← c ☆   The test of "USB Audio Peripheral Attributes Test" failed when using Audio Box   +1   Hotlists (5)   Mark as Duplicate   🔔   ⋮
44VSL+CTS-Verifier 12.0 _ R7.

| Comments (10) | Dependencies | Duplicates (0) | Blocking (0) | Resources (0) |

Fixed   Bug   P3   (+ Add Hotlist)   [AOSP] assigned

👥 **STATUS UPDATE** No update yet.   **Edit**

📄 **DESCRIPTION** wu...@gmail.com created issue #1   Apr 6, 2023 07:56PM   ⋮

■[Steps]
0: Prepare AudioBOX44VSL and CTS-Verifier12.0_r7.
1.Perform the following tests:
CTS Verifier→「AUDIO」-「USB Audio Peripheral Attributes Test」

■Our analysis:
Judging from the existing logs:
1.It seems that there is an abnormality on the drive side:
2.It seems that the failure to access "ro.audio.usb.period_us" leads to the failure to match the corresponding
file.

■Our platform:SDM450.
AudioBOX version: AudioBOX44VSL
CTS Verifier version: 12.0_r7

Key logs:
========
●Test start:
04-03 09:11:18.387 1851 5507 I ActivityTaskManager: START u0
{cmp=com.android.cts.verifier/.audio.USBAudioPeripheralAttributesActivity (has extras)} from uid 10253
04-03 09:11:18.403 1851 5507 I REC@REC@0: am_create_activity:
{0,50623622,11,com.android.cts.verifier/.audio.USBAudioPeripheralAttributesActivity,null,null,null,0}
04-03 09:11:18.403 1851 5507 I wm_create_activity:
[0,50623622,11,com.android.cts.verifier/.audio.USBAudioPeripheralAttributesActivity,NULL,NULL,NULL,0]
04-03 09:11:18.426 1851 5507 I ActivityTaskManager: FOREGROUND_APPLICATION_CHANGED to
com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity
04-03 09:11:18.428 1851 5507 I wm_restart_activity:
[0,50623622,11,com.android.cts.verifier/.audio.USBAudioPeripheralAttributesActivity]
04-03 09:11:18.431 1851 5507 I wm_set_resumed_activity:
[0,com.android.cts.verifier/.audio.USBAudioPeripheralAttributesActivity,minimalResumeActivityLocked]
04-03 09:11:18.581 4338 4338 I wm_on_create_called:
[50623622,com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity,performCreate]
04-03 09:11:18.583 4338 4338 I wm_on_start_called:
[50623622,com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity,handleStartActivity]
04-03 09:11:18.588 4338 4338 I wm_on_resume_called:
[50623622,com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity,RESUME_ACTIVITY]
04-03 09:11:18.598 4338 4338 I wm_on_top_resumed_gained_called:
[50623622,com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity,topStateChangedWhenResume
d]
04-03 09:11:18.601 3495 3495 D LayoutAnalysisManagerService: onReceive :
ACTION_FOREGROUND_APPLICATION_CHANGED
activityName=com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity
04-03 09:11:18.622 1851 1963 I input_focus: [Focus request a35fce0
com.android.cts.verifier/com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity,reason=UpdateInp
utWindows]
04-03 09:11:18.658 1851 1959 I ActivityTaskManager: Displayed
com.android.cts.verifier/.audio.USBAudioPeripheralAttributesActivity: +274ms
04-03 09:11:18.658 1851 1959 I REC@REC@0: Displayed
com.android.cts.verifier/.audio.USBAudioPeripheralAttributesActivity: +274ms ,WARM_LAUNCH
04-03 09:11:18.658 1851 1959 I wm_activity_launch_time:
[0,50623622,com.android.cts.verifier/.audio.USBAudioPeripheralAttributesActivity,274]
04-03 09:11:18.666 1851 2080 I input_focus: [Focus entering a35fce0
com.android.cts.verifier/com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity
(server),reason=Window became focusable. Previous reason: NOT_VISIBLE]
04-03 09:11:18.889 0 0 E kgsl-3d0: |counter_delta| Abnormal value:0x8e6fe34 (0x8edbb65) from perf counter :
0x3b0 ★★★
04-03 09:11:18.939 0 0 E kgsl-3d0: |counter_delta| Abnormal value:0x9bd1c10 (0x9c4aead) from perf counter :
0x3b0 ★★★
04-03 09:11:19.827 1851 2080 I input_interaction: Interaction with: a35fce0

