

Test Report of Certification

ascom

Ascom i62 VoWiFi handset

with

HiPath 4000 V6.0

Test Status: Released
Release Date: November 22, 2011

Siemens Enterprise Communications GmbH & Co. KG 2011

Issued by:
Siemens Enterprise Communications GmbH & Co.KG
Hofmannstraße 51
D-81359 Munich

Siemens Enterprise Communications GmbH & Co. KG is a Trademark Licensee of Siemens AG

Copying of this document and giving it to others and the use or communication of the contents thereof, are forbidden without express authority. Offenders are liable to the payment of damages. All rights reserved in the event of the grant of a patent or the registration of a utility model or design.

Owner: Eddy De Braekeleer
Department: SEN Service PS
Date: November 2011
Document: Certification_ascom_H4KV6.doc

Contents:

History of Change.....	3
1 Overview	4
1.1 Test Object.....	4
1.1.1 Basic Equipment	4
1.1.2 ASCOM VoWiFi	4
1.2 Test Strategy	4
1.2.1 Measuring / Test Instruments	5
1.3 Realisation Data	5
1.4 Test Results Summary	6
1.4.1 Problems	6
1.4.2 Restrictions	6
1.4.3 Remarks.....	7
2 Configuration.....	8
2.1 ASCOM devices.....	8
2.2 Hipath 4000.....	8
2.3 Hipath Wireless Controller	8
2.4 Configuration Block Diagram	9
3 Detailed test results.....	10
3.1 Connectivity and Basic Operation	10
3.2 Basic call.....	11
3.3 Telephony features	13
3.4 Audio features	18
3.5 Restart test	18
3.6 Interconnection with DAKS	19
3.7 Remarks	19
4 Configuration Data.....	20
4.1 Hipath 4000.....	20
4.1.1 System Basics.....	20
4.2 ASCOM.....	20
4.2.1 Documentation	20
4.2.2 Basic Configuration	20
4.3 Wireless network	21
5 Confirmation.....	21

Owner: Eddy De Braekeleer
Department: SEN Service PS
Date: November 22, 2011
Document: released_Certification_report_ASCOM_i62_H4k_V6_mw.doc

History of Change

<u>Date</u>	<u>Description</u>	<u>Name</u>
February 2009	Initial Version	Eddy De Braekeleer SEN Service Customer Solution Lab Brussels E-Mail: eddy.debraekeleer@siemens-enterprise.com Phone: +32.2.406.7316
March 2011	Update for new versions	Eddy Sterckx SEN service E-Mail: eddy.sterckx@siemens-entreprice.com Phone: +32.2.406.7197
April 2011	Certification tests	Eddy Sterckx SEN service E-Mail: eddy.sterckx@siemens-entreprice.com Phone: +32.2.406.7197
April 8, 2011	Review	Eddy Sterckx SEN service E-Mail: eddy.sterckx@siemens-entreprice.com Phone: +32.2.406.7197
April 18, 2011	Review partner	Ascom Wireless Solutions: Matthew Williams Email: matthew.williams@ascom.se Phone +46 31 55 93 58
December 2011	Additional testing & tracing	Eddy Sterckx SEN service E-Mail: eddy.sterckx@siemens-entreprice.com Phone: +32.2.406.7197
November 22, 2011	Release	Eddy De Braekeleer SEN Service Customer Solution Lab Brussels E-Mail: eddy.debraekeleer@siemens-enterprise.com Phone: +32.2.406.7316

1 Overview

1.1 Test Object

1.1.1 Basic Equipment

Test system: Hipath 4000 CPCI

Software Version: RMX V6 R0.25.5

Gateways STMI: L0-T3R.61.002-009
Wireless C2400: V7 41.02.0009
Controller

1.1.2 ASCOM VoWiFi

Certification: Test of interface functionality between the Hipath 4000 and the ASCOM i62 VoWiFi handset

Test Equipment: Hipath 4000 in combination with an Siemens HiPath Wireless C2400 Controller and Access Points (AP)

Software Release i62: V2.2.14 (initial version)

Recommended version i62: 2.3.16

HW / FW Release: HW[G2]

Manufacturer: ASCOM

Description: The i62 VoWiFi handset functions as a SIP device registered on the Hipath 4000.

