

BSJ Communication protocol

2929 Protocol

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Revision history

Version	Revision content	Reviser	Time
V1.1	Append SMS command of week setting with corresponding time point 【A5C used】	Chentan	2015-05-27
V1.2	Append additional information [0x00A9] uplink multi base station information 【A5C used】	Chentan	2015-05-28
V1.3	Append additional information [0x0088] uplink mileage information 【A5E used】 [0x00A8] uplink battery gauge 【A5E used】	Chentan	2015-06-10
V1.4	Status of modify function switch T: function switch 1 ->ON 0-> OFF Append 00AA uplink extension command	Chentan	2015-06-17
V1.5	Append [0x00A5] command: definition of terminal module Append [0x00B3]command: ACAR terminal alarm status command	Chentan	2016-04-08
V1.6	Append SMS command L, K Upgrade 80 location status description Revise alarm bit in uplink additional 00B3 command	Chentan	2016-04-13
V1.7	Append uplink apply for parameter command D8	Chentan	2016-04-18
V1.8	Revise description of <W:0,123,1200> command	Chentan	2016-04-27
V1.9	Revise description of bit 1 in status bit of uplink extension command 00B3	Chentan	2016-04-28
V2.0	Revise remark in type support of command terminal	Chentan	2016-05-07
V2.1	Append WIFI protocol of A5C-5 terminal Append A5C-5 type terminal in uplink additional 00A5 command	Chentan	2016-07-08
V2.2	Revise I item of description in location appendix format	Chentan	2016-08-03
V2.3	Append A5C-5 type terminal in uplink additional 00A5 command	Chentan	2017-01-03
V2.4	Append A5E-3 type terminal command 1. SMS command of wired and wireless mode setting *M 2. SMS command of motion/static mode post back interval setting *O *H 3. SMS command of fortification and withdraw fortification setting *3C *3D 4. Append A5E-3 type terminal in uplink additional 00A5 command	Wangfeng	2017-01-19
V2.5	1. Delete terminal command of A5E-3 type, software architecture changed 2. Append SMS setting command of zone name *Q 3. Append SMS setting command of backup IP in domain name mode *1X	Wangfeng	2017-02-09

V2.6	1: Append 0x7B instruction annotation, super long standby terminal is not used 2: Append 0xD8 instruction annotation, after the platform receive the command, need not issued 0x3A if there's no parameter setting	Wangfeng	2017-02-27
V2.7	1. Append A5C-9 terminal in uplink additional 00A5 command	Wangfeng	2017-03-21
V2.8	1. Append A5C-M terminal in uplink additional 00A5 command	Wangfeng	2017-04-27
V2.9	1. Append A5M terminal in uplink additional 00A5 command	Wangfeng	2017-05-18

1. Instruction structure and explanation of noun conception

Instruction structure

2	1	2	4	n	1	1
Packet head	Main signaling	Packet length	Fake IP	Content	Verification	Packet end

Packet head and packet end

Indicates the frame boundary of the data, length of packet head is 2 bytes, end is 1 byte.

Packet head is fixed character (0x29 0x29) while packet end is (0x0D)

Packet length

Indicates length of data packet content, length is 2 bytes from the first byte after the byte of packet head to the packet end.

Verification

Indicates from the packet header until all the bytes of the previous byte performs exclusive OR before verification, occupies 1 byte.

Fake IP address

Indicates the IP address of the SIM card converted by a [specified method](#), length is 4 bytes.

Illustration:

Terminal only use UDP for communication.

2. Center issue

2.1 (0x21) Center confirmation packet

[Function] Center issues confirmation packet when received the effective UDP packet for vehicle-mounted device

[Receiver] Vehicle-mounted device

[Communication way] This data packet only issued by UDP

[Format]

29	29	21	00	5					0D
Packet head	Main signaling	Packet length	Received packet check value	Received packet main signaling	Received packet sub-signaling	Verification	Packet end		

[Parameter description] This command can also be as the UDP confirmation response packet of vehicle-mounted terminal. For some command (including robbery alarm, [geo-fence alarm](#) and [scheduling information](#)) sent by the vehicle terminal must have this command response, otherwise will send again which causes an increase traffic of GPRS. In general, the center should issue a confirmation packet when received the effective UDP packet from the vehicle-mounted device.