Reporter	⬤ ji...@google.com
Type	Bug
Priority	P3
Severity	S3
Status	Fixed
Access	Default access View
Assignee	⬤ vi...@google.com
Verifier	--
Collaborators	👥 ⌃
CC	🏠 ⌃
	ji...@google.com
	wu...@gmail.com
AOSP ID	--
API name	--
APK Name	--
App Name	--
App ver.	--
CTS / CDD specifics	--
Device name, model and build #	--
OEM name	--
ReportedBy	Developer
Found In	--
Targeted To	--
Verified In	--
In Prod	◯

com.android.cts.verifier/com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity (server),
PointerEventDispatcher0 (server),

●Match failed due to "Access denied finding property ro.audio.usb.period_us".
04-03 09:11:23.660 930 3569 W libc   : Access denied finding property "ro.audio.usb.period_us" ★★★
04-03 09:11:23.797 930 3569 W libc   : Access denied finding property "ro.audio.usb.period_us" ★★★
04-03 09:11:23.919 930 3569 W libc   : Access denied finding property "ro.audio.usb.period_us"
04-03 09:11:23.991 930 3569 W libc   : Access denied finding property "ro.audio.usb.period_us"
04-03 09:11:24.111 930 3569 W libc   : Access denied finding property "ro.audio.usb.period_us"
04-03 09:11:24.212 930 3569 W libc   : Access denied finding property "ro.audio.usb.period_us"
04-03 09:11:24.335 930 3569 W libc   : Access denied finding property "ro.audio.usb.period_us"

●Add AudioDevices.
04-03 09:11:24.415 4338 4338 I USBAudioPeripheralNotificationsTest: onAudioDevicesAdded() num:2

●Match fail.
04-03 09:11:24.427 4338 4338 I USBAudioPeripheralButtonsActivity: match:false ★★★
04-03 09:11:24.428 4338 4338 I USBAudioPeripheralButtonsActivity: match:false ★★★
04-03 09:11:24.440 4338 4338 I USBAudioPeripheralNotificationsTest: onAudioDevicesAdded() num:2

●Remove AudioDevices.
04-03 09:11:26.120 4338 4338 I USBAudioPeripheralNotificationsTest: onAudioDevicesRemoved() num:2
 ★★★
04-03 09:11:26.127 4338 4338 I USBAudioPeripheralNotificationsTest: onAudioDevicesRemoved() num:2
 ★★★

●Looks like trying to re-match.
04-03 09:11:30.174 930 3569 W libc   : Access denied finding property "ro.audio.usb.period_us"
04-03 09:11:30.318 930 1018 W libc   : Access denied finding property "ro.audio.usb.period_us"
04-03 09:11:30.445 930 1018 W libc   : Access denied finding property "ro.audio.usb.period_us"
04-03 09:11:30.491 930 3569 W libc   : Access denied finding property "ro.audio.usb.period_us"
04-03 09:11:30.620 930 3569 W libc   : Access denied finding property "ro.audio.usb.period_us"
04-03 09:11:30.724 930 3569 W libc   : Access denied finding property "ro.audio.usb.period_us"
04-03 09:11:30.845 930 3569 W libc   : Access denied finding property "ro.audio.usb.period_us"

●Add Audiodevices again.
04-03 09:11:30.917 4338 4338 I USBAudioPeripheralNotificationsTest: onAudioDevicesAdded() num:2

●Match fail.
04-03 09:11:30.928 4338 4338 I USBAudioPeripheralButtonsActivity: match:false
04-03 09:11:30.928 4338 4338 I USBAudioPeripheralButtonsActivity: match:false
04-03 09:11:30.940 4338 4338 I USBAudioPeripheralNotificationsTest: onAudioDevicesAdded() num:2

04-03 09:11:32.972 1851 2080 I input_focus: [Focus leaving a35fce0
com.android.cts.verifier/com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity
(server),reason=Waiting for window because NOT_VISIBLE]

●Screenshot.
04-03 09:11:33.249 19658 19658 D Screenshot: ScrollCapture: No scrollable targets found in window
[com.android.cts.verifier/com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity]

