

Das Eclipse Jubula Projekt zur funktionalen Testautomatisierung

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BREDEX GmbH



Agenda

▶ Einführung

Geschichte, Versionen, Prinzipien

▶ Konzepte

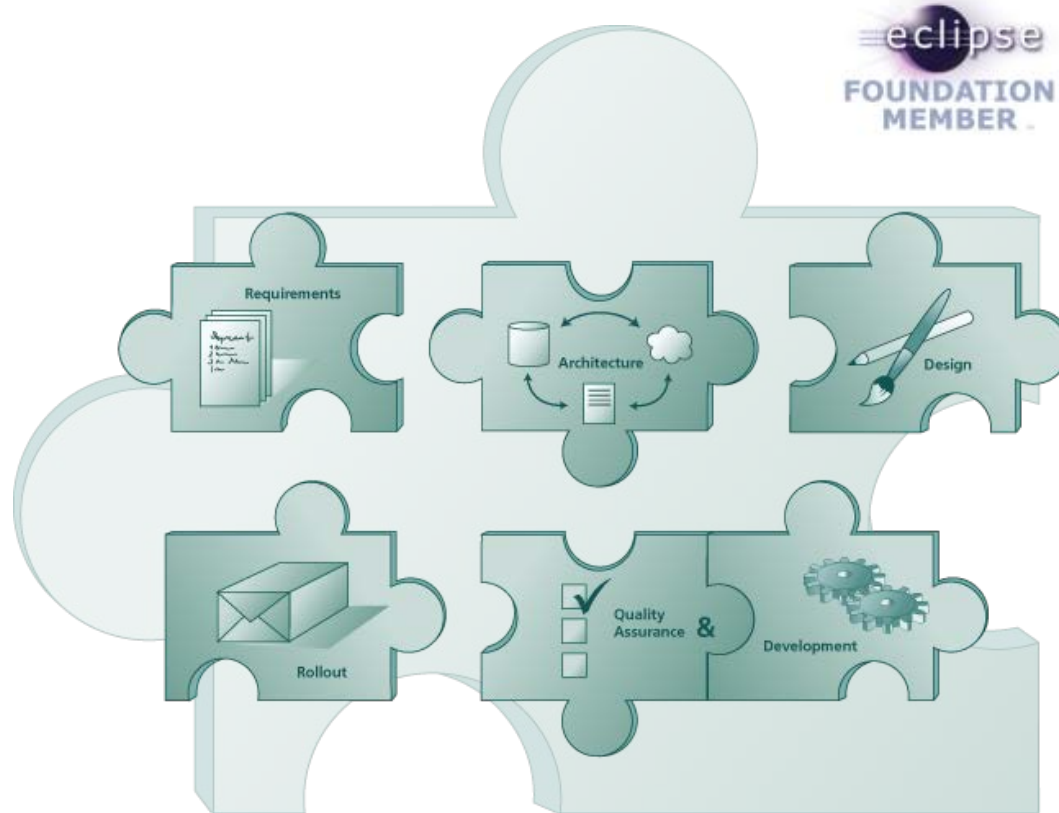
Testfallerstellung, Teststruktur,

▶ Technik

Architektur, Testausführung, Erweiterungen

▶ Einbindung im Testprozess

Wer ist BREDEX?



Es war einmal...



2005



2011

GUIDancer Standalone
Kommerziell
Weitere zusätzlichen Features

Jubula Standalone
Kostenlos
EPL + andere

Eclipse for Testers
Eclipse Jubula: Open Source

Gegenwart



GUIDancer[®]



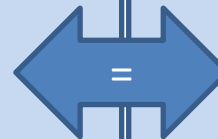
JUBULA
the functional testing tool

GUIDancer
Standalone

Jubula
Standalone

Kostenlos

Kostenlos



Code freigegeben unter EPL (seit 2011)
Eclipse for Testers

Open Source

Ziel & Fokus



Ziel & Fokus

Funktional

Black-Box

Systemtest

Akzeptanz

Integration



Workflows

Use Cases

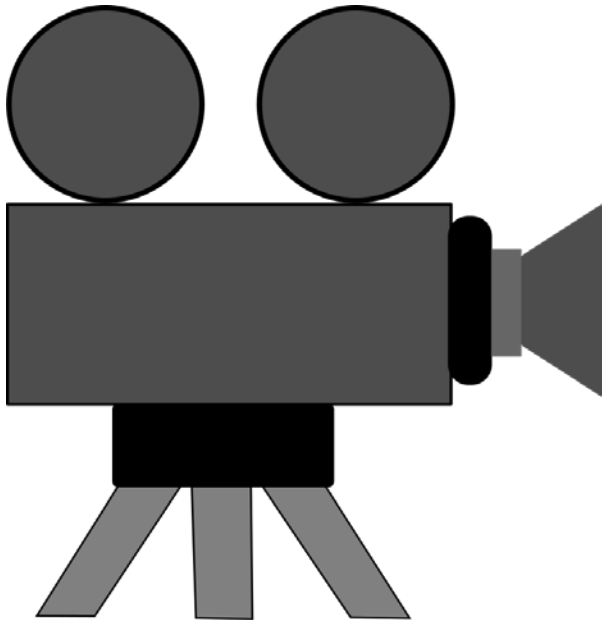
Benutzer-
perspektive

Alle Ebenen

Testen = Information sammeln, um Entscheidungen zu treffen

Frühzeitig
Häufig
Zeitnah

Tests durch die GUI...



- AUT muss vorhanden sein
- Use Case muss funktionieren
- Implementierungsnah
- Redundanzen
- Müssen überarbeitet werden

Prinzipien

Programmed tests

- ✗ Testers write tests
- ✓ Structure
- ✗ Transparency for customer
- ✓ independent from AUT

Recorded tests

- Testers write tests ✓
- Structure ✗
- Transparency for customer ✓
- independent from AUT ✗

best practices for design & structure

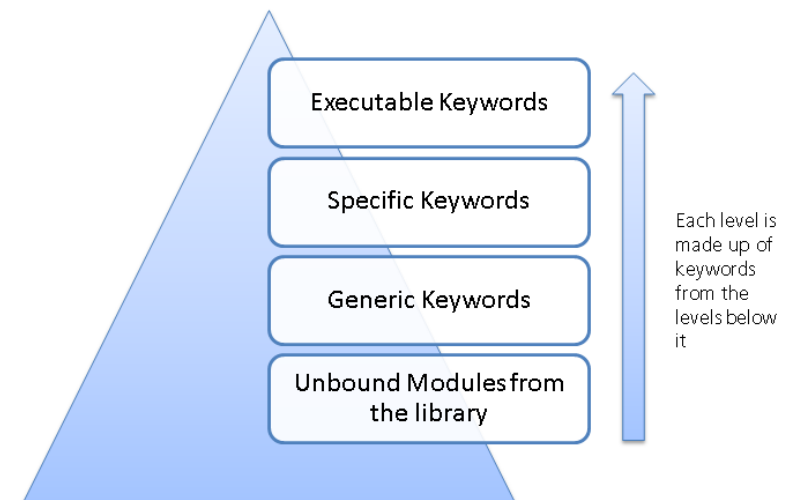
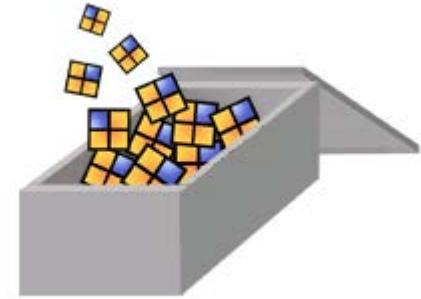
aims & benefits