Documentation:

Test Network: Test network of HiPath Ready Lab Brussels

Test Configuration: See section 2.3

1.2 Test Strategy

This certification test for the **ASCOM** phones listed below with the **Siemens Hipath 4000 V6** focused on the verification of the SIP interface in the following scenarios:

- Basic phone configuration and registration
- Basic calls
- Telephony feature verification
- Audio features, including codec's and DTMF

Owner: Eddy De Braekeleer
Department: SEN Service PS
Date: November 22, 2011
Document: released_Certification_report_ASCOM_i62_H4k_V6_mw.doc

- Restart test

REMARK:

Basic WLAN tests were performed – WLAN was not part of this certification. This part was carried out by Enterasys & Ascom.

For successful implementation, it is necessary to take into account the WLAN test results and hints from the respective Ascom-WLAN Interoperability “Tests and Certifications”. They are available at Ascom for the i62 VoWiFi Handset with a number of different WLAN Infrastructures from several Vendors.

The scope of the tests is to execute/verify that the solution performs within the limits of the system requirements, targeting the end product. To accomplish this, feature and solution based test cases are created, inspected, and executed under a real system environment (mirroring as closely as possible real customer environment).

Note:

The testing of the product with regard to compliance to requirements for Product Safety, EMV, Network Access Interfaces and Radiation Protection were not performed.

Siemens Enterprise Communications therefore assumes no responsibility for the compliance to these requirements.

1.2.1 Measuring / Test Instruments

Tracing and monitoring available on all IP phones, servers, gateways and laptops. No special hardware required.

1.3 Realisation Data

Test Preparation: April 2011

Test Duration: April 2011
Additional testing in November/December 2011

Test Location: Siemens Enterprise Communications
Demeurslaan 134
1654 Huizingen
International Solution Lab

Test Personnel: Siemens Hipath 4000:
Eddy Sterckx
E-Mail: eddy.sterckx@siemens-entreprice.com
Phone: +32.2.406.7197

Ascom Wireless Solutions:
Matthew Williams
Email: matthew.williams@ascom.se
Phone +46 31 55 93 58

Coordination: De Braekeleer Eddy
Email: eddy.debraekeleer@siemens-entreprise.com
+32 2 406.7316

1.4 Test Results Summary

For details please have a look at the test results.

Note: If U-APSD is set on the i62 you also have to activate it on the WLAN controller! Otherwise bad voice quality will occur. All test where performed without U-APSD.

1.4.1 Problems

- 1) Call forwarding on busy is not performed, calling party gets busy tone.
Problem solved in i62 Software 2.3.16
- 2) After a network connection loss or restart H4K system/STMI, the i62 has to be restarted before it will register again. No automatically re-registration.
Problem solved in i62 Software 2.3.16.
- 3) In case the MWI is turned off (test 85) and the i62 is powered off/on the message indication is switch on again on the display of the i62.
Problem solved in i62 Software 2.3.16.
- 4) When the i62 handset has "second call" active ("Device", "Call", "Busy on 1 / Disable call waiting=no), and two calls are active, the initiator of a third call does not get a "busy tone" (or is not forwarded when CFB is set) but gets "Not possible".
H4K problem Ticket NA09139797.
The COS CW is not necessary for SIP and it produce the improper disconnection. The SIP manages the CW on it's own by means of device configuration.
Without this COS the third call is correctly disconnected (...so full menu is available like CALLBACK...).
"Not possible" is not occurring anymore. Third caller only get busy tone. A correction is in progress which assume that COS CW will be ignored when it is incorrectly used for SIP. (Cozmin Coman)

1.4.2 Restrictions

- 1) In all test cases the i62 handset display only shows the calling party name and not the calling party number.
Feedback ASCOM: Per design, name is prioritized before number. However, number should be saved in the call list. This limitation will be investigated further in conjunction with future regression testing. (test 58)
- 2) No display update on A-party in case of call transfer, call forwarding and call deflection.
Works as designed by H4k (Call transfer, Call forwarding or Call Deflect will not work and a CR (Change Request) would be needed. Statement confirmed by Mr Robert Stampfl , CP Development")
- 3) On DUT the members of the conference are indicated, but no indication of conference on the member site.
Feedback ASCOM: When we as conf. leader are multiplexing RTP locally, no update or notification is sent to other side.
Works as designed by ASCOM
- 4) Connected to the XPR there is no display indication on the i62 of the possible menu selections.

The handset does not show a number of waiting messages.

Feedback ASCOM: This is a limitation of the MWI indicator in the i62 GUI. The current implementation does not support this feature.

