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# 高通多媒体技术期刊 20160330

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Qualcomm Technologies, Inc.

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# Revision History

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Revision	Date	Description
A	Mar. 2016	Initial release

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

# 内容

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- Display
  - 8952/8956/8976 - 与ESD相关的丢帧问题
  - 8956/76 - 与Rotator相关的丢帧问题
  - 8956/76 - 显示颜色偏移问题
  - 8996 - 与MDSS Fence timeout相关的性能问题
  - 8996 - 4K DSC Panel Support
- Browser
  - M42 fix list until 3/2016



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# Display

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# [8952/8956/8976] 与ESD相关的丢帧问题

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- 问题描述：
  - 在使能ESD check时，有时候会出现丢帧现象，可以通过systrace log看到丢帧。
- 解决方案：
  - msm: mdss: Reorder mutex locks in ESD thread
  - [https://us.codeaurora.org/cgit/quic/la/kernel/msm-3.10/commit/?h=LA.BR.1.3.3\\_rb2.13&id=fa8c1a8ac93058328dea3f62dfe400922a049d96](https://us.codeaurora.org/cgit/quic/la/kernel/msm-3.10/commit/?h=LA.BR.1.3.3_rb2.13&id=fa8c1a8ac93058328dea3f62dfe400922a049d96)
  - msm: mdss: Remove unnecessary offlock during fps update
  - [https://us.codeaurora.org/cgit/quic/la/kernel/msm-3.10/commit/?h=LA.BR.1.3.3\\_rb2.13&id=b4f9f017b084a713c2c0252fd57a839ed82c6345](https://us.codeaurora.org/cgit/quic/la/kernel/msm-3.10/commit/?h=LA.BR.1.3.3_rb2.13&id=b4f9f017b084a713c2c0252fd57a839ed82c6345)
- 补充：
  - 可以通过disable ESD check 来进行确认。

# [8956/76]与Rotator相关的丢帧问题

## ■ 问题描述：

- 在播放视频时，且需要旋转时，有时候会出现卡顿或者丢帧的现象，通过分析 systrace，发现rotator耗时比较多，从而照成在一个Vsync之内没办法完成一帧。

## ■ 解决方案：

- 具体修改如下

```
diff --git a/drivers/video/msm/mdss/mdss_mdp.c b/drivers/video/msm/mdss/mdss_mdp.c
index d7e56c4..aa6128a0 100644
--- a/drivers/video/msm/mdss/mdss_mdp.c
+++ b/drivers/video/msm/mdss/mdss_mdp.c
@@ -3598,9 +3598,9 @@ static void apply_dynamic_ot_limit(u32 *ot_lim,

    res = params->width * params->height;

-   pr_debug("w:%d h:%d rot:%d yuv:%d wb:%d res:%d\n",
+   pr_debug("w:%d h:%d rot:%d yuv:%d wb:%d res:%d fps:%d\n",
        params->width, params->height, params->is_rot,
-       params->is_yuv, params->is_wb, res);
+       params->is_yuv, params->is_wb, res, params->frame_rate);

    switch (mdata->mdp_rev) {
    case MDSS_MDP_HW_REV_111:
```

## [8956/76]与Rotator相关的丢帧问题 –cont1

- 续上一页，如下

```
diff --git a/drivers/video/msm/mdss/mdss_mdp_intf_writeback.c b/drivers/video/msm/mdss/mdss_mdp_intf_
index cfe54f4..2f3ae06 100644
--- a/drivers/video/msm/mdss/mdss_mdp_intf_writeback.c
+++ b/drivers/video/msm/mdss/mdss_mdp_intf_writeback.c
@@ -330,7 +330,7 @@ static int mdss_mdp_writeback_prepare_rot(struct mdss_mdp_ctl *ctl, void *arg)

    ctx->bwc_mode = rot->bwc_mode;
    ctx->opmode |= ctx->bwc_mode;
-
+    ctx->frame_rate = ctl->frame_rate;
    ctx->width = ctx->dst_rect.w = rot->dnsc_factor_w ?
        rot->dst.w / rot->dnsc_factor_w : rot->dst.w;
    ctx->height = ctx->dst_rect.h = rot->dnsc_factor_h ?
diff --git a/drivers/video/msm/mdss/mdss_mdp_pipe.c b/drivers/video/msm/mdss/mdss_mdp_pipe.c
index e5389b4..2f62352 100644
--- a/drivers/video/msm/mdss/mdss_mdp_pipe.c
+++ b/drivers/video/msm/mdss/mdss_mdp_pipe.c
@@ -1779,6 +1779,7 @@ static void mdss_mdp_set_ot_limit_pipe(struct mdss_mdp_pipe *pipe)
    ot_params.is_rot = pipe->mixer_left->rotator_mode;
    ot_params.is_wb = ctl->intf_num == MDSS_MDP_NO_INTF;
    ot_params.is_yuv = pipe->src_fmt->is_yuv;
+    ot_params.frame_rate = pipe->frame_rate;

    mdss_mdp_set_ot_limit(&ot_params);
}
```