Jubula / GUIDancer

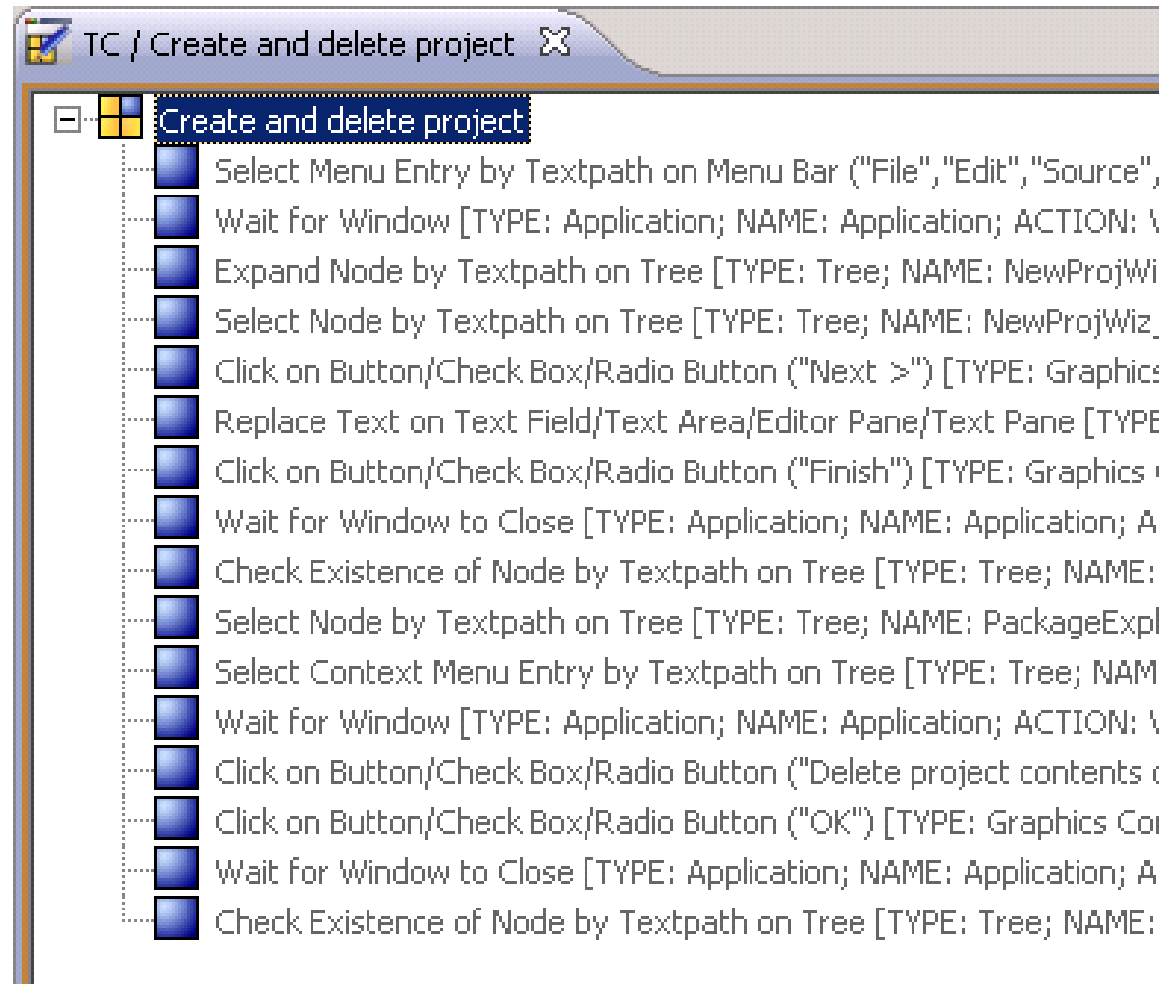
- ✓ Testers write tests ✓
- ✓ Structure ✓
- ✓ Transparency for customer ✓
- ✓ independent from AUT ✓

Keyword-Driven Testing

- ▶ **Schlüssel- oder Aktionswörter**
- ▶ **Hierarchisch aufgebaut**
 - Atomare Aktionen (Bibliothek)
 - Wiederverwendbare Module
 - Teilworkflows
 - Anwendungsfälle



