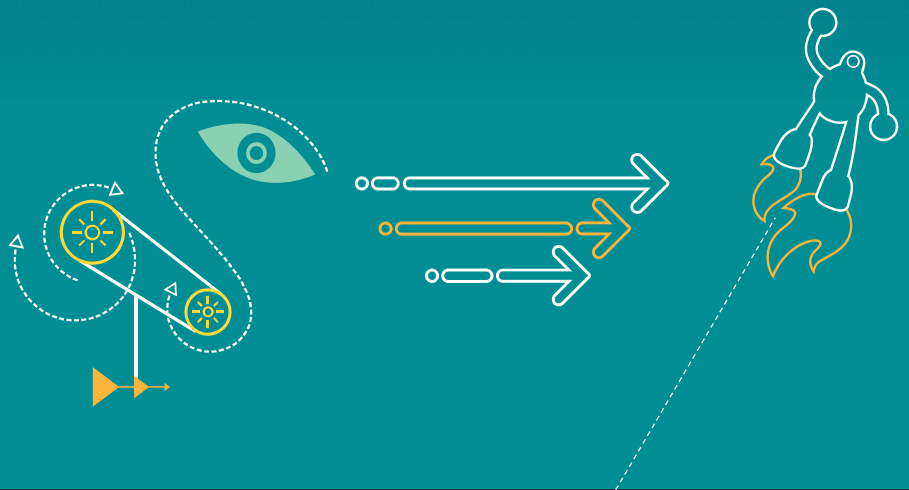
高通协议技术期刊 –2014/12/04

Qualcomm Technologies, Inc.



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Revision History

Revision	Date	Description
A	Dec 2014	Initial release

Note: There is no Rev. I, O, Q, S, X, or Z per Mil. standards.

Contents

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- CMCC/CU SIM reset feature

8916/8936/9x30系统解决方案Solution

- 为了直观，便于检索，我们在Saleforce系统上编写了系统解决方案。包含各个技术领域，便于大家查找。
- 8916系统解决方案
- Solution Number: 00029134
- 链接： https://qualcomm-cdmatech-support.my.salesforce.com/50130000000VfUZ?srPos=0&srKp=501

- 8936/8939系统解决方案
- Solution Number: 00029333
- 链接：https://qualcomm-cdmatech-support.my.salesforce.com/50130000000Vg5B

- MDM9x30/9x35系统解决方案
- Solution Number 00029678
- https://qualcomm-cdmatech-support.my.salesforce.com/50130000000ViGQ

MBN介绍

- MBN的设计需求，文档，实现方法, 请参阅Solution number:00029357.
- https://qualcomm-cdmatech-support.my.salesforce.com/50130000000VgDA?srPos=0&srKp=501

80-ND934-2EC Rev C (DATA THROUGHPUT TROUBLESHOOTING)

- 1，80-ND934-2EC (DATA THROUGHPUT TROUBLESHOOTING) 已经更新到版本C。
- 2，以流程图的方式列出了分析吞吐量的步骤。
- 3，列出各种手机RAT下分析吞吐量的关键检查点。
- 4，为达到最大吞吐量，列出了用于手机调试的配置信息，例如TCP窗口的配置，温控的配置，双向FTP传输的配置，等等。

