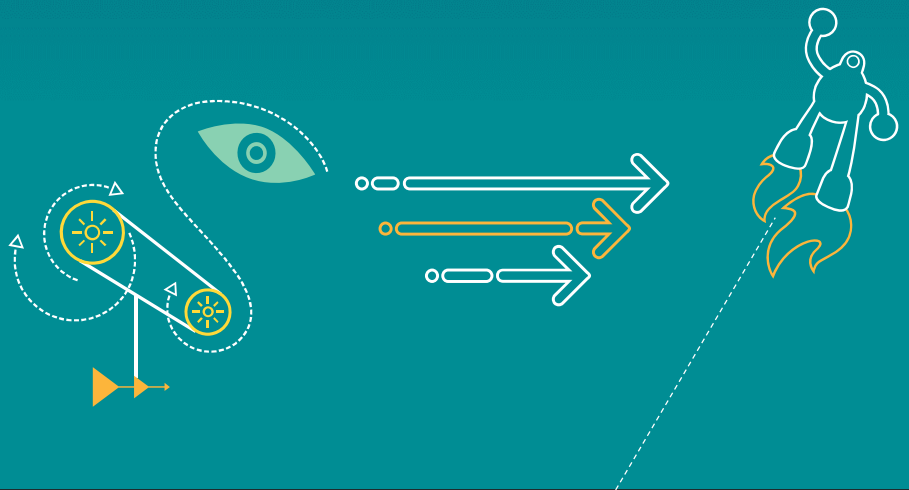
高通多媒体技术期刊 20150415

Qualcomm Technologies, Inc.



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Revision History

Revision	Date	Description
A	Apr 2015	Initial release

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

Contents

Camera

MSM8916/8939/8909 Android 5.0 Camera log - HAL

- *$ adb shell setprop persist.camera.hal.debug.mask <mask>*
  - <mask> 28-31位决定打印级别:
    - 设为1: CDBG_HIGH() log会被打印
    - 设为2及大于2: CDBG_HIGH() 和CDBG() log都会被打印
    - 注: CDBG_ERROR() log总是被打印
  - <mask> 0-27位决定打印模块(目前只有三个模块):
    - Bit0: HAL (hardware/qcom/camera/QCamera2/HAL)
    - Bit1: mm-camera-interface (hardware/qcom/camera/QCamera2/stack/mm-camera-interface)
    - Bit2: mm-jpeg-interface (hardware/qcom/camera/QCamera2/stack/mm-jpeg-interface)
- 例子
  - $ adb shell setprop persist.camera.hal.debug.mask 536870919
    - 536870919 = 0x20000007, 表示HAL/mm-camera-interface/mm-jpeg-interface CDBG_HIGH() 和CDBG() log都会被打印. CDBG_ERROR() log总是被打印
  - $ adb shell setprop persist.camera.hal.debug.mask 536870913
    - 536870913 = 0x20000001, 表示HAL CDBG_HIGH() 和CDBG() log会被打印. CDBG_ERROR() log总是被打印

MSM8916/8939/8909 Android 5.0 Camera log - Sensor

- *$ adb shell setprop persist.camera.sensor.debug <mask>*
  - <mask> bit0 不为零: SHIGH() log会被打印
  - <mask> bit1 不为零: SLOW() log会被打印
  - 注: SERR() log总是会被打印
- 例子
  - $ adb shell setprop persist.camera.sensor.debug 3
    - SERR(), SHIGH()和SLOW() log会被打印
  - $ adb shell setprop persist.camera.sensor.debug 2
    - SERR(), SHIGH() log会被打印
  - $ adb shell setprop persist.camera.sensor.debug 1
    - SERR(), SLOW() log会被打印