Sub-signaling is the 10th byte of the receiving data packet. If there's no sub-signaling in data packet, then the byte bit of sub-signaling reserve.

[Example] The center receives: 29 29 84 00 0A 00 00 00 00 C4 E3 BA C3 D0 0D

The center responses: 29 29 21 00 05 D0 84 C4 B4 0D

[Vehicle-mounted response] Need not response

[Vehicle-mounted return data] Null

2.2 (0x7B) Periodically send back

[Function] Set specified vehicle send [general location information](#) to the center by UDP according to the set period.

[Receiver] Vehicle-mounted device

[Communication way] TCP/UDP/SMS | Support G and C network terminal

[Format]

29	29	7B	00	0a									0D
Packet head	Main signaling	Packet length	Fake IP			Interval		Count	Verification			Packet end	

[Parameter description] Interval: double byte, unit is second, effective range is 2~65535 seconds.

Count: double byte, unit is time, range is 1~65535 times

This command requires the vehicle-mounted device use 'interval' for time interval, send back 'count' times location information, maximum is 65535 times. After vehicle-mounted device received this command, send back general location information to the monitoring center immediately, this command parameter is not saved when power off.

Noted: When periodically send back general location information is enabled

[Example] 29 29 7B 00 0A 00 00 00 00 00 0F 00 0A 74 0D

Indicates send back one location information every 15 seconds, 10 times in total

[Vehicle-mounted response] [Vehicle-mounted device response confirmation packet](#)

[Vehicle-mounted return data] Null

Scheduling information

2.3 (0x3A) Issue scheduling text information

[Function] Issue scheduling text information to specified vehicle-mounted device

[Receiver] Vehicle-mounted device

[Communication way] UDP

[Format]

29	29	3A	00	n							0D
Packet head	Main signaling	Packet length	Fake IP				Scheduling information	Verification	Packet end		

[Parameter description] Information issues as ASCALL or GB2312 code, maximum of SMS content is 240 bytes

[Example] The center issues ‘Hello!’

29 29 3A 00 0B 0C 3A 3B 2A C4 E3 BA C3 21 69 0D

[Vehicle-mounted response] [Vehicle-mounted device response confirmation packet](#)

[Vehicle-mounted return data] Null

Noted: A5 series terminal can configures related parameters through this command which means SMS configure command use this command to issue

Process reference: [Appendix D: Process of platform issues 3A command parameter setting](#)

[Parameter description] This command can also be as the UDP confirmation response packet of vehicle-mounted terminal. For some command (including robbery alarm, [geo-fence alarm](#) and [scheduling information](#)) sent by the vehicle terminal must have this command response, otherwise will send again which causes an increase traffic of GPRS. In general, the center should issue a confirmation packet when received the effective UDP packet from the vehicle-mounted device.

Sub-signaling is the 10th byte of the receiving data packet. If there’s no sub-signaling in data packet, then the byte bit of sub-signaling reserve.

[Example] The center receives: 29 29 84 00 0A 00 00 00 00 C4 E3 BA C3 D0 0D

The center responses: 29 29 21 00 05 D0 84 C4 B4 0D

[Vehicle-mounted response] Need not response

[Vehicle-mounted return data] Null

2.4 (0x32) Reset restart

[Function] Control the specified vehicle to shutdown, reset and restart

[Receiver] Vehicle-mounted device

[Communication way] UDP

[Format]

29	29	32	00	06						0D
Packet head	Main signaling	Packet length	Fake IP				Verification		Packet end	

[Parameter description] Reset restart will not change the parameter set by the vehicle, but delete the Bluetooth alarm status.