●Remove AudioDevices.
04-03 09:11:35.077 4338 4338 I USBAudioPeripheralNotificationsTest: onAudioDevicesRemoved() num:2
04-03 09:11:35.084 4338 4338 I USBAudioPeripheralNotificationsTest: onAudioDevicesRemoved() num:2
04-03 09:11:35.636 1851 2080 I input_interaction: Interaction with: a35fce0
com.android.cts.verifier/com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity (server),
Screenshot (server), PointerEventDispatcher0 (server),
04-03 09:11:35.664 1851 1963 I input_focus: [Focus request a35fce0
com.android.cts.verifier/com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity,reason=UpdateInp
utWindows]
04-03 09:11:35.675 1851 2080 I input_focus: [Focus entering a35fce0
com.android.cts.verifier/com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity
(server),reason=setFocusedWindow]

●Try match again.
04-03 09:11:37.917 930 1018 W libc   : Access denied finding property "ro.audio.usb.period_us"
04-03 09:11:38.050 930 3569 W libc   : Access denied finding property "ro.audio.usb.period_us"
04-03 09:11:38.176 930 3569 W libc   : Access denied finding property "ro.audio.usb.period_us"
04-03 09:11:38.223 930 3569 W libc   : Access denied finding property "ro.audio.usb.period_us"
04-03 09:11:38.354 930 3569 W libc   : Access denied finding property "ro.audio.usb.period_us"
04-03 09:11:38.449 930 930 W libc   : Access denied finding property "ro.audio.usb.period_us"
04-03 09:11:38.577 930 930 W libc   : Access denied finding property "ro.audio.usb.period_us"

●Ad AudioDevices again.
04-03 09:11:38.651 4338 4338 I USBAudioPeripheralNotificationsTest: onAudioDevicesAdded() num:2
04-03 09:11:38.662 4338 4338 I USBAudioPeripheralButtonsActivity: match:false
04-03 09:11:38.663 4338 4338 I USBAudioPeripheralButtonsActivity: match:false

04-03 09:11:38.677 4338 4338 I USBAudioPeripheralNotificationsTest: onAudioDevicesAdded() num:2

●Remove AudioDevices again.
04-03 09:11:41.556 4338 4338 I USBAudioPeripheralNotificationsTest: onAudioDevicesRemoved() num:2
04-03 09:11:41.563 4338 4338 I USBAudioPeripheralNotificationsTest: onAudioDevicesRemoved() num:2
04-03 09:11:41.867 1851 2080 I input_interaction: Interaction with: a35fce0
com.android.cts.verifier/com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity (server),
PointerEventDispatcher0 (server),

●Test finish.
04-03 09:11:41.935 1851 5421 I REC@REC@0: am_finish_activity:
{0,50623622,11,com.android.cts.verifier/.audio.USBAudioPeripheralAttributesActivity,app-request}
04-03 09:11:41.935 1851 5421 I wm_finish_activity:
[0,50623622,11,com.android.cts.verifier/.audio.USBAudioPeripheralAttributesActivity,app-request]
04-03 09:11:41.947 1851 5421 I wm_pause_activity:
[0,50623622,com.android.cts.verifier/.audio.USBAudioPeripheralAttributesActivity,userLeaving=false,finish]
04-03 09:11:41.950 4338 4338 I wm_on_top_resumed_lost_called:
[50623622,com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity,topStateChangedWhenResume
d]
04-03 09:11:41.952 4338 4338 I wm_on_paused_called:
[50623622,com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity,performPause]
04-03 09:11:41.953 1851 5421 I wm_add_to_stopping:
[0,50623622,com.android.cts.verifier/.audio.USBAudioPeripheralAttributesActivity,completeFinishing]
04-03 09:11:41.981 1851 2080 I input_focus: [Focus leaving a35fce0
com.android.cts.verifier/com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity
(server),reason=NO_WINDOW]
04-03 09:11:42.455 1851 1962 I wm_destroy_activity:
[0,50623622,11,com.android.cts.verifier/.audio.USBAudioPeripheralAttributesActivity,finish-imm:idle]
04-03 09:11:42.473 4338 4338 I wm_on_stop_called:
[50623622,com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity,LIFECYCLER_STOP_ACTIVITY]
04-03 09:11:42.475 4338 4338 I wm_on_destroy_called:
[50623622,com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity,performDestroy]
04-03 09:11:42.481 1851 2453 W InputManager-JNI: Input channel object 'a35fce0
com.android.cts.verifier/com.android.cts.verifier.audio.USBAudioPeripheralAttributesActivity (client)' was
disposed without first being removed with the input manager!
========

