be retested			
8	Number of Test Scenarios			
9	Duration of creation of 1 Test Scenario		hours	
10	Duration of execution of 1 Test Scenario		hours	
11	Number of Test Scenarios to be retested			
12	Number of releases			
13	Number of expected defects per Test Case			
14	Number of expected defects per Test Scenario			
15	Duration of administration per defect		hours	

BasicData | BasicTimeData | Tasks

Test Planning Proceeding

3.1 Estimate Effort – Basic data

- Risk Loading in Percentage
  - effort to be added
  - depending on how certain you are in guessing, the less or the higher should be the percentage to be added



  - You could add additional risk loading values, e. g. to differ between risk loading for
    - Test preparation tasks and
    - Test execution tasks

Test Planning Proceeding

3.1 Estimate Effort – Basic data

- Number of Use Cases
  - Out of the functional specification
  - Main basic for Test Cases
  - Attention: If the quality of the specification is not sufficient, maybe you should consider more Use Cases to be handed later
- Number of and Business Use Cases
  - Out of business process specification
  - Main basic for Test Scenarios

Test Planning Proceeding

3.1 Estimate Effort – Basic data

- Number of Test Cases
  - should depend on Use Cases
  - Maybe additional Test Cases because of additional specification documents, additional ideas, late changes, ...
  - Consider to add special NFR Test Cases, if helpful

Test Planning Proceeding

3.1 Estimate Effort – Basic data

- Duration of creation of 1 Test Case, consider
  - complexity of project topic
  - planned size of Test Case
  - effort for learning, review, rework, overwork
- Duration of execution of 1 Test Case, consider
  - planned size and granularity of Test Case
  - expected quality of Test Case – easy to use / additional tasks
  - effort for documentation

Test Planning Proceeding

3.1 Estimate Effort – Basic data

- Number of Test Cases to be retested
  - Guess over testing cycle, depends on requested quality and test strategy
- Number of Test Scenarios, Duration ...
  - same considerations as for Test Cases, but on business process level and depending on Business Use Cases
- Number of releases
  - influences time for defect fixing, retest effort

Test Planning Proceeding

3.1 Estimate Effort – Basic data

- Number of expected defects per Test Case
  - Depends on size of Test Case, quality of software (first release or fix?), experience, and so on
    - 0,1 – out of 10 Test Cases 1 defect is expected
    - 1 – 1 defect per Test Case (something like rule of thumb)
    - 2 – 2 defects per Test Case

Test Planning Proceeding

3.1 Estimate Effort – Basic data

- Number of expected defects per Test Scenario
  - Depends on size of Test Scenario, e. g. how many Test Cases are included in average, quality of software and quality of testing, experience in software development, interfaces, quality of simulators, quality of test environments, and so on
    - 1 – 1 defect per Test Scenario
    - 10 – 10 defects per Test Scenario (something like rule of thumb)

Test Planning Proceeding

3.1 Estimate Effort – Basic data

- Duration of administration per defect, consider
  - Administration for informing about bug (description, assigning, screenshots, ...)
  - Clarification effort (communication, reconstruction, explanation)
  - Managing bug (status, reporting, fixed?, fixed and delivered?, retested – by whom?, closing fix, reassign)
  - Defect meetings – number of participants
  - Escalation meetings – number of participants

