
Subject: Re: [PATCH] kthread: saa7134-tvaudio.c
Posted by [Sukadev Bhattiprolu](#) on Thu, 31 Aug 2006 01:02:49 GMT
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Mauro Carvalho Chehab [mchehab@infradead.org] wrote:

```
| > On Wed, 30 Aug 2006 18:30:27 +0200
| > Cedric Le Goater <clg@fr.ibm.com> wrote:
| >
|
| It is likely to work if we remove allow_signal and replacing the
| signal_pending() by kthread_should_stop() as above.
|
| The better is to check the real patch on a saa7134 hardware before
| submitting to mainstream. You may submit the final patch for us to test
| at the proper hardware.
|
```

Thanks for all the input. Mauro, thanks for help with testing.
Here is an updated patch that removes the signal code and the race.

Replace kernel_thread() with kthread_run() since kernel_thread()
is deprecated in drivers/modules. Also remove signalling code
as it is not needed in the driver.

Signed-off-by: Sukadev Bhattiprolu <sukadev@us.ibm.com>
Signed-off-by: Cedric Le Goater <clg@fr.ibm.com>
Cc: Dave Hansen <haveblue@us.ibm.com>
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```
drivers/media/video/saa7134/saa7134-tvaudio.c | 45 ++++++-----
drivers/media/video/saa7134/saa7134.h      | 4 --
2 files changed, 24 insertions(+), 25 deletions(-)
```

Index: lx26-18-rc5/drivers/media/video/saa7134/saa7134.h

```
=====
--- lx26-18-rc5.orig/drivers/media/video/saa7134/saa7134.h 2006-08-29 18:35:53.000000000
-0700
+++ lx26-18-rc5/drivers/media/video/saa7134/saa7134.h 2006-08-29 18:35:56.000000000 -0700
@@ -311,10 +311,8 @@ struct saa7134_pgtable {

/* tvaudio thread status */
```

```

struct saa7134_thread {
- pid_t          pid;
- struct completion  exit;
+ struct task_struct *  task;
  wait_queue_head_t    wq;
- unsigned int      shutdown;
  unsigned int      scan1;
  unsigned int      scan2;
  unsigned int      mode;

```

Index: lx26-18-rc5/drivers/media/video/saa7134/saa7134-tvaudio.c

```

=====
--- lx26-18-rc5.orig/drivers/media/video/saa7134/saa7134-tvaudio.c 2006-08-29
18:35:53.000000000 -0700
+++ lx26-18-rc5/drivers/media/video/saa7134/saa7134-tvaudio.c 2006-08-30 14:09:00.000000000
-0700
@@ -28,6 +28,7 @@
#include <linux/slab.h>
#include <linux/delay.h>
#include <linux/smp_lock.h>
+#include <linux/kthread.h>
#include <asm/div64.h>

#include "saa7134-reg.h"
@@ -357,16 +358,22 @@ static int tvaudio_sleep(struct saa7134_
DECLARE_WAITQUEUE(wait, current);

add_wait_queue(&dev->thread.wq, &wait);
- if (dev->thread.scan1 == dev->thread.scan2 && !dev->thread.shutdown) {
+
+ set_current_state(TASK_INTERRUPTIBLE);
+
+ if (dev->thread.scan1 == dev->thread.scan2 && !kthread_should_stop()) {
+   if (timeout < 0) {
-   set_current_state(TASK_INTERRUPTIBLE);
+   schedule();
+   } else {
+   schedule_timeout_interruptible
+   (msecs_to_jiffies(timeout));
+   }
+ }
+
+ set_current_state(TASK_RUNNING);
+
+ remove_wait_queue(&dev->thread.wq, &wait);
+
+ return dev->thread.scan1 != dev->thread.scan2;
}

```

```
@@ -521,11 +528,9 @@ static int tvaudio_thread(void *data)
    unsigned int i, audio, nscan;
    int max1,max2,carrier,rx,mode,lastmode,default_carrier;
```