- 5) The i62 phone does not fully support an optional functionality in rfc3842, where, in addition to the "Messages-Waiting: yes", the number of messages also can be sent, for instance "Voice-Message: 1/3". If this additional/not required information is not sent, MWI will not be activated. This can lead to a malfunction for certain VM systems.

- 6) Blind transfer (test case 53) and ringing transfer (test case 54) are not supported in H4k
Works as designed by H4k

1.4.3 Remarks

- 1) In order to make the display update possible, the following has to be done. Change PRODE so that in PD07 (SBDSS1) the element Connected Number becomes mandatory for Outgoing Setup.
CHANGE-
PRODE:KIND=PD,PDNAME=PD07,SEC=WELMAND,SETNO=0,B22=10;
CHANGE-PRODE:PD,PD07,ORG,,Y;
Works as designed by H4k

- 2) When the i62 handset has setup a local three-party conference it is not possible to leave the conference so that the two other parties are joining. The i62 can only disconnect with one of the conference parties.
Works as designed by ASCOM

- 3) No survivability possibility/second registration possible on phone (not possible to add a second IP address)
From i62 Software 2.2.17 it is possible to add a second IP

- 4) If a CFU is set on the i62, and the phone is called, from time to time the i62 rings once.
Problem did not occur with i62 Software 2.3.16

- 5) When activating the local music on hold the H4K system music on hold is still used.
Feedback ASCOM: This is a special option for PBXes that do not send MoH. In those cases, we'll play a hold tone in the earpiece instead of it just being silent.

2 Configuration

2.1 ASCOM devices

- Handset i62: V2.2.14 → software version used for the initial certification tests.
A number of hotfixes were delivered by Asom during the certification period.
The recommended software version for customer projects is 2.3.16

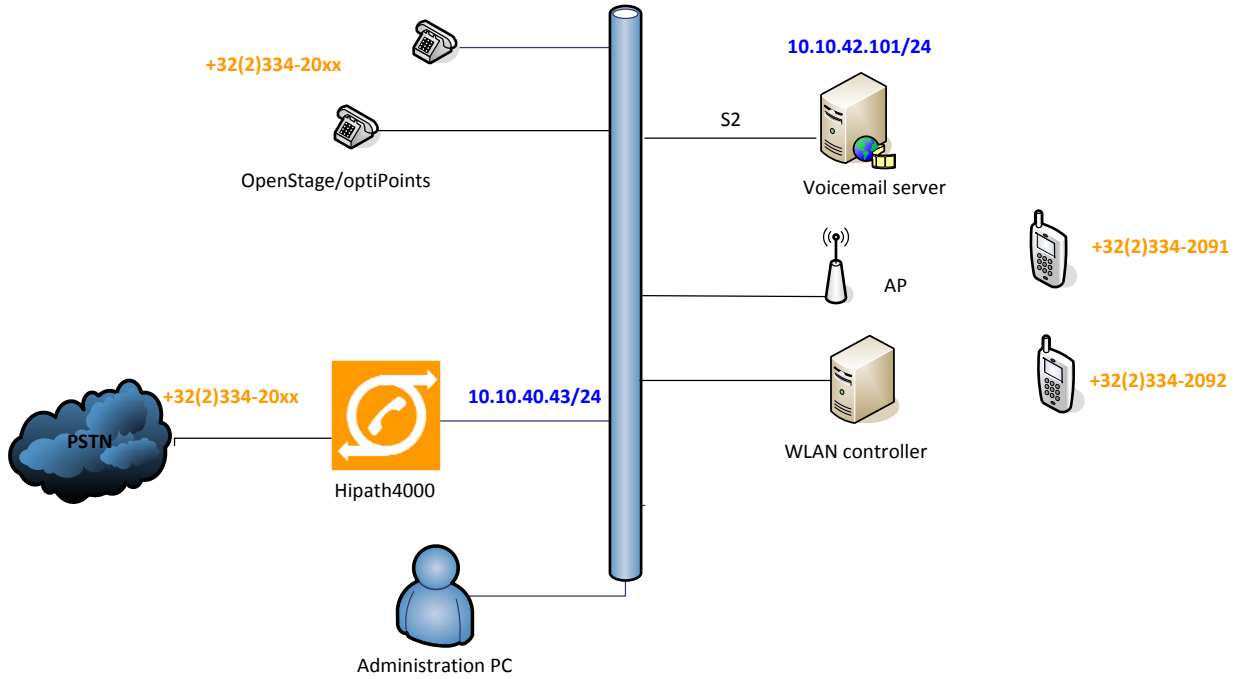
2.2 Hipath 4000

- RMX V6 R0.25.3
- Assistant V6 R0.28.0
- IP phones
 - OptiPoint 420
 - OpenStage 20/60
- STMI HG3500 pzksti40 37.002-009