Vergleich zu Capture-Replay



TC / Create and delete project

Create and delete project

- Select Menu Entry by Textpath on Menu Bar ("File", "Edit", "Source",
- Wait for Window [TYPE: Application; NAME: Application; ACTION: \
- Expand Node by Textpath on Tree [TYPE: Tree; NAME: NewProjWi
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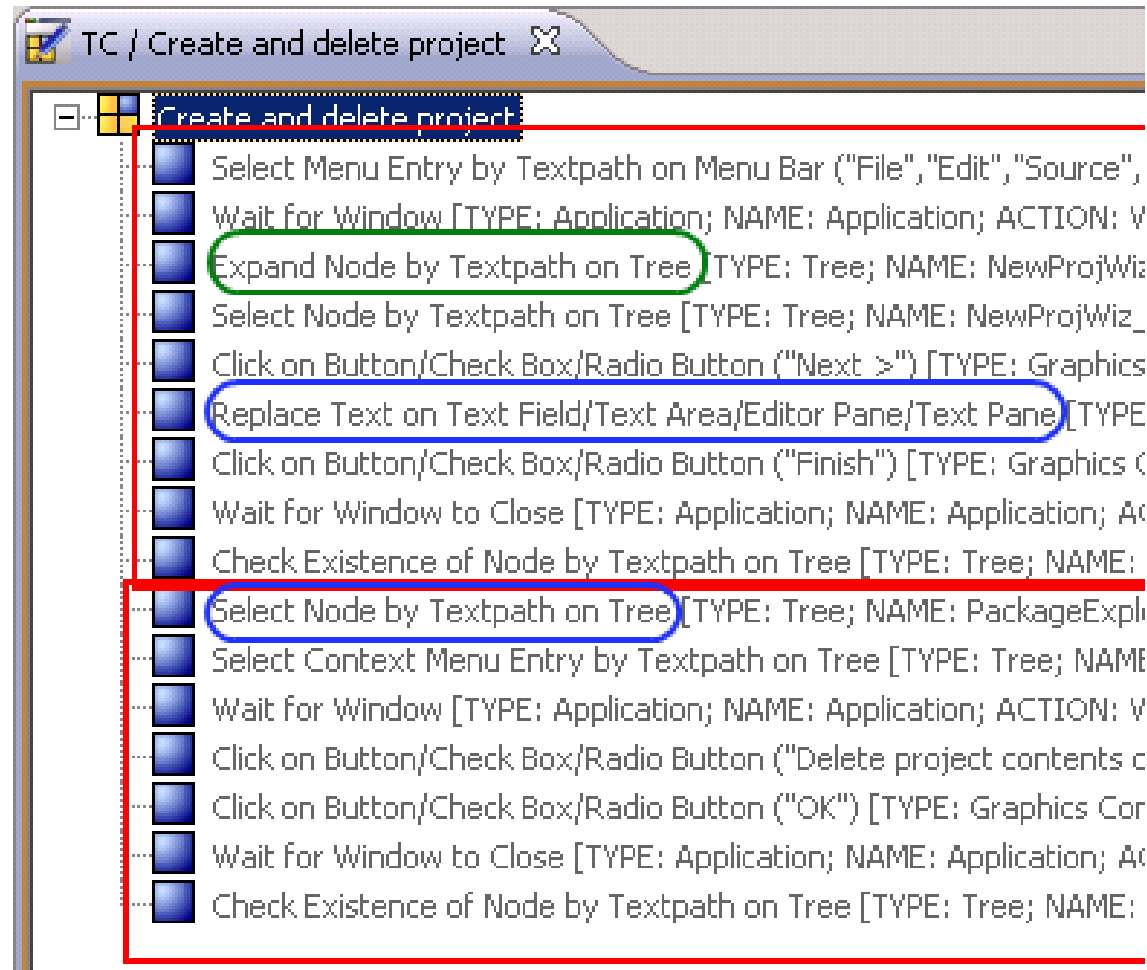
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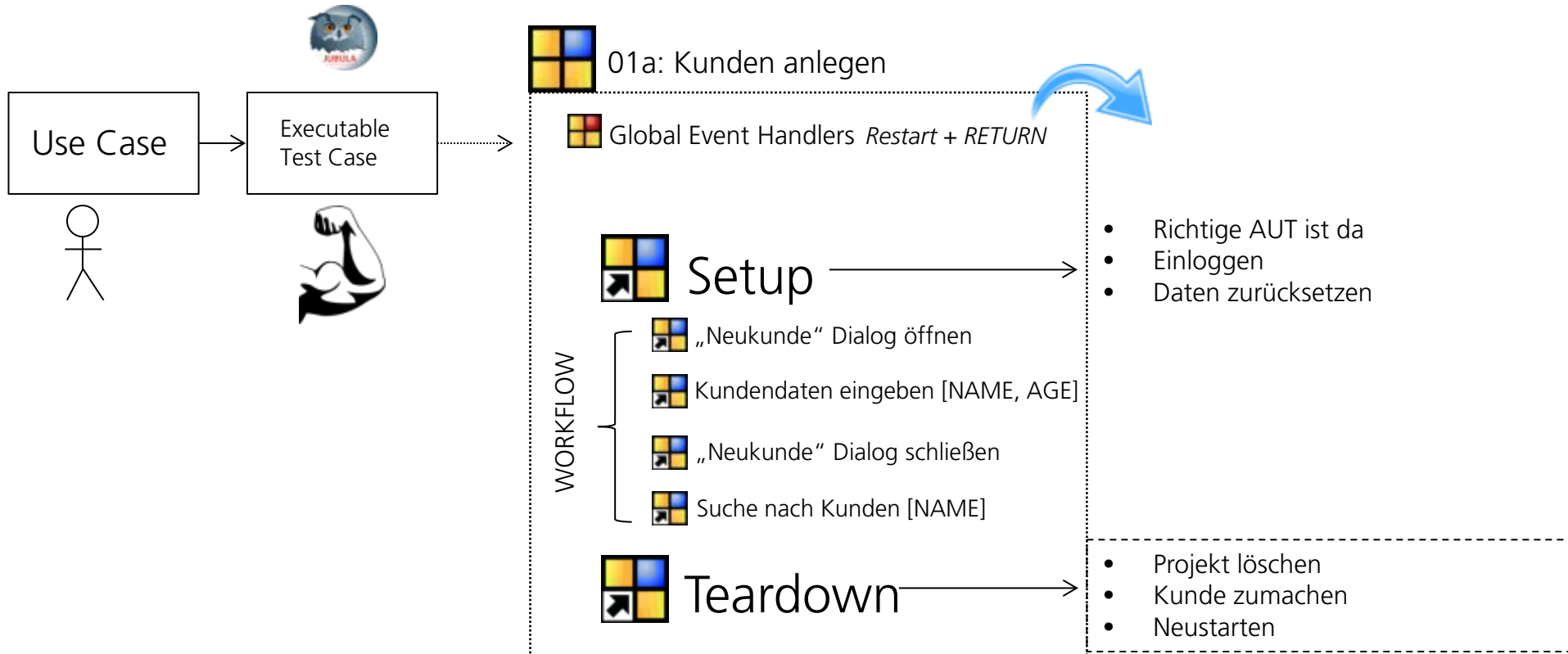
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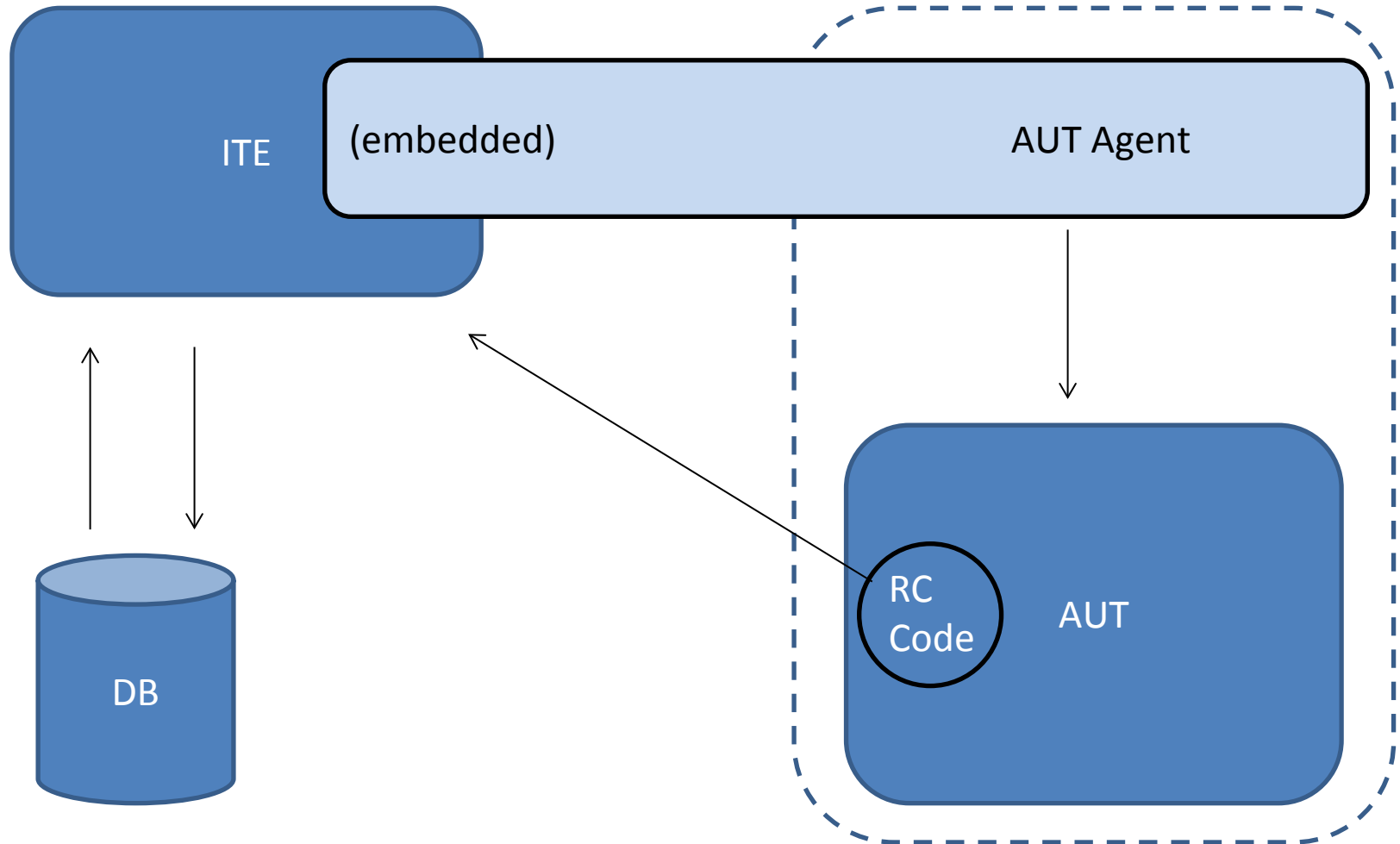
Vergleich zu Capture-Replay

