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# 高通CNSS技术期刊

2015/1

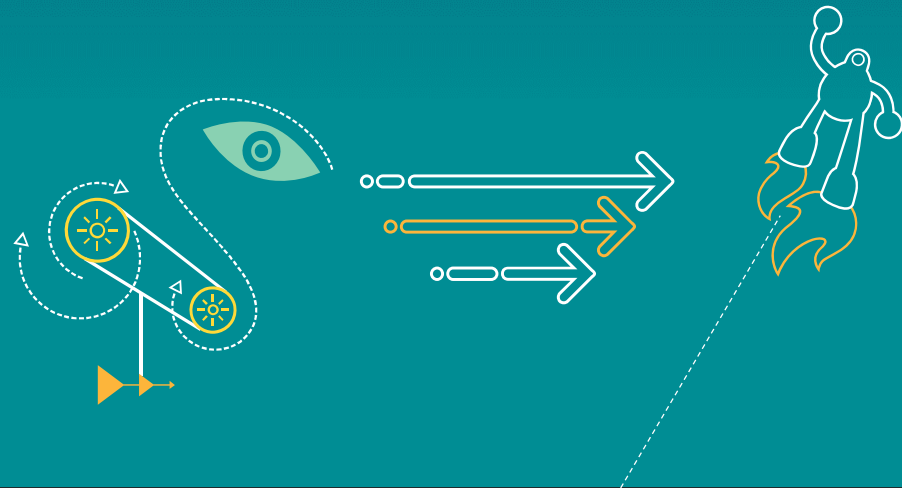
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Qualcomm Technologies, Inc.

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# WCN 方案几个WLAN fix

- 非法BSSIndex, CR#681884

<https://www.codeaurora.org/cgit/external/wlan/prima/commit/?id=dde69981dc557f1797c729c7e21ad460c9181129>

- HT40兼容性问题, FW CR#775248以及host CR#775312

<https://www.codeaurora.org/cgit/quic/la/platform/vendor/qcom-opensource/wlan/prima/commit/?id=7c1a512df707984c2f3a05ccd5bae5b57db8aff1>

- 8939 TCP UL速率低, Iperf测试Rx需要10s才达到峰值, CR#781472

Init.qcom.rc去掉:

//setprop net.tcp.delack.wifi 20

# WCN 几个FTM测试问题

- 使用命令行测试，一些命令之间应该加些延时
  - insmod 和iwpriv wlan0 ftm 1 之间
  - iwpriv wlan0 ftm 0 和rmmod之间
  - rmmod和insmod之间
- Android L上NV没法从QRCT导出
  - 如果NV是V3版本的，请切回V2版本
  - QDART使用版本4.8.23

# 8939/8916某些版本WIFI启动慢2.5s问题

- CR779421

Wcnss\_wlan.c , 将

```
if (!penv->fw_cal_available && WCNSS_CONFIG_UNSPECIFIED
!= has_calibrated_data && !penv->user_cal_available) {
while (!penv->user_cal_available && retry++ < 5)
msleep(500);
}
```

改为

```
if (!penv->fw_cal_available && 0
!= has_calibrated_data && !penv->user_cal_available) {
while (!penv->user_cal_available && retry++ < 5)
msleep(500);
}
```

# WCN连接WAPI AP失败fix

- CR#770318 修改文件CORE/MAC/src/pe/lim/limApi.c

```
/* WEP */    if ( (pBeacon->capabilityInfo.privacy == 1) && (pBeacon->wpaPresent == 0) &&
    (pBeacon->rsnPresent == 0) &&
    - ( (pSession->encryptType == eSIR_ED_WEP40) ||
    -      (pSession->encryptType == eSIR_ED_WEP104)))
+      ( (pSession->encryptType == eSIR_ED_WEP40) ||
+      (pSession->encryptType == eSIR_ED_WEP104) )
+ #ifdef FEATURE_WLAN_WAPI
+      || (pSession->encryptType == eSIR_ED_WPI )
+ #endif+      ))
return eSIR_TRUE;
```

# QCA61x4A WLAN软件版本获取

先在设备上开启WLAN，然后在adb shell下，使用如下命令获取QCA61x4A 软件版本信息：

```
root@msm8994:/ # iwpriv wlan0 version
```

```
iwpriv wlan0 version
```

```
wlan0    version:Host SW:4.4.2.171, FW:0.0.0.51, HW:QCA6174_REV3_2
```



