Travaux pratiques sur RTEMS

Rapport

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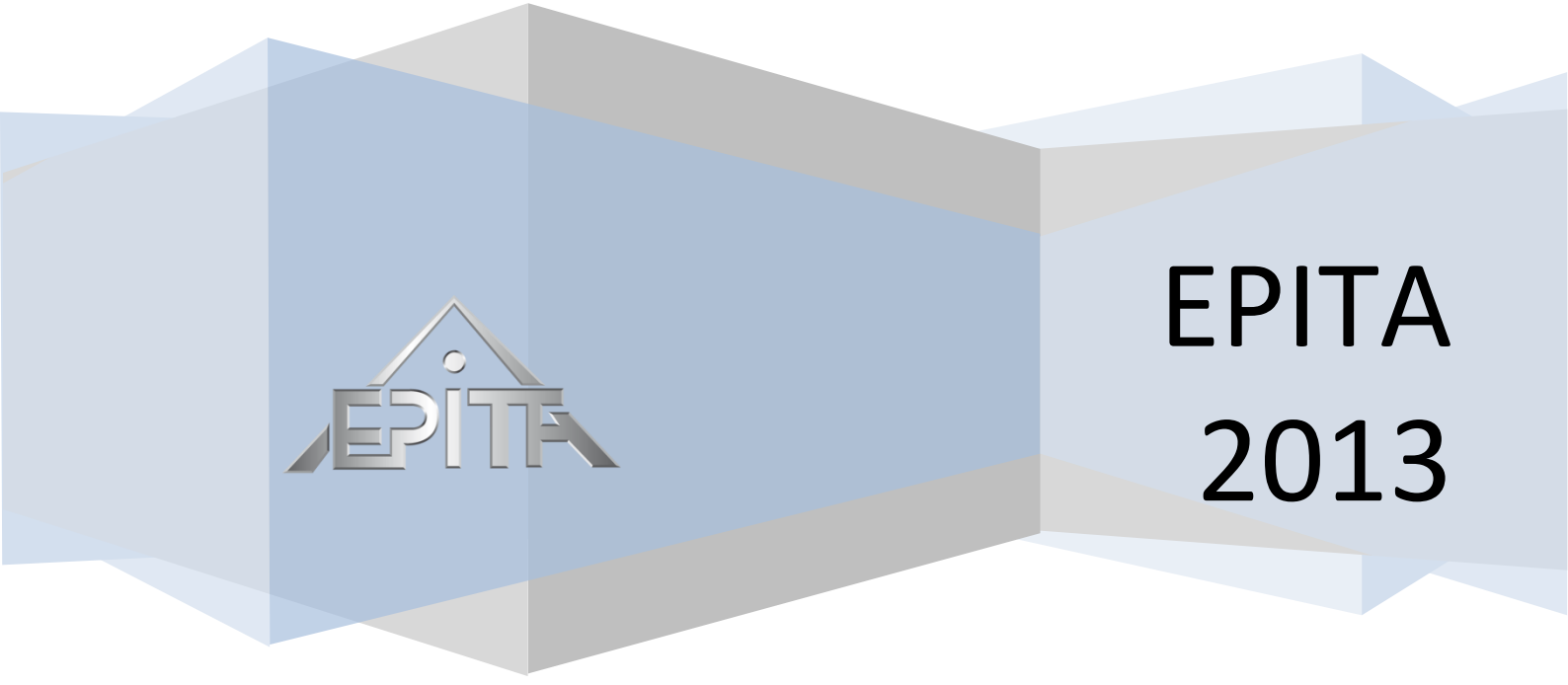

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Introduction

Voici le compte rendu de mon travail dans le cadre du cours d'RTEMS. Dans un premier temps le driver réalisé affichait sur la sortie série le numéro du bouton pressé. La seconde version du driver avait pour but d'allumer une LED en fonction du bouton pressé.

Ce document contient les logs des deux manipulations effectués sur la carte mini2440.

Simple driver

Ce programme affiche juste quel bouton est pressé.

```
MINI2440 BY NUTS# tftp 0x32000000 but.img
dm9000 i/o: 0x20000300, id: 0x90000a46
DM9000: running in 16 bit mode
MAC: 08:08:11:18:12:27
TFTP from server 192.168.1.100; our IP address is 192.168.1.101
Filename 'but.img'.
Load address: 0x32000000
Loading: T ############
done
Bytes transferred = 174464 (2a980 hex)
MINI2440 BY NUTS# bootm
## Booting kernel from Legacy Image at 32000000 ...
   Image Name:   RTEMS Application
   Created:      2012-11-24  16:52:58 UTC
   Image Type:   ARM RTEMS Kernel Image (uncompressed)
   Data Size:    174400 Bytes = 170.3 kB
   Load Address: 30000100
   Entry Point:  30000100
   Verifying Checksum ... OK
   Loading Kernel Image ... OK
OK
## Transferring control to RTEMS (at address 30000100) ...


*** BUTs driver test ***
buts_open
fd = 3
All BUTs OFF
status= 805478552 errno= 0 =>
t0 = 567993600
BUT #1 IS PUSHED
BUT #1 IS PUSHED
BUT #1 IS PUSHED
BUT #1 IS PUSHED
BUT #1 IS PUSHED
BUT #1 IS PUSHED
```

```
BUT #2 IS PUSHED
BUT #2 IS