2.3 Hipath Wireless Controller

- HW Version : C2400
- SW Version: V7 41.02.0009
- Access Points: AP3610

2.4 Configuration Block Diagram



3 Detailed test results

The syntax of the abbreviations used in the test cases:

DUT = +3223342091 = DUT (device under test)

A1 = +3223342092 **A2** = +3223349401 = Ascom i62 handsets

O1 = +3223342093 **O2** = +3223342094 = OpenStage/optiPoint IP HFA phones

OS1 = +3223349440 = OpenStage/optiPoint IP SIP phone

E1 = External PSTN phone u

3.1 Connectivity and Basic Operation

Test Case	Test Description	Result	Comment
1	Power up the handset and verify that the phone obtains a valid IP address from the DHCP server.	OK	
2	Connect a PC to the lab LAN and verify that access to the GUI of the test phone is possible.	OK	For the GUI a proprietary admin interface is provided to be used via a password.
3	Program the phone via GUI with the HiPath 4000 registrar information and verify that the phone registers	OK	The Ascom WinPDM programs are used for that purpose. Ascom's remote management "over the air" provides a similar interface.
4	Change the HiPath 4000 subscriber settings so that Digest Authentication is required for the registration. Verify that the phone does not register.	OK	
5	Add the information for HTTP Digest Authentication to the test phone settings via web GUI and verify that the phone registers	NA	NA Per Design (Ascom)
6	Verify that the test phone displays the local date and time correctly that is provided by the lab's SNTP server (10.10.85.254).	OK	
7	The first node of the H4K is put out of service, which means that on the second node the backup registrar IP address is coming up.	NA	
8	The first node of the H4K is put in service again, which means that on the first node the registrar IP address is coming up.	NA	
9	The DUT is registered on the same number as the O1 phone. This can be used to use the two phones in parallel (like is done sometimes with a hard phone and a soft client).	NA	No forking on H4K

3.2 Basic call

For every test the HTTP Digest Authentication was enabled on the IP phones.

Test Case	Test Description	Result	Comment
10	Initiate a call from the DUT to internal subscriber A1. Verify that A1 is ringing (DUT receives ring back) and that the displays on the DUT and A1 show the correct called/calling number/name information. Subscriber A1 has special characters in the user name (éü...)	OK	No called name on calling phone display in ringing state. H4K problem. See remark 1) After change (remark 1) No calling number on the i62, only calling name. See restrictions 1)
11	From the previous test case answer the call at A1 and verify speech path between both phones. Verify that the phone displays show the correct information after the call connected.	OK	Idem test 10
12	From the previous test case disconnect the call at the DUT and verify that both phones return to idle state.	OK	
13	Repeat the previous call, but disconnect the DUT before A1 answers. Verify that the DUT returns to idle state.	OK	
14	Initiate a call from A1 to the DUT. Verify that the DUT is ringing (A1 receives ringback) and that the displays on the DUT and A1 show the correct called/calling number/name information.	OK	Idem test 10
15	From the previous test case answer the call at the DUT and verify speech path between both phones. Verify that the phone displays show the correct information after the call connected.	OK	Idem test 10
16	From the previous test case disconnect the call at the DUT and verify that both phones return to idle state.	OK	
17	Initiate a call from the DUT to internal subscriber O1. Verify that O1 is ringing (DUT receives ring back) and that the displays on the DUT and O1 show the correct called/calling number/name information.	OK	Idem test 10
18	From the previous test case answer the call at O1 and verify speech path between both phones. Verify that the phone displays show the correct information after the call connected.	OK	Idem test 10
19	From the previous test case disconnect the call at the DUT and verify that both phones return to idle state.	OK	
20	Repeat the previous call, but disconnect the DUT before O1 answers. Verify that the DUT returns to idle state.	OK	

