UC2000 Trouble Shooting

Foreword

- This course is mainly:
  - Introduce How to check if the status is normal
  - Introduce How to check the unregistered issue
  - Introduce How to check the voice issue.

Course Objective

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Through this course you will be able to

Understand and know Normal state

learn how to check the unregistered issue

Understand how to troubleshoot gateway voice issue

Contents

Status Check

01

1.1 Device appearance

1.2 Indicator Status

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Device Appearance

- Product Appearance of UC2000-VE

The appearance of UC2000-VE shows as follow

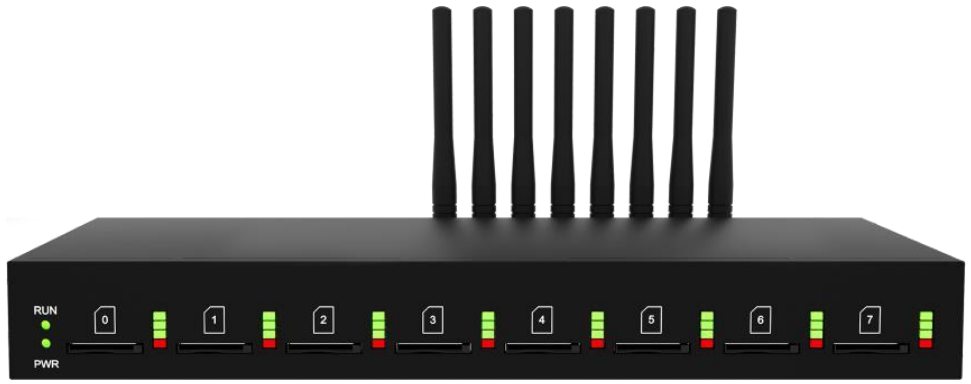

Figure-1 Description of Front view

Figure -2 Rear view of UC2000-VE

Device Appearance

- Product Appearance of UC2000-VF

The appearance of UC2000-VF shows as follow

Figure-1 Description of Front view

Figure -2 Rear view of UC2000-VF

Device Appearance

- Product Appearance of UC2000-VG

The appearance of UC2000-VG shows as follow

Figure-1 Description of Front view

Figure -2 Rear view of UC2000-VF

Indicator Status

Index	Indicators	Description
1	RUN	On: Starting Off: Abnormal Blinking every 0.5s: Normal status
2	PWR	On: Power on Off: Power off
3	Signal	 Signal strength indicators with green color
4	Channel	 Use/Unuse indicator with Red color, ON is used, Off is unused
5	SIM Slots	 SIM card slot

Index	Interface	Description
1	Power Connector	 Power connector of DC power. Input: DC12V
2	Antenna Connector	Mark as digits 0 to 7
3	Network	FE0 and FE1, its default IP address **192.168.11.1**
4	Console	RS232 standard, **band rate 115200bps**
5	RST	Reset button to restore default IP and password or restore factory setting. • Restore IP and Password: **hold RST button 3~5 seconds, RUN LED being ON during this time** • Restore factory setting: **Hold RST button 7 seconds, RUN LED being blink**

