

25/11/2011

A Test Management solution that fits all needs - Test Management for everybody

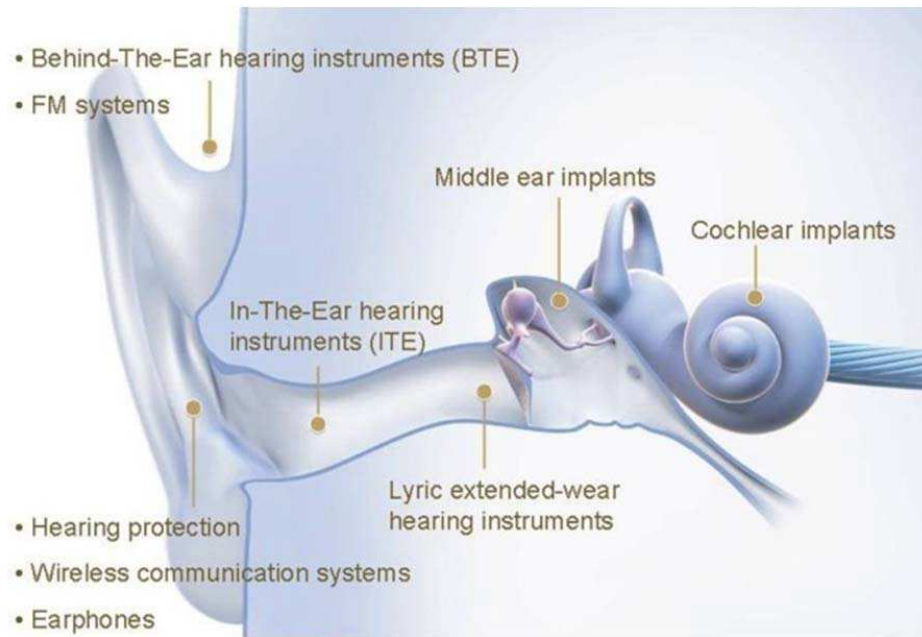
Justyna-Wanda Niewiadomski



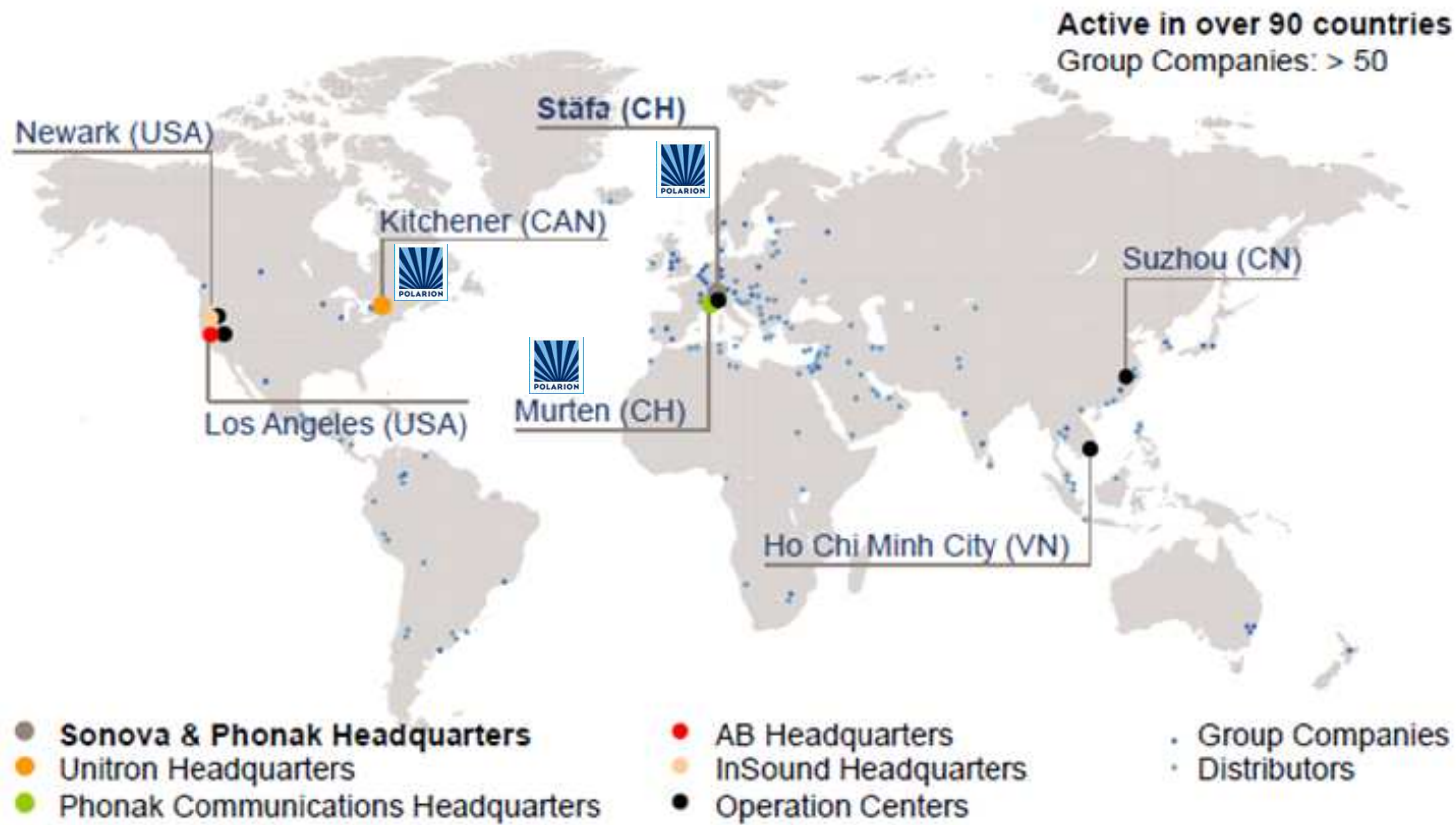
PHONAK life is on

Phonak – a company in the Sonova group

Overview



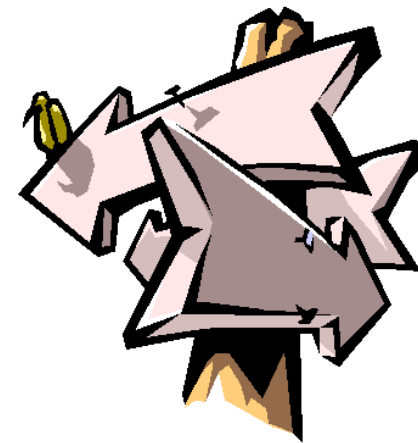
Overview of Sonova



sonova

Challenges for a Test Management solution in Sonova group/Phonak

- Different needs in different companies and departments
- Software tests for two worlds:
 - PC world
 - Embedded world
- Exchange with hardware tests
- Connection to Automation and Test Robot
- Needs a solution that works „with a fingertip“