- [-] [icon] Create New Java Project [PROJECT_NAME]
 - [+] [icon] Select "New Project" from menu
 - [+] [icon] Wait for new project window
 - [+] [icon] Select "Java" from new project dialog
 - [-] [icon] Click next (Synchronized click)
 - [+] [icon] Wait for component to click
 - [+] [icon] Check component enabled (ub_grc_checkEnablement) [ENABLED]
 - [+] [icon] Left click once (ub_grc_clickLeft_single)
 - [+] [icon] Enter project name (Synchronized replace text) [TEXT]
 - [-] [icon] Click Finish (Synchronized click)
 - [+] [icon] Wait for component to click (Standard wait for component)
 - [+] [icon] Check component enabled (ub_grc_checkEnablement) [ENABLED]
 - [+] [icon] Left click once (ub_grc_clickLeft_single)
 - [+] [icon] Wait for new project window to close
 - [+] [icon] Check that new project was created in package explorer

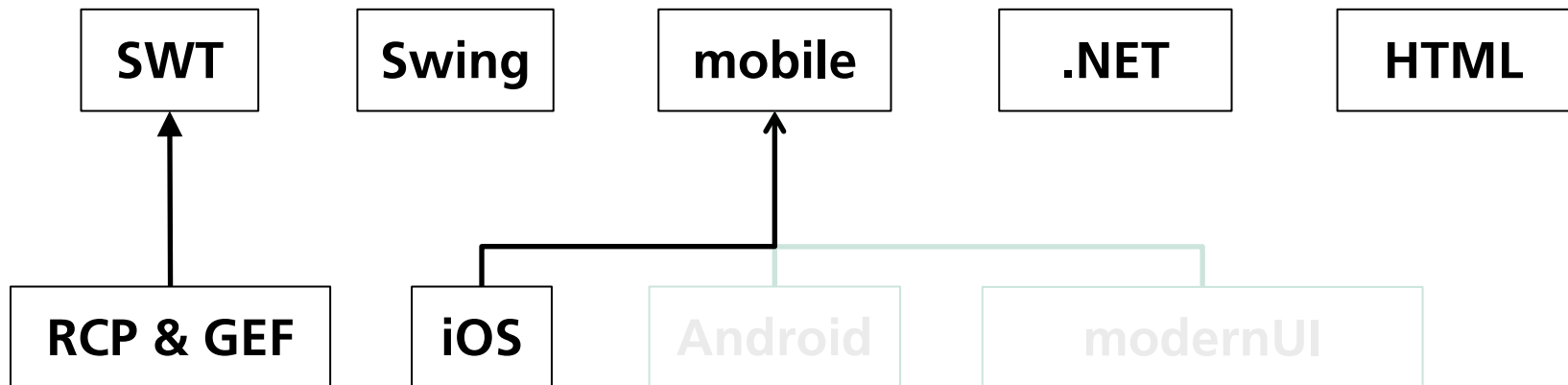
Testdesign



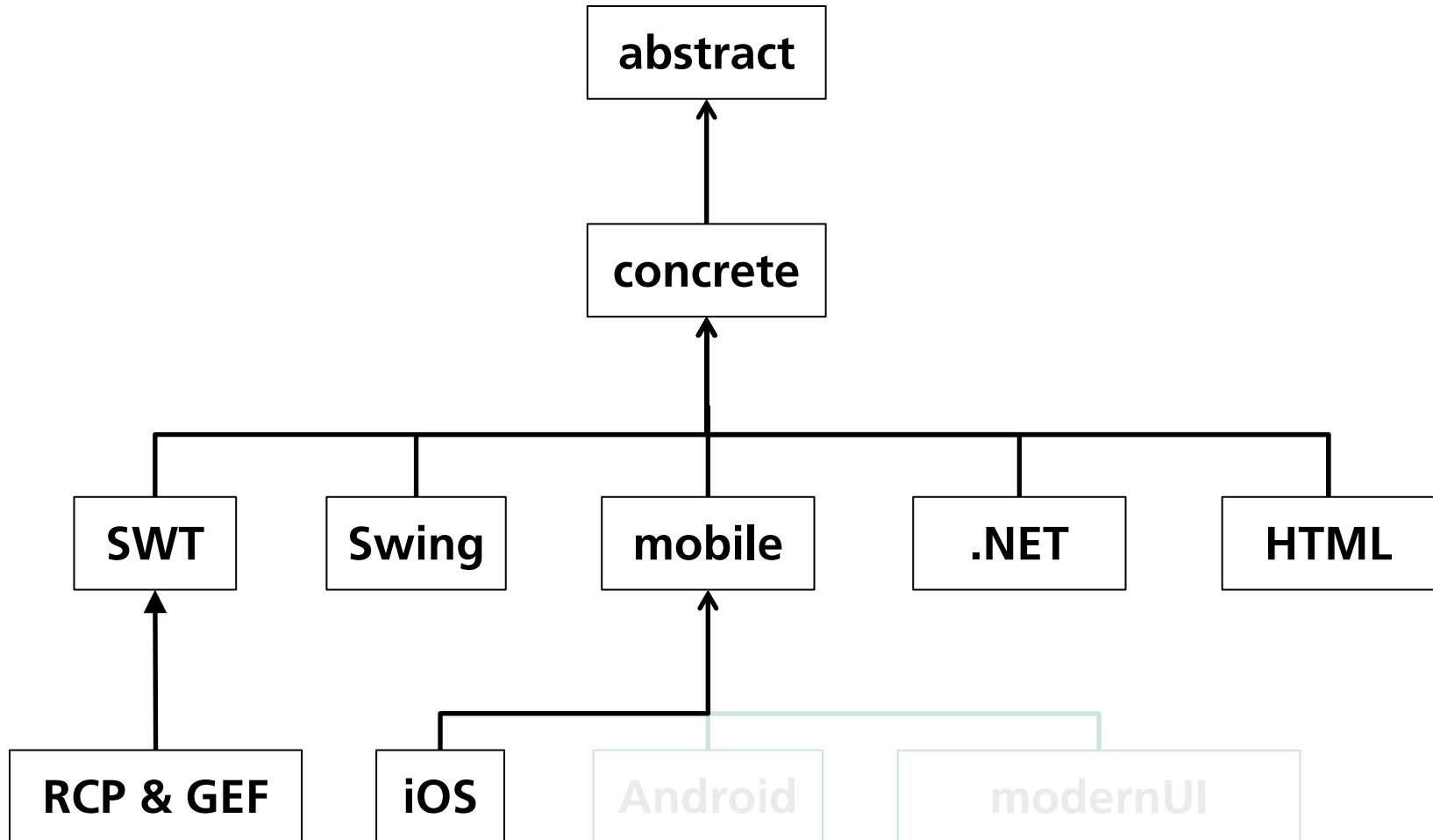
Architektur



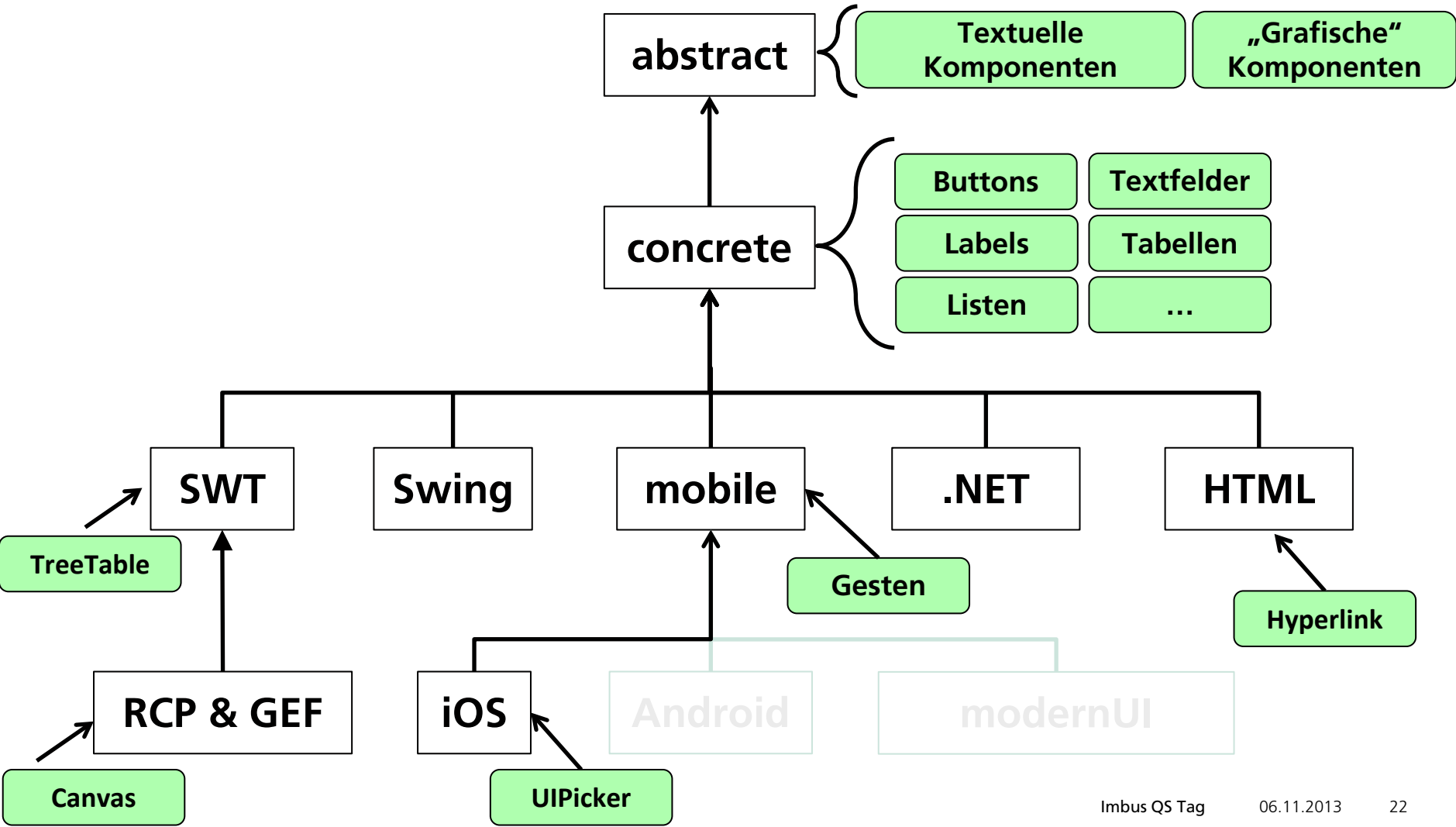
Toolkit Hierarchie



Toolkit Hierarchie



