

Test Report of Certification

Innovaphone
IP6000 V6.0

with

SIEMENS
HiPath 8000 V2.0 – PS07E03

Test Status: Certified
Release Date: March 24th, 2006

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Enterprise Networks
D-81359 Munich

Owner: Minne Stefaan
Department: IC EN S ID
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History of Change

<u>Date</u>	<u>Description</u>	<u>Name</u>
March 20th, 2006	Initial Creation	Minne Stefaan COM ES ISD E-Mail: stefaan.minne@siemens.com phone: + 32 2 536 4094
March 20th, 2006	Review and Update	Minne Stefaan COM ES ISD E-Mail: stefaan.minne@siemens.com phone: + 32 2 536 4094
March 20th until March 24th, 2006	Certification Test, update test results	Benoit Lacrosse COM ES TC SX E-Mail: benoit.lacrosse@siemens.com phone: + 32 2 536 8000
March 31th, 2006	Update test results, Review Final document Signing test results	Benoit Lacrosse COM ES TC SX E-mail: benoit.lacrosse@siemens.com phone: + 32 2 536 8000 Minne Stefaan COM ES ISD E-mail: stefaan.minne@siemens.com phone: +32 2 536 4094

1 Overview

1.1 Test Object

1.1.1 Basis Equipment

Test system: HiPath 8000 V2.0

Software Version: HiPath 8000 V2.0 PS07E03

1.1.2 Innovaphone IP6000

Certification: Test of interface functionality
- against failures and
- of the features
of the application

Test Equipment: IP6000

Software Release: IP6000 V6.0

HW / FW Release: 104

Manufacturer: innovaphone AG
Böblinger Str. 76
71065 Sindelfingen
Germany
Phone: +49 (7031) 73009-0

Description: ISDN primary rate gateway with optional PBX functionality

Documentation: http://www.innovaphone.com/download/documentation/admin/en/man_Gateways_en.pdf

Test Network:

Test Configuration:

1.2 Test Strategy

The main goal of this testing is to test

- the external interfaces
- the system failure/recovery behavior
- the main functionality

of this component within the system as a whole.

The external interfaces are:

- E1 ISDN and SIP

1.2.1 Test Intensity

Scopes of the tests are to execute / to verify 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 close as possible real customer's 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 AG therefore assumes no responsibility for the compliance to these requirements.

1.2.2 Measuring / Test Instruments

1.3 Realisation Data

Test Preparation: March 2006

Test Duration: March 20-24, 2006

Test Location: Siemens Brussels
Demeurslaan 134
1654 Huizingen
Test LAB

Test Personnel: Siemens HiPath8000:
Benoit Lacrosse benoit.lacrosse@siemens.com +32 2 536 8000

Coordination:
De Braekeleer Eddy eddy.debraekeleer@siemens.com +32 2 536 4285
Minne Stefaan stefaan.minne@siemens.com +32 2 536 4094

1.4 Test Results Summary

IP6000 is ready for link to HiPath8000.

During the test mainly Optipoint410/420 are used.

1.4.1 Problems

1. none

1.4.2 Restrictions

1. none

1.4.3 Remarks

1. CLIP on PTTside is never updated when the part is changed on the HiPath8000 (FWD, TXFER, ...).
2. Due to overlapping between FAX and Modem Tones, T38 auto-detection has to be disabled in IP6000 and AP1120
3. Due to an error on the HiPath8000, The IP-address of the IP6000' was configured as **Trusted EndPoint** in HiPath8000

2 Configuration

2.1 IP6000

2.1.1 Configuration Advices

Configuration of IP6000 was done by personnel of Innovaphone.
Personnel of Innovaphone also joined the certification test.