21	Initiate a call from O1 to the DUT. Verify that the DUT is ringing (O1 receives ring back) and that the displays on the DUT and O1 show the correct called/calling number/name information.	OK	Idem test 10
22	From the previous test case answer the call at the DUT and verify speech path between both phones. Verify that the phone displays show the correct information after the call connected.	OK	Idem test 10
23	From the previous test case disconnect the call at the DUT and verify that both phones return to idle state.	OK	
24	Initiate a call from the DUT to an external number . Verify that the external phone is ringing (DUT receives ring back) and that the displays on the DUT and the external phone show the correct called/calling number.	OK	Idem test 10
25	From the previous test case answer the call at the external phone and verify speech path between both phones. Verify that the phone displays show the correct information after the call connected.	OK	Idem test 10
26	Initiate a call from an external number to the DUT. Verify that the DUT is ringing (external phone receives ring back) and that the displays on the DUT and the external phone show the correct called/calling number.	OK	Idem test 10
27	From the previous test case answer the call at the DUT and verify speech path between both phones. Verify that the phone displays show the correct information after the call connected.	OK	Idem test 10

3.3 Telephony features

Test Case	Test Description	Result	Comment
28	Initiate a call from the DUT to internal subscriber A1. Answer the call at A1. Put the DUT on hold and verify that it receives Music-on-hold.	OK	Music on hold delivered by the H4K (system moH) Local music on hold See remark 5)
29	From the previous test case retrieve the DUT from hold and verify speech path between the DUT and A1.	OK	Music on hold delivered by the H4K (system moH)
30	Initiate a call from the DUT to internal subscriber A1. Answer the call at A1. Put the A1 on hold and verify that it receives Music-on-hold.	OK	Music on hold delivered by the H4K (system moH)
31	From the previous test case retrieve the A1 from hold and verify speech path between the DUT and A1.	OK	
32	Initiate a call from internal subscriber A1 to the DUT. Answer the call at the DUT. Put the DUT on hold and verify that it receives Music-on-hold.	OK	Music on hold delivered by the H4K (system moH)
33	From the previous test case retrieve the DUT from hold and verify speech path between the DUT and A1.	OK	Music on hold delivered by the H4K (system moH)
34	Initiate a call from internal subscriber A1 to the DUT. Answer the call at the DUT. . Put the A1 on hold and verify that it receives Music-on-hold.	OK	Music on hold delivered by the H4K (system moH)
35	From the previous test case retrieve A1 from hold and verify speech path between the DUT and A1.	OK	Music on hold delivered by the H4K (system moH)
36	Initiate a call from the DUT to internal subscriber O1. Answer the call at O1. Put the DUT on consultation hold and verify that it receives Music-on-hold.	OK	Music on hold delivered by the H4K (system moH)
37	From the previous test case retrieve the DUT from hold and verify speech path between the DUT and O1.	OK	Music on hold delivered by the H4K (system moH)
38	Initiate a call from the DUT to internal subscriber O1. Answer the call at O1. Put the O1 on consultation hold and verify that it receives Music-on-hold.	OK	
39	From the previous test case retrieve the O1 from hold and verify speech path between the DUT and O1.	OK	
40	Initiate a call from internal subscriber O1 to the DUT. Answer the call at the DUT. Put the DUT on consultation hold and verify that it receives Music-on-hold.	OK	Music on hold delivered by the H4K (system moH)

Owner: Eddy De Braekeleer
 Department: SEN Service PS
 Date: November 22, 2011
 Document: released_Certification_report_ASCOM_i62_H4k_V6_mw.doc

