LogicaCMG & Testing: **TestFrame & RRBT**

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TestFrame

Introduction, reason for this presentation

- EuroSTAR 2005: one-day tutorial called
  “Outsourcing / Offshoring under Control”
Who is Rik Marselis

• Senior Test Advisor, working for LogicaCMG since 8 years
• 25 years in IT
• 12 years in testing and quality assurance
• board member of Dutch Testing Qualifications Board (ISTQB branch for Belgium and Netherlands)
• member of organisation committee of TestNet (= SAST of the Netherlands)
• accredited ISTQB foundation tutor
• certified Prince2 practitioner
• certified ISEB practitioner
About LogicaCMG

- > 30,000 employees worldwide
- 36 countries
- > 40 years experience in IT services
- Offers a wide range of IT-solutions
- Specialised in industry-specific solutions
LogicaCMG & Software Testing

• 2500 Test Professionals world-wide
• Test Research Centre in the Netherlands
  – TestFrame method & tooling
  – Test management: Risk & Requirement Based Testing
  – Business Acceptance Management & Business Acceptance Testing
  – ERP & Testing
  – STAPPIN (Module based testing of standard desktop or server configurations)
  – Technical TestFrame
... LogicaCMG’s knowledge & experience in testing is based on more than 1,000 test projects over the world
Now let's talk about: TESTING!
Agenda this afternoon

• 13:25 – 14:05 Part 1: TestFrame

• 14:50 – 15:30 Part 2: Outsourcing/Offshoring – The challenges

• 15:40 – 16:30 Part 3: Outsourcing/Offshoring – Under control
Agenda Part 1: TestFrame

- Introduction

- Position various test solutions

- Risk & Requirement Based Testing (RRBT)

- TestFrame
  - TestFrame model
  - TestFrame phases & approach
  - Conclusion
Facts of life for testers
The later you find faults, the more it costs to solve them

source: Boehm
Testing (esp. test execution) is often under pressure
Testing in parallel to the development activities

Development activities

- Requirements engineering
- System specifications
- Design and coding
- Test execution

Testing activities

- Requirements review
- Specifications review
- Design & code review
- Test planning, analysis and design
- Test execution
Facts of life for testers: Our way to handle them
Risk & Requirement Based Testing

Successful Test Management
An Integral Approach

Iris Pinkster
Bob van de Burgt
Dennis Janssen
Erik van Veenendaal
Test Management Model

Test Frame

EVALUATION AND TRANSFER

RISK AND REQUIREMENT BASED TESTING

REPORTING AND IMPLEMENTATION ADVICE

ISSUE MANAGEMENT

PROGRESS MANAGEMENT

TEST ORGANIZATION

PLANNING

ESTIMATION

RISK ANALYSIS AND TEST STRATEGY

TEST MANAGEMENT FILE

PREPARATION

EXECUTION
Product risks versus requirements

Matching risks and requirements

A risk, no requirement:
- Add requirement (find faults earlier)
- Remove risk (don’t test more than necessary)

A requirement, no risk:
- Adjust risk list (better coverage of testing)
- Remove requirement (don’t develop more than necessary, no “frills”)
Testing under pressure, the Strategic Test Slicing Method (STSM)

Must test:
- ...
- ...
- ...
- ...
- ...

Should test:
- ...
- ...

Could test:
- ...
- ...
- ...

Won't test:
- ...
- ...

OUCH!!
Risk & Requirement Based Testing

Added value:

• Product risks: use the same language as stakeholders

• Unambiguous method for prioritizing product risks

• Detect gaps in requirements

• Good base for managing progress of test project
Integrated Test Design & Automation
Using the TestFrame Method

Hans Buwalda, Dennis Janssen, Iris Pinkster
LogicaCMG’s method for structured testing

- Testing plays a role in quality
  - Verifying test process and products
  - Working in a structured way
- Testing takes effort
  - Re-use defined products
  - Optimal use of tools
- Testing is not a goal, it is used to reach a goal
  - Use consciously and goal-oriented
  - Risk analysis
- Testing has to fit with development method and organization
  - Flexible and fitting
Adjust testing to organization (not vice versa)

