Application Test Specification

For AS800 version

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1. Purpose

Unit test case for PSTN device and firmware.

2. Unit Test Cases

2.1 Test Cases of FXS

2.1.1 states

- Introduction

'states' test the number of status of PSTN devices(SLIC/DAA)

- run

States

Test Case No	Purpose	Command	Check	Result
Pstn_01	Check the device number and device status, both SLIC and DAA are list.	#states	Display the device number,device type and device status(off –hook or onhook)	pass
Mem	Put the telephone connect to FXO in different hook status and check the output of this program			

2.1.2 car_fxs

- Introduction

"car_fxs"test the car signal on fxs port

- run

car_fxs < FXS DEVICE >

Test Case No	Purpose	Command	Check	Result
Pstn_02	test the car signal on fxs port	Car_fxs /dev/astel/1	When program detect car singal,will display "Modem Signal can be send now FXS CAR: test succeed!" and exit	pass

Mem	

2.1.3 flash

■ Introduction

"flash" test the flsh signal of fxs port in the phone

■ run

flash <FXS DEVICE>

Test Case No	Purpose	Command	Check	Result
Pstn_03	Check the flash signal in the fxs port which from the phon	Car_fxs /dev/astel/1	Display the "winflash event checked"when press the flash button, Display the"onhook event checked"and program will exit if you on hook the phone	pass
Mem				

2.1.4 rx_dtmf

■ Introduction

"rx_dtmf" test the DTMF signal in the fxs Port

■ run

rx_dtmf <FXS DEVICE>

Test Case No	Purpose	Command	Check	Result
Pstn_04	Check the DTMF signal in the fxs Port	rx_dtmf /dev/astel/1	Display the phone number what you press (most twenties)	pass
Mem	Phone must be in dtmf mode			

2.1.5 rx_dp

■ Introduction

"rx_dp" test the DP signal in the fxs Port(dp10 / dp20)

■ run

rx_dp <FXS DEVICE>

Test Case No	Purpose	Command	Check	Result
Pstn_05	Check the DP signal in the fxs Port	rx_dp /dev/astel/1	Display the phone number what you press (most twenties)	pass
Mem	Phone in dp10 or dp20 mode			

2.1.6 dtmf_dsp_detect

■ Introduction

"dtmf_dsp_detect" test the DTMF signal of the fxs port in the hardware

■ run

dtmf_dsp_detect <FXS DEVICE>

Test Case No	Purpose	Command	Check	Result
Pstn_06	Check the DTMF signal in the fxs port	dtmf_dsp_detect /dev/astel/0	Display the dtmf phone number what you press Press "ctl+c" exit program	pass
Mem	Phone in dtmf mode			

2.1.7 tones

■ Introduction

"tones" test use the phone to listen the tone (DT、BT、RBT、SDT、IIT、CPT、NFT) which played by fxs port

■ run

tones <FXS DEVICE>

Test Case No	Purpose	Command	Check	Result
Pstn_07	Check the tone which played by fxs port	tone /dev/astel/1	Display the test result and in order to play the tone (DT、BT、RBT、SDT、IIT、CPT、NFT)	pass
Mem	DT：uninterrupted sound BT:Circulation 1 second:sound 0.5 second and stop 0.5 second RBT: Circulation 3 second:sound 1 second and stop 2 second SDT: Circulation 1 second:sound 0.125-0.15 second and stop 0.1-0.125 second CPT/NFT: Circulation 1 second:sound 0.125 second and stop 0.125 second			

2.1.8 ring

■ Introduction

"ring" test ring signal and the show number in the fxs port

■ run

ring <FXS DEVICE> [callid]

Test Case No	Purpose	Command	Check	Result
Pstn_08	Check the ring signal and the show number in the fxs port	ring /dev/astel/1 803	Display the phone number and ring signal in the phone which connected with Fxs port	Pass
Mem	For Chinese phone could show phone number. Japanese phone only ring			

2.1.9 dsp_dtmf_gen

■ Introduction

"dsp_dtmf_gen" test the ring signal and the telephone number in the fxs port

■ run

dsp_dtmf_gen <FXS DEVICE>

Test Case No	Purpose	Command	Check	Result
Pstn_09_1	Check the DTMF signal and number in the fxs port	dsp_dtmf_gen /dev/astel/1	Display the phone number and ring signal in the phone which connected with Fxs port	Pass
Pstn_09_2	The same test when add echo cancel driver	dsp_dtmf_gen /dev/astel/1	Display the phone number and ring signal in the phone which connected with Fxs port	Pass
Mem	For Chinese phone could show phone number. Japanese phone only ring			