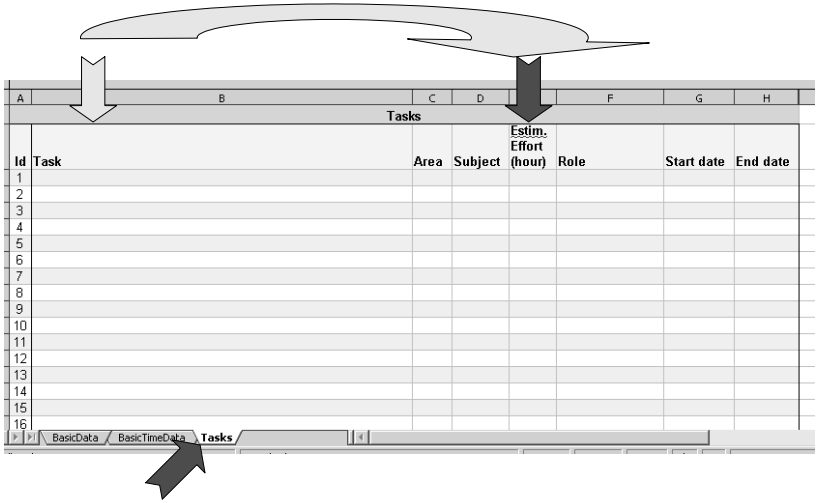
Test Planning Proceeding

3.1 Estimate Effort – Basic data

- ... more
  - More basic values are possible, depending on Test Project

Test Planning Proceeding

3.2 Estimate Effort – Tasks



Test Planning Proceeding

3.2 Estimate Effort – Tasks – General

- Estim(ated) effort (in hours) could
  - either be calculated out of BasicData combined with BasicTimeData or
  - Guessed
- Discuss concerning effort with people who will do the work
- If people are influenced, integrate them (e. g. developers concerning development circle)

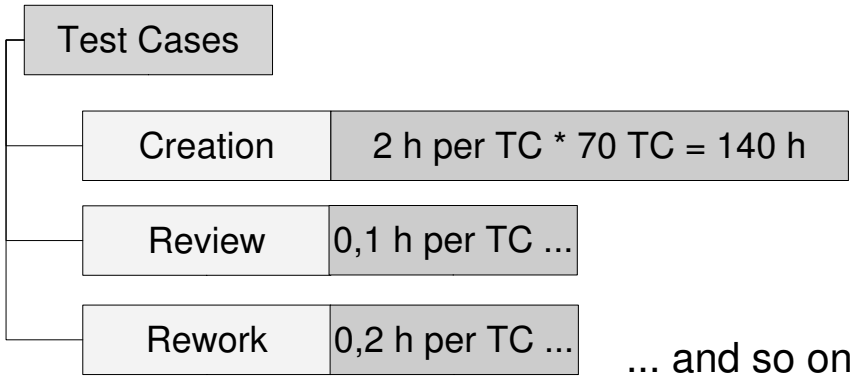
Test Planning Proceeding

3.2 Estimate Effort – Tasks – General

- Estimate the amount of time needed for each task
- Consider
  - experienced people? (test tools, expertise as tester, expertise in business area)
  - learning curve
  - risk loading
  - sickness, vacation, holidays, training effort