MSM8916/8939/8909/8994 Android 5.0 Camera log - imglib

- *$ adb shell setprop persist.camera.imglib.logs <level>*
  - <level> = 2: IDBG_HIGH() log会被打印
  - <level> = 3: IDBG_HIGH() , IDBG_MED() log会被打印
  - <level> = 4: IDBG_HIGH() , IDBG_MED(), IDBG_LOW() log会被打印
  - **注:**
    - IDBG_ERROR() log总是会被打印
    - MSM8994同样适用
- 例子
  - $ adb shell setprop persist.camera.imglib.logs 4
    - IDBG_ERROR(), IDBG_HIGH() , IDBG_MED(), IDBG_LOW() 都会被打印

MSM8916/8939/8909 Android 5.0 Camera log - PPROC

- *$adb shell setprop persist.camera.pproc.debug.mask <mask>*
  - <mask> 28-31位决定打印级别:
    - 设为1: CDBG_HIGH() log会被打印
    - 设为2: CDBG_HIGH(), CDBG() log都会被打印
    - 设为3及3以上: CDBG_HIGH(), CDBG(), CDBG_LOW() log会被打印
  - <mask> 0-27位决定打印模块(目前只有三个模块):
    - Bit0: PPROC (mm-camera2/media-controller/modules/pproc-new)
    - Bit1: C2D (mm-camera2/media-controller/modules/pproc-new/c2d)
    - Bit2: CPP (mm-camera2/media-controller/modules/pproc-new/cpp)
- 例子
  - $adb shell setprop persist.camera.pproc.debug.mask 805306375
    - 805306375 = 0x30000007, 表示PPROC/C2D/CPP CDBG_HIGH(), CDBG(), CDBG_LOW() 都会被打印.

MSM8916/8939/8909 Android 5.0 Camera log - MCT

- *$adb shell setprop persist.camera.mct.debug.mask <mask>*
  - <mask> 28-31位决定打印级别 (默认1):
    - 设为1: CDBG_HIGH() log会被打印
    - 设为2及2以上: CDBG_HIGH(), CDBG() log都会被打印
  - <mask> 0-27位决定打印模块(目前只一个模块):
    - Bit0: PPROC (mm-camera2/media-controller/mct)
- 例子
  - $adb shell setprop persist.camera.pproc.debug.mask 536870913
    - 536870913 = 0x 20000001, 表示MCT CDBG_HIGH(), CDBG() 都会被打印.

MSM8916/8939/8909 Android 5.0 Camera log - ISP

- *$adb shell setprop persist.camera.ISP.debug.mask <mask>*
- Bit 0: ISP_MOD_LINEARIZATION
  Bit 1: ISP_MOD_ROLLOFF
  Bit 2: ISP_MOD_DEMUX
  Bit 3: ISP_MOD_DEMOSAIC
  Bit 4: ISP_MOD_BPC
  Bit 5: ISP_MOD_ABF
  Bit 6: ISP_MOD_ASF
  Bit 7: ISP_MOD_COLOR_CONV
  Bit 8: ISP_MOD_COLOR_CORRECT
  Bit 9: ISP_MOD_CHROMA_SS
  Bit 10: ISP_MOD_CHROMA_SUPPRESS
  Bit 11: ISP_MOD_LA
  Bit 12: ISP_MOD_MCE
  Bit 13: ISP_MOD_SCE
  Bit 14: ISP_MOD_CLF
  Bit 15: ISP_MOD_WB
  Bit 16: ISP_MOD_GAMMA
  Bit 17: ISP_MOD_FOV
  Bit 18: ISP_MOD_SCALER
  Bit 19: ISP_MOD_BCC
  Bit 20: ISP_MOD_CLAMP
  Bit 21: ISP_MOD_FRAME_SKIP
  Bit 22: ISP_MOD_STATS
  Bit 23: ISP_MOD_COLOR_XFORM
  Bit 24: ISP_MOD_COM
- 例子
  - *adb shell setprop persist.camera.ISP.debug.mask 16777217*
    - 16777217 = 0x1000001, 打开 ISP_MOD_COM. ISP_MOD_LINEARIZATIO log