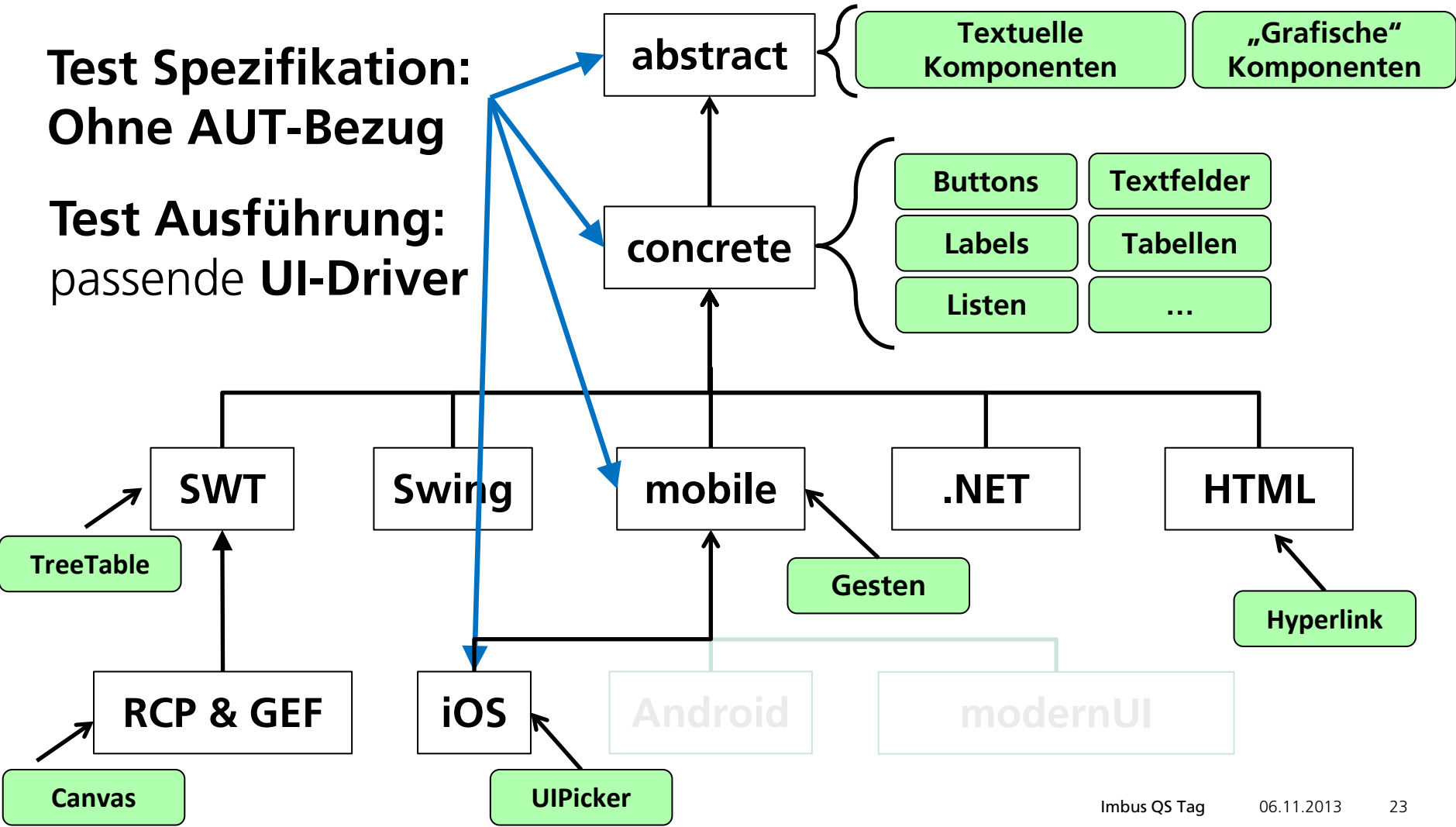
Toolkit Hierarchie



Toolkit Hierarchie

**Test Spezifikation:
Ohne AUT-Bezug**

**Test Ausführung:
passende UI-Driver**



Toolkit Unterstützung

▶ Remote Controlling

Drivers

AWT Robot / Selenium / KIF / UI Automation Framework + user32.dll

Extensibility – Unterstützung neuer Komponenten

Erweiterung in der ITE

Erweiterung im RC-Teil

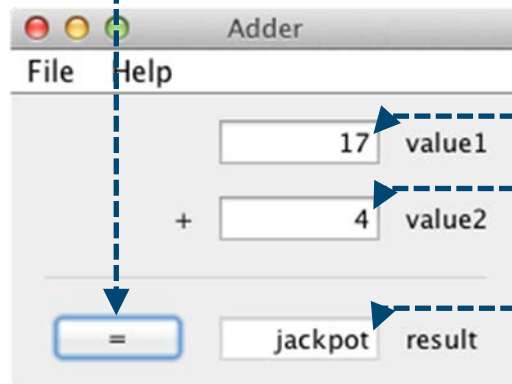
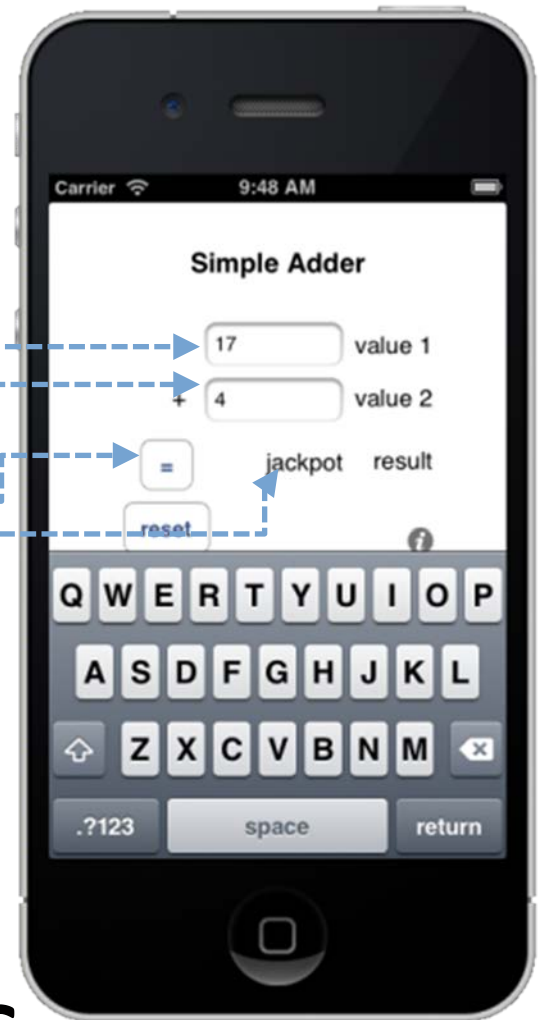
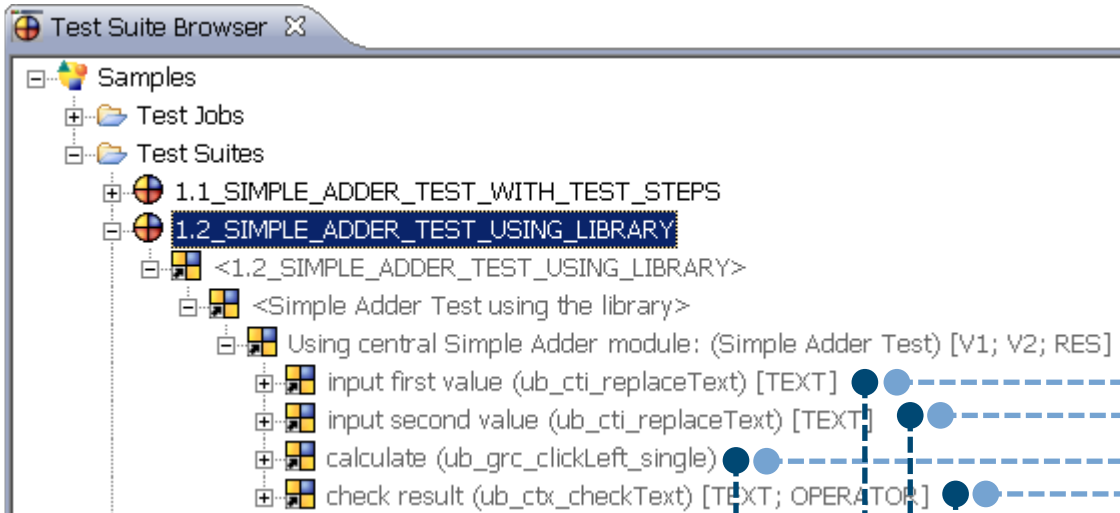
▶ Zugang zu Objektzuständen