2.2 HiPath8000

- HW-Version: HiPath8000 IBM x346
- SW-Version: HiPath8000 V2.0 PS07E03
- IP6000 connection:
 - S2/PRI
 - SIP
- Phones
 - Optipoint 410 advanced
 - Optipoint 420 advanced

2.2.1 Configuration Advices

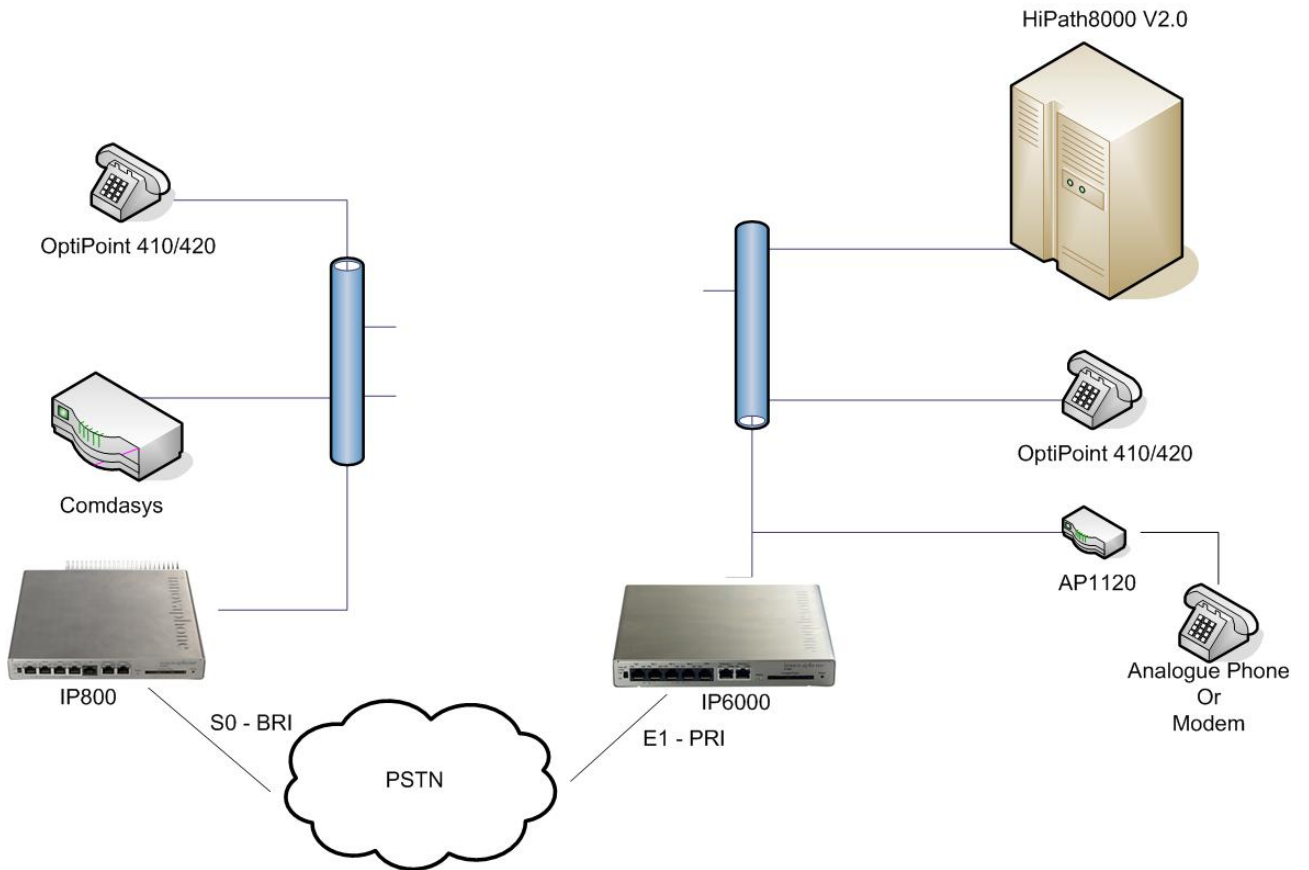
2.2.1.1 CSTA Link

- CSTA is not used

2.2.1.2 Devices

- Optipoint 410 advanced
- Optipoint 420 advanced

2.3 Configuration Block Diagram



3 Test Results in Detail

3.1 IP Net Services

No	Test Procedure	Expected Result	Result
1.	Set fix IP-address		OK
2.	Retrieve IP-address using DHCP		OK
3.	Use DNS of DNS	.	OK
4.	Using of DNS SRV to detect the SIP-registrar responsible for the local SIP-components		NP:Will be proceeded when we receive access right to DNS
5.	Using of the local branch router (default gateway) as NTP-server		OK
6.	Transmitting the NTP-server-address via DHCP.		OK
7.	Register the IP6000 on the HiPath 8000		OK
8.	Register IP6000 on alternate HiPath 8000 during failed local SIP Proxy		OK
9.	Register the IP6000 on Comdasys	Registration is forwarded to the HiPath8000	OK

3.2 Call Processing (Mode UDP)

The capabilities characteristics that has to be tested with SIP transport settings = UDP
Tests are performed with HiPath8000 and also with Comdasys as SIP-Proxy.