# QCA61x4A WLAN设备MAC地址设置

- 在MSM8994和MDM9x35平台上，QCA61x4A使用softmac的方式来设置WLAN的MAC地址。目前QCA61x4A没有从NV中读取MAC地址的功能。
- Softmac文件位于/persist/wlan\_mac.bin
- Softmac文件格式示例如下：  
`Intf0MacAddress=00037faabb00`  
`Intf1MacAddress=08037faabbdd`  
`END`
- 注意：在调试过程中，常常遇到由于MAC地址冲突导致的各种奇怪问题，所以请注意保证设备上softmac文件内容的唯一性。

# QCA61x4A WLAN死机分析需要提供的log

Item	Path/Information
memory dump	C:\ProgramData\Qualcomm\QPST\Sahara\Port_COM8
vmlinux	out/target/product/msm8994/obj/KERNEL_OBJ/vmlinux
qca_cld_wlan.ko(elf)	out/target/product/msm8994/obj/vendor/qcom/opensource/wlan/qcacld-2.0/
meta information	M8994AAAAANLYD1024C.1
cnss firmware version	CNSS.SW_RM.2.0-00266-QCARMSWPZ-1

注释：

请确保所有的ELF文件和dump是匹配的

# 提交蓝牙问题时，请提交分析问题所需的日志文件

- **所有问题的必要日志:** logcat, QXDM

请参考文档80-Y0513-2来配置QXDM。

- **各类问题分别需要的其他日志**

- 音频问题: btsnoop, OTA

- 互联互通问题: btsnoop, OTA

- 蓝牙认证问题:

PTS: Virtual Sniffer log, PTS report

DUT: btsnoop

- 稳定性问题: RAMDUMP, kmsg

- 功耗问题: kmsg, OTA

## MSM8994 新基线中的 BTFM.bin

- It is a partition to store NVM and patch files that are downloaded from the BT driver in user space.
- Please sync to Partition.xml, contents.xml, and fastboot\_complete.py sent in this meta-release, by referring the Release Notes.

i.e.

80-NU306-4 B Release Notes for M8994AAAAANLYD1140

### **1.3 Build components and commands**

BTFM Binary only — Sync to Partition.xml, contents.xml, and fastboot\_complete.py sent in this meta-release.

# 最新的蓝牙Android补丁

- 协议栈: external/bluetooth/bluedroid

- CR#764190: Null checks in threads methods

<https://www.codeaurora.org/cgit/quic/la/platform/external/bluetooth/bluedroid/commit/?h=lp&id=1493ea7c258da9e465123d90ed190c1b4552514d>

- CR#763157: Release Mutex during error condition

<https://www.codeaurora.org/cgit/quic/la/platform/external/bluetooth/bluedroid/commit/?h=lp&id=578cdd030e755661fe58592d0d526b3abdf51469>

- Frameworks: frameworks/base

- CR#761698: Sync Bluetooth Adapter and Manager Service

<https://www.codeaurora.org/cgit/quic/la/platform/frameworks/base/commit/?h=lp&id=ef94d6c610b165b0449e62d80d4481d8706316b6>

- 应用: packages/apps/Bluetooth

- CR#765769: Send the share status of file once transfer is complete

<https://www.codeaurora.org/cgit/quic/la/platform/packages/apps/Bluetooth/commit/?h=lp&id=9acf0403cf8041e0943fd306d6affc242de2f10b>

- 应用: packages/apps/Settings

- CR#762437: Add Manifest configure to fix settings crash

<https://www.codeaurora.org/cgit/quic/la/platform/packages/apps/Settings/commit/?h=lp&id=f5458cda72bdfe7b78cb58329c53bbda9727c6c1>

# 蓝牙组织官网发布 PTS 6.0

<https://www.bluetooth.org/en-us/test-qualification/test-tools-overview/profile-tuning-suite>

## New and Updated Test Suite Support

- Support for TCRL 2014-2
- WSP, WSS, BCS, BMS, ES, CGM, CTS 1.1—new adoptions
- SDP, HID, HID 1.1, BNEP, A2DP 1.3, PAN—new and updated test suites/cases
- Additional support for 4.1: GAP Dual Mode Topology, and GAP and GATT-based LE Privacy.
- Variety of bug fixes across multiple test suites

# ◦ 中国电信AGPS相关CR和配置

## ◦ 1. 3个可能影响电信AGPS的CR:

- 
- CR718608: consistent handling on UMTS UP and 1x UP for XTRA downloading trigger in MS-based
- CR742933 fix stop update frequently during navigation(CDMA A-GPS server connection interrupt fix update)
- CR764964 MSB not work due to incorrect session\_handle error