## [8956/76]显示颜色偏移问题

### ■ 问题描述：

- 在使用某些app时，会出现显示异常问题，比如泛红，当时Disable HW Overlay后，此问题消失。
- 从dumpsys SurefaceFlinger中，可以看到出现问题的layer的format 为 RGBA4444。

### ■ 解决方案：

```
diff --git a/drivers/video/msm/mdss/mdss_mdp_formats.h b/drivers/video/msm/mdss/mdss_mdp_formats.h
index 8475f39..ce46b4a 100644
--- a/drivers/video/msm/mdss/mdss_mdp_formats.h
+++ b/drivers/video/msm/mdss/mdss_mdp_formats.h
@@ -269,10 +269,10 @@ static struct mdss_mdp_format_params mdss_mdp_format_map[] = {
     .bpp = 2,
     .element = { C2_R_Cr, C0_G_Y, C1_B_Cb, C0_G_Y },
 },
- FMT_RGB_1555(MDP_RGBA_5551, 1, C2_R_Cr, C0_G_Y, C1_B_Cb, C3_ALPHA),
- FMT_RGB_1555(MDP_ARGB_1555, 1, C3_ALPHA, C2_R_Cr, C0_G_Y, C1_B_Cb),
- FMT_RGB_4444(MDP_RGBA_4444, 1, C2_R_Cr, C0_G_Y, C1_B_Cb, C3_ALPHA),
- FMT_RGB_4444(MDP_ARGB_4444, 1, C3_ALPHA, C2_R_Cr, C0_G_Y, C1_B_Cb),
+ FMT_RGB_1555(MDP_RGBA_5551, 1, C3_ALPHA, C1_B_Cb, C0_G_Y, C2_R_Cr),
+ FMT_RGB_1555(MDP_ARGB_1555, 1, C1_B_Cb, C0_G_Y, C2_R_Cr, C3_ALPHA),
+ FMT_RGB_4444(MDP_RGBA_4444, 1, C3_ALPHA, C1_B_Cb, C0_G_Y, C2_R_Cr),
+ FMT_RGB_4444(MDP_ARGB_4444, 1, C1_B_Cb, C0_G_Y, C2_R_Cr, C3_ALPHA),
};
#endif
```

# [8996] 与MDSS Fence timeout相关的性能问题

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- 问题描述：
  - 在某些场景进行压力测试时，比如camera use-case，有时候会出现来自MDSS fence timeout，从而造成fps比较低，主要由于pingpong done 计数器存在竞争。
- 解决方案：
  - msm: mdss: handle race condition in pingpong done counter
  - <https://us.codeaurora.org/cgit/quic/la/kernel/msm-3.18/commit/?h=rel/msm-3.18&id=df9c33ad1a248b81dcb10948953f5713a5744694>
- 补充：
  - 此问题发生在command mode panel上。

# [8996] 4K DSC Panel Support

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- 在8996平台上 , 4K panel with DSC(Display Stream Compression) 支持
- 具体的link :
  - dev: gcdb: display: add support for Sharp 4k dsc video panel selection  
<https://us.codeaurora.org/cgit/quic/la/kernel/lk/commit/?h=LA.HB.1.3.1&id=8e1ce791aaa1ced74decc65d574e4f9d1de6d120>
  - dev: gcdb: display: add support for Sharp 4k dsc cmd panel selection  
<https://us.codeaurora.org/cgit/quic/la/kernel/lk/commit/?h=LA.HB.1.3.1&id=330038af8c46b29002a84b3bb546d8e57777289e>
  - ARM: dts: msm: add sharp dsc 4k video panel support for msm8996  
<https://us.codeaurora.org/cgit/quic/la/kernel/msm-3.18/commit/?h=rel/msm-3.18&id=6611a5a8470d7cccce90941104af2b1091eacae3>
  - ARM: dts: msm: fix config-select in sharp dsc 4k video mode panel  
<https://us.codeaurora.org/cgit/quic/la/kernel/msm-3.18/commit/?h=rel/msm-3.18&id=0ddda74441a8f304ecac61ac1fef1c7c82d2d6b3>
  - ARM: dts: msm: fix panel on cmd for sharp 4k dsc video panel  
<https://us.codeaurora.org/cgit/quic/la/kernel/msm-3.18/commit/?h=rel/msm-3.18&id=a2f1049d2bdfca33d9db20215cb9654d9c6f8e2f>
  - ARM: dts: msm: add sharp dsc 4k cmd panel support for msm8996  
<https://us.codeaurora.org/cgit/quic/la/kernel/msm-3.18/commit/?h=rel/msm-3.18&id=8040b58f1ab3ac1c0ee15b5896aefdb5478cfb18>