3.2.1 CallRouting

Call Routing according to the requirements given in the branch-concept

- Voice-Call internal within one branch
- Voice-Call external over the PSTN-gateway to another branch
- Voice-Call external over the PSTN-gateway to any other destination
- Gateway Rollover
- Calls to the voice mail server (Xpressions)

General Remark: PTT party's display is never updated when H8K'party is changed (FWD, TXFER,...).

No	Test Procedure	Expected Result	Result
10.	Normal modeVoice Call external over the PSTN gateway to a destination using E.164 National Format		OK
11.	Normal modeVoice Call external over the PSTN gateway to a destination using E.164 International Format		OK
12.	Normal modeVoice Call external over the PSTN gateway from a destination		OK
13.	Normal modeVoice Call external over the PSTN gateway to another branch		OK
14.	Normal modeVoice Call external over the PSTN gateway from another branch		OK
15.	Normal modeVoice Call external over the 2 nd PSTN line, connected to the gateway, to a destination		OK
16.	Call from internal subscriber over the PSTN Gateway to a destination. All channels on the Gateway are in use		NP
17.	Call from external subscriber to the PSTN Gateway. All channels on the Gateway are in use		OK
18.	Call from internal subscriber over the PSTN Gateway to a destination. Start DTMF dialing		OK
19.	Call from internal subscriber over the PSTN Gateway to a another Branch. Start DTMF dialing		OK
20.	Connection of analogue Device (ab)	Basic A to B call; no Flash features. Verify test with AP1120	OK
21.	Call Pickup	PU member can see the A-Party number in his Display B-Party can be seen in the number of the PU member(s)	OK. Attention! If preferred codec are different, H8K doesn't negotiate correctly. Corrected with PatchSet 10
22.	Call Transfer after Consultation	Check CLIP on A-B and C Party	Clip is not correct. There no p-asserted from H8K. Corrccted with PatchSet 10

No	Test Procedure	Expected Result	Result
23.	Call Transfer, blind transfer	Check CLIP on A-B and C Party	Clip is not correct. H8K provide transferring party's clip in the invite msg. Corrceted with PatchSet 10
24.	CFW variable	Check CLIP on A-B and C Party	OK
25.	Alternate	Check CLIP on A-B and C Party	OK
26.	CFW ring no answer	Check CLIP on A-B and C Party	OK
27.	CFW busy	Check CLIP on A-B Party	OK
28.	Keysets basic calls	<p>Test the basic functionality with keysets with up to 10 lines</p> <p>Verfiy</p> <ul style="list-style-type: none"> - incoming calls on a primary line - outgoing calls on primary line - incoming calls on secondary line - outgoing calls on secondary line <p>Test the basic functionality with keysets with up to 10 lines</p> <p>Verfiy the state of the line key LED, display and the call processing</p> <ul style="list-style-type: none"> - consultation - return after conslutation - hold - transfer - join - parking with line key - resume parked call on different phone - conference 	NP
29.	Conference (max 3 internal, external)	Check CLIP on A-B-C and D Party	OK
30.	MLHG call	Setup a multiline huntgroup and verify the functionality	OK
31.	Deflect cal		OK
32.	Reject call		OK
33.	CLIP of chief is active	If chief makes an outgoing call the B-Party will see the A- Parties number in his Display	NA
34.	Incoming Calls to Chief will be signalled at the secretary	Incoming Calls to Chief will be signalled at the secretary's phone, even if the Chief is in conversation on his personal line	NA

No	Test Procedure	Expected Result	Result
35.	Chief can pickup calls	Chief can pickup incoming calls by himself by pushing the Line key	NA
36.	CFNR to secretary	Call forward no Answer of the private Line of the Chief to the secretary is possible.	NA
37.	Chief can pickup phones from the secretary	Chief can see the status of the Line Key from the secretary and can pickup calls from secretarys line.	NA
38.	Representive secretary	The secretary can forward her functionality to a representative secretary The activation and deactivation of the substitute secretary is initiated at the secretary terminal	NA