[Example] 29 29 32 00 06 00 00 00 00 34 0D

[Vehicle-mounted response] [Vehicle-mounted terminal response confirmation packet](#)

[Vehicle-mounted return data] Null

3. Vehicle-mounted terminal sending command to the center

3.1 (0x80) General location data

[Function] Vehicle-mounted terminal send current location information to the network center

[Receiver] The network center

[Communication way] UDP

[Format]

29	29	80	00	28+N					34Byte)	N Byte		0D
Packet head	Main signaling	Packet length	Fake IP				<u>Location data</u>		<u>Extended data</u>		Verification	Packet end

[Signaling description] If the host sends the command unsuccessful, the network fault is considered and the connection is recreated automatically.

Extended data description: when a certain extended function set by command issued: when sending back it should carry the data segment, otherwise this segment is null, it's null by default.

[Example]

29 29 80 00 28 0C 3A 3B 2A 00 00 00 08 00 00 02 23 20 31 11 40 15 70 00 00 00 00 38 00 00

00 FF FC 56 80 00 1E 00 00 00 00 00 00 70 0D

[Center response] [Center confirmation packet](#)

3.2 (0x85) Vehicle-mounted terminal confirmation packet

[Function] Vehicle-mounted terminal response the command sent by network center

[Receiver] The network center

[Communication way] UDP vehicle- mounted send corresponding way according to the communication type of issued command

[Format]

29	29	85	00	28					34Byte)		0D
Packet head		Main signaling	Packet length		Fake IP				Location data	Verification	Packet end

[Signaling description]

[Example]

29 29 85 00 28 37 B7 37 B7 08 06 28 11 31 16 02 23 25 73 11 40 52 76 00 00 00 00 F8 00 00 C0 7F
FC 7F 00 00 3C 00 00 00 00 00 34 73 0D

[Center response] [Center confirmation packet](#)

3.3 (0xD6) Send portable terminal proofread time protocol

[Function] Send proofread time application to the center. Noted: The terminal sends this command to apply for proofread time when received proofread time command send by SMS.

[Receiver]

[Communication way] UDP

[Format]

29	29	D6	00	n					34 BYTE		0D
Packet head		Main signaling	Packet length		Fake IP				Location data	Verification	Packet end

[Center response] D7 proofread time command

29	29	D6	00	n					7 BYTE		0D
Packet head		Main signaling	Packet length		Fake IP				Time is 6 bytes BCD+1 byte reserve	Verification	Packet end

3.4 (0xD8) Send application setting parameter (support ACAR, A5C-3/5/8, A5H)

[Function] Send application to the center. Noted: the terminal will apply once every time it goes online.

[Receiver]

[Communication way] UDP

[Format]

29	29	D8	00	06						0D
Packet head		Main signaling	Packet length		Fake IP		Verification			Packet end

[Center response] 3A command (need not send 3a command when no parameter needs setting)

Noted: Process reference: [Appendix D: Process of platform issues 3A command parameter setting](#)

4. SMS configuration parameter

Append SMS debugging command to facilitate the user to debug the vehicle and test the working status of the vehicle. Use SMS to read and modify parameters, can set the terminal with any number.

SMS debugging command format:

Setting parameters:

Format is as follows:

(1) Multiple setting

<SPBSJ*P:123456*U:222.010.013.001,6666*A:CMNET*N:13418181818*R:0010,0600,1200,2300*C:150328093535*D:006*E:1000*G:00*W:T,1234567,hmm*K:100,30*L:0*Q:www.qq.com:6610*1X:192.168.011.011,6868>

Description

[P: password; U: UDP IP and port; A: APN; N: SIM card number; R: clock time (hour and minute, maximum is 4 groups); C: time of proofread time (year month day hour minute second); D: set timing return interval; E: set the number of sending; G: anti-tamper alarm setting; W: week and corresponding time point setting; K: set number and interval of Bluetooth alarm; L: Bluetooth alarm switch setting; Q: domain name; 1X: backup IP]

Supplementary instruction:

W: week and corresponding time point setting

T: function switch 1: on; 0: off

1234567: corresponding week range, 1~7 are correspond from Monday to Sunday

HHMM: the corresponding time of the week. Hours, minutes

Example:

<W: 1,12,1200> Week mode on, wake up at 12:00 on Monday and Tuesday

<W:0,123,1200> Week mode off, **the following week parameters do not work**, and so on, arrange in order, the number cannot repeat, such as <W:1,113,1200> is regard as illegal. When week mode is on, corresponding week item cannot be null, such as <W:1, ,1200> is regard as illegal.