MSM8916/8939/8909 Android 5.0 Camera log - 3A

- *$adb shell setprop persist.camera.stats.debug.mask <mask>*
  - Bit 0: STATS_DEBUG_MASK_**AEC**_LOG
    Bit 1: STATS_DEBUG_MASK_**AWB**_LOG
    Bit 2: STATS_DEBUG_MASK_**AF**_LOG
    Bit 3: STATS_DEBUG_MASK_**ASD**_LOG
    Bit 4: STATS_DEBUG_MASK_**AFD**_LOG
- 例子
  - adb shell setprop persist.camera.stats.debug.mask 7
    - 7 = 0b111, 打开AEC/AWB/AF log

MSM8994 Android 5.0 Camera log - HAL

- *$ adb shell setprop persist.camera.hal.debug <level>*
  - <level> = 1: CDBG_HIGH () log会被打印
  - <level> = 2: CDBG_HIGH () , CDBG() log会被打印
  - **注:**
    - CDBG_ERROR() log总是会被打印
    - 该log开关同时控制HAL/mm-camera-interface/mm-jpeg-interface log
    - 默认level 为0，只有CDBG_ERROR() log被打印
- 例子
  - $ adb shell persist.camera.hal.debug 2
    - 表示HAL/mm-camera-interface/mm-jpeg-interface CDBG_HIGH() 和CDBG() log都会被打印. CDBG_ERROR() log总是被打印

MSM8994 Android 5.0 Camera log - Sensor

- *$ adb shell persist.camera.sensor.debug <level>*
  - <level> = 1: SHIGH() log会被打印
  - <level> = 2: SHIGH() , SLOW() log会被打印
  - **注:**
    - SERR() log总是会被打印
    - 默认level为0，只有SERR() log被打印
- 例子
  - $ adb shell persist.camera.sensor.debug 2
    - 表示 sensor module (mm-camera2/media-controller/modules/sensors) SERR() , SHIGH() 和SLOW() log都会被打印.

MSM8994 Android 5.0 Camera log - CPP

- 没有动态开关，需要修改mm-camera2/media-controller/modules/pproc-new/cpp/cpp_log.h 里面定义的CPP_LOG_VERBOSE后重新编译
  - CPP_LOG_VERBOSE = 0，只有CPP_ERR() log被打印
  - CPP_LOG_VERBOSE = 1，CPP_ERR(), CPP_HIGH() log被打印
  - CPP_LOG_VERBOSE = 2，CPP_ERR(), CPP_HIGH(), CPP_DBG() log被打印
  - CPP_LOG_VERBOSE = 3，CPP_ERR(), CPP_HIGH(), CPP_DBG() , CPP_LOW() log都被打印
- 默认CPP_LOG_VERBOSE = 1

MSM8994 Android 5.0 Camera log - MCT

- *$adb shell setprop persist.camera.mct.debug <level>*
  - <level> = 1: MCT CDBG_HIGH() log会被打印
  - <level> = 2: MCT CDBG_HIGH() , CDBG() log会被打印
  - **注:**
    - CDBG_ERROR () log总是会被打印
    - 默认level为1，即默认MCT CDBG_ERROR(), CDBG_HIGH() log被打印
- 例子
  - $adb shell setprop persist.camera.mct.debug 2
    - 表示MCT(mm-camera2/media-controller/mct) CDBG_ERROR(), CDBG_HIGH(), CDBG() 都会被打印.

MSM8994 Android 5.0 Camera log - 3A

- *$adb shell setprop persist.camera.stats.debug <mask>*
  - Bit 0-1: STATS_DEBUG_MASK_AEC_LOG
  - Bit 2-3: STATS_DEBUG_MASK_AWB_LOG
  - Bit 4-5: STATS_DEBUG_MASK_AF_LOG
  - Bit 6-7: STATS_DEBUG_MASK_ASD_LOG
  - Bit 8-9: STATS_DEBUG_MASK_AFD_LOG
  - Bit 10-11: STATS_DEBUG_MASK_Q3A_LOG
  - Bit 12-13: STATS_DEBUG_MASK_STATS_LOG
  - Bit 14-15: STATS_DEBUG_MASK_IS_LOG