3.2.2 FaxTransmissionG3

No	Test Procedure	Expected Result	Result
39.	Fax with T38 over PSTN gateway to another branch		OK
40.	Fax with T38 over PSTN gateway to any other destination		OK
41.	Fax with G711 over PSTN gateway to another branch		OK
42.	Fax with G711 over PSTN gateway to any other destination		OK

3.2.3 ModemConnections

The Modem is connected to a Mediatrix AP1120.

Attention!!!!!! Due to overlapping between FAX and Modem Tones, T38 auto-detection has to be disabled in IP6000 and AP1120.

No	Test Procedure	Expected Result	Result
43.	Modem connection with G711over PSTN gateway to another branch		OK
44.	Modem connection with G711over PSTN gateway to external destination		OK

3.2.4 *SpeechCompression*

Available Codec's: - G.711
 - G.729a

No	Test Procedure	Expected Result	Result
45.	Voice call with codec G711 over PSTN gateway to another Branch		OK
46.	Voice call with codec G711 over PSTN gateway to external destination		OK
47.	Voice call with codec G729 over PSTN gateway to another Branch		OK
48.	Voice call with codec G729 over PSTN gateway to external destination		OK

3.3 Call Processing (Digest Authentication)

The capabilities characteristics that has to be tested with SIP transport settings = UDP
Tests are performed with HiPath8000 and also with Comdasys as SIP-Proxy.

Attention!!!!!! Due to an error on the HiPath8000, The IP-address of the IP6000' was configured as **Trusted EndPoint** in HiPath8000.

3.3.1 CallRouting

Call Routing according to the requirements given in the branch-concept

- Voice-Call internal within one branch
- Voice-Call external over the PSTN-gateway to another branch
- Voice-Call external over the PSTN-gateway to any other destination
- Gateway Rollover
- Calls to the voice mail server (Xpressions)

No	Test Procedure	Expected Result	Result
49.	Normal modeVoice Call external over the PSTN gateway to a destination using E.164 National Format	CLIP?	OK
50.	Normal modeVoice Call external over the PSTN gateway to a destination using E.164 International Format		OK
51.	Normal modeVoice Call external over the PSTN gateway from a destination		OK
52.	Normal modeVoice Call external over the PSTN gateway to another branch		OK
53.	Normal modeVoice Call external over the PSTN gateway from another branch		OK
54.	Normal modeVoice Call external over the 2 nd PSTN line, connected to the gateway, to a destination		OK
55.	Call from internal subscriber over the PSTN Gateway to a destination. All channels on the Gateway are in use		OK
56.	Call from external subscriber to the PSTN Gateway. All channels on the Gateway are in use		OK
57.	Call from internal subscriber over the PSTN Gateway to a destination. Start DTMF dialing		OK
58.	Call from internal subscriber over the PSTN Gateway to a another Branch. Start DTMF dialing		OK
59.	Connection of analogue Device (ab)	Basic A to B call; no Flash features. Verify test with AP1124 and AP1120	OK
60.	Call Pickup	PU member can see the A-Party number in his Display B-Party can be seen in the number of the PU member(s)	OK
61.	Call Transfer after Consultation	Check CLIP on A-B and C Party	OK

No	Test Procedure	Expected Result	Result
62.	Call Transfer, blind transfer	Check CLIP on A-B and C Party	OK
63.	CFW variable	Check CLIP on A-B and C Party	OK
64.	Alternate	Check CLIP on A-B and C Party	OK
65.	CFW ring no answer	Check CLIP on A-B and C Party	OK
66.	CFW busy	Check CLIP on A-B Party	OK
67.	Keysets basic calls	<p>Test the basic functionality with keysets with up to 10 lines Verify</p> <ul style="list-style-type: none"> - incoming calls on a primary/Secondary line - outgoing calls on primary/Secondary line <p>Test the basic functionality with keysets with up to 10 lines Verify the state of the line key LED, display and the call processing</p> <ul style="list-style-type: none"> - consultation - return after conslutation - hold - transfer - join - parking with line key - resume parked call on different phone - conference 	NP
68.	Conference (max 3 internal, external)	Check CLIP on A-B-C and D Party	OK
69.	MLHG call	Setup a multiline huntgroup and verify the functionality	OK
70.	Deflect cal		OK
71.	Reject call		OK
72.	CLIP of chief is active	If chief makes an outgoing call the B-Party will see the A- Parties number in his Display	NA
73.	Incoming Calls to Chief will be signalled at the secretary	Incoming Calls to Chief will be signalled at the secretary's phone even if the Chief is in conversation on his personal line	NA
74.	Chief can pickup calls	Chief can pickup incoming calls by himself by pushing the Line key	NA
75.	CFNR to secretary	Call forward no Answer of the private Line of the Chief to the secretary is possible.	NA