*K: set number and interval of Bluetooth alarm, number of times is 2 byte (0-65535) unit is times, interval is 2 byte (0-999) unit is minute.

E.g.: *K:100,30 means send alarm data 100 times, interval is 30 minutes

*L: set Bluetooth alarm switch 0: on; 1: off

E.g.: *L:0 means Bluetooth alarm is on

***Q: set online domain name format *Q:domain name: port length <=60 bytes**

E.g.: *Q:www.qq.com:6610

***1X: backup IP under domain name mode, append 0 in the front while IP is less than 3 bits**

E.g.: *1X:192.168.011.011,6868

Quick command

(2) Single setting (only support the parameter configuration as follows)

<C:TIME>	Apply for proofread time command
<D:xxx>	Set timing return time
<R:HHMM,HHMM...>	Set clock time
<G:xx>	Set anti-tamper alarm
<W:T,1234567,hhmm>	Set time point corresponding to the week

(3) Query parameter

<CKBSJ>

Vehicle-mounted device send back:

<BSJ*U:222.010.013.001,6666*A:CMNET*N:13418181818*R:0010,0600,1200,2300*D:006*E:1000*G:00>

Description:

[P: password; U: UDP IP and port; A: APN; N: SIM card number; R: clock time (hour and minute, maximum is 4 groups); D: set timing return time; E: set the number of sending; G: anti-tamper alarm setting; W: week and corresponding time point setting; K: set number and interval of Bluetooth alarm; L: Bluetooth alarm switch setting]

5. Factory default parameter of the terminal

Function	Factory default value
APN	CMNET
SIM card number	13000000000
UDP IP and port 1	123,65,216,246,8804
UDP IP and port 2	219,133,34,195,4542
GPS continually refresh time	10 seconds
numbers of RTC clock	1
RTC wake up time	12:00/14:00 (A5C-8)

6. Appendix A: Location data

YMDHMS WWW JJJ SS FF T LLL ABCD W W E R T Y U I

[08 06 05 14 26 34 02 23 25 56 11 40 52 81 01 20 01 54 F8 00 4E 20 7F FC 5F 00 00 3C 00 00 00 00 00]

YMDHMS: year month day hour minute second

Range of date: year, two bits after; year, 1-12; date, 1-31

Range of time: hour, 00-23; minute, 00-59; second, 00-59

Year, month, day, hour, minute, second all use compressed BCD coding.

[Example]: June 5th, 2018, 14:26:34 expressed as:

08H,06H,05H,104H,26H,34H

WWW: latitude, 4 bytes

Range of latitude: 00 degree 00.000 minute----- 89 degree 59.999 minutes;

Use compressed BCD coding, but the highest bit is the sign bit. 'Plus' stands for 'North latitude', 'minus' stands for 'South latitude';

Unit of 'minute' is: millesimal minute.

[Example]: 22 degree 32.556 minutes North latitude is:

0x02232556

JJJ: Longitude, 4 bytes

Range of longitude: 000 degree 00.000 minute ----- 179 degree 56.999 minute;

Use compressed BCD coding, but the highest bit is the sign bit. 'Plus' stands for 'East longitude', 'minus' stands for 'West longitude';

Unit of 'minute' is: millesimal minute.

[Example]: 114 degree 05.281 minutes East longitude is: (Noted: 1degree= 60 minutes)

0x11405281

SS: Speed, 2 bytes

Range: 0-9999 km/h

Use compressed BCD coding.