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# Browser

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# M42 fix list until 3/2016

fix	patches	classification
Fix linux compilation error because of upmerge	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=53a7e0a7439c090f0dace1aad18e5d4171664b3a">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=53a7e0a7439c090f0dace1aad18e5d4171664b3a</a>	rendering
Change logic for calculating SWE version	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=41f321237bc5842d343ea0a916aeb59d9d9157f7">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=41f321237bc5842d343ea0a916aeb59d9d9157f7</a>	rendering
pick from google,BUG=391585	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=e01edcc0fb28b20fc82c096a702a05189fdb8b73">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=e01edcc0fb28b20fc82c096a702a05189fdb8b73</a>	rendering
pick from google,BUG=497854	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=3b5dee24c498aa9e358655c1d5c04a747367d545">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=3b5dee24c498aa9e358655c1d5c04a747367d545</a>	rendering
pick from google,BUG=364522	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=319bc7cee926264e01be65246a381a36cdc01b19">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=319bc7cee926264e01be65246a381a36cdc01b19</a>	rendering
pick from google,BUG=427357	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=b1b5e05507b2145106066c225ee29e3dfad6c252">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=b1b5e05507b2145106066c225ee29e3dfad6c252</a>	rendering
pick from google,BUG=364522	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=281fb0d397bf1a34eb809dd21c5f7459317effb4">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=281fb0d397bf1a34eb809dd21c5f7459317effb4</a>	rendering
pop up FC when use auto-fill function to select Chromium Auto-fill settings	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=e729b74efedc48ef5b4cdbc0fe1c954b5b3d52">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=e729b74efedc48ef5b4cdbc0fe1c954b5b3d52</a>	stability
link to an unavailable web page when invoke gmail/whatsApp	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=43f9a3561f04b05a48620c31b30b8a233825fdfb">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=43f9a3561f04b05a48620c31b30b8a233825fdfb</a> <a href="https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=9169e94d049eab895c54d813701c35111e0ff885">https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=9169e94d049eab895c54d813701c35111e0ff885</a> <a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/blink/commit/?h=m42&amp;id=a3702e9a2866f50b3ffef133d3a75d22c82e42b8">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/blink/commit/?h=m42&amp;id=a3702e9a2866f50b3ffef133d3a75d22c82e42b8</a>	rendering
Fix The cursor doesn't display when tap input frame to register youku account	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=03080c1f8219cf922146dece75616344083f112a">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=03080c1f8219cf922146dece75616344083f112a</a>	rendering
Add support for perflock in Android M	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=55f4fe734b6f184334ce329090ff423792e97e1d">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=55f4fe734b6f184334ce329090ff423792e97e1d</a>	rendering
Enable swecore for browser.	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=e9b4a7d1042533cc62d682f3da5a3fa9bc79b6d8">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=e9b4a7d1042533cc62d682f3da5a3fa9bc79b6d8</a>	rendering