## ◦ 2. Modem NV设置:

- 
- NV1993 = 2 //V2 spec is used.
- NV1994 = 0 //all applications are based on no-trusted.
- NV1995 =65001 //Vx dedicated SMS teleservice identifier =65001



# • 中国电信AGPS相关CR和配置

- NV400 =0 // disable Sending System Parameter Info Msg.
- NV4698 =0x0AC716A5 //AGPS server mpc address:10.199.22.165
- NV4705 = 6066 //mpc port =6066
- NV3520= 0xFFFD //disable OTA seed position
- NV67217:  
Umts\_lte\_preffered=0,Agps\_Rat\_Enable\_Bitmask=0xFFFF //  
disable UMTS/LTE AGPS preferred.
- NV65811=0 //0 mean run IS801 instead of SUPL on 1x
- NV7165 =0x800
- 
- NV1713 = right Tcal value; //TCAL case defined in 80-VM522-2
- NV449 = right RF loss value; ////C/NO case defined in 80-VM522-2

# • 中国电信AGPS相关CR和配置

## • 3. APN设置

- 在以下APN的APN类型中加入SUPL: CTWAP and CTLTE

## • 4. SIM 卡 OMH位置服务兼容性问题解决方案:

- 1)在modem目录: build\ms\custxxxxxx.h (xxxxxx is build flavor id ) :
  - #undefine或者删除 : FEATURE\_UIM\_SUPPORT\_LBS
- 2)modem\_proc/gps/gnss/pd\_comms/pd\_comms\_tcp/src/pd\_comms\_tcp\_task.c
  - Change:#define LBS\_APP\_TYPE 0x00000020
  - To #define LBS\_APP\_TYPE 0x00000000

# ◦ 中国电信AGPS相关CR和配置

## ◦ 电信实验室认证（PLTS测试）NV修改：

◦

### ◦ 在现网配置基础上修改以下NV：

◦ NV4698 = 0xC0A80101

◦ NV4705 = 8000

◦ NV3358 = 0; //disable MPC/PDE throttling

◦ NV3520 = 1; //disable seed position based on network type(country code, cell learning etc);

◦ NV4428 = 1 ; //send SMS over access channel.

◦ NV6264=1054; //adjust GPS week to old GPS week.

◦ NV7165 =0; //disable XTRA to avoid some unexpected issue on test system.

# 中国联通AGPS相关CR和配置

- 1.影响联通AGPS的两个CRs:

- 

- CR740924

After the first final fix, the next fix request is not made during the SUPL-XTRA fallback session

- 

- CR764398

CP NILR still interrupt the MO session after setting NV1920 to disable CP

- 

- 2. Android和modem配置取决于客户使用的SUPL服务器

# 中国联通AGPS相关CR和配置

- a.如果使用Google非安全连接的服务器:
- 在etc/gps.conf设置
- # supl version 2.0
- SUPL\_VER=0x20000
- SUPL\_HOST=supl.google.com  
SUPL\_PORT=7276
- Modem NV配置  
NV7165 =0x00001200  
NV3758 =0
- NV72533 =1
- NV1930 =2
- NV1920 = 0xFF7F ->0x307 //CP NILR interrupting MO session is seen ,  
disable 2G/3G/4G CP MSA/MSB

# • 中国联通AGPS相关CR和配置

- b. 如果使用谷歌基于SSL的服务器:
- 在AP侧etc/gps.conf设置 :
  - # supl version 2.0
  - SUPL\_VER=0x20000
  - SUPL\_HOST=supl.google.com
  - SUPL\_PORT=7275
- Modem NV配置 :
  - NV7165 =0x00001200
  - NV3758 =1
  - NV72533 =1
  - NV1930 =2
  - NV1920 = 0xFF7F ->0x307 //CP NILR interrupting MO session is seen , disable 2G/3G/4G CP MSA/MSB

# ◦ 中国联通AGPS相关CR和配置

- 证书要预置在EFS/SUPL文件夹下.
- 注意：从QRD DPM2.0起, 谷歌SUPL服务器根证书已经集成在联通MBN中.
- **3. APN设置：**
- 在以下APN的APN类型中添加SUPL：3GNET
- 
- **4. 相关apps notes:**
- 
- Intermittent NTP Time Download Failure on Some China Networks
- Application Note
- 80-NP749-1 A

# • 中国联通AGPS相关CR和配置

- **NV7165相关位域的定义：**

- #define

NV\_GNSS\_OEM\_FEATURE\_MASK\_10\_REQ\_XTRA\_DURING\_SUPL  
0x00000200 /\* requesting XTRA download during MO MSB SUPL \*/

