

INTERNAL USE

MEDIATEK

Rainier Known / Limitation

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Legacy Limitation – GTS

CR ID	CR Description	Why Limitation	Repeat Ratio
ALPS02349180	[Rainier M][XTS 3.0] com.google.android.xts.media.MediaCodecSt ressTest#testDecodeDecodeCompositeEnco de1080p--Failed.(3/3)	Our device only have 512 MB DRAM, this test case require more memory, and this gap is toot large to be optimized.	always

- Anticipated Behavior
 - Pass testDecodeDecodeCompositeEncode1080p test case
- Current Behavior
 - testDecodeDecodeCompositeEncode1080p test fail
- Root-Cause
 - Low memory
- Impact on End-User
 - None
- Action
 - Report to Google for GTS 3.0 waive

Overview

- Test Environment
 - gts-3.0
- Android Version
 - M
- Test Package
 - com.google.android.xts.media.MediaCodecStressTest
- TestCase
 - .testDecodeDecodeCompositeEncode1080p.
- Test Command
 - run xts -c com.google.android.xts.media.MediaCodecStressTest -m testDecodeDecodeCompositeEncode1080p
- Fail Rate
 - always

Description

- This test case will run 2 1080p video decoder components and 1 1080p video encoder component at the same time.
- Our device support 1080p video codec, but can't reach it due to out of memory.
- **Our device only have 512 MB DRAM**
- **This case need about 330 MB** memory for multimedia modules on our solution. But **after booting, the device only have about 168 MB** (MemFree + Cached) free memory.
- Device memory information :



A screenshot of a Windows command prompt window. The title bar shows 'C:\WINDOWS\system32\cmd.exe'. The command prompt displays the output of the command 'adb shell cat /proc/meminfo'.

```
C:\>adb shell cat /proc/meminfo
MemTotal:      460392 kB
MemFree:       4536 kB
Buffers:       5932 kB
Cached:        164192 kB
SwapCached:    392 kB
```

Analysis Report

- Our device only have 512 MB DRAM
- This case need about 330 MB memory for multimedia modules on our solution. But after booting, the device only have about 168 MB free memory.
- Low memory log analysis :

=main_log=

We can see the binder have some problems here :

04-23 12:05:40.165 **4614** 4632 I TestRunner: started: testDecodeDecodeCompositeEncode1080p(com.google.android.xts.media.MediaCodecStressTest)

...

04-23 12:05:57.266 317 317 D GuiExt : [GuiExtS] binder of dump tunnel(BQM-[**4614**:com.google.android.xts.media]) died

04-23 12:05:57.266 317 317 D GuiExt : [GuiExtS] binder of dump tunnel(RB-0xb7ad2f88) died

=kernel log=

This showed low memory killer kill GTS's process, and made it fail :

<6>[3054.130472]<1> (3)[63:kswapd0] **lowmemorykiller**: Killing 'droid.xts.media' (**4614**), adj 0, score_adj 0,

<6>[3054.130472]<1> to free 26604kB on behalf of 'kswapd0' (63) because

<6>[3054.130472]<1> cache 19968kB is below limit 24576kB for oom_score_adj 0

<6>[3054.130472]<1> Free memory is 0kB above reserved

<7>[3054.130718]<1>-(3)[63:kswapd0][63:kswapd0] sig 9 to [**4614**:droid.xts.media] stat=S

■ Result :

Test Package: google.media ABI: armeabi-v7a

Test	Result	Failure Details
com.google.android.xts.media.MediaCodecStressTest		
-- testDecodeDecodeCompositeEncode1080p	fail	Test failed to run to completion. Reason: 'Instrumentation run failed due to 'Process crashed.'. Check device logcat for details

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