

PSEsupportCenter
Test

SIEMENS

B1 – Test Management

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Overview

Test team organization

Roles in test process

Testing activities management

- Test cycle planning
- Test cycle monitoring
- Test cycle control

Problem management

- Test report
- Problem report
- Error classification
- Problem status

Summary

- Test team organization
- Roles in test process
- Testing activities
- Problem management
- Summary

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PSE Support Center <small>Test</small>		Types of test organization		SIEMENS	
Test team organization					
Roles in test process					
Testing activities management					
Test cycle planning					
Test cycle monitoring					
Test cycle control					
Problem management					
Test report					
Problem report					
Error classification					
Problem status					
Requirements					
Standards					
Summary					
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PSE Support Center <small>Test</small>		Organization patterns at various test levels		SIEMENS	
Test team organization					
Roles in test process					
Testing activities management					
Test cycle planning					
Test cycle monitoring					
Test cycle control					
Problem management					
Test report					
Problem report					
Error classification					
Problem status					
Summary					
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<div> <div>PSEsupportCenter Test</div> <div>Roles in the test process</div> <div>SIEMENS</div> </div>	
<div> <div>Test team organization</div> <div>Roles in test process</div> <div>Testing activities management</div> <div>Test cycle planning</div> <div>Test cycle monitoring</div> <div>Test cycle control</div> <div>Problem management</div> <div>Test report</div> <div>Problem report</div> <div>Error classification</div> <div>Problem status</div> <div>Summary</div> </div>	<ul style="list-style-type: none"> • Test manager <ul style="list-style-type: none"> – Expert in test planning, test controlling. – Experience in project management, personnel management • Test designer <ul style="list-style-type: none"> – Expert for test methods – Experience in software development, specification methods • Test automator <ul style="list-style-type: none"> – Experience in software development, test automation tools
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<div> <div>PSEsupportCenter Test</div> <div>Roles in the test process</div> <div>SIEMENS</div> </div>	
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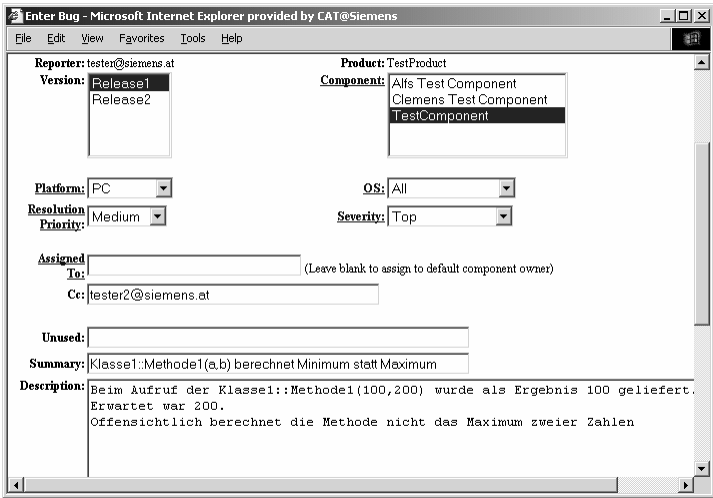
PSEsupportCenter <i>Test</i>	Test cycle planning	SIEMENS
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PSEsupportCenter <i>Test</i>	Test cycle monitoring	SIEMENS
<div>Test team organization</div> <div>Roles in test process</div> <div>Testing activities management</div> <div>Test cycle planning</div> <div>Test cycle monitoring</div> <div>Test cycle control</div> <div>Problem management</div> <div>Test report</div> <div>Problem report</div> <div>Error classification</div> <div>Problem status</div> <div>Summary</div>	<ul style="list-style-type: none">• Metrics<ul style="list-style-type: none">– in accordance with test concept• Error-based metrics<ul style="list-style-type: none">– Number of errors detected– Priority, severity• Test-case-based metrics<ul style="list-style-type: none">– Number of planned, blocked, executed test cases– Errors detected for each test case• Test-object-based metrics<ul style="list-style-type: none">– Coverage: Code, dialogs, configurations, platforms	Armin Beer, Alfred Spalt, Siemens PSE 8
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<div>Test team organization</div> <div>Roles in test process</div> <div>Testing activities management</div> <div>Test cycle planning</div> <div>Test cycle monitoring</div> <div>Test cycle control</div> <div>Problem management</div> <div>Test report</div> <div>Problem report</div> <div>Error classification</div> <div>Problem status</div> <div>Summary</div>		<ul style="list-style-type: none">• Test completion criteria<ul style="list-style-type: none">– defined for each individual test level– Example:<ul style="list-style-type: none">• all priority 1 test cases executed• no errors of severity 1 or 2• 50 % of priority 2 test cases executed• no errors of severity 1, 2, 3, 4• Approval<ul style="list-style-type: none">– For each test level: Verification whether test level complied with<ul style="list-style-type: none">• i.e. whether test completion criteria for this level have been met– Transfer:<ul style="list-style-type: none">• to the next test level• or delivery to the client/customer	
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PSEsupportCenter Test		Test cycle control	SIEMENS
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PSEsupportCenter Test	Test report	SIEMENS
Test team organization Roles in test process Testing activities management Test cycle planning Test cycle monitoring Test cycle control Problem management Test report Problem report Error classification Problem status Summary	<ul style="list-style-type: none"> • Creation <ul style="list-style-type: none"> – during test execution – as accurate as possible – in particular in the case of problems: <ul style="list-style-type: none"> • record as much information as possible • to make error diagnosis possible/easier • Analysis of the reports <ul style="list-style-type: none"> – Error in the test object? – Error during test execution? • Root cause analysis <ul style="list-style-type: none"> – is not the tester's task!!! 	Armin Beer, Alfred Spalt, Siemens PSE 11
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PSEsupportCenter Test	Sample problem report	SIEMENS
Test team organization Roles in test process Testing activities management Test cycle planning Test cycle monitoring Test cycle control Problem management Test report Problem report Error classification Problem status Summary		Armin Beer, Alfred Spalt, Siemens PSE 12
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Severity of problem

