Test Report

Project / KA:	**Certification Nokia E52 Dualmode Mobile (WLAN/SIP) with HiPath 3000 V8**
ITEM Test plan:	ITEM2: HiPath 3000 V8 R4
ITEM Test session:	ITEM2: Cert_SIP_Nokia_E52_HE684B.00.013_HI-G15.84.002
Test TPL:	SEN VA SME QA1
Tester:	SEN VA SME QA1

TEST		**TEST DEMAND:**
	Integration Simulation	**Certification starting with:**
	Integration Hardware	**HiPath 300 V8 R4**
	Regression Test	
X	**Certification Test**	
	System Test	

Result overview, test cases:	**all**	**passed**	**failed**
	84	**77**	**7**

Overview:

	Retest necessary
	Object not released
X	**Object released**
	Test coverage: 100 %

Blocking Points: None

Date / Signature (Tester)	**Date / Signature (Test TPL)**
04.05.2010	

History of change:

Date	Author	Version	Review No.	Comment
19.04.2010		001		Creation test report
04.05.2010		002		Voicemail notification, finish test report

Test Environment, Preconditions:
This certification test investigates interworking between HiPath 3000 V8, HG1500 and Nokia E52 Dualmode mobile phone. The WLAN SIP client is in focus here. SIP station is configured in Mobility Entry list in Hipath 3000. SIP station is member of a Basic MULAP with HFA or TDM. Configuration and multiple payload scenarios are checked.

Environment:

1. HiPath 3500 V8: HE684S.00.013
2. HiPath HG1500: HI-G15.84.002
3. OpenStage 20…80 HFA: V2 R0.35.0
4. optiPoint 4x0 HFA: V5 R6.1.0
5. optiPoint 420 SIP: V7 R5.6.0
6. optiPoint 150 S:
7. Nokia E52 (RM-469): S60, VoIP Rel 3.1, Firmware 33.002(.237.03)
8. Nokia SIP VoIP Settings: SIP_VoIP_3_x_Settings_v2_0_en.sis
9. Nokia E52 Default Codecs: 1=AMR-WB, 2=AMR, 3=G.711u, 4=G.711a, 5=iLBC, 6=G.729, 7=CN
10. HG1500 Default Codecs: 1=G711a, 2=G.711u, 3=G.723, G.729, G.729AB
11. WLAN WB500/AP2630: V1R3.10504.4

Nokia E52 SIP client configuration:

1. Install SIP VoIP 3.x Settings application (SIP_VoIP_3_x_Settings_v2_0_en.sis) on your mobile device using Nokia PC Suite.
2. *Menu-> Ctrl. Panel-> Net settings-> Advanced VoIP settings-> Create new service:*
3. Select *Create new SIP profile* option:
4. Configure *Username* "*<SIP call number>@<HG1500 IP address>"*
5. Configure *Password* "*<password>"* if authentication is configured in HiPath (HiPath 3000 workpoint client data: UserID = *<SIP call number>* and Realm = *<HG1500 IP address>)*
6. Answer following question "*Would you like to create presence settings for the service?"* with *"No"*
7. Select following option for "*Activate service"*
8. Now the WLAN configuration is started, if not yet done:
9. Select your WLAN network (SSID is should be displayed) and enter Preshared key (PSK)

Configuration for **Default Service**:
Nokia SIP client can become automatically active, when configured WLAN ("home zone") is recognized. The VoIP service must be configured as "default service" for this purpose:

1. *Contacts-> Select VoIP service in drop down list-> Options-> Settings:*
2. Set *Default Service* = "Yes"

Nokia phone does not allow editing of SIP profile settings as long as VoIP Service is active. If editing is necessary, then deactivate VoIP Service as follows: *Contacts-> Select VoIP service in drop down list-> Options-> Deactivate service.*
The VoIP service can be activated again after selecting *Activate service* in same contacts menu.

It is recommended to **disable "Comfort Noise"** (CN) in SIP profile, to get better voice quality. Nokia phone shows this setting as "CN codec", that is relevant for G.711 and iLBC codec if it exists in VoIP settings.

1. Switch phone to Offline mode
2. *Menu-> Ctrl. Panel-> Net settings-> Advanced VoIP settings->VoIP services-> Select your Service-> Codecs:*
3. Select the *"CN"* codec and remove it
4. switch phone back profile *General*.

Configuration for **Voicemail Notification**:
Nokia E52 can notify user about new voice messages in HiPath Voicemail system (IVM but not EVM). There is always a new message in inbox, when number of new messages is changing. Voicemail must be configured in Nokia E52, to get the notification and callback to voicemail option:

1. Switch phone to Offline mode
2. *Menu-> Ctrl. Panel-> Net settings-> Advanced VoIP settings->VoIP services-> Select your Service-> Profile settings:*
3. Select your SIP profile in *Voicemailbox Settings ID*
4. Configure *Voicemailbox address* "*<Voicemail call number>@<HG1500 IP address>*"
5. switch phone back profile *General*.

ITEM Result:

Cert_SIP_Nokia_E52
_HE684B.00.013_HI-

MRTS Overvierw:

#	MR ID	Pri	Summary
001	H74052	4	Cert: Nokia : call from HFA put on hold before release
002	H74070	3	Cert: Nokia :call released when SIP is put on hold by HFA
003	H74074	2	Cert: Nokia : TDM cannot be put on hold a second time
004	H74114	3	Cert: Nokia : sporadically no transfer with Nokia SIP pos
005	no MR	4	Cert: Nokia : call released when SIP is put on hold by TDM twice
006	no MR	2	Cert: Nokia: no SIP Re-Register when IP connection lost for some minutes
007	no MR	3	Cert: Nokia: E52 sometimes not responding after answering SIP call

Conclusion and Restrictions:
The Nokia E52 SIP Client can be used as WLAN VoIP client in HiPath 3000 V8 environment. Following hints or restrictions have been found:

- Nokia phone configuration is done via additional VoIP setting tool (SIP_VoIP_3_x_Settings_v2_0_en.sis)
- "Comfort Noise" feature should be disabled on Nokia E52 phone; otherwise the voice may appear shortly interrupted; disruptive clicking and noise will be heard on some ITSP calls (e.g. toplink)
- Voice in direction to Nokia Phone is distinctly delayed. Reducing Jitter buffer in Nokia phone (default = 200 ms) seems not to take effect.
- some call transfer scenarios may fail (as described in failed test cases)
- Nokia E52 does not Re-Register, when LAN connectivity to SIP Registrar (HG1500) is lost for more than 4 minutes but WLAN connection is active. VoIP service is then disabled on phone. There is no problem, when WLAN connectivity is lost as in standard use case "leaving WLAN home zone"!
- Nokia E52 is sporadically not responding to any more user input after anwsering SIP call until call is finished. "XXX calling" stays in display then instead "XXX" for active call.