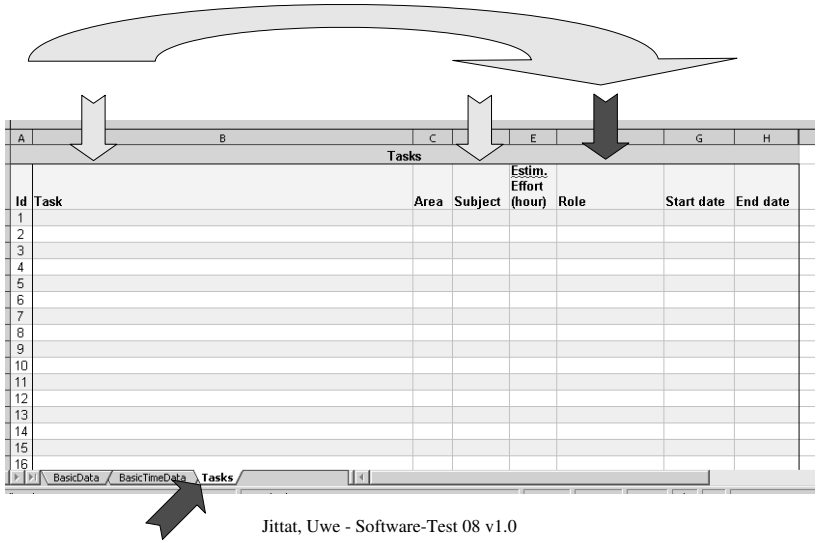
Test Planning Proceeding

3.2 Estimate Effort – Tasks – Detail



Test Planning Proceeding

4. Allocate resources



Test Planning Proceeding

4. Allocate resources

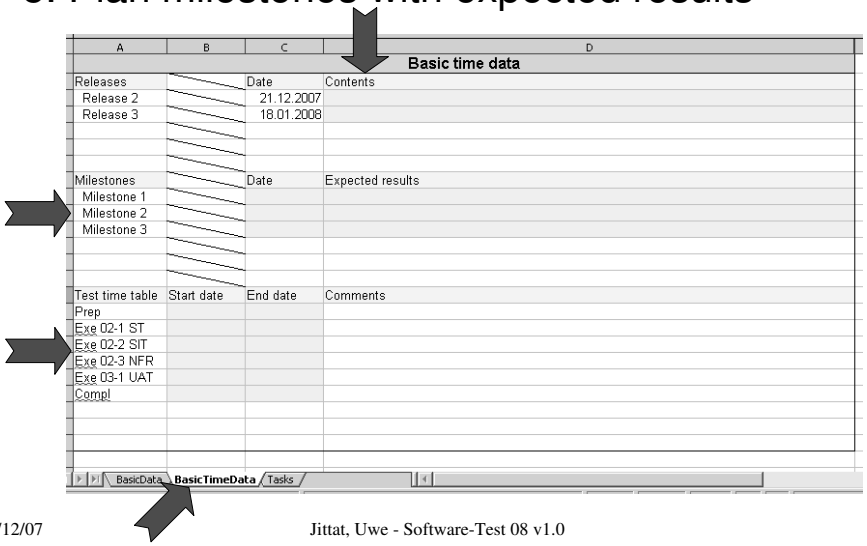
- Which roles do you know?
  (Study lecture slides concerning Test Basics)
- Roles to use should be already defined roles in the test project
- Mapping Tasks to Roles

Test Planning Proceeding

4. Allocate resources

Test Planning Proceeding

5. Plan milestones with expected results



Test Planning Proceeding

5. Plan milestones with expected results

- Releases should contain all planned releases, versions, and fixes
  - "Contents" should describe in each case headlines of delivery
  - Information out of "Contents" should be found in release notes as well

Test Planning Proceeding

5. Plan milestones with expected results

- Milestones
  - "Expected results" should contain headlines of working results of each working group
  - Test Preparation Milestones
    - Could depend on Review Workshops, specific number of Test Cases (50 %, 100 %), all Test Cases are initialized, all Test Cases reviewed, Test Scenarios finished, ...
  - Test Execution Milestones
    - Should follow the releases
    - Intermediate Milestones if helpful

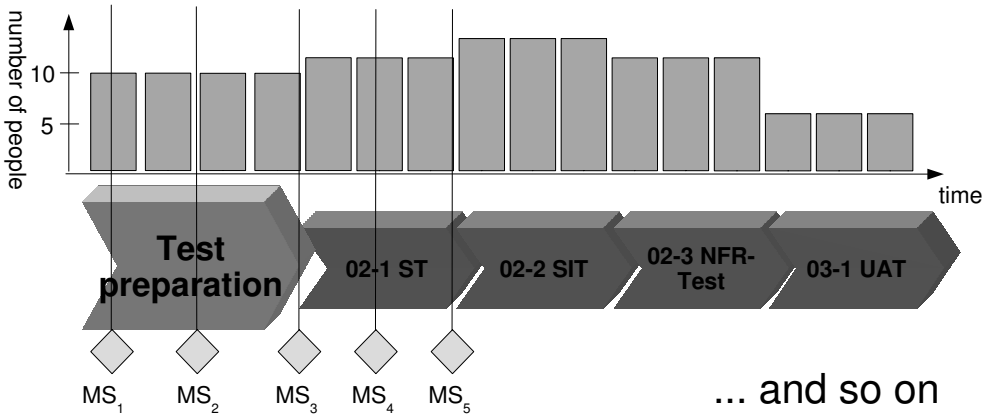
Test Planning Proceeding

5. Plan milestones with expected results

- Test time table
  - Close connection to milestones
  - Each Testing circle should have
    - Entrance criteria
    - Exit criteria
  - It must be clear, who is responsible to finish a test circle (should have defined acceptance criteria as well)

Test Planning Proceeding

5. Plan milestones with expected results, Example



... and so on

Test Planning Proceeding

5. Plan milestones with expected results, Example

- Preparation Milestone 1 MS_1
  - Testers are trained
  - Test tool is running
- Preparation Milestone 2 MS_2
  - 50 % of Test Cases created
  - review workshop done
  - rework started
  - 50 % of Test Scenarios created ...