41	From the previous test case retrieve the DUT from hold and verify speech path between the DUT and O1.	OK	Music on hold delivered by the H4K (system moH)
42	Initiate a call from internal subscriber O1 to the DUT. Answer the call at the DUT. Put the O1 on consultation hold and verify that it receives Music-on-hold.	OK	Music on hold delivered by the H4K (system moH)
43	From the previous test case retrieve O1 from hold and verify speech path between the DUT and O1.	OK	Music on hold delivered by the H4K (system moH)
44	Initiate a call from the DUT to external subscriber E1. Answer the call at E1. Put the DUT on consultation hold and verify that it receives Music-on-hold.	OK	Music on hold delivered by the H4K (system moH)
45	From the previous test case return from hold and verify speech path between the DUT and E1.	OK	
46	Initiate a call from external subscriber E1 to the DUT . Answer the call at DUT. Put the E1 on hold and verify that it receives Music-on-hold.	OK	Music on hold delivered by the H4K (system moH)
47	From the previous test case return from hold and verify speech path between the DUT and E1.	OK	
48	Initiate a call from internal subscriber A1 to the DUT. Answer the call and initiate consultation at the DUT. Verify that A1 receives Music-on-hold while the DUT receives dial tone. Dial O1 at the DUT. Answer the call at O1. Verify that the DUT can toggle between A1 and O1.	OK	
49	Initiate a call from internal subscriber O1 to the DUT. Answer the call and initiate consultation at the DUT. Verify that O1 receives Music-on-hold while the DUT receives dial tone. Dial O2 at the DUT. Answer the call at O2. Verify that the DUT can toggle between O1 and O2.	OK	
50	Initiate a call from internal subscriber A1 to the DUT. Answer the call and make a supervised transfer at the DUT to O1. Verify that A1 receives Music-on-hold while the DUT receives dial tone. Verify that A1 and O1 have speech path, the displays are correct, and that the DUT returns to idle state.	OK	
51	Initiate a call from the DUT to internal subscriber O1. Answer the call and make a supervised transfer at the O1 to O2 so that the DUT and O2 are connected. Verify that the DUT and O2 have speech path, the displays are correct, and that the O1 returns to idle state.	OK	
52	From the previous test case initiate a supervised transfer at the DUT so that O1 and O2 are connected. Verify that O1 and O2 have speech path, the displays are correct, and that the DUT returns to idle state.	OK	

53	Initiate a call from the DUT to internal subscriber A1. Answer the call and initiate consultation at the DUT. Dial A2 and perform a blind transfer from A2 to A1. Answer A1 and verify that A2 and A1 have speech path, the displays are correct, and that the DUT returns to idle state.	NA	Blind transfer not supported on H4K
54	Initiate a call from the O1 to the DUT. Answer the call on the DUT. Perform a ringing transfer from the DUT to O2. Answer O2 and verify that O1 and O2 have a speech path, the displays are correct, and that the DUT returns to idle state.	NA	Ringling transfer not supported on H4K SIP
55	Initiate a call from the DUT to the O2. Answer the call on O2. Perform a ringing transfer from O2 to O3. Answer on O3 and verify that O3 and the DUT have a speech path, the displays are correct, and that the O2 returns to idle state	OK	
56	Initiate a call from the internal subscriber O1 to the O2. Answer the call on O2. Perform a ringing transfer from O2 to the DUT. Answer on the DUT and verify that O1 and the DUT have a speech path, the displays are correct, and that the O2 returns to idle state	OK	No display update on DUT after transfer. In connect state display OK H4K works as designed. See restrictions 2)
57	From the previous test case invoke the last number redial function on the DUT and verify that it calls O2.	NA	No last number redial on i62
58	Initiate a call to the DUT from an external subscriber E1. Answer the call, then disconnect. Verify that the external number can be called from the call history list.	OK	Call is performed but no number in call list only "RICHT" name. Idem test 10 Performing a "edit number " then the number OK
59	Initiate a call from the DUT to the internal subscriber O1. Answer the call and initiate a three-way conference from the DUT (conference master) with A1. Verify that all parties have speech path and that the displays on the phones indicate the conference.	OK	Conference OK. But no display indication of conference on member site. See restrictions 3)
60	From the previous test case release the conference master (= DUT). Verify that the O1 and A1 are in two-party talk and the displays are updated accordingly.	NOK	Joining the two other parties after leaving the DUT is not provided by the Ascom handset. See remark 2)
61	Initiate a call from the O1 to the internal subscriber DUT. Answer the call and initiate a three-way conference from the O1 (conference master) with A1. Verify that all parties have speech path and that the displays on the phones indicate the conference.	OK	Conference OK. But no display indication of conference on DUT and A1, on O1 OK Idem test 58
62	From the previous test case release the conference master (= O1). Verify that the DUT and A1 are in two-party talk and the displays are updated accordingly.	OK	
63	Call the O1 from the DUT after the Do-Not-Disturb function was activated on O1. Verify that the call is rejected (phone based DND).	OK	The display of the DUT shows "user busy" (translation of the "403 Forbidden").