No	Test Procedure	Expected Result	Result
76.	Chief can pickup phones from the secretary	Chief can see the status of the Line Key from the secretary and can pickup calls from secretarys line.	NA
77.	Representive secretary	The secretary can forward her functionality to a representative secretary The activation and deactivation of the substitute secretary is initiated at the secretary terminal	NA

3.3.2 FaxTransmissionG3

No	Test Procedure	Expected Result	Result
78.	Fax with T38 over PSTN gateway to another branch		OK
79.	Fax with T38 over PSTN gateway to any other destination		OK
80.	Fax with G711 over PSTN gateway to another branch		OK
81.	Fax with G711 over PSTN gateway to any other destination		OK

3.3.3 ModemConnections

The Modem is connected to a Mediatrix AP1120.

No	Test Procedure	Expected Result	Result
82.	Modem connection with G711over PSTN gateway to another branch		OK
83.	Modem connection with G711over PSTN gateway to external destination		OK

3.3.4 SpeechCompression

Available Codec's: - G.711
- G.729a

No	Test Procedure	Expected Result	Result
84.	Voice call with codec G711 over PSTN gateway to another Branch		OK
85.	Voice call with codec G711 over PSTN gateway to external destination		OK
86.	Voice call with codec G729 over PSTN gateway to another Branch		OK
87.	Voice call with codec G729 over PSTN gateway to external destination		OK

3.4 Service and Maintenance

3.4.1 Backup/Recovery.

No	Test Procedure	Expected Result	Result
88.	Backup system config		OK
89.	Restore system config		OK
90.	Full-Backup		OK
91.	Emergency Restore		NA

3.4.2 Troubleshooting

Check possible for possible ways of Fault – Management

- Monitoring all components
- Testing the possibilities of taking a trace on the devices
- Analysis of possible existing log-files

IP6000 Troubleshooting and monitoring:

- Online calls view
- online B-ch state
- SNMP implemented for Fault management
- ISDN tracing
- SIP tracing
- SIP registration logs
- TCP, PPP, ... logs
- Relay calls and relay routing logs
- configuration changes logs.

3.4.3 Service

- Replacement of faulty equipment under the terms of configuration and replacement-procedures
- Restart Behaviour:

The whole system comes back to work without manual interferences.

3.4.4 SoftwareUpdates

- Software Update of the S0- and E1-gateways

The down times of the systems appearing during a software upgrade will be documented. After a finished software upgrade the correct functionality of the device will be tested.

No	Test Procedure	Expected Result	Result
92.	Check actual SW Version	via General tab of web access on IP6000.	OK
93.	Get SW from SW Server	Manual or automatic download from internet.	OK
94.	Transfer SW to PSTN Gateway	PPP access	NP: but Implemented
95.	Activate SW on PSTN Gateway	PPP access	NP: but Implemented

3.5 Remarks

Meanings of Abbreviations:

OK	Testcase successful
NOK	Testcase NOT successful
NA	Testcase not applicable
NP	Testcase not processed
NS	Situation not supplied
N *X	Error / restriction with description
* X	Remark to Functionality

4 Configuration Data

4.1 HiPath8000

4.1.1 System Basics

5 *Confirmation*

Testing personnel confirms that the testcases Nr.1 until Nr.95 were performed and that the results were as described in this documents.

Testing personnel confirms test duration: 20/03/2006 – 24/03/2006

Innovaphone A.G.

Minne Stefaan

SIEMENS NV Belgium