

Bug 1787405 Opened 9 months ago Closed 9 months ago

immediate expression requires a # prefix

Categories

Product:	Core	Type:	defect
Component:	Audio/Video	Priority:	Not set
Version:	Firefox 104	Severity:	--
Platform:	ARM Linux		

Tracking

Status: RESOLVED WORKSFORME

People (Reporter: ray-v, Unassigned)

Details

Bottom

Tags

Timeline

Ray Vine Reporter

Description • 9 months ago

Cross compiling FF104.0 for armv7 fails:

```
media/libyuv/libyuv
...
{standard input}: Assembler messages:
{standard input}:19830: Error: immediate expression requires a # prefix -- 'pid [r2,1792]'
{standard input}:19885: Error: immediate expression requires a # prefix -- 'pid [r4,1792]'
{standard input}:20044: Error: immediate expression requires a # prefix -- 'pid [r3,1792]'
{standard input}:20122: Error: immediate expression requires a # prefix -- 'pid [r4,1792]'
{standard input}:25927: Error: immediate expression requires a # prefix -- 'pid [r0,1792]'
{standard input}:25966: Error: immediate expression requires a # prefix -- 'pid [r0,1792]'
gmake[4]: *** [/mozilla/build/mozilla/config/rules.mk:669: Unified_cpp_media_libyuv_libyuv1.o] Error 1
gmake[3]: *** [/mozilla/build/mozilla/config/recurse.mk:72: media/libyuv/libyuv/libyuv_target-objects] Error 2
```

x86_64, aarch64 and i686 builds are all ok.
I'm using a gcc cross compiler and this seems a similar issue to [bug 1756347](#) part 2 - Use # prefix for arm32 immediates.

Ray Vine Reporter

Comment 1 • 9 months ago

After some searching in the mozilla repository log, I managed to find out where this change occurred, and work out, guided by the fix 'Use # prefix for arm32 immediates', what the Error: messages refer to.

This patch fixes the build for me.

```
--- media/libyuv/libyuv/source/row_neon.cc
+++ media/libyuv/libyuv/source/row_neon.cc
@@ -591,591 @@
-      "pid      [%0, 1792]          \n"
+      "pid      [%0, #1792]         \n"
@@ -612,612 @@
-      "pid      [%0, 1792]          \n"
+      "pid      [%0, #1792]         \n"
```

Status: UNCONFIRMED → RESOLVED
Closed: 9 months ago
Resolution: --- → WORKSFORME

tt_1

Comment 2 • 8 months ago

hi, did you take any actions to fix this with upstream libyuv?

Ray Vine Reporter

Comment 3 • 8 months ago

No. I just saw it as an obstacle to the build completing, and assumed that it was a mozilla issue without looking further.
I can raise it upstream unless you're involved with libyuv and what to do that yourself - do you think it's the correct solution?

Ray Vine Reporter

Comment 4 • 8 months ago

(In reply to Ray Vine from [comment #3](#))
No. I just saw it as an obstacle to the build completing, and assumed that it was a mozilla issue without looking further.
I can raise it upstream unless you're involved with libyuv and want to do that yourself - do you think it's the correct solution?

tt_1

Comment 5 • 8 months ago

(In reply to Ray Vine from [comment #3](#))
No. I just saw it as an obstacle to the build completing, and assumed that it was a mozilla issue without looking further.
I can raise it upstream unless you're involved with libyuv and what to do that yourself - do you think it's the correct solution?
Yes please, absolutely raise this issue at upstream. I'm not involved into libyuv development, and barely know a thing about assembler.
I believe there are basically two issues: the firefox build system enables neon on armv7 without being told to do so via --enable-fpu=neon config switch. See mozbug #1791267, or have a look at media/libyuv/libyuv/libyuv.gyp - grep for LIBYUV_DISABLE_NEON
and the other issue may be an actual bug in the neon assembler code, which you seemingly have fixed here.

Ray Vine Reporter

Comment 6 • 8 months ago

This issue has been fixed upstream in r1843:
<https://chromium.googlesource.com/libyuv/libyuv/+c4b1ddd8fe758e465563ecfe75a2974f4f340f2a?/>

tt_1

Comment 7 • 8 months ago

Well that is some very good news indeed! Were you already able to confirm the compile? I can queue it if you haven't yet and report back.
Do you want to reopen and repurpose the bug to pull in the fixed revision of libyuv into the firefox tree?

Ray Vine Reporter

Comment 8 • 8 months ago

Were you already able to confirm the compile?
I've already done that. My build of 104.0 included the patch at [comment #4](#) for the two problematic lines of the code which were in row_neon.cc at the time. I don't think the additional 4 instances which are now in the file will make a difference as far as this issue is concerned.
Do you want to reopen and repurpose the bug to pull in the fixed revision of libyuv into the firefox tree?
I'm not familiar with that process, but I don't think so. Given the history of updating libyuv, re: [bug-1698699](#), there could well be other issues arising from that which cause problems.
I think this bug report has run its course. If mozilla don't pick this up and patch for the 106 release there is the reassurance from upstream that this patch is the correct fix, and it's easy enough to include in future armv7 builds.

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