Objekterkennung (Heuristik)

Zugriff auf Felder (enablement, ...)



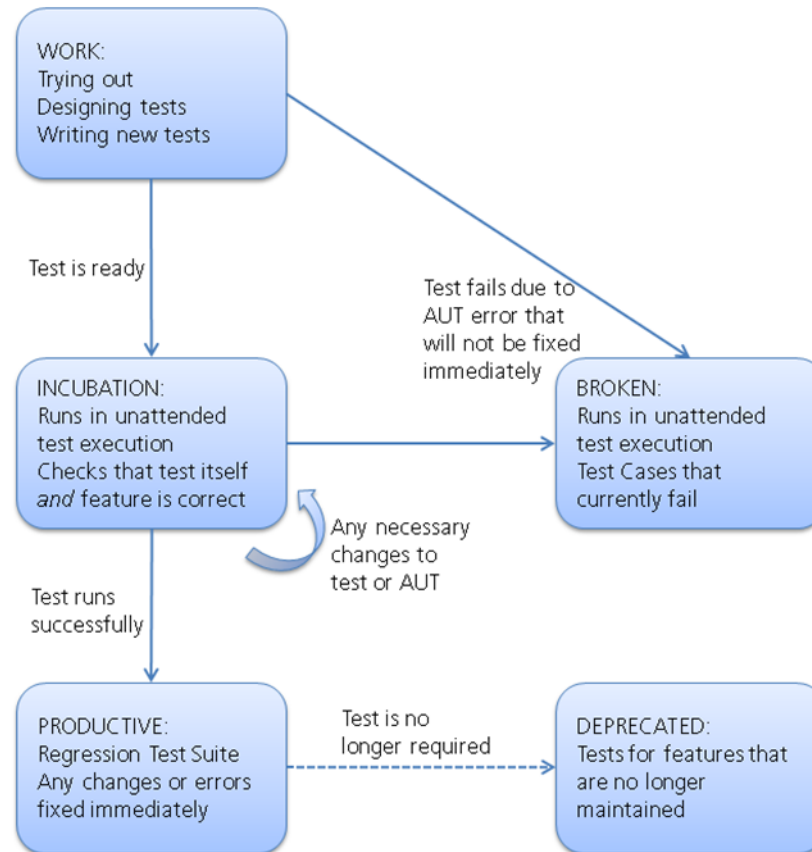
Zum ausführbaren Test



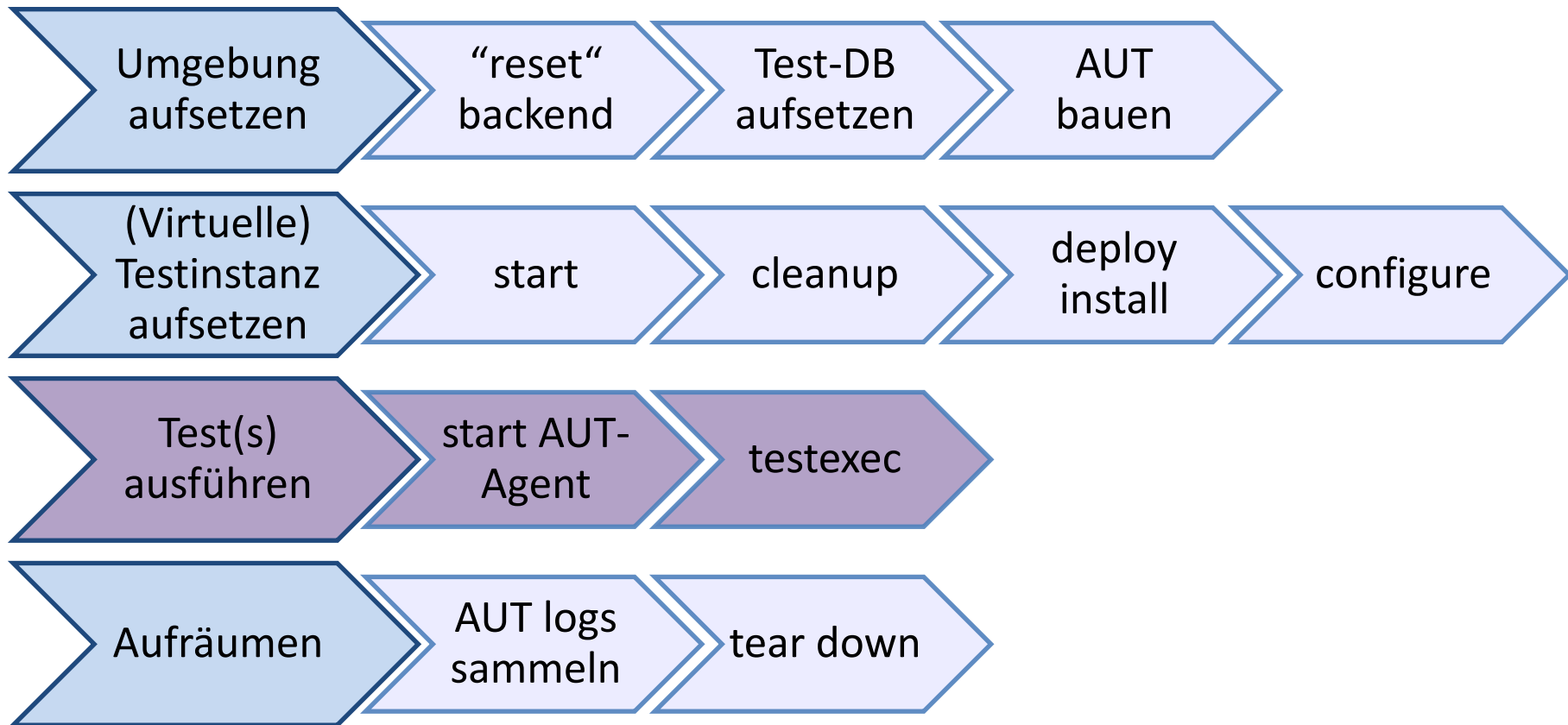
Swing

iOS

Jubula im Testprozess



Jubula im Testprozess



Jubula im Testprozess

▶ Testergebnisanalyse

HTML-Report / in der ITE / im Web-Dashboard

Screenshot im Fehlerfall

Reporting: Test Execution Overview / Comments

▶ Test-Trendreporting

Testverlauf : erwartet / ausgeführt / fehlgeschlagen

Code Coverage (Java Anwendungen)