Key code:
bionic/libc/system_properties/system_properties.cpp
===
125const prop_info* SystemProperties::Find(const char* name) {
126 if (!initialized_) {
127   return nullptr;
128 }
129
130 prop_area* pa = contexts_->GetPropAreaForName(name);
131 if (!pa) {
132   async_safe_format_log(ANDROID_LOG_WARN, "libc", "Access denied finding property \"%s\"", name);
133   return nullptr;
134 }
135
136 return pa->find(name);
137}
===

■We want to know:
What should we do to pass this test?

COMMENTS   All comments ▼   ↓ Oldest first

○ **wu...@gmail.com** <wu...@gmail.com>   Apr 6, 2023 08:05PM

       📎 **deleted**   🔒 Restricted
          0 B ⓘ

       📎 **deleted**   🔒 Restricted
          0 B ⓘ

○ **vi...@google.com** <vi...@google.com> #2   Apr 6, 2023 11:10PM ⋮

   Assigned to vi...@google.com.

We have shared this with our product and engineering team and will update this issue with more information as it becomes available.

---

wu...@gmail.com <wu...@gmail.com> #3   Apr 10, 2023 11:40AM   ⋮

Dear google:
Pixel-TOSV (TQIA.230205.002) test will also fail.
Pixel-4A-TOSV (TQ2A.230305.008.C1) and Pixel-3-SOSV (SP1A.210812.016.C2) can pass the test.
Excuse me, do you have a patch for this case?

---

wu...@gmail.com <wu...@gmail.com> #4   Apr 10, 2023 05:09PM   ⋮

Dear google:
①OurPlatform-PASS:
Output-Match d[0xc]★★★ p[0xc]
Input-Match d[0xc] p[0xc, 0x10]

②OurPlatform-FAIL:
Output-Match d[0xcc★★★, 0xc] p[0xc]
Input-Match d[0xc] p[0xc, 0x10]

③Pixel-4A-TOSV(TQ2A.230305.008.C1)-PASS:
Output-Match d[0xc] p[0xc]
Input-Match d[0x10,0xc] p[0xc, 0x10]

④Pixel-3-SOSV(SP1A.210812.016.C2)：
Output-Match d[0xc] p[0xc]
Input-Match d[0x10,0xc] p[0xc, 0x10]

From the above comparison results, the output of tosa-sosv matches 0xcc and 0xc at the same time, but the expected result is 0xc, so it fails.

Is it because our platform supports two Channel, so there are also two matching output?
Can we just choose 0xc in the test?

---

wu...@gmail.com <wu...@gmail.com> #5   Apr 20, 2023 04:09PM   ⋮

Dear google:

After returning the following submission, sdm450 passed the test. Can we revert this patch?
Or could you please provide another patch to fix it?
=========================
commit 400bbe0e7d7b86e8ccd0690ae7c69d06792091a9
Author: jiabin jiabin@google.com
Date: Wed Oct 28 13:56:59 2020 -0700

  Upgrade device version of usb audio HAL to 3.0.

  Upgrade device version of usb audio HAL to 3.0. With this change, the
  framework will use createAudioPatch API for audio routing.

  When opening a stream, the HAL will open alsa device with the given
  device information. The HAL will cache the io handle to identify the
  stream. Before starting audio playback/recording, create_audio_patch
  API is called to set the correct devices. All the devices will be
  cached as a list in stream_in/stream_out. The HAL will return a unique
  patch handle which is used when updating/releasing the patch. When
  patch is released, the patch handle will also be removed.

  Bug: 160352965
  Test: playback/record with usb device
  Change-Id: Iba69c5cc82d1063af8ab050183d6a57b27083ee1
=========================

---

wu...@gmail.com <wu...@gmail.com> #6   Apr 24, 2023 07:20PM   ⋮

Dear google:

I'm sorry to bother you, but do you have any reply?

Reassigned to ji...@google.com.