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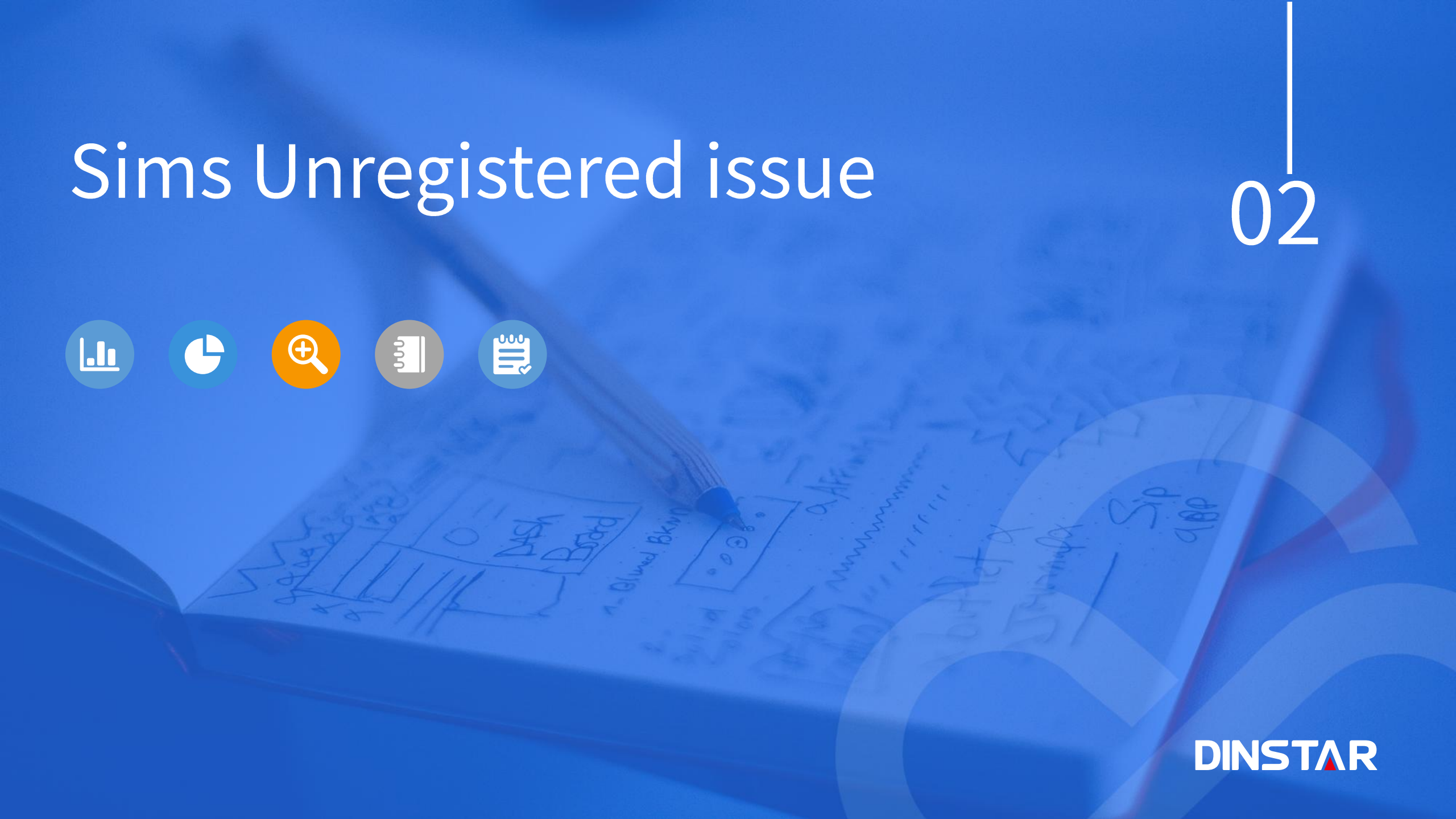
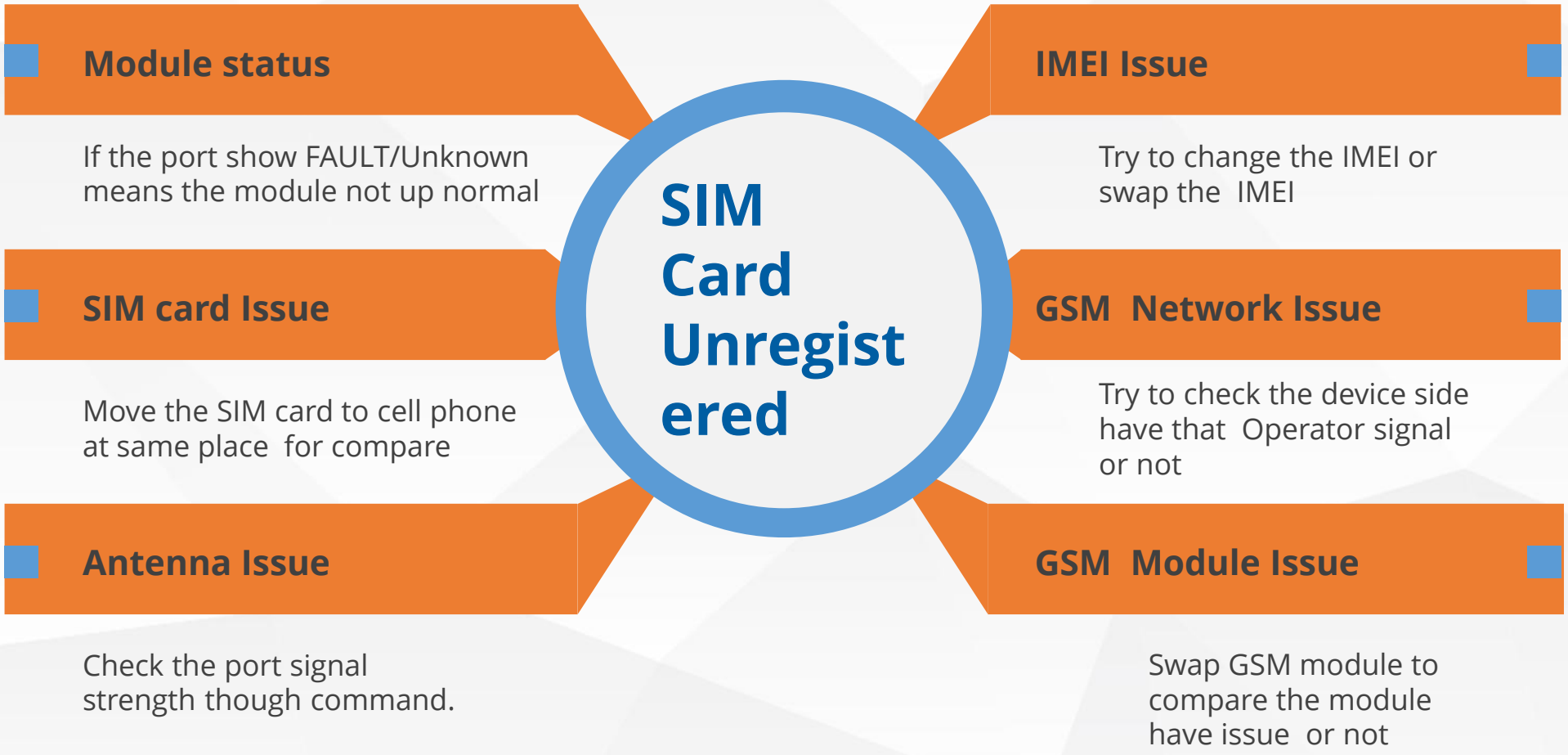
Sims Unregistered issue