Structured process
Structured products

Quality-to-market & Time-to-market

Use of tools for test analysis, test execution and test management
TestFrame phases

- Preparation
- Analysis
- Navigation
- Execution
TestFrame products

- Assessment Report
- Plan of Approach
- Test plan
- Risk analysis

- Scoping
- Test Conditions
- Clusters
- Test cases

- Technical test
- Navigation structure
- Engine
- Navigation scripts

- Test report
- Findings
- Evaluation report
- Handover set

TestFrame
### Test Clusters, Test Conditions and Test Cases in Excel

![Excel screenshot showing test clusters and test cases](image)

**Test Cluster Details:**
- **testcluster**: SAST
- **version**: 1.0
- **date**: 04 May 2006
- **author**: Rik Marsels
- **authorised by**: the audience
- **number of testconditions**: 1
- **number of testcases**: 3

**Test Conditions:**

<table>
<thead>
<tr>
<th>Testcase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAST1C10</td>
<td>If someone is 65 years or older he gets a pension (Must Test)</td>
</tr>
<tr>
<td>SAST1C10T10</td>
<td>If someone is 64 years he will get a pension (Must Test)</td>
</tr>
<tr>
<td>SAST1C10T20</td>
<td>If someone is 65 years he will actually get a pension (Must Test)</td>
</tr>
</tbody>
</table>

**Test Cases:**

<table>
<thead>
<tr>
<th>Testcase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAST1C10T10</td>
<td>This is a boundary value test for someone who is not entitled to a pension</td>
</tr>
<tr>
<td>SAST1C10T20</td>
<td>This is a boundary value test for someone who is entitled to a pension</td>
</tr>
<tr>
<td>SAST1C10T30</td>
<td>This is a boundary value test for someone who is not entitled to a pension</td>
</tr>
</tbody>
</table>

**Test Priority:**
- **Testrun by Test Priority:** Not defined
- **Test run by Auto numbering type:** Must Test
- **Test run by Grouping conditions/cases:** Should Test
- **Test run by Quality after Run:** Won't Test
Testing with action words (1)

- Identify the smallest functional test step

- Assign an action word to every step

- Add parameters

- Use the action words when defining test cases and test scenario’s

- When necessary: automate the action words
Testing with action words (2)

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>check balance</td>
<td>Taylor</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>transfer</td>
<td>Houston</td>
<td>Taylor</td>
<td>210</td>
</tr>
<tr>
<td>check balance</td>
<td>Taylor</td>
<td>210</td>
<td></td>
</tr>
<tr>
<td>transfer</td>
<td>Smith</td>
<td>Taylor</td>
<td>150</td>
</tr>
<tr>
<td>check balance</td>
<td>Taylor</td>
<td>360</td>
<td></td>
</tr>
</tbody>
</table>

Test preparation and specification

Automated test execution

Navigation script

Test cluster

Test execution

... check balance
... transfer
...
TestFrame test automation

- **test plan**
  - **test design**
    - test clusters
      - test conditions
      - test cases
  - **navigation script**
  - **CAST tool**
  - **target system**
  - input data
  - expected outcomes
  - documentation
  - separation

- **report**
  - End users
  - Management
  - QA/Auditors
  - System development
  - actual results
  - comparison with expectations
  - management information

- **TestFrame Engine**
TestFrame: facts & advantages

• Easy accessible and well maintainable test products
• Early start possible and therefore time saving at the end of the project
• Effort “scarce” experts is minimized
• Better steering and control test execution process
• Test automation possible without adjustments to test documentation
• Test automation also possible when application is not 100% correct
• Easy reporting on test execution status and test results
TestFrame is a Framework, an approach for structured testing; that is easily adapted to the needs of the business or organisation, making use of the TestFrame engine in order to interface with standard off-the-shelf test tools at any desired moment.

Fits seamlessly in (Test) Managed environments

“I didn’t test it, but I assume it’s gonna work”