64	Call the DUT from O1 after the Do-Not-Disturb function was activated via a service code. Verify that the call is rejected (system based DND).	NA	Activating DND via service code is not supported on H4K SIP
65	Activate call forwarding (CFU) on the H4K to A1. Call the DUT from O1 and verify that the call is forwarded to A1 (H4K based forwarding).	OK	
66	Activate call forwarding (CFNR) on the H4K to A1. Call the DUT from O1 and verify that the call is forwarded to A1 (H4K based forwarding).	OK	Timer?
67	Activate call forwarding (CFB) on the H4K to A1. Call the DUT from O1 and verify that the call is forwarded to A1 (H4K based forwarding).	OK	
68	Activate call forwarding (CFU) on the DUT to A1. Call the DUT from O1 and verify that the call is forwarded to A1 (device based forwarding).	OK	Device based forwarding is overruled if H4K based forwarding is configured. No CF indication on A1 No display update on DUT See restrictions 2) From time to time DUT is ringing once See remark 4) Did not occur with i62 Software 2.3.16.
69	From the previous test case invoke the call forwarding (CFU) function on the DUT to a external subscriber E1.	OK	Idem test 68
70	From the previous test case (68). Call the DUT from E1 and verify that the call is forwarded to A1	OK	Idem test 68
71	Activate call forwarding (CFNR) on the DUT to A1. Call the DUT from O1 and verify that the call is forwarded to A1 (device based forwarding).	OK	Idem test 68
72	From the previous test case invoke the call forwarding (CNR) function on the DUT to a external subscriber E1.	OK	Idem test 68
73	From the previous test case (XX). Call the DUT from E1 and verify that the call is forwarded to A1	OK	Idem test 68
74	Activate call forwarding (CFB) on the DUT to A1. Call the DUT from O1 and verify that the call is forwarded to A1 (device based forwarding).	OK	No call forwarding is performed. Busy tone. See problem 1) Problem solved in i62 Software 2.3.16.
75	From the previous test case invoke the call forwarding (CFB) function on the DUT to a external subscriber E1.	OK	No call forwarding is performed. Busy tone. Idem test 74 Problem solved in i62 Software 2.3.16.
76	From the previous test case (XX). Call the DUT from E1 and verify that the call is forwarded to A1	OK	No call forwarding is performed. Busy tone. Idem test 74 Problem solved in i62 Software 2.3.16.

77	Put the DUT and O1 in the same pickup group. Call O1 from A1. While O1 is ringing, dial the Group Pick-up code (*22) from the DUT and verify that speech path to A1 is established and the display shows correct caller information.	NA	Call pickup not supported for SIP on H4K
78	Call the DUT from O1. While connected, call the DUT from A1 and verify that a call waiting indication is presented on the DUT that shows the calling party information.	OK	
79	From the previous test case accept the waiting call and verify that speech path is established between the DUT and A1. Verify that O1 is put on hold.	OK	
80	O1 has call waiting disabled. O1 is on the call with O2 and the DUT tries to call O1.	OK	On the DUT the message "user busy" is displayed.
81	Call OS1 from the DUT and reject the call at OS1. Verify that the DUT indicates the call rejection. OS1 SIP phone	OK	On the DUT the message "user busy" is displayed. Even if the parameter "replace call rejected by call busy" is disabled
82	Call OS1 from the DUT and deflect the call to O1. Verify that the DUT indicates the call deflection.	NOK	No indication of deflection, in connect state display info OS1 on DUT!
83	Make the DUT busy and then call it from A1. Verify that the call is forwarded to the voicemail system (Xpressions) and that the message waiting indication (MWI) on the DUT is turned on.	OK	No call forwarding is performed. Busy tone. Idem test 74 Problem solved in i62 Software 2.3.16.
84	From the previous test case retrieve the voicemail message and verify that the MWI is turned off.	OK	Test 83 not successful Problem solved in i62 Software 2.3.16.
85	The O1 subscriber does call the DUT. The DUT does not answer and the O1 comes into the voice mailbox of the DUT. The O1 subscriber leaves a voice message. The DUT receives a MWI. The DUT calls the call back number of XPR and reads its message. After reading and deleting its message the MWI is turned off.	OK	No display indication while connected to XPR. See restriction 4)
86	While the MWI is lit on the DUT, disconnect the DUT from power and force a reboot. Verify that after the reboot is complete, the MWI is turned on.	OK	In case the MWI is turned off (test 85) and the i62 is powered off/on the message indication is switch on again. See problem 3) Problem solved in i62 Software 2.3.16.
87	While the MWI is lit on the DUT, reboot the Xpressions server. Verify that after the reboot is complete, the MWI is turned on.	OK	
88	The DUT is put in an HG (hunt group) together with O1, and A1.	OK	
89	Large conference call between O1, E1, DUT, A1, A2 and OS1 (more than three parties involved). The conference initiator is O1.	OK	Large conference not supported for SIP on H4K