02



SIM Card Unregister



SIM Card Unregister

All port or one Userboard show FAULT, please try to check one by one:

1. Try to check the Userboard connected or not.
   If connected already, please try to pull out and push in.
2. Move the Userboard to other device, for check the Userboard Ok or not.
   If show OK at other device, means current device Controlboard or Backboard have issue.
3. Try to check the Userboard version info.
   If show FF means hardware issue, like B5.3.2.26LFF B.1
4. Try to upgrade the Userboard from command.
   a. Telnet at device and access to mode (ada)
   b. Input the command: **cmd 53 50 0**, 0 means the first Userboard. Then, check the log.
   c. If upgraded failed, power off device 1min and try upgrade again.
      After try twice and port show FAULT still, means Userobard hardware issue.
   d. If upgraded successful and port show FAULT still , means Userobard hardware issue.

```
ROS>en
ROS#
ROS#^ada
ROS(ada)#[088-03:33:34:030]ADA CONNECTED ...,WELCOME!

ROS(ada)#cmd 53 50 0
```

SIM Card Unregister

Mostly Module show unknown, please try to check one by one:

1. Open page Advanced>>>>>>Basic Configuration, the option “Startup Interval” set correct or not.
The range means after one port up, the next port need wait are random time(between range) and start up.
2. Try to upgrade the module.
Open page Diagnostic>>>>>>Module Recovery, click the “upgrade”.
3. Try to reset baudrate of the module.
Open page Diagnostic>>>>>>Module Recovery, click the “baudrate ”.
4. Try to check the Userboard version info. If show FF means hardware issue, like B5.3.2.26LFF B.1
5. Try to send command as next page, to check the command can send or not, and get response or not.

Single Module show unknown:

1. Try to pick up the module and connect again.
2. Try to swap the module with other one, to check the issue move with module or not.
   If move with module means the module hardwae issue
   If the port show unknown always, means the board hardware issue.