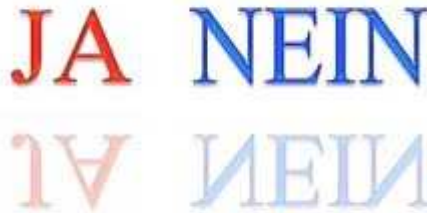
Additional Requirements

- Not only a test tool – should also assist, or rather connect, to Defect Tracking, Requirements, Project Management
- Cover regulatory guidelines
- Linking between Order – Requirements/Specification - Test – Defects



Polarion Test Management Configuration

- Own configuration



- Polarion configuration

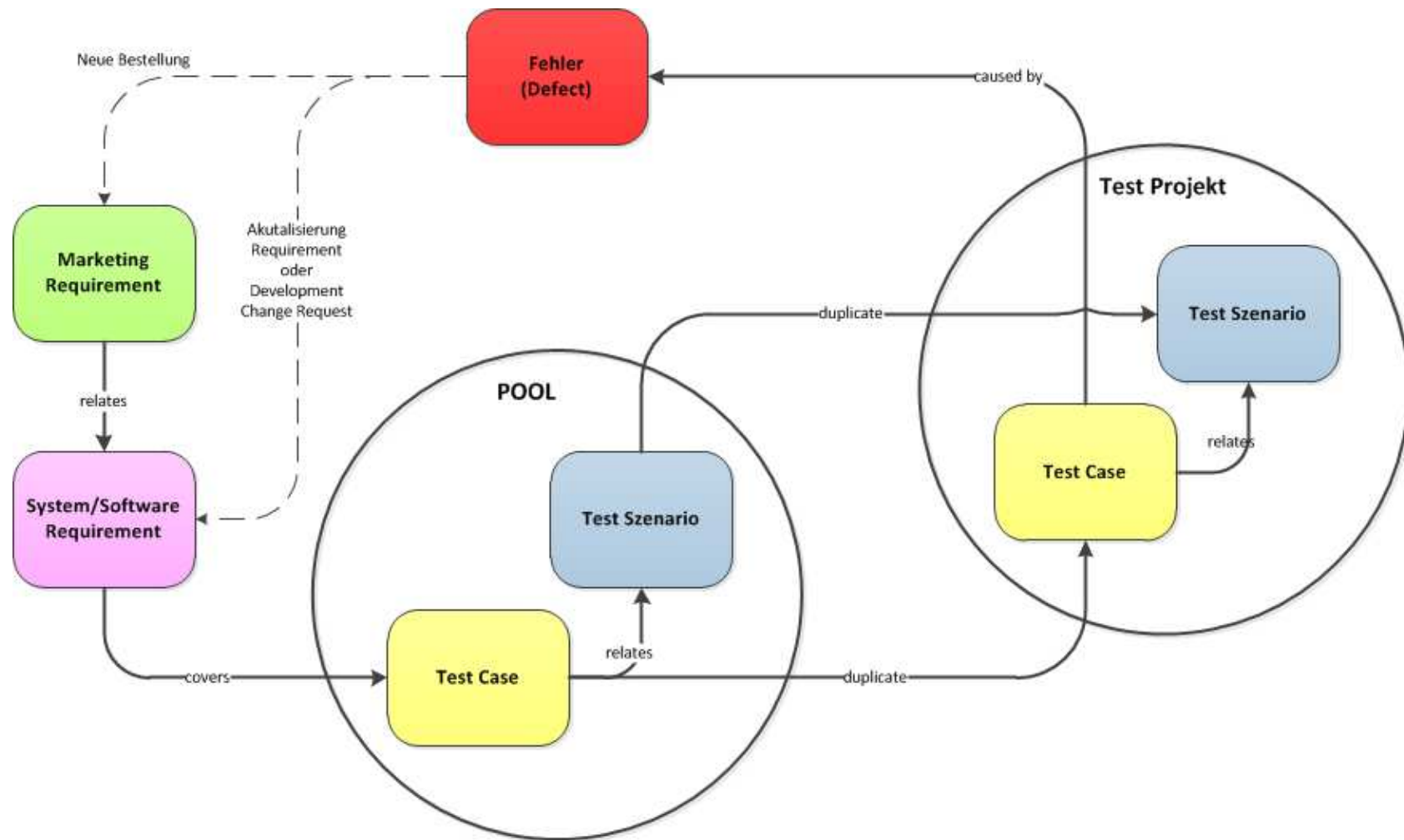
- Drivers:
 - Tailoring the tool to our processes and needs and not the other way around
 - Own understanding of coordination between test scenarios and test cases
 - Easier implementation and training phase