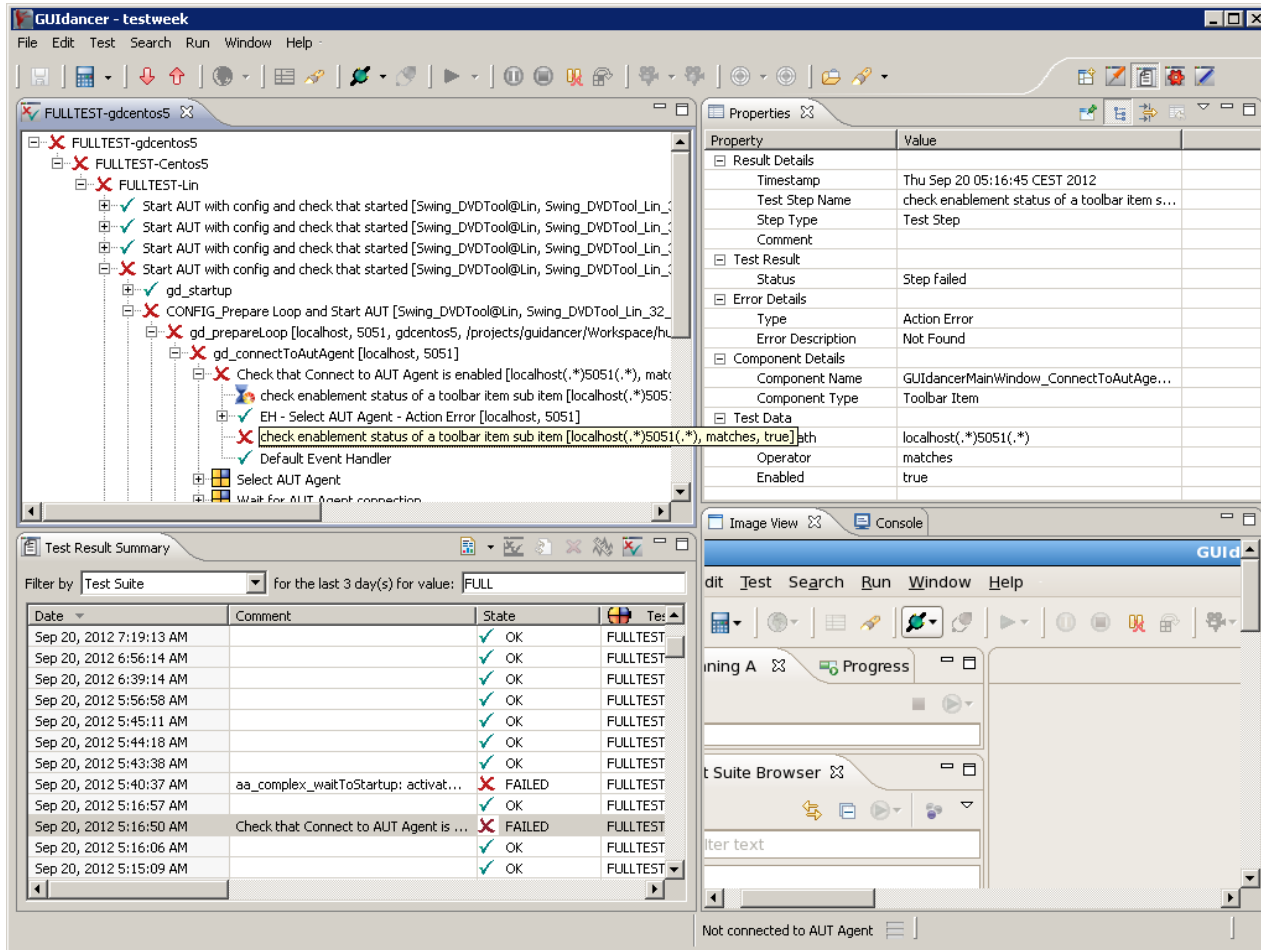
▶ Anbindung an ALM-Systemen

Verlinkung: Test – Repository

Zurückführen Testergebnisse – Repository

Erstellung von Issues aus fehlgeschlagenen Tests

Demo



The screenshot displays the GUIDancer application interface during a test suite execution. The main window shows a tree view of the test suite 'FULLTEST-gdcentos5'. A specific test step, 'check enablement status of a toolbar item sub item [localhost.(*)5051.(*)]', is highlighted in red, indicating a failure. The Properties window on the right provides details for this failed step, showing the status as 'Step failed' and the error description as 'Not Found'.

Below the test suite tree, the 'Test Result Summary' window is visible, displaying a table of test results for the last 3 days. The table includes columns for Date, Comment, State, and Test Suite Name.

Date	Comment	State	Test Suite
Sep 20, 2012 7:19:13 AM		OK	FULLTEST
Sep 20, 2012 6:56:14 AM		OK	FULLTEST
Sep 20, 2012 6:39:14 AM		OK	FULLTEST
Sep 20, 2012 5:56:58 AM		OK	FULLTEST
Sep 20, 2012 5:45:11 AM		OK	FULLTEST
Sep 20, 2012 5:44:18 AM		OK	FULLTEST
Sep 20, 2012 5:43:38 AM		OK	FULLTEST
Sep 20, 2012 5:40:37 AM	aa_complex_waitToStartup: activat...	FAILED	FULLTEST
Sep 20, 2012 5:16:57 AM		OK	FULLTEST
Sep 20, 2012 5:16:50 AM	Check that Connect to AUT Agent is ...	FAILED	FULLTEST
Sep 20, 2012 5:16:06 AM		OK	FULLTEST
Sep 20, 2012 5:15:09 AM		OK	FULLTEST

The bottom right corner of the application shows a status bar indicating 'Not connected to AUT Agent'.

Danke!

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Blog.bredex.de

www.bredex.de

www.guidancer.de

www.eclipse.org/jubula