[Example]: 120km/h is:

0x0120

FF: Direction, 2 bytes

Range: 000-359 degree

Use compressed BCD coding, true North is 0 degree, counted clockwise.

Unit is: degree.

[Example]: 154 degree is:

0x0154

T: Positioning, antenna, power status: 1 byte

Positioning status is consists of single byte, meaning of each bit is as follows:

D7	D6	D5	D4	D3	D2	D1	D0
----	----	----	----	----	----	----	----

D7	Positioning sign
0	GPS is not positioning
1	GPS has positioning

D6 D5	
1 1	GPS is normal
0 1	GPS antenna open circuit

D4	D3	Power status
1	1	Normal
1	0	Main power fails
0	1	Main power's voltage is too low

D2	D1	D0	ACAR and A5 series is not used
----	----	----	--------------------------------

LLL: ACAR and A5 series is not used

A B C D: vehicle status, 4 bytes in total

A: (ACAR and A5 series is not used)

B: D7 D6 D5 D4 D3 D2 D1 D0

D7 D6 D5 D4 (ACAR and A5 series is not used)

D3=0 normal, D3=1 terminal dismantled (A5C,A5C-3/5/8,ACAR,A5E-2,A5H and other light sensation function supported)

D2=0 Reserve

D1=0 GPRS is online; D1=1 GPRS is not online

D0=0 terminal dial-up success; D0=1 terminal dial-up failed

C: D7 D6 D5 D4 D3 D2 D1 D0

D7=0 GPRS register; D7=1 GPRS not register

D6=0 the center need not issue 21 response command. D6=1 the center should issue 21 response command.

[Indicate whether the center should send 21 response commands to this data, need not response through TCP.]

D5=0 UDP communication way; D5=1 TCP communication way

[Indicates the communication way of this data.]

D4 D3 D2 D1 D0: CSQ signal status 0-31

D: (ACAR and A5 series terminal is not used)

W E R T Y U (ACAR and A5 series terminal is not used)

I: Main command issued by the center, 1 byte

7. Appendix B: Description of extended data in location information

7.1 AD value: (A5 series, ACAR supported)

Name	Length	Command	Data
Occupied byte	2	2	3
AD value	0x0005	0x0004	33 11 22
Explanation	33 11 22 Indicates 3.31122V		
A5 series			

7.2 Voltage of battery: A5B, A5D, A5C, A5C-3/5/8, ACAR terminal

Name	Length	Command	Data
Occupied byte	2	2	2
Battery voltage	0x0004	0x0008	xxxx
Explanation	xxxx= occupies 2 bytes, unit: pc		
A5B, A5D terminal 1000			

7.3 Terminal host debug information: A5E terminal

Name	Length	Command	Data
Occupied byte	2	2	4

Terminal host debug information	0x000N	0x00A3	Debug information
Explanation	Use string to express debug information		
Example: Upload terminal version 00 10 00 A3 41 35 43 2D 47 35 31 30 55 56 31 2E 30 39			

7.4 Terminal host model

Name	Length	Command	Data
Occupied byte	2	2	4
Terminal host model	0x0006	0x00A5	4 bytes terminal model code X
Explanation	X =	A5C model terminal	
	0x00000001	A5D model terminal	
	X =	K9 model terminal	
	0x00000002	A5E model terminal	
	X =	A5F model terminal	
	0x00000003	ACAR model terminal	
	X =	A5H model terminal	
	0x00000004	A5C-3 model terminal	
	X =	A5C-5 model terminal	
	0x00000005	A5C-8 model terminal	
	X =	A5C-9 model terminal	
	0x00000006	A5C-M model terminal	
	X =	A5M model terminal	
	0x00000007		
	X =		
	0x0000000A		
	X =		
	0x0000000B		
	X =		
	0x0000000C		
	X =		
	0x0000000D		
	X =		
	0x0000000E		
	X =		
	0x0000000F		
Other reserve			
The terminal model is mainly for the convenience of the platform to analyze the battery power			