```
- daemonize("%s", dev->name);
- allow_signal(SIGTERM);
    for (;;) {
        tvaudio_sleep(dev,-1);
- if (dev->thread.shutdown || signal_pending(current))
+ if (kthread_should_stop())
        goto done;
```

restart:

```
@@ -633,7 +638,7 @@ static int tvaudio_thread(void *data)
    for (;;) {
        if (tvaudio_sleep(dev,5000))
            goto restart;
- if (dev->thread.shutdown || signal_pending(current))
+ if (kthread_should_stop())
        break;
        if (UNSET == dev->thread.mode) {
            rx = tvaudio_getstereo(dev,&tvaudio[i]);
@@ -649,7 +654,6 @@ static int tvaudio_thread(void *data)
    }
```

done:

```
- complete_and_exit(&dev->thread.exit, 0);
    return 0;
}
```

```
@@ -798,9 +802,6 @@ static int tvaudio_thread_ddep(void *dat
    struct saa7134_dev *dev = data;
    u32 value, norms, clock;
```

```
- daemonize("%s", dev->name);
- allow_signal(SIGTERM);
-
```

```
    clock = saa7134_boards[dev->board].audio_clock;
    if (UNSET != audio_clock_override)
        clock = audio_clock_override;
```

```
@@ -812,7 +813,7 @@ static int tvaudio_thread_ddep(void *dat
```

```
    for (;;) {
        tvaudio_sleep(dev,-1);
- if (dev->thread.shutdown || signal_pending(current))
+ if (kthread_should_stop())
        goto done;
```

```

restart:
@@ -894,7 +895,6 @@ static int tvaudio_thread_ddep(void *dat
}

done:
- complete_and_exit(&dev->thread.exit, 0);
return 0;
}

@@ -1004,15 +1004,16 @@ int saa7134_tvaudio_init2(struct saa7134
break;
}

- dev->thread.pid = -1;
+ dev->thread.task = NULL;
if (my_thread) {
/* start tvaudio thread */
init_waitqueue_head(&dev->thread.wq);
- init_completion(&dev->thread.exit);
- dev->thread.pid = kernel_thread(my_thread, dev, 0);
- if (dev->thread.pid < 0)
- printk(KERN_WARNING "%s: kernel_thread() failed\n",
+ dev->thread.task = kthread_run(my_thread, dev, dev->name);
+ if (IS_ERR(dev->thread.task)) {
+ printk(KERN_WARNING "%s: failed to create kthread\n",
dev->name);
+ dev->thread.task = NULL;
+ }
saa7134_tvaudio_do_scan(dev);
}

@@ -1023,10 +1024,10 @@ int saa7134_tvaudio_init2(struct saa7134
int saa7134_tvaudio_fini(struct saa7134_dev *dev)
{
/* shutdown tvaudio thread */
- if (dev->thread.pid >= 0) {
- dev->thread.shutdown = 1;
- wake_up_interruptible(&dev->thread.wq);
- wait_for_completion(&dev->thread.exit);
+ if (dev->thread.task) {
+ /* kthread_stop() wakes up the thread */
+ kthread_stop(dev->thread.task);
+ dev->thread.task = NULL;
}
saa_andorb(SAA7134_ANALOG_IO_SELECT, 0x07, 0x00); /* LINE1 */
return 0;
@@ -1034,7 +1035,7 @@ int saa7134_tvaudio_fini(struct saa7134_

```

```
int saa7134_tvaudio_do_scan(struct saa7134_dev *dev)
{
- if (dev->thread.pid >= 0) {
+ if (dev->thread.task) {
    dev->thread.mode = UNSET;
    dev->thread.scan2++;
    wake_up_interruptible(&dev->thread.wq);
}
```

Containers mailing list

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<https://lists.osdl.org/mailman/listinfo/containers>