2.1.10 dsp_tones

■ Introduction

"dsp_tones" use the phone to listen the tone (DT、BT、RBT、SDT、IIT、CPT、NFT) which played by dsp

■ run

dsp_tones <FXS DEVICE>

Test Case No	Purpose	Command	Check	Result
Pstn_10	Play tone (DT、BT、RBT、SDT、IIT、CPT、NFT)	dsp_tones /dev/astel/1	Display the test result and in order to play the tone (DT、BT、RBT、SDT、IIT、CPT、NFT)	pass
Mem	DT：uninterrupted sound BT:Circulation 1 second:sound 0.5 second and stop 0.5 second RBT: Circulation 3 second:sound 1 second and stop 2 second SDT: Circulation 1 second:sound 0.125-0.15 second and stop 0.1-0.125 second CPT/NFT: Circulation 1 second:sound 0.125 second and stop 0.125 second			

2.1.11 fsk_gen

■ Introduction

"fsk_gen,fsk_detect,fsk_file" test write or read the date of fsk

■ run

fsk_gen < FILENAME or FXS DEVICE> [PHONE NUMBER] [USERNAME]

fsk_detect <FILENAME>

fsk_file <FXS DEVICE> <FILENAME>

Test Case No	Purpose	Command	Check	Result
Pstn_11_1		fsk_gen /dev/astel/1 12345 'aaaaa'	Display the phone number(12345) and ring the phone which connected with fxs port	pass
Pstn_11_2		1. touch 1.data 2. fsk_gen 1.data 12345 'aaaaa' 3. fsk_detect 1.data	1.create a file 2.write fsk data into file(1.data) 3.Display the data which you input the file	pass
Pstn_11_3		fsk_detect /dev/astel/1 1.data	Display the file(1.data)'s content	pass
Pstn_11_4		fsk_file /dev/astel/1 1.data	Display the phone number(12345) and ring the phone which connected with fxs port	pass
Mem	For Chinese phone could show phone number. Japanese phone only ring			

2.1.12 event

■ Introduction

"event" test the event signal on fxs/fxo device

■ run

event < FXS/FXO DEVICE >

Test Case No	Purpose	Command	Check	Result
Pstn_12	Check the event signal on fxs/fxo device	event /dev/astel/1	Display the event name when you press the telephon buttonin on the phone which connected with fxs port	pass
Mem	"Ctrl+c" to exit the program			

2.1.13 ntt_detect

■ Introduction

decode the fsk file which is encode with ntt spec

■ run

Ntt_detect <FILENAME>

Test Case No	Purpose	Command	Check	Result
Pstn_13	decode the fsk file	ntt_detect 0000000014.ntt.data	Display the right fsk data:" NTT_DETECT: End of output FSK data!res =0 phonenumber ='0000000014'"	pass
Mem				

2.1.14 ntt_cid

■ Introduction

"Ntt_cid" could encode fsk call singal with ntt spec and send to phone

■ run

Ntt_cid <FXS_DEVICE> CALLID

Test Case No	Purpose	Command	Check	Result
Pstn_14	encode fsk call singal with ntt spec and send to phone	ntt_cid /dev/astel/1 999888	Display the phone number(12345) and ring the phone which connected with fxs port。	PASS
Mem				

2.2 FXO TEST

2.2.1 busy/busy_fxo

■ Introduction

"busy/busy_fxo" test the busy tone on the fxo device

■ run

busy <FILENAME>

busy_fxo <FXO DEVICE>

Test Case No	Purpose	Command	Check	Result
Pstn_15_1	Check the files of busy.tone.u	busy <FILENAME> Default is :busy.tone.u	Program Find the right busy.tone.u files and exit	pass
Pstn_15_2	Fxo device check the busy tone	busy_fxo /dev/astel/0	Dial the outside line number which conneted with fxo port。When screen Display the "Please hang the phone making this call, then check result of BT detect",onhook the call phone, program will output"BT Detect : BT(Busy Tone) Detected on %s, then on-hook FXO Device"and exit	pass
Mem				

2.2.2 car_fxo

■ Introduction

"car_fxo"test the car signal on fxo port

■ run

Car_fxo < FXO DEVICE >

Test Case No	Purpose	Command	Check	Result
Pstn_16	test the car signal on fxo port	Car_fxo /dev/astel/0	Dial the outside line which conneted with fxo port,screen display the "Event 'CAR'	pass

			received in FXO Port",at the end ,screen display the"FXO CAR: test ended".then you can on hook the phone and program will exit	
Mem				

2.2.3 fxo_call

■ Introduction

"fxo_call" test the fxo device send call signal

■ run

fxo_call < FXO DEVICE > [callerId]