7.5 Percentage of battery power: A5E terminal

Name	Length	Command	Data
Occupied byte	2	2	1
Percentage of battery power	0x0003	0x00A8	V
Explanation	V unit is percentage %, range: 0x00 to 0x64		
A5E terminal			

7.6 GSM cell information (single base station)

Name	Length	Command	Data
Occupied byte	2	2	n
GSM cell information (single base station)	n	0x0024	Data
Explanation	Data including 4 field of country, operator code, area number and tower number, separate each other with ‘;’ E.g.: 460;01;270575;192749		
Example: 29 29 80 00 40 0C 3A 3B 2A 00 00 00 08 00 00 02 23 20 31 11 40 15 70 00 00 00 00 38 00 00 00 FF FC 56 80 00 1E 00 00 00 00 00 00 00 00 16 00 24 34 36 30 3B 30 31 3B 32 37 30 35 37 35 3B 31 39 32 37 34 39 22 0D			

7.7 Extend alarm status bit:

A5C, A5C-3/5/8, A5E-2, ACAR, A5H and other terminal with light sensation function supported

Name	Length	Command	Data
Occupied byte	2	2	4
Extend status bit	0x0006	0x0089	State [31~0]
Explanation	bit12: 1: normal; 0: illegal dismantle		

	other bits refer to BSJ uplink extend protocol (A5C, ACAR, A5E-3/5/8, A5H are not used)
A5C, A5C-3/5/8, A5E-2, ACAR, A5H and other terminal with light sensation function supported	

8. GSM cell information (multi base station)

Name	Length	Command	Data
Occupied byte	2	2	34
GSM cell information (multi base station)	0024	0x00A9	V
Explanation	V = national number, operator number, base station number, [area number 1, tower number 1, signal strength 1, ... area number 6, tower number 6, signal strength 6] National number: 2 bytes, use HEX to express, e.g.: 0x01CC is expressed as 460 Operator number: 1 byte, use HEX to express, e.g.: 0x00 Base station number: 1 byte, use HEX to express, e.g.: 0x06, maximum support 6 base station Area number: 2 bytes, use HEX to express, high bit is in the front and low bit behind, e.g.: 0x262C Tower number: 2 bytes, use HEX to express, high bit is in the front and low bit behind, e.g.: 0x04BA Signal strength: 1 byte, use HEX to express, e.g.: 0x58, original value Noted: If there's no base station information, corresponding area number, tower number and signal strength all fill in 0		

9. Status and GSM cell information: A5E terminal

Name	Length	Command	Data
------	--------	---------	------

Occupied byte	2	2	N
Status and GSM cell information	N	0x00AA	Status and GSM cell information
Explanation	ACC status1 Byte (HEX) 1: ACC on 0: ACC off G_Sensor status1 Byte (HEX) 1: normal 0: abnormal ACC on send back time2 Byte (HEX) unit: second ACC off send back time2 Byte (HEX) unit: second Duration of motion mode4 Byte (HEX) unit: minute Duration of static mode4 Byte (HEX) unit: minute Base station informationN Byte (ASCII code) Description of base station information: MCC; MNC; NUM; LAC_1; CI_1; LAC_2; CI_2; LAC_3; CI_3; ...; LAC_n; CI_n; Explanation of nouns: MCC -> Mobile Country Code (Chinese MCC is 460) MNC -> Mobile Network Code (China Mobile: 00, China Unicom: 01) NUM -> the number of base station uploaded (maximum is 6) LAC -> Location Area Code (LAC_1 stands for LAC of base station 1) CI -> Cell ID (ID_1 stands for CI of base station 1)		
A5E used			