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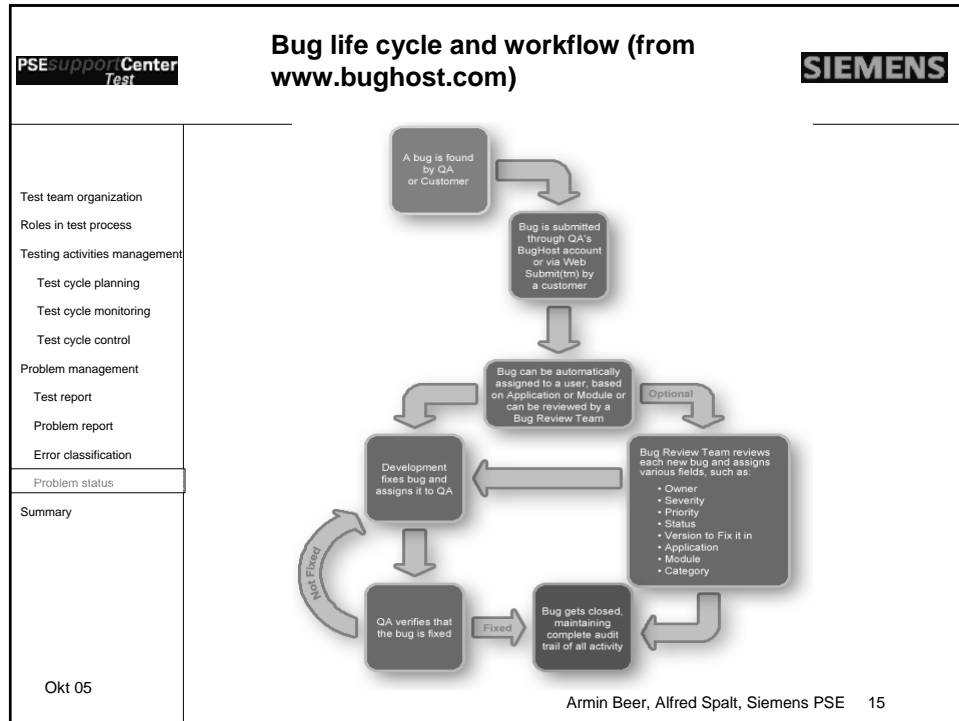
Test team organization Roles in test process Testing activities management Test cycle planning Test cycle monitoring Test cycle control Problem management Test report Problem report	<p>"Severity" = impairment of product use</p> <p>Example:</p> <table><thead><tr><th>Class</th><th>Description</th></tr></thead><tbody><tr><td>S1</td><td>System crash, perhaps even loss of data. Test object cannot be used</td></tr><tr><td>S2</td><td>Important function defective. Test object can be used only with major restrictions</td></tr><tr><td>S3</td><td>"Normal" error. Deviation from desired behavior. Test object can be used except for the defective part.</td></tr><tr><td>S4</td><td>Small deviation. Test object can be used without any restrictions.</td></tr><tr><td>S5</td><td>"Cosmetic" error, e.g.: Spelling error in screen form. Test object can be used without restrictions.</td></tr></tbody></table>	Class	Description	S1	System crash, perhaps even loss of data. Test object cannot be used	S2	Important function defective. Test object can be used only with major restrictions	S3	"Normal" error. Deviation from desired behavior. Test object can be used except for the defective part.	S4	Small deviation. Test object can be used without any restrictions.	S5	"Cosmetic" error, e.g.: Spelling error in screen form. Test object can be used without restrictions.
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Priority in problem resolution

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Test team organization Roles in test process Testing activities management Test cycle planning Test cycle monitoring Test cycle control Problem management Test report Problem report	<p>Priority = how urgent is the resolution of the problem?.</p> <p>Example:</p> <table><thead><tr><th>Class</th><th>Description</th></tr></thead><tbody><tr><td>P1</td><td>Testing cannot be continued. The problem must be resolved as soon as possible.</td></tr><tr><td>P2</td><td>The problem must be resolved until the next time the test is scheduled for execution.</td></tr><tr><td>P3</td><td>The problem should be resolved in the next version of the product.</td></tr><tr><td>P4</td><td>Classification in P1-P3 pending.</td></tr></tbody></table>	Class	Description	P1	Testing cannot be continued. The problem must be resolved as soon as possible.	P2	The problem must be resolved until the next time the test is scheduled for execution.	P3	The problem should be resolved in the next version of the product.	P4	Classification in P1-P3 pending.
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Test team organization Roles in test process Testing activities management Test cycle planning Test cycle monitoring Test cycle control Problem management Test report Problem report Error classification Problem status	<ul style="list-style-type: none"> • Test tasks tend to be distributed among development and expert team • The roles in a test project have to be clearly defined • Test planning starts already after the completion of the requirements definition phase (process model) • Improvement of test processes based on metrics • Workflow for error tracking • Use of standards 	Armin Beer, Alfred Spalt, Siemens PSE 16
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