... and so on

Test Planning Proceeding

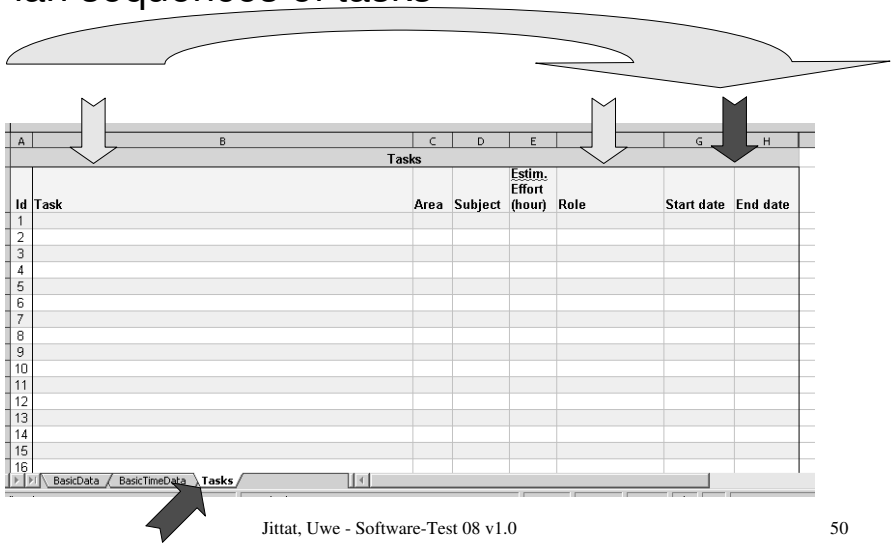
5. Plan milestones with expected results, Example

- Execution Milestone 1 MS_4
  - Entrance criteria fulfilled
  - Smoketest successfully
- Execution Milestone 2 MS_5
  - Test Coverage achieved
  - Test results reported
  - Exit criteria fulfilled

... and so on

Test Planning Proceeding

6. Plan sequences of tasks

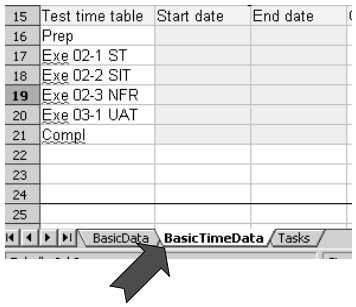


Test Planning Proceeding

6. Plan sequences of tasks

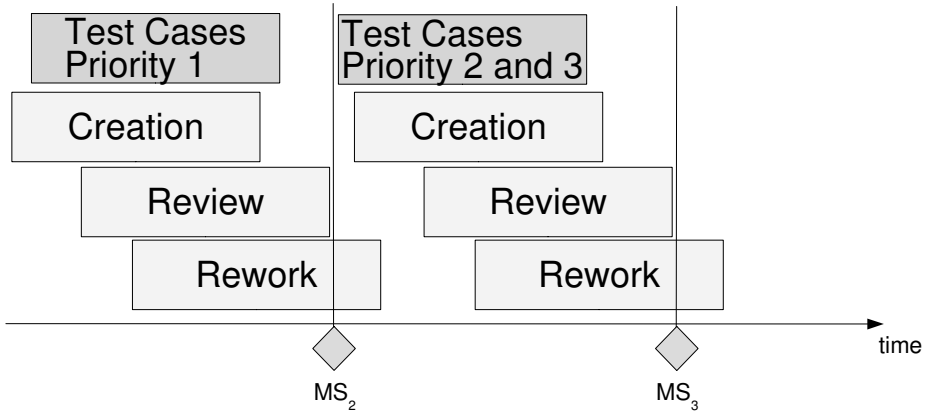
- Start date and End date should follow
  - Milestones and / or
  - Test time table

out of BasicTimeData



Test Planning Proceeding

6. Plan sequences of tasks



... and so on