Tests at Phonak

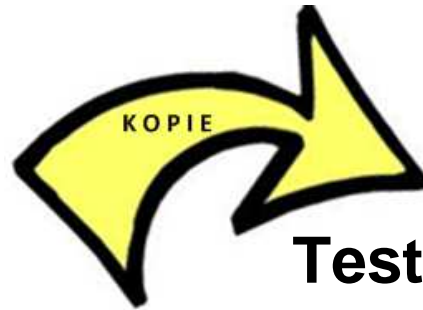
-> Challenges for Test Management

- Multiple versions and releases in parallel
- Multiple test runs at the same time
- Simultaneous tests of multiple devices
- Coordination of different groups and departments
- Test Automation
- Documentation

Correlation Requirements – Tests – Defects



Test Pool <-> Test Project



Test Pool

- Creation and Management
 - ▣ Test Scenarios
 - ▣ Test Cases
 - ▣ Automation Test Cases
 - ▣ Expert Test Cases
 - ▣ Test Charts

Test Project

- Creation and Management of Test Results
 - Hearing Device type
 - Accessoires (e.g. cell phones, remote controls)
 - Test Runs
 - Beta- and Project phases

Test Pool

Welcome to the TC Pool for iCOM2

General Remarks on iCom2 Test Cases

This chapter describes some general rules for the creation of test cases in the iCom2 project for HI & Accessory Verification in Polarion. The intended purpose is to simplify the creation and use of the test cases and to make them easily understandable for all users.

Title of a test case

The title of a test case should point to the main purpose of the test case. Do not write down a long sentence Do not describe some functional area aspects, where the test case belongs to.

Apart from some general rules every tester should feel free to create his test cases to the best of his knowledge and preferences.

Content of a test case

For the iCom2 project we create mainly short test cases with only one proper goal and a limited number of steps and asserts in the workflow. The result of the execution of the test case should be to clearly say "passed" or "failed", and not "partly passed" or "partly failed", followed by a long description of the steps that passed or failed.

This makes it easier for the testers and the developers to reproduce bugs and to fix bugs.

Guidelines for pre-conditions

General rules for pre-conditions:

- Keep the list as short as possible
- Use standardized pre-conditions
- Use standardized terms
- Avoid unnecessary pre-conditions
- Do not write down pre-conditions at the beginning of the workflow

Standard pre-conditions

To help keeping the pre-conditions list short, there is a list of standard pre-conditions, that are applicable for many testcases. If the standard pre-conditions are applicable for a testcase, the first line of the pre-conditions field in that testcase contains "Standard pre-conditions"

Standard pre-conditions
1 - HI's switched on
2 - HI's inside neckloop or in HIBAN range
3 - iCom2 switched on

Project Overview

This section describes general information about this project. You can edit the project properties in Administration.