Test Case No	Purpose	Command	Check	Result
Pstn_17	fxo device send call signal	fxo_call /dev/astel/0 813	The called phone's screen will display "call" and program will show "End of FXO Calling" and exit	pass
Mem	813 is called phone's number			

2.2.4 fxo_callee

■ Introduction

"fxo_callee" test the fxo device check the busy tone

■ run

fxo_callee < FXO DEVICE >

Test Case No	Purpose	Command	Check	Result
Pstn_18	fxo device check the busy tone	fxo_callee /dev/astel/0	Dial the outside line which conneted with fxo port。When screen Display the "Please hang the phone making this call, then check result of BT detect",onhook the call phone, program will output"BT Detect : BT(Busy Tone) Detected on %s, then on-hook FXO Device"and exit	pass

Mem	Japan phone can not detected bt tone on this program , “crtl+c” to exit program

2.2.5 fxo_line

■ Introduction

“fxo_line ” test the fxo device whether could check outside line status

■ run

fxo_line < FXO DEVICE >

Test Case No	Purpose	Command	Check	Result
Pstn_17	Check outside line status	Fxo_line /dev/astel/0	Display the outside line’s right status (“has line plugin” or “has no line plugin”)	pass
Mem				

2.2.6 progress_fxo

■ Introduction

“progress_fxo” test the fxo device call progress

■ run

progress_fxo < FXO DEVICE > [CallID]

Test Case No	Purpose	Command	Check	Result
Pstn_18	Check the fxo device call progress	progress_fxo /dev/astel/0 812	Program will display the fxo device call progress and every call enent which been checked	pass
Mem				

2.2.7 caller

■ Introduction

test call progress which the phone connected with fxs port

■ run

Caller < FXS DEVICE > < FXO DEVICE >

Test Case No	Purpose	Command	Check	Result
Pstn_19		Caller /dev/astel/1 /dev/astel/0	Offhook the phone which	pass

			connected with fxs port,and first press “0” ,then dial the outside line phone number,called phone will ring and show callid	
Mem				

2.2.8 callee

■ Introduction

test called progress which the phone connected with fxs port

■ run

Callee < FXS DEVICE > < FXO DEVICE >

Test Case No	Purpose	Command	Check	Result
Pstn_20	called progress	1 .Callee /dev/astel/1 /dev/astel0 2. onhook /dev/astel/0	1.outside line could call the phone which connected with fxs port and ring it 2.onhook the fxo port	pass
Mem				

2.2.9 fxo_dp

■ Introduction

“fxo_dp” check the fxo device send dp10/dp20 singal

■ run

Fxo_dp <FXO device> <Call NO> [1|2]

Test Case No	Purpose	Command	Check	Result
Pstn_21	Check fxo port send dp10/dp20 singal	1. /fxo_dp /dev/astel/0 8888888 1 onhook /dev/astel/0 2. /fxo_dp /dev/astel/0 8888888 2 Onhook /dev/astel/0	Called phone will ring(the argument “1” is dp10 ,”2” is dp20)	pass
Mem	Onhook command return fxo port to normal status			

2.2.10 hook_status

■ Introduction

Check the phone status at the phone directconnected with fxo port

■ run

Test Case No	Purpose	Command	Check	Result
Pstn_22	Check phone status	delay_chan_ctl 0 hook_status delay_chan_ctl 1	Display the right status(on hook/off hook)when the phone on hook or off hook	pass
Mem	At first,use “delay_chan_ctl 0” command Finished test,use “delay_chan_ctl 1” command			

2.2.11 fxo_cid

■ Introduction

Receive the call number , encode the callid with ntt spec and write to a file,decode the file and show callid on the screen

■ run

Test Case No	Purpose	Command	Check	Result
Pstn_22	Encode/decode callid	Fxo_cid /dev/astel/0	When program show ” Waiting CAR signal from outside”,dial the phoe which connected with fxs port,and program will show callid on the screen and exit	pass
Mem	At first,use “delay_chan_ctl 0” command Finished test,use “delay_chan_ctl 1” command			

2.3 other device

2.3.5 delay_chan_ctl

■ Introduction

Test the program which FXS switch to LINE depend on the relay

■ run

delay_chan_ctl <switch '0'-Line or '1'-FXS>

Test Case No	Purpose	Command	Check	Result
Pstn_23_1	Check the switched state of FXS or LINE	delay_chan_ctl 0	Hear a voice by delay switch ,Phone connect with the FXS port	
Pstn_23_2	Check the switched state of FXS or LINE	delay_chan_ctl 1	Hear a voice by delay switch ,Phone connect with the FXO port, can dial the outside line direct	
Mem				