【CMCC调研】终端对时间的显示控制支持情况（主要是NITZ方式）

- （一）关于授时机制：
- 1.　　终端是否支持NITZ方式自动获取时间？2G、3G、4G是否全部都支持？如果支持，NITZ功能是否在2G、3G、4G测试过?
- [Reply] YES.
- 2.　　除NITZ方式以外是否还支持其他方式授时？请一一列举，并简要说明每种方式的实现机制
- [Reply]GPS is not suitable option.
- 3.　　所支持的各类授时方式的优先级是什么？默认的自动授时方式是哪种？
- 4.　　是否提供给用户可以选择具体的授时方式？（建议给出界面截图，截图中包含选择各种自动授时方式的所有选项）
- 5.　　不同操作系统是否有区别？例如在安卓系统和Windows系统的实现上。
- [Reply] WP uses MSFT time services and does not use our (QCOM) time services. for Windows OS, MSFT is the owner of time services. Qualcomm responsibility is just to provide the interface to the Real Time Clock (RTC) hardware (in this case Qualcomm's PMIC) through ACPI. For NTP, there is client on WP to get NTP. It is controlled by MSFT OS side.
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- 注：典型授时方式具体如下，但不限于如下方式
- 首先分手动获取和自动获取，
- 手动获取方式是手动设置日期、时间，
- 自动获取方式有：
- NITZ（Network Identity and Timezone）方式——终端根据移动网络下发的信令进行时间设置（参考3GPP 22.042协议，24.008协议，24.301协议）
- NTP方式——终端从Internet服务器（请给出服务器的归属和获取机制）获取时间
- GPS方式——终端通过终端自带的GPS获取时间（请给出获取机制）
- 如果终端有更多实现方式和优化方案，请给出

【CMCC调研】终端对时间的显示控制支持情况（主要是NITZ方式）

- （二）关于授时的异常处理机制：
- 1. 自动获取时间的异常处理机制是什么？请列举每种授时方式获取时间失败后的处理流程
-
- （三）关于NITZ
- 1. 如支持NITZ，多长时间进行一次更新？
- [Reply] Please refer to 3GPP 22.042, Chapter 6.1 as below.
- 6.1 Transfer of NITZ information
- Network name, time, DST and timezone information can be transferred from the serving PLMN to the MS:
- 1) Upon registering on the network.
- 2) When the MS geographically relocates to a different Local Time Zone.
- 3) When the network changes its Local Time Zone, e.g. between summer and winter time.
- 4) When the network changes its identity.
- 5) At any time during a signalling connection with mobile station.
- Transfer of relevant information shall not unduly consume scarce network resources.
-
- 2. 对于NITZ方式，如果网络分别通过2/3G的CS域、PS域和4G网络下发MM information，GMM information，EMM information，通过这几条NAS信令授时，终端是否全部都能解析并显示时间？
- [Reply] YES.
- 3. 终端如果先后收到来自同一域或者不同域的好几条NITZ信令，是否每次都实时更新，并能以最新的为准？
- [Reply]YES.
- 4. 贵司生产的3G终端是否支持NITZ？
- [Reply] YES.

【CMCC调研】终端对时间的显示控制支持情况（主要是NITZ方式）

- 5. 贵司生产的4g终端是否支持NITZ？CSFB手机和双待机是否有区别？如果有区别请给出。例如双待机分别在两个网络都收到NITZ信令的授时，以哪一个为准？
- [Reply]
- QMI-NAS will send the network sent NITZ information to appropriate clients based on which subscription the clients(RIL) was bound to. For Example : In DSDS target : if RIL1 => Bound to SUB1, RIL2 => Bound to SUB2, then when Network sends NITZ on SUB1, we will send it to RIL1 and vice versa.
- But, If clients later come back and Queries for NITZ information then we will send them the latest available NITZ irrespective on which SUB it was bound to.
-
- 6. 如果网络打开NITZ，会不会对现网已上市终端产生影响？可能会有什么影响？
- [Reply]No side affect.
- 7. 同一芯片方案，或同一解决方案的，或同一终端厂家的，不同终端款型在NITZ功能方面是不是会有不同的表现。
- 8. 通过什么样的方式可以快捷地确认网络打开NITZ后，在网终端的表现是否正常，或者如何发现潜在的问题。