Lead:	Spycher, Annett
Start/Finish:	2011-03-21 / --
Active:	<input checked="" type="checkbox"/>
Team Members:	16
Repository URL:	http://polarionalm-phonak.sonova.com:80/repo/Test%20Cases/Accessories/iCOM2

References

Requirements iCOM2

- iCom2 Marketing Requirements
- iCom2 DCRs
- iCom2 Product Specification

User Interaction Specification iCOM2

- iCom2 User Interaction Specification
- iCom2 User Interaction Signalisation Specification

iCom2 Wiki

- [Wiki with all iCom2 related informations](#)

Latest Build

Download the latest build here or browse all the other build results in the Builds topic.

Currently the build process is not configured for the project. You can learn how to set up the build process in [Getting Started with Build Management in the Administrator's Guide component of Help.](#)

Batch Duplicate

Query

Type: Any
 Test Scenarios
 Test Cases
 Automated Test
 Expert Tests

Test Priority: Any
 None
 Prio1
 Prio2
 Prio3

Functional Area: Any
 Non-Functional Requirements - Sound Equipment
 Non-Functional Requirements - Internationalization
 Non-Functional Requirements - Compatibility
 Deployment - CD/DVD Installation

Search

Query: ~~

Copy selected work items to
 Phonak Target 2.0
 Save

~~Found 1944 Work Items.

Inverse Selection

<input type="checkbox"/>	<input checked="" type="checkbox"/>	TC-CC-2687	AftProgramToSoundCompatibility
<input type="checkbox"/>	<input checked="" type="checkbox"/>	TC-CC-2688	AftSoundToProgramCompatibility
<input type="checkbox"/>	<input checked="" type="checkbox"/>	TC-CC-2689	MftProgramToSoundCompatibility
<input type="checkbox"/>	<input checked="" type="checkbox"/>	TC-CC-2690	MftSoundToProgramCompatibility
<input type="checkbox"/>	<input checked="" type="checkbox"/>	TC-CC-2691	Installation - burning process for master CDs and DVDs for official release
<input type="checkbox"/>	<input checked="" type="checkbox"/>	TC-CC-2692	MedicalDeviceRisk: AudiogramDirect - Stop playing signal after max. 2 seconds if HI's disconnected
<input type="checkbox"/>	<input checked="" type="checkbox"/>	TC-CC-2694	Cros Hearing System - warning when program is set to mute
<input type="checkbox"/>	<input checked="" type="checkbox"/>	TC-CC-2695	Media Player - correct content of "Feature animations" and "Instruction movies"
<input type="checkbox"/>	<input checked="" type="checkbox"/>	TC-CC-2696	Media Player - correct content of "Feature animations" and "Instruction movies"
<input type="checkbox"/>	<input checked="" type="checkbox"/>	TC-CC-2697	Expert Test - Audiogram Direct
<input type="checkbox"/>	<input checked="" type="checkbox"/>	TC-CC-2698	DistantFitting: Activate distant fitting
<input type="checkbox"/>	<input checked="" type="checkbox"/>	TC-CC-2699	Non Functional - Allow Installation - Windows 7 Home Basic 32bit
<input type="checkbox"/>	<input checked="" type="checkbox"/>	TC-CC-2700	Non Functional - Allow Installation - Windows 7 Home Basic 64bit

Test Project

Wiki > Fitting Software > Home

[Edit](#)
[Actions](#)
[Extract Work Item](#)

[Attachments \(2\)](#)
[Backlinks \(0\)](#)

SW Verification Release Plan Target 2.0

K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AJ	AJ	AK		
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42		
21.4.11	28.4.11	5.5.11	12.5.11	19.5.11	26.5.11	2.6.11	9.6.11	16.6.11	23.6.11	30.6.11	7.7.11	14.7.11	21.7.11	28.7.11	4.8.11	11.8.11	18.8.11	25.8.11	1.9.11	8.9.11	15.9.11	22.9.11	29.9.11	6.10.11	13.10.11	20.10.11		
				alpha Branch Thu, 25. May 11			alpha 1 with ambra aemo Thu, 9. Jun 11	Beta 0 Thu, 16. Jun 11	alpha 2 Naida CRT's with Thu, 23. Jun 11	Beta 1 Thu, 30. Jun 11		Beta 2 Thu, 14. Jul 11		Beta 3 Thu, 28. Jul 11		Beta 3b (last DCR) Thu, 11. Aug 11	Beta 3c Thu, 18. Aug 11	Beta 4 (DCR Complete) Thu, 25. Aug 11	Beta 5 Thu, 1. Sep 11	Beta 6 Thu, 8. Sep 11		Beta 7 Thu, 22. Sep 11	RC1 Thu, 29. Sep 11	Himsa Wed, 5. Oct 11		Ship CD to GC Mon, 17. Oct 11		
Target 2.0 testing	Val ASC Nemo																											
	Canada Homologation																											
	Val Naida S CRT																											
	Prio 1																											
	Prio 2																											
	Rerun Prio 1																											
	Rerun Failed																											
	Prio 3																											
	Installation Matrix																											
	Translation																											
Automated Tests																												
Expert Tests																												
Exploratory Testing																												
Himsa Tests																												