Jiabin,

I'm not seeing this problem with a udc-dev based CTS-Verifier. Is there something wrong going on on the HAL/Driver side?

Thanks.

Reassigned to vi...@google.com.

Discuss with Paul internally, will make some improvement for the test.

Dear google:

①In system/media/alsa_utils/alsa_device_profile.c
========
char * profile_get_channel_count_strs(const alsa_device_profile* profile)
  /* We currently support MONO and STEREO, and always report STEREO but some (many)
   * USB Audio Devices may only announce support for MONO (a headset mic for example), or
   * The total number of output channels. SO, if the device itself doesn't explicitly
   * support STEREO, append to the channel config strings we are generating.
   *
   * The MONO and STEREO positional channel masks are provided for legacy compatibility.
   * For multichannel (n > 2) we only expose channel index masks. ★★★
   */
  // Always support stereo
  curStrLen = strlcat(buffer, chans_strs[2], buffSize); ★★★
========
When channel_count>2 (assuming 4), the above API will only return [2] =
"AUDIO_CHANNEL_OUT_STEREO" and [4] = "AUDIO_CHANNEL_INDEX_MASK_4".

②However, since usbhal 3.0, Google has added a way to return channel.
hardware/libhardware/modules/usbaudio/audio_hal.c
========
static int adev_get_audio_port(struct audio_hw_device *dev, struct audio_port *port)
    for (size_t i = 0; i < min(profile->channel_counts[i]+1, AUDIO_PORT_MAX_CHANNEL_MASKS) &&
        (channel_count = profile->channel_counts[i]) != 0 &&
        num_channel_masks < AUDIO_PORT_MAX_CHANNEL_MASKS; ++i) {
      if (channel_count < channel_masks_size && channel_count <=2) {
        channel_masks[num_channel_masks++] = channel_masks_map[channel_count];
        if (num_channel_masks >= AUDIO_PORT_MAX_CHANNEL_MASKS) {
          break;
        }
      }
      if (channel_count < CHANNEL_INDEX_MASKS_SIZE &&
          CHANNEL_INDEX_MASKS_MAP[channel_count] != AUDIO_CHANNEL_NONE) {
        channel_masks[num_channel_masks++] = CHANNEL_INDEX_MASKS_MAP[channel_count];
      }
    }
========
->channel_count = profile->channel_counts[i]
When channel_count>2 (assuming 4), [4] = AUDIO_CHANNEL_OUT_QUAD and [4] =
AUDIO_CHANNEL_INDEX_MASK_4 are returned.

When channel_count>2, I think adev_get_audio_port should be consistent with the chanel set by
profile_get_channel_count_strs.
So I made the following changes. Is it ok?
================
diff --git a/modules/usbaudio/audio_hal.c b/modules/usbaudio/audio_hal.c
index 9598d3d6..cd0e611e 100644
--- a/modules/usbaudio/audio_hal.c
+++ b/modules/usbaudio/audio_hal.c
 /* Lock play & record samples rates at or above this threshold */
 #define RATELOCK_THRESHOLD 96000
@@ -431,11 +432,12 @@ static unsigned int populate_channel_mask_from_profile(const
alsa_device_profile
      channel_masks_size = FCC_LIMIT + 1;
    }

```
    unsigned int channel_count = 0;
+   channel_masks[num_channel_masks] = channel_masks_map[2];
    for (size_t i = 0; i < min(channel_masks_size, AUDIO_PORT_MAX_CHANNEL_MASKS) &&
        (channel_count = profile->channel_counts[i]) != 0 &&
        num_channel_masks < AUDIO_PORT_MAX_CHANNEL_MASKS; ++i) {
-       if (channel_count < channel_masks_size &&
-           channel_masks_map[channel_count] != AUDIO_CHANNEL_NONE) {
+       if (channel_count < channel_masks_size &&
+           channel_masks_map[channel_count] != AUDIO_CHANNEL_NONE && channel_count <= 2) {
        channel_masks[num_channel_masks++] = channel_masks_map[channel_count];
        if (num_channel_masks >= AUDIO_PORT_MAX_CHANNEL_MASKS) {
            break;
================
```

vi...@google.com <vi...@google.com> #10   May 21, 2023 09:50PM   ⋮

Marked as fixed.

The development team has fixed the issue and it will be available in a future build.