SIM Card Unregister

Check port 0 signal value

1. Telnet at device and access to mode (ada)
2. Input the command: **cmd 53 19 0 0 1** (0 0 means the port range, from 0 to 0, current check port 0 only)
3. Telnet at device at other window and access mode (config)
4. Input the command: **mobile cmd at 0 AT+CSQ** (0 means port 0)
5. At first windows, you will see the port0 signal value 31.
   If less 10 means very weak.

```
ROS#^ada
ROS(ada)#ADA CONNECTED ...,WELCOME!
ROS(ada)#cmd 53 19 0 0 1
ROS(ada)#Jul  4 19:04:04.200 mpe_sys: <211>  [  DEBUG] set module channel at cmd:0 debug:on
Jul  4 19:04:09.470 mpe_sys: <212>  [  DEBUG] atchannel:<channel:0>,send a at command = AT+CLCC,type=3,responsePrefix=+CLCC,smspdu=<
Jul  4 19:04:09.520 mpe_sys: <213>  [  DEBUG] atchannel:<channel:0>,pre process command is OK len is 2
Jul  4 19:04:09.520 mpe_sys: <214>  [  DEBUG] atchannel:<channel:0>,processLine start a timer
Jul  4 19:04:12.340 mpe_sys: <215>  [  DEBUG] atchannel:<channel:0>,send a at command = AT+CSCA?,type=2,responsePrefix=+CSCA:,smspdu
4
Jul  4 19:04:12.420 mpe_sys: <216>  [  DEBUG] atchannel:<channel:0>,pre process command is +CSCA: "+8613800755500",145 len is 27
Jul  4 19:04:12.440 mpe_sys: <217>  [  DEBUG] atchannel:<channel:0>,pre process command is OK len is 2
Jul  4 19:04:12.440 mpe_sys: <218>  [  DEBUG] atchannel:<channel:0>,processLine start a timer

ROS(ada)#Jul  4 19:04:15.470 mpe_sys: <219>  [  DEBUG] atchannel:<channel:0>,send a at command = AT+CSQ,type=2,responsePrefix=+CSQ,s
4f5610
Jul  4 19:04:15.530 mpe_sys: <220>  [  DEBUG] atchannel:<channel:0>,pre process command is +CSQ: 31,0 len is 10
Jul  4 19:04:15.550 mpe_sys: <221>  [  DEBUG] atchannel:<channel:0>,pre process command is OK len is 2
Jul  4 19:04:15.550 mpe_sys: <222>  [  DEBUG] atchannel:<channel:0>,processLine start a timer
Jul  4 19:04:21.470 mpe_sys: <223>  [  DEBUG] atchannel:<channel:0>,send a at command = AT+CLCC,type=3,responsePrefix=+CLCC,smspdu=<
Jul  4 19:04:21.530 mpe_sys: <224>  [  DEBUG] atchannel:<channel:0>,pre process command is OK len is 2
Jul  4 19:04:21.530 mpe_sys: <225>  [  DEBUG] atchannel:<channel:0>,processLine start a timer
```

```
ROS#^config
ROS(config)#mobile cmd at 0 AT+CSQ
ROS(config)#
```

SIM Card Unregister

Check port 0 carrier info

1. Telnet at device and access to mode (ada)
2. Input the command: **cmd 53 19 0 0 1** (0 0 means the port range, from 0 to 0, current check port 0 only)
3. Telnet at device at other window and access mode (config)
4. Input the command: **mobile cmd at 0 AT+QENG** then, **mobile cmd sear 0** (0 means port 0)
5. At first windows, you will see the port0 which carrier found and which carrier trying register to. 2 means current using carrier.

```
[  DEBUG] atchannel:<channel:0>,save a at command = AT+CSQ,type=2,responsePrefix=+CSQ,smspdu=<NULL>,timeoutMsec=0,response_callback=4f5610
[  DEBUG] atchannel:<channel:0>,save a at command = AT+CLCC,type=3,responsePrefix=+CLCC,smspdu=<NULL>,timeoutMsec=0,response_callback=4f7fdc
[  DEBUG] atchannel:<channel:0>,save a at command = AT+CSCA?,type=2,responsePrefix=+CSCA:,smspdu=<NULL>,timeoutMsec=0,response_callback=502ae

: < 58>  [  DEBUG] atchannel:<channel:0>,pre process command is +COPS: (2,"CHINA MOBILE","CMCC","46000"),(3,"CHINA UNICOM GSM","UNICOM","4600
```

```
ROS(config)#mobile cmd at 0 AT+QENG
ROS(config)#mobile cmd sear 0
```

Contents

Gateway Voice Issue

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GSM GW Voice Issue

Issue Check Flow

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Check Client Side

If the Client side is Softphone, you can run the wireshark at PC that can show the original voice OK or not

Check IPPBX to GW

Try to capture at GW side, it will show the IPPBX to GW network

Or try voice loop test

Check Operator network

Try voice loop test, it will show the issue at GW side Operator or not.

Check Client to IPPBX

If can capture the package at IPPBX side is better。

If not, try to call out and router to other destination.

Check GSM GW

Use the Xlite at same LAN with GSM GW and try to call out

GW Voice Issue

Voice Loop
The voice loop used to check which side take the voice issue.
It have IP side loop and GSM side loop.
The IP side loop means when voice hit at DWG form IP, it will loop back directly to IPPBX side.
The GSM side loop means when the voice hit at DWG form carrier side, it will loop back directly to GSM side.
The voice not pass the GSM GW when do loop.

GW Voice Issue

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Voice Loop

- Start the call and keep connected
- Start the loop type at page“voice Loopback Test”
- Continue talk, to check the voice statue after loop
- Stop the voice loopback(MUST)
- Drop the call

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THANKS

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