TODAY

Tests for Beta 3b on trunc/main

- New functionalities (0) deadline is on 11th August
- Restlichen Prio 2 (25)
- rerun Prio 1 regression (23)

Tests for Beta 3c on trunc/main

- HI Upgrade with Ambra (0)
- HI Upgrade with Cassia (0)
- HI Upgrade with Solana (0)
- HI Upgrade with Naida S CRT (0)
- HI Upgrade with Audeo S Smart I (0)
- HI Upgrade with Nios S V (0)

Translation Master Bugs for Target 2.0

Danish: BUG3548

German: BUG3516

Taiwan: BUG3430

Greek: BUG3360

French: BUG3835

Chinese: BUG3986

Spanish: BUG3996

Total Test Cases Executed per week

Test Execution - Automation

TP-FSW-PT-1.2-516 - MftSoundToProgramCompatibility
TC-CC-2690

Total:	Passed:	Failed:	Errors:
Status: ✔ Passed	Test Type: Compatibility	Details:	

Comments

Create Comment Collapse All Expand All View: Tree

#1 Passed:47 Failed:0 Errors:0 by Tester, Auto on 2010-12-16 11:25 [Reply](#)

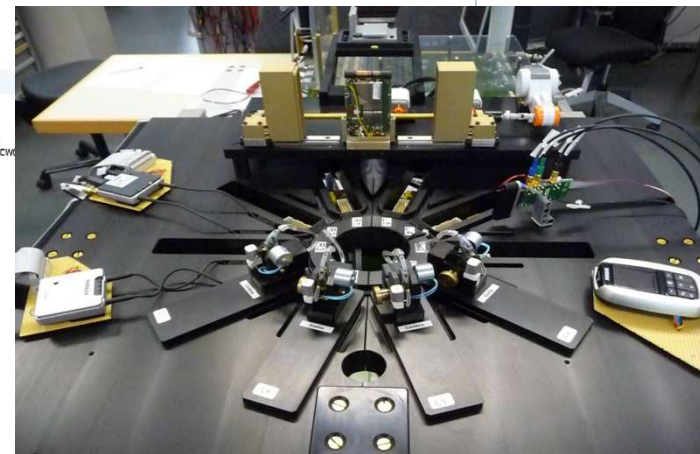
```
<statistic name="MftSoundToProgramCompatibility" time="127.547" total="47" failures="0" errors="0" succeeded="47">
  <context-info>
    <environment nunit-version="2.5.5.10112" clr-version="2.0.50727.3607" os-version="Microsoft Windows NT 5.1.2600 Service Pack 3" platform="Win32NT" cwd="C:\Temp\TestBed" machine-name="AUTOTEST1" user="11autotester"
    user-domain="AUTOTEST1" />
    <culture-info current-culture="en-US" current-uiculture="en-US" />
  </context-info>
</statistic>
```

#2 Passed:47 Failed:0 Errors:0 by Tester, Auto on 2010-12-16 11:26 [Reply](#)

```
<statistic name="MftSoundToProgramCompatibility" time="128.828" total="47" failures="0" errors="0" succeeded="47">
  <context-info>
    <environment nunit-version="2.5.5.10112" clr-version="2.0.50727.3607" os-version="Microsoft Windows NT 5.1.2600 Service Pack 3" platform="Win32NT" cwd="C:\Temp\TestBed" machine-name="AUTOTEST1" user="11autotester"
    user-domain="AUTOTEST1" />
    <culture-info current-culture="en-US" current-uiculture="en-US" />
  </context-info>
</statistic>
```

#3 Passed:47 Failed:0 Errors:0 by Tester, Auto on 2011-01-13 15:43

```
<statistic name="MftSoundToProgramCompatibility" time="134.047" total="47" failures="0" errors="0" succeeded="47">
  <context-info>
    <environment nunit-version="2.5.5.10112" clr-version="2.0.50727.3607" os-version="Microsoft Windows NT 5.1.2600 Service Pack 3" platform="Win32NT" cwd="C:\Temp\TestBed" machine-name="AUTOTEST1" user="11autotester"
    user-domain="AUTOTEST1" />
    <culture-info current-culture="en-US" current-uiculture="en-US" />
  </context-info>
</statistic>
```



Test Execution - Manual

TC-CC-3039 BUG-CC-4140
TP-FSW-PT-1.3-1955 - ALPS - change Lyric HI (device) in Target i:

***Status:** Assigned
Assignee: Assigned
Release Cycle: Beta 5
Test Priority: Prio1

Common

- Perform action Passed
- Perform action Failed
- Perform action Parked
- Perform action Valid

SQA

Time Spent: 5d
Test Env. Source: -- not selected --
OS-System: -- not selected --
OS Language: Acronis
Installation Mode: VMWare
Test Machine: Phonak Workstation
Build Number: 123456789
HI Family: All Audeo S
HI Model: CRTs
Fitting Device: NoahLink
Fitting Device Firmware: 123456789
Accessory: myPilot
Accessory Firmware: 123456789




