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Revision History

Revision	Date	Description
A	May 2016	Initial release

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

- Display
 - 如何disable UBWC
 - 基于SDM , 如何dump primary, external, virtual display layer
 - 基于SDM , 如何enable SDM debug log
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Display

如何disable UBWC

- UBWC全称为Universal BandWidth Compression , 目前UBWC在8996,8953,8937平台上支持。
- 为了debug目的 , 可以通过下面操作来disable UBWC :
 - 1)Pull build.prop file from device
 - adb pull /system/build.prop .
 - 2)Make following changes in build.prop file:
 - debug.gralloc.gfx_ubwc_disable=1
 - debug.gralloc.enable_fb_ubwc=0
 - 3)Push build.prop file:
 - adb root
 - adb remount
 - adb push build.prop /system/
 - adb shell chmod 644 /system/build.prop
 - adb shell sync
 - adb reboot

基于SDM，如何dump primary, external, virtual display layer

- SDM全称为Snapdragon Display Manager，对于某些问题，比如显示花屏的问题，有时候需要dump layer，请参见下面方法，此dump layer的方法适用于8996,8953,8937平台。
- 一般来说，display类型可以分为primary display, external display, virtual display等。
- 请看下面的具体定义：
 - In /hardware/libhardware/include/hardware/hwcomposer_defs.h文件中
 - /* Display types and associated mask bits. */
enum {
 HWC_DISPLAY_PRIMARY = 0, // primary
 HWC_DISPLAY_EXTERNAL = 1, // HDMI, etc.
 HWC_DISPLAY_TERTIARY = 2,
 HWC_DISPLAY_VIRTUAL = 3, // WFD,etc

 HWC_NUM_PHYSICAL_DISPLAY_TYPES = 3,
 HWC_NUM_DISPLAY_TYPES = 4,
};
- 注意，以上的枚举以客户中的代码为准。

基于SDM , 如何dump primary, external, virtual display layer – cont1

- 如何dump primary display的layer :
 - adb root
 - adb remount
 - adb shell su -c setenforce 0
 - adb shell chmod 777 /data/misc/display
 - adb shell service call display.qservice 21 i32 20 i32 1 i32 1 // input (20 frames)
- 其中 ,
- 21 表示如下 :
 - 在[/hardware/qcom/display/libqservice/IQService.h](#)
 - [class IQService](#) : [public android::IInterface](#)
{
 [public:](#)
 [DECLARE_META_INTERFACE](#)([QService](#));
 [enum](#) {
 [SET_FRAME_DUMP_CONFIG](#) = 21, // Provides ability to set the frame dump config
- 20 表示为dump frame count
- 1 表示为 primary display
- 1 表示为 input layer dump
- 注意 : dump的数据在/data/misc/display目录下

基于SDM , 如何dump primary, external, virtual display layer – cont2

- 如何dump HDMI 的layer
 - adb shell service call display.qservice 21 i32 20 i32 2 i32 1 // input (20 frames)
- 其中 ,
 - 2 表示为 HDMI display
 - 1 表示为input layer dump
- 如何dump WFD的layer
 - adb shell service call display.qservice 21 i32 20 i32 8 i32 1 // input (20 frames)
 - adb shell service call display.qservice 21 i32 20 i32 8 i32 2 // output (20 frames)
- 其中 ,
 - 8 表示为 WFD display
 - 1 表示为input layer dump
 - 2 表示为output layer dump

基于SDM，如何enable SDM debug log

- 如何enable SDM debug log :
 - adb shell su -c setenforce 0
 - adb shell chmod 777 /data/misc/display
 - adb shell service call display.qservice 15 i32 0 i32 1 i32 1
- 其中，
- 15 表示为
 - DYNAMIC_DEBUG = 15, // Enable more logging on the fly
- 具体代码在/[hardware/qcom/display/sdm/libs/hwc/hwc_session.cpp](#)
 - **void** HWCSession::DynamicDebug(**const** android::Parcel *input_parcel) {
 int type = input_parcel->readInt32();
 bool enable = (input_parcel->readInt32() > 0);
 DLOGI("type = %d enable = %d", type, enable);
 int verbose_level = input_parcel->readInt32();

基于SDM , 如何change idle timeout for video mode panel

- 对于idle timeout 适用于video mode panel
- a) how to set idle timeout
 - adb shell service call display.qservice 16 i32 1000
 - 其中 ,
 - SET_IDLE_TIMEOUT = 16, // Set idle timeout for GPU fallback
 - 1000 is time in ms
- b) how to disable idle timeout
 - adb shell service call display.qservice 16 i32 0
- 或者通过修改property值来修改idle timeout:
 - adb root
 - adb shell setprop sdm.idle_time 1000
 - adb shell stop
 - adb shell start
 - adb shell getprop sdm.idle_time // get the property value

如何抓取kernel log 和userspace log在同一文件

- 在调试问题时，往往需要把kernel log 和userspace log输出到同一个文件中，
- To get both kernel/userspace log simultaneously :
 - **adb shell logcat -b main -b system -v threadtime -f /dev/kmsg | adb shell cat /proc/kmsg**
- 注意：
 - OEMs/ODMs can change the tag name.

如何disable improveTouch solution

- 如果基于MSM8937/8953 的项目没用使用improveTouch solution , 请通过如下步骤关闭improveTouch
 - 在init.qcom.post_boot.sh中把把 start hbtcp注释掉
 - 重新编译整个AP 侧代码
 - 重新烧录整个AP侧代码
- 注意 :
 - improveTouch 是高通的touch solution

Questions?

<https://support.cdmatech.com>