10. ACAR terminal dedicated extension alarm status: ACAR supported

Name	Length	Command	Data
------	--------	---------	------

Occupied byte	2	2	5
ACAR extension alarm status	0007	0x00B3	T (1 byte)+Alarm words (2 bytes)+State word (2 byte)
Explanation	T: 1=ACAR (wireless) Bluetooth function off; 0=ACAR (wireless) Bluetooth function on Noted: while Bluetooth function is off, bit0~1 of State and Alarm is invalid, not parsing Alarm [15~0 bit]: alarm bit (Receive the platform responds clearance or issues to change the return mode removal or status recovery clearance.) bit0: Reserve bit1: 1=BCAR (wired) normal 0=BCAR (wired) tamper alarm [bit2~bit5]: Reserve State [15~0 bit]: stands for status bit, real-time status, change according to real-time status, not for alarm bit0: 1=ACAR (wireless) Bluetooth normal 0=ACAR (wireless) Bluetooth malfunction bit1: 1=BCAR (wired) normal 0=BCAR (wired) checking... [bit2~bit15]: Reserve		

11. A5C-5 terminal WIFI hotspot data

Name	Length	Command	Data
Occupied byte	2	2	n
A5C-5 WIFI hotspot data	000n	0x00B9	Composed by numbers of WIFI hotspot (1B) + WIFI hotspot (nB)
Explanation	Composed by numbers of WIFI hotspot (1B) + WIFI hotspot (nB) Numbers of hotspot: 0x01~0x05, maximum 5 groups, use HEX to express		

	WIFI hotspot format: composed by WIFI MAC address + signal value, use ASCALL code to express E.g.: 24:69:68:5d:2c:a5, -30 Multi-group format: 24:69:68:5d:2c:a5,-30,2e:d0:5a:42:16:ad,-69,5c:0e:8b:8b:ca:50,-70,5 c:0e:8b:8b:ca:52,-70,78:a1:06:6f:bb:fe,-70
A complete example: 00 70 00 b9 05 32 34 3A 36 39 3A 36 38 3A 35 64 3A 32 63 3A 61 35 2C 2D 33 30 2C 32 65 3A 64 30 3A 35 61 3A 34 32 3A 31 36 3A 61 64 2C 2D 36 39 2C 35 63 3A 30 65 3A 38 62 3A 38 62 3A 63 61 3A 35 30 2C 2D 37 30 2C 35 63 3A 30 65 3A 38 62 3A 38 62 3A 63 61 3A 35 32 2C 2D 37 30 2C 37 38 3A 61 31 3A 30 36 3A 36 66 3A 62 62 3A 66 65 2C 2D 37 30	

Appendix C: Transform functions and processes of fake IP and SIM card

Note that the SIM card number is 11 bit phone card number to remove the first 1, e.g.: 13688888888 --
3688888888

VB function

Public Function NumToIp(Num As Currency) As String

Dim Tmp As Currency

Dim Ip As String

Dim IpByte As Integer

Tmp = Int(Num / 256) *34447552

IpByte = Num - Tmp * 256

Ip = "." & CStr(IpByte)

Num = Tmp

Tmp = Int(Num / 256) IpByte

= Num - Tmp * 256 Ip = "."

& CStr(IpByte) & Ip Num =

Tmp

```

    Tmp = Int(Num / 256)
    IpByte = Num - Tmp * 256
    Ip = Tmp & "." & CStr(IpByte) + Ip
    NumToIp = Ip
End Function

Public Function IpToNum(Ip As String) As Currency
Dim Num, iSum As Currency
Dim Tmp As String
    Tmp = Ip
    Num = CInt(mid(Tmp, 1, InStr(1, Tmp, ".") - 1))
    iSum = Num * 256 * 256 * 256
    Tmp = mid(Tmp, InStr(1, Tmp, ".") + 1)
    Num = Val(mid(Tmp, 1, InStr(1, Tmp, ".") - 1))
    iSum = iSum + Num * 256 * 256
    Tmp = mid(Tmp, InStr(1, Tmp, ".") + 1)
    Num = Val(mid(Tmp, 1, InStr(1, Tmp, ".") - 1))
    iSum = iSum + Num * 256
    Tmp = Val(mid(Tmp, InStr(1, Tmp, ".") + 1))
    IpToNum = iSum + Tmp
End Function

```

Appendix D: Process of the platform issues 3A command parameter data setting