Test Execution

Automation Control


Task Overview

Latest Smoke Test


Build name: PhonakTargetCustomer1.1.1.253_2011_1_7.zip

SimpleSmokeTest [Details](#) 2011-01-07 07:02:41 

Summary - Total runs: 1; failed: 0; error: 0; passed: 1

CocoonStandaloneSmokeTest [Details](#) 2011-01-07 07:02:41 

Summary - Total runs: 1; failed: 0; error: 0; passed: 1

LongSmokeTest [Details](#) 2011-01-07 07:02:41 

Summary - Total runs: 1; failed: 0; error: 0; passed: 1

[All Tests - Latest run](#)
[All Tests - History](#)

Latest build that passed all smoke tests: PhonakTargetCustomer1.1.1.253_2011_1_7.zip

Announcements

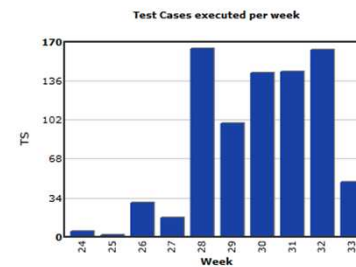
The automated tests will not be maintained 18.-22.10.2010
 2010-10-14 15:09

[Add new](#) | [More...](#)

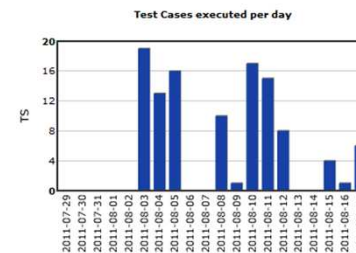
Latest Builds

Date	Build	Status
1/7/2011	PhonakTargetCustomer1.1.1.253_2011_1_7.zip	✓
1/6/2011	PhonakTargetCustomer1.1.1.252_2011_1_6.zip	✓
1/5/2011	PhonakTargetCustomer1.1.1.251_2011_1_5.zip	✓
1/5/2011	PhonakTargetCustomer1.1.1.250_2011_1_5.zip	✓
1/4/2011	PhonakTargetCustomer1.1.1.247_2011_1_4.zip	✓
1/3/2011	PhonakTargetCustomer1.1.1.246_2011_1_3.zip	✓
1/3/2011	PhonakTargetCustomer1.1.1.246_2011_1_3.zip	✗
1/2/2011	PhonakTargetCustomer1.1.1.245_2011_1_2.zip	✗