90	Call DUT from O1 and perform a callback free on O1. Check if after a call from DUT the callback is performed.	OK	
91	Make the DUT busy and then call it from O1 and perform a callback Busy on O1. Check if after DUT becomes free the callback is performed.	OK	

3.4 Audio features

Test Case	Test Description	Result	Comment
92	Configure A3 to use the G.729A codec only. Call the DUT from A3 and verify that the connection is established with G.729A (use Wireshark).	OK	
93	Configure A3 to use the G.723 codec preferably. Call the DUT from A3 and verify that the connection is established with the first matching codec supported by the DUT or rejected if no match is found.	OK	Remark: the G.723 codec was tested with an optiPoint 420. The G.723 codec is not supported in the i62 GUI but is in the supported codec list (SDP).
94	Configure the DUT for DTMF transmission via RFC 2833. Verify that from and to the DUT DMTF "telephony events" are sent.	OK	Traces taken by mirroring the wireless controller port on the ethernet switch.
95	Configure the DUT for DTMF transmission via RFC 2833. Verify that the Xpression voicemail system can be accessed via DTMF.	OK	Traces taken by mirroring the wireless controller port on the ethernet switch.
96	Configure the DUT for DTMF transmission via RFC 2833. Verify that the DTMF tones are sent to and received from the PSTN.	OK	Remark : gateway supports RFC 2833

3.5 Restart test

Test Case	Test Description	Result	Comment
97	Unplug the STMI board and check if the phone indicates that it is out of service.	OK	After a few minutes "no access"
98	Replug the STMI board and check if the phones register automaticaly	OK	After 30min phones not yet registered. After power off/on OK See problem 2) Problem solved in i62 Software 2.3.16.
99	Reload of H4K and check if the phones register automatically	OK	Idem test 98 Problem solved in i62 Software 2.3.16.

3.6 Interconnection with DAKS

Test Case	Test Description	Result	Comment
100			
101			

3.7 Special Features

Test Case	Test Description	Result	Comment
102	Number of simultaneous calls can be configured from WinPDM.	NP	Configurable parameter: Device > Call > Busy on 1/Disable call waiting. Default value set to "No". With this feature, a new incoming call can be rejected and busy indication sent back to the SIP proxy.
103			

3.8 Remarks

Meanings of Abbreviations:

OK	Test case successful
NOK	Test case NOT successful
NA	Test case not applicable
NP	Test case not processed
NS	Situation not supplied
N *X	Error / restriction with description
* X	Remark to Functionality
DUT	Device Under Test
CFU	Call Forwarding Unconditional
CFNR	Call Forwarding on No Reply
CFB	Call Forwarding on Busy
MLHG	Multi Line Hunt Group
moH	music-on-hold
DND	Do Not Disturb
AP	Access Points

4 Configuration Data

4.1 Hipath 4000

4.1.1 System Basics

```
ADD-SBCSU:2091,FPP,SIP,1-1-8-  
28,SOPP,75,75,6,6,6,6,0,0,N,0,0,,,"SBDSS1",Y,Y,0,10  
,N,N,,,5,0,1,,,"2091","2091",,,,,;
```

```
ADD-SBCSU:2092,FPP,SIP,1-1-8-  
29,SOPP,75,75,6,6,6,6,0,0,N,0,0,,,"SBDSS1",Y,Y,0,10  
,N,N,,,5,0,,,,,"2092","2092",,,,,;
```

```
ADD-SBCSU:9401,FPP,SIP,1-1-8-  
30,SOPP,75,75,6,6,6,6,0,0,N,0,0,,,"SBDSS1",Y,Y,0,10  
,N,N,,,5,0,,,,,"9401","9401",,,,,;
```

4.2 ASCOM

4.2.1 Documentation

Available on the website of ASCOM

4.2.2 Basic Configuration



D:\Cert\Ascom\
i62_config.zip

Recommendations:

- **Ascom recommends that the parameter: Network > Network A > 802.11b/g/n channels should be set to "1,6,11" in conjunction with this WLAN infrastructure.**
- **The SIP Expiration value on the H4k and, likewise, on the Ascom i62 should be set to 120 seconds.**

4.3 *Wireless network*

Wireless network settings (Siemens):



D:\Cert\Ascom\
Wlan_config.zip

5 *Confirmation*

Testing personnel confirms that all the test cases were performed and that the results were as described in this document.

Matthew Williams
ASCOM

Eddy Sterckx
SEN Belgium