# M42 fix list until 3/2016

fix	patches	classification
GPU channel timeout increased	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=539628fbd0383b12f9938746ed73d24621b86622">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=539628fbd0383b12f9938746ed73d24621b86622</a>	rendering
Update with new MediaStreamInfoBarDelegate::Create	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=9c563b2c1a93697a7167e5f723597fac87c97a5b">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=9c563b2c1a93697a7167e5f723597fac87c97a5b</a>	rendering
Limit the one instance of base to Android	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=6867a84b8f2855f72468f833fe235370ebf83ab9">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=6867a84b8f2855f72468f833fe235370ebf83ab9</a>	rendering
Update TabSettings when global settings changes.	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=9db8f9e6e7e25ea326eca717aaf8a7f81fff7a7b">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=9db8f9e6e7e25ea326eca717aaf8a7f81fff7a7b</a>	rendering
isplays half of screen when play video in Youku	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=8543d6d2ee5ff74d6e1e4d46174b4bf2bf030faa">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=8543d6d2ee5ff74d6e1e4d46174b4bf2bf030faa</a>	rendering
Fix issue the color of background and edittext no change under nightmode	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=9e1b8ddd1ccf7c43e44a1c2fd64d477c749f3c5d">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=9e1b8ddd1ccf7c43e44a1c2fd64d477c749f3c5d</a> <a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/blink/commit/?h=m42&amp;id=bcd2734baaa05b497efc612ceefaa5357cd16df4">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/blink/commit/?h=m42&amp;id=bcd2734baaa05b497efc612ceefaa5357cd16df4</a>	ui
Fix browser FC when use night mode	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=fafa3a1aa057f12bc64a551506b7df95922df655">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=fafa3a1aa057f12bc64a551506b7df95922df655</a>	stability
Do not check Mass Storage state for external storage	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=2df97b65a6b188cc9ccb26cfed8149d0cb3cdd46">https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=2df97b65a6b188cc9ccb26cfed8149d0cb3cdd46</a>	ui
Fix a monkey crash issue	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=5e19904024d5668b149713b7f7399ef052dbc604">https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=5e19904024d5668b149713b7f7399ef052dbc604</a>	stability
Add fast-webview configuration file	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=d9c4f0678d2f03ecd81f4b6ba1d2df2ff471fe2f">https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=d9c4f0678d2f03ecd81f4b6ba1d2df2ff471fe2f</a>	ui
When firstly add browser widget is abnormal	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=58475b15611084ed7871e53f18ec3a842c33d6cd">https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=58475b15611084ed7871e53f18ec3a842c33d6cd</a>	ui
Guard against null strings	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=96096e56cf245e74ee472ea716415ca8283962ea">https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=96096e56cf245e74ee472ea716415ca8283962ea</a>	stability
Fix click some options in promption is invalid after long pressing the link	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=d5038b9dfe1a115136595d2597d88876fd6d7e3e">https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=d5038b9dfe1a115136595d2597d88876fd6d7e3e</a>	ui

# M42 fix list until 3/2016

fix	patches	classification
It still can remember data when "Remember form data" function is turn off	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=f3ba127232779bdecf590f1c39736fe3beae8262">https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=f3ba127232779bdecf590f1c39736fe3beae8262</a>	ui
Fix UI behavior on saved pages	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=0024f5449fe04ad904fdae5efdf4c51d12e3f42e">https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=0024f5449fe04ad904fdae5efdf4c51d12e3f42e</a>	ui
Fix the tab interface display is not complete in landscape mode	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=abbe487a1ebd1a10fe3de356f8fa04882359f5df">https://codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=abbe487a1ebd1a10fe3de356f8fa04882359f5df</a>	ui
Fix Video Fullscreen Crash Due To Text Flow Opt	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/blink/commit/?h=m42&amp;id=0089f458735945a892a5c73d97fa0832101520e7">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/blink/commit/?h=m42&amp;id=0089f458735945a892a5c73d97fa0832101520e7</a>	stability
Fix a linux build issue	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/blink/commit/?h=m42&amp;id=72acee0ecd3987feddd56c36bcaafd973909167">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/blink/commit/?h=m42&amp;id=72acee0ecd3987feddd56c36bcaafd973909167</a>	rendering
Added support for URL redirection for the download from ContextMenu	<a href="https://us.codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=10ffa66b401137fd0155d9a080ed0bed52c89082">https://us.codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=10ffa66b401137fd0155d9a080ed0bed52c89082</a>	ui
Fix browser crash on device reboot	<a href="https://us.codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=fc0e8dab6d0622ddd19575091fecf50bbdd1db8d">https://us.codeaurora.org/cgit/quic/chrome4sdp/external/android/packages/apps/browser/commit/?h=m42&amp;id=fc0e8dab6d0622ddd19575091fecf50bbdd1db8d</a>	ui
Disable gpu rasterization on Adreno 3.x	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=4c9b2acdf8f73a402b3d10d22bc0c66a3a67de3f">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=4c9b2acdf8f73a402b3d10d22bc0c66a3a67de3f</a>	rendering
NULL check to fix java.lang.NullPointerException	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=a84d7ecb09f4b779a2be00117d45dd0ef55bdc0a">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=a84d7ecb09f4b779a2be00117d45dd0ef55bdc0a</a>	ui
Disable partial composition to fix some flicker issue	<a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=0b4a41594a774b2ab5dbe49f4319977f2a60531d">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=0b4a41594a774b2ab5dbe49f4319977f2a60531d</a> <a href="https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=b3fc782c8613804210106501bac55ee98591935e">https://codeaurora.org/cgit/quic/chrome4sdp/chromium/src/commit/?h=m42&amp;id=b3fc782c8613804210106501bac55ee98591935e</a>	rendering

## M42 fix list until 3/2016

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Besides the fixes, M42 also updates v8 and skia parts to improve the stability in our latest tip.

So we strangely recommend you to sync your m42 codebase to our tip.



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## Questions?

<https://support.cdmatech.com>