Total Test Cases Executed per week



Test Cases executed by Voegeli, Raffael (you) per day



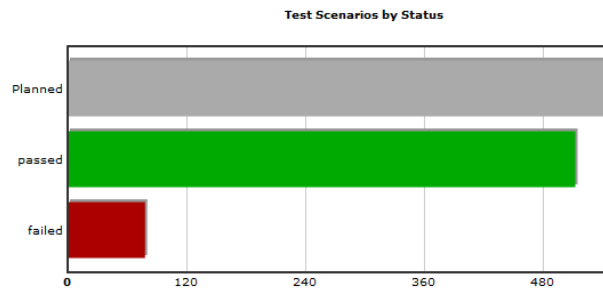
Test Results - Matrix

Phone Test Execution Matrix

Test Cases	iPhone 3G	iPhone 3Gs	iPhone 4	Nokia N95	SE W302	Black Berry	HTC Desire S	S
TC-iCOM2-1 - Accept incoming phone call on iCom2	Total: 2 times Last Execution:	Total: 2 times Last Execution:	Total: 4 times Last Execution:	Total: 3 times Last Execution:	Total: 2 times Last Execution:	Total: 8 times Last Execution:	Total: 8 times Last Execution:	
TC-iCOM2-2 - Accept incoming phone call on BT phone	Total: 3 times Last Execution:		Total: 4 times Last Execution:	Total: 3 times Last Execution:	Total: 2 times Last Execution:	Total: 5 times Last Execution:	Total: 2 times Last Execution:	
TC-iCOM2-3 - Hold active BT phone call	Total: 2 times Last Execution:		Total: Once Last Execution:	Total: 2 times Last Execution:		Total: Once Last Execution:	Total: 4 times Last Execution:	
TC-iCOM2-4 - End active BT phone call	Total: 4 times Last Execution:		Total: 6 times Last Execution:	Total: 5 times Last Execution:	Total: 4 times Last Execution:	Total: 11 times Last Execution:	Total: 12 times Last Execution:	
TC-iCOM2-5 - Refuse incoming phone call	Total: 3 times Last Execution:		Total: 3 times Last Execution:	Total: 3 times Last Execution:	Total: 2 times Last Execution:	Total: 7 times Last Execution:	Total: 4 times Last Execution:	
TC-iCOM2-6 - Initiate outgoing phone call	Total: 2 times Last Execution:	Total: 2 times Last Execution:	Total: 4 times Last Execution:	Total: 3 times Last Execution:	Total: 2 times Last Execution:	Total: 8 times Last Execution:	Total: 8 times Last Execution:	
TC-iCOM2-7 - Pause and resume A2DP streaming	Total: 3 times Last Execution:		Total: 4 times Last Execution:	Total: 3 times Last Execution:	Total: 2 times Last Execution:	Total: 5 times Last Execution:	Total: 3 times Last Execution:	
TC-iCOM2-14 - Pairing with mobile phone	Total: 4 times Last Execution:	Total: 2 times Last Execution:	Total: 2 times Last Execution:	Total: 5 times Last Execution:	Total: 4 times Last Execution:	Total: 6 times Last Execution:	Total: 5 times Last Execution:	
TC-iCOM2-15 - Start A2DP stream	Total: 4 times Last Execution:		Total: 3 times Last Execution:	Total: 3 times Last Execution:	Total: 2 times Last Execution:	Total: 7 times Last Execution:	Total: 5 times Last Execution:	
TC-iCOM2-16 - Voice Dial			Total: 2 times Last Execution:	Total: 3 times Last Execution:		Total: 4 times Last Execution:		
TC-iCOM2-17 - Last Number Redial	Total: 3 times Last Execution:			Total: Once Last Execution:	Total: Once Last Execution:	Total: 3 times Last Execution:	Total: Once Last Execution:	
TC-iCOM2-18 - Caller ends call before accepting call	Total: 3 times Last Execution:		Total: 4 times Last Execution:	Total: 3 times Last Execution:	Total: 2 times Last Execution:	Total: 5 times Last Execution:	Total: 3 times Last Execution:	

Test Results - Report

Test Scenarios



TP-FSW-PT-1.2-1005	Smoke Test: Standalone -> Lyric			Failed
TC-CC-2105_5	Smoke Test: Standalone -> Lyric selectable			Passed
TC-CC-2106_5	Smoke Test: Standalone -> Lyric default settings			Failed
BUG-CC-3572	Some wrong GUI for Lyric in Target 1.2.	Fitting Devices - Lyric Fitting Device	Minor	Released
TP-FSW-PT-1.2-764	HI Integration Phonak Target 1.2 - Naida S - Test 3/3			Failed
TC-CC-2586_1	HI Integration Phonak Target 1.2 - Acoustic Parameters - Naida S			Passed
TC-CC-2594_1	HI Integration Phonak Target 1.2 - Accessories Compatibility - Naida S			Passed
TC-CC-2589_1	HI Integration Phonak Target 1.2 - HI Colors - Naida S			Passed
TC-CC-2588_1	HI Integration Phonak Target 1.2 - Program Manager - Naida S			Failed
Warning: Testcase failed but no bug linked.				

The following tables list all executed test cases.

Type	Amount of performed Items	PASSED	PASSED WITH RESTRICTIONS	FAILED
Test Scenario	3	2	1	0
Test Case	46	40	6	0
Test Suites (VM)	0	0	0	0

Test Scenarios

ID	Title	Functional Area	Status
C31-iCOM2-1455	Receive a phone call while streaming audio	Bluetooth HFP	Passed
C31-iCOM2-1456	Initiate a phone call while streaming audio	Bluetooth HFP	Passed
C31-iCOM2-1454	Test cases for CORE HIs	None	Passed with restrictions

3 items found

Test Cases

ID	Title	Functional Area	Status
TC-iCOM2-15_2	Start A2DP stream	Bluetooth A2DP	Passed
TC-iCOM2-21_2	Skip music track on streaming device	Bluetooth A2DP	Passed
TC-iCOM2-22_2	Fast-forward and rewind music on streaming device	Bluetooth A2DP	Passed
TC-iCOM2-26_2	Disconnect BT device while streaming from other device	Bluetooth A2DP	Passed