电信手机无法在香港进行G/W/L手动搜网

- 问题描述：电信手机无法在香港进行G/W/L手动搜网
- 解决方案：检查NV71524 /nv/item_files/modem/mmode/get_net_auto_mode是否为1。 如果没有设置，请设置为1后进行验证
- Log分析：
- LOG [0x138E]QMI Link 1 RX PDU 00:00:37.601 Length: 0017
- MsgType = QMI_NAS_PERFORM_NETWORK_SCAN_MSG
- MsgLength = 4
- QmiNasPerformNetworkScan {
- QmiNasPerformNetworkScanReqTlvs[0] {
- Type = 16
- Length = 1
- NetworkTypeTlv {
- network_type = GSM | UMTS | LTE
- MSG [00005/02]Call Manager/High cm.c 11797 =CM= CM_PH_CMD_GET_NETWORKS: network_type 39, list_type 0, subs_id 0
-
- MSG [00005/02]Call Manager/High cmph.c 41974 =CM= get network cmd_subs=0, ss=0
- MSG [00005/02]Call Manager/High cmph.c 42025 =CM= network_type -1, cmd_info->network_type 39, cmd_subs 0
- MSG [00005/02]Call Manager/High cmph.c 42027 =CM= active_subs 3, cdma_subs_avail 1, gw_subs_avail 1
- MSG [00005/02]Call Manager/High cmph.c 13786 =CM= Phone cmd err!, cmd=10, err=48, client=25
- MSG [00005/01]Call Manager/Medium cmdbg.c 02716 =CM= <<CM1 ph cmd err, cmd=10, err=48 /// CM_PH_CMD_ERR_NET_TYPE_P
- MSG [00005/01]Call Manager/Medium cmdbg.c 02718 =CM= <<CM1 ph cmd err, client=17

CDMA语音加密功能

- 需求：CDMA语音加密功能

- 解决方案： 8916以及后续平台提供API 接口支持1x语音加密功能 (FR#23076- > CR# 747969,747972)。对于API 接口的使用，可以参考文档或提case咨询。

CT test item: TC-FDD_SVLTE-03003 1x call setup， UL/DL FTP data rate test.

- In CT Lab, Sprint test box is used. LTE UE category must be the same as network side by manually setting UE LTE category.
- For example:
- If sprint run Cat3 script, UE LTE category must be set to Cat3.
- If sprint run Cat4 script, UE LTE category must be set to Cat4.

CMCC/CU SIM reset feature

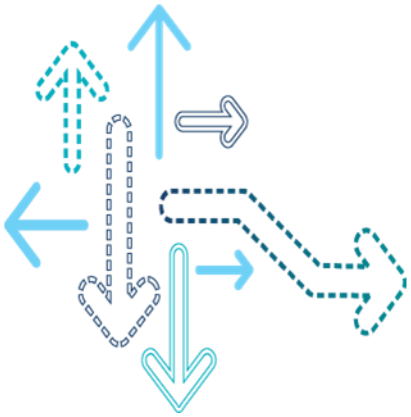
- Requirement: when USIM is rejected by network with network reason, mark USIM card as illegal, so UE will be out of service.

- **Workaround:**
- 1, FR3624 for CMCC.
- App notes: Please refer to 80-NM709-1 for more details and configurations.

- 2, China Unicom
- CR683965 was done on top of FR 3624 such that NAS will support to recover when SIM gets invalid due to abnormal network behavior for CU operator/ QRD device / EFS #72509 (is_sim_invalid_recovery_enabled) is set as “TRUE”. .
- SIM validate Recovery feature will be enabled if either of the below mentioned NV condition matches.
- 1. Newly added item under EFS # 72509 (is_sim_invalid_recovery_enabled) set as TRUE and (Version should be #2).
- 2. /nv/item_files/modem/mmode/operator_name (OPERATOR_CU #2)
- 3. /nv/item_files/modem/mmode/qmss_enabled 1.

References

Ref.	Document	
Qualcomm Technologies		
Q1	*Application Note: Software Glossary for Customers*	CL93-V3077-1
Standards		
S1	*Title*	Standard Number (June 2002)
Resources		
R1		



Questions?

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