  - 每一个3A模块有2bit控制log level
    - level = 0: ERR
    - level = 1: ERR, HIGH
    - level = 2: ERR, HIGH, LOW
  - 注：
    - ERR log总会被打印
    - 建议查看mm-camera2/media-controller/modules/stats/stats_debug.h了解更多细节
- 例子
  - adb shell setprop persist.camera.stats.debug 2
    - 打开AEC ERR/HIGH/LOW log, 即AEC_ERR()/AEC_HIGH()/AEC_LOW() log会被打印

MSM8994 Android 5.0 Camera log - Global

- *$adb shell setprop persist.camera.global.debug <level>*
  - <level> = 1: HIGH level log会被打印
  - <level> = 2: HIGH LOW level log会被打印
  - **注:**
    - ERR level log总是会被打印
    - 全局控制HAL/Sensor/MCT/3A log
- 例子
  - $adb shell setprop persist.camera.global.debug 2
    - 表示HAL/Sensor/MCT/3A 所有ERROR/HIGH/LOW log都会被打印。这样log会非常的多，容易造成log丢失。

问题1：HDR拍照卡死

- 1.1 问题描述: HDR拍照过程中旋转概率性卡死
  - Log中可看到下面的错误：
    - 10-31 11:39:09.601 E/mm-jpeg-intf(306): mm_jpeg_session_config_main_crop:963] invalid crop boundary (2947, 5205) out of (5312, 2988)
  - CR **810417**: Rotation the camera quick when do HDR capture continuely, error happen

- 1.2 问题描述: ZSL + HDR 正常拍照概率性卡死
  - CR **818702**: ZSL HDR snapshot failed with timing problem

- Solution: 请提交Case, 我们会release formal patch to you

问题2：开机后快速打开Camera，小概率性无法打开

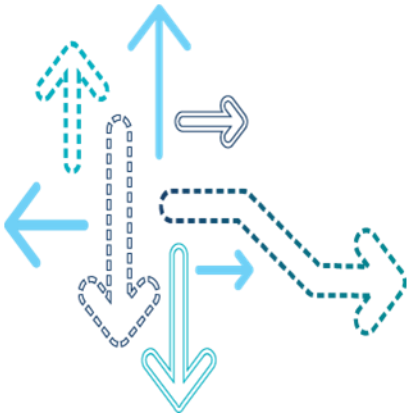
- 问题描述:
  - 开机后快速打开Camera，小概率性无法打开，且只有重启或者kill掉mediaserver才能恢复
- Log中可看到下面的错误：
  04-08 15:39:27.581 330 1940 E mm-camera-sensor: module_sensor_start_session:740 failed
  04-08 15:39:27.671 330 330 E mm-camera-sensor: module_sensor_query_mod:4104 session_id doesn't match idx
- CR **780344**: APT LA PLAT TEST: Observe error message "Cant connect to camera" when trying to launch camera app or while switching modes even after loading QCN.
- Solution: 请提交Case, 我们会release formal patch to you

问题3：全景拍照在未移动device的情况下点击两次shutter 按钮，生成图片有问题

- 问题描述:全景拍照在未移动device的情况下点击两次shutter 按钮，生成图片有毛刺条纹 (100%复现)。
- CR **794974** : Take messy picture in Panorama mode.(100%)
- Solution: 请提交Case, 我们会release formal patch to you

问题4：MSM8909 在特定sensor上拍摄RAW图出现上下曝光不一致

- 问题描述: MSM8909 在特定sensor上拍摄RAW图出现上下曝光不一致，导致tuning无法进行。
- 分析:
  - 这是因为frame skip设置在MSM8909上对RAW图无效导致 (有些sensor只有skip 1到2帧才能稳定)。
- 如果MSM8909 tuning遇到该问题，请提交case。我们有相应修改使RAW snapshot frame skip生效



Questions?

https://support.cdmatech.com