Test Results - Report

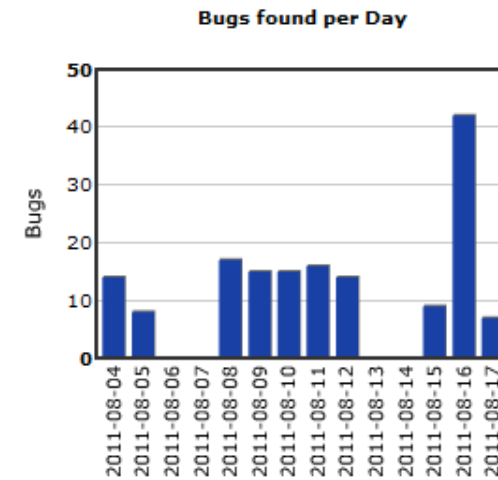
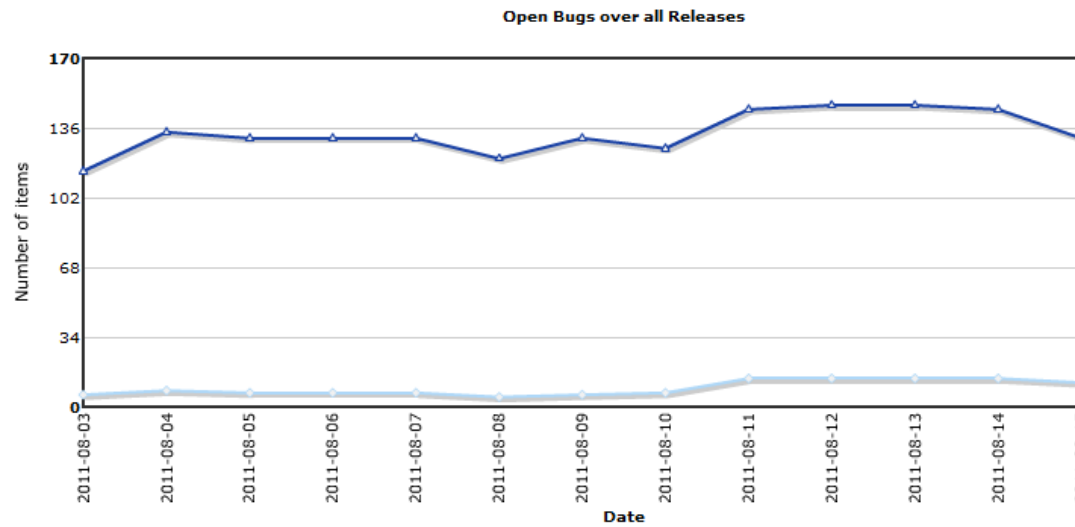
Requirements	Test Cases	Last Execution	Bug if last execution failed
RQ-ACC-156 - Mono signal when one HI	TC-iCOM2-30 - Changing between mono and stereo audio streaming	✓ (C35)	
	TC-iCOM2-11 - Stream audio for monaural fittings	✓ (C35)	
RQ-ACC-158 - HIBAN compatibility general	TC-iCOM2-50 - Start FM Stream	✓ (C36)	
RQ-ACC-161 - Paired device	TC-iCOM2-97 - Pair Spice HI	✓ (C35)	
	TC-iCOM2-98 - UnPair Spice HI	✓ (C35)	
RQ-ACC-162 - Battery charging	TC-iCOM2-71 - Akku Charging, LED Indication during charging	✓ (C36)	
RQ-ACC-166 - TVLink compatibility	TC-iCOM2-15 - Start A2DP stream	✓ (C36)	
RQ-ACC-169 - Using as RC only	TC-iCOM2-100 - RC Reaction Time (HIBAN / Coil)	✓ (C23)	
	TC-iCOM2-88 - RC Manual Navigation	✓ (C35)	
RQ-ACC-172 - Button handling	TC-iCOM2-1 - Accept incoming phone call on iCom2	✓ (C36)	
	TC-iCOM2-5 - Refuse incoming phone call	✓ (C35)	
RQ-ACC-175 - Device startup time	TC-iCOM2-69 - Switch Power On, Startup Time for Streaming	✗ (C36)	BUG-ACC-660 - iCom2 Jack Streaming Start has a big Delay After Switching iCom2 on Status: Open
	TC-iCOM2-68 - Switch Power On, Startup Time for RC	✓ (C35)	
RQ-ACC-176 - RC reaction ime	TC-iCOM2-100 - RC Reaction Time (HIBAN / Coil)	✓ (C23)	
RQ-ACC-177 - Docking behaviour	TC-iCOM2-231 - Wallcharger Docking Behavior: Power Slider Position OFF	✓ (C36)	
	TC-iCOM2-230 - Wallcharger Docking Behavior: Power Slider Position ON	✓ (C36)	
RQ-ACC-178 - Mic pickup	TC-iCOM2-61 - Call with iCom2 under shirt	✓ (C35)	
RQ-ACC-179 - External mic	TC-iCOM2-60 - Call with external mic connected	✓ (C35)	
RQ-ACC-181 - Sidetone	TC-iCOM2-59 - Sidetone: Own voice is heard during call	✓ (C36)	
RQ-ACC-182 - Keep Bluetooth pairing	TC-iCOM2-89 - iCom2 configuration settings are restored after a SW update	✓ (C36)	
	TC-iCOM2-65 - Bluetooth pairing is still available after image upgrade	✓ (C36)	

Error Metrics/Statistics

Open Bugs

Phonak Target 2.0

Severity	Count
Critical	30
Major	97
Minor	64
Total Open Bug Count	191



Summary

- Working fine in compliance with Phonak processes
- Achieved compliance with standards for medical devices
- Traceability and linking of Tests to Requirements
- Connection to automation
- Creation of analyses, statistics and reports

Thank you very much



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