- #define

NV\_GNSS\_OEM\_FEATURE\_MASK\_12\_REQ\_XTRA\_DURING\_1XUP  
0x00000800 /\* requesting XTRA download during MO MSB 1x UP (V2  
etc) \*/

- #define

NV\_GNSS\_OEM\_FEATURE\_MASK\_13\_END\_SUPL\_AFTER\_FINAL\_F  
IX 0x00001000 /\* End SUPL session with server if final fix is reported  
to the AP \*/

- #define

NV\_GNSS\_OEM\_FEATURE\_MASK\_14\_SUPL\_TDS\_LOCID\_CFG  
0x00002000 /\* Configure TD-SCDMA LocationID depending on  
SUPL server used \*/



# ◦ 中国移动AGPS相关CR和配置

## ◦ 1. 与移动AGPS相关的两个CR:

◦

### ◦ CR740924

After the first final fix, the next fix request is not made during the SUPL-XTRA fallback session

CR747513

TDSCDMA Cell ID format compatible design in SUPL for both CMCC SUPL server and Google SUPL server

## ◦ 2. Android和modem配置取决于客户使用的SUPL服务器

# ◦ 中国移动AGPS相关CR和配置

- a. 如果使用谷歌非安全服务器
- AP侧etc/gps.conf
- # supl version 2.0
- SUPL\_VER=0x20000
- SUPL\_HOST=supl.google.com  
SUPL\_PORT=7276
- Modem NV配置
- NV7165 =0x00003200
- NV3758 =0
- NV72533 =1
- NV1930 =2

# ◦ 中国移动AGPS相关CR和配置

- b. 如果使用谷歌基于SSL的服务器
- AP侧etc/gps.conf
- # supl version 2.0
- SUPL\_VER=0x20000
- SUPL\_HOST=supl.google.com  
SUPL\_PORT=7275

## Modem NV配置

NV7165 =0x00003200

NV3758 =1

- NV72533 =1

- NV1930 =2

# ◦ 中国移动AGPS相关CR和配置

- 证书要预置在EFS/SUPL文件夹下.
- 注意：从QRD DPM2.0起, 谷歌SUPL服务器根证书已经集成在移动MBN中
- c. 如果使用移动基于SSL的服务器:
- 注：此配置为SUPL1.0，不支持LTE网络
- Setting in etc/gps.conf
- # supl version 1.0
- SUPL\_VER=0x10000
- SUPL\_HOST=221.176.0.55  
SUPL\_PORT=7275
- Setting in modem NV  
NV7165 =0x0x00001200  
NV3758 =1
- NV72533 =1
- NV1930 =2

# ◦ 中国移动AGPS相关CR和配置

- 证书要预置在EFS/SUPL文件夹下.
- 注意：从QRD DPM2.0起, 移动SUPL服务器根证书已经集成在移动MBN中

## ◦ 3. APN设置

- 在以下APN中添加APN类型SUPL：CMNET and CMWAP

## ◦ 4. 中国移动AGPS相关的APPS note:

- 
- Intermittent NTP Time Download Failure on Some China Networks
- Application Note
- 80-NP749-1 A
- 注意：如果网络时间下载有问题，请参考此文档

# ◦ 中国移动AGPS相关CR和配置

- 移动(NSN/MOT) 网络互操作问题的 Apps Note
- 80-NL684-1 A
- 注意: 此IOT问题只发生在移动NSN服务器上

# ◦ 中国移动AGPS相关CR和配置

- NV7165相关位域的定义：

- #define

NV\_GNSS\_OEM\_FEATURE\_MASK\_10\_REQ\_XTRA\_DURING\_SUPL  
0x00000200 /\* requesting XTRA download during MO MSB SUPL \*/

- #define

NV\_GNSS\_OEM\_FEATURE\_MASK\_12\_REQ\_XTRA\_DURING\_1XUP  
0x00000800 /\* requesting XTRA download during MO MSB 1x UP (V2  
etc) \*/

- #define

NV\_GNSS\_OEM\_FEATURE\_MASK\_13\_END\_SUPL\_AFTER\_FINAL\_F  
IX 0x00001000 /\* End SUPL session with server if final fix is reported  
to the AP \*/

- #define

NV\_GNSS\_OEM\_FEATURE\_MASK\_14\_SUPL\_TDS\_LOCID\_CFG  
0x00002000 /\* Configure TD-SCDMA LocationID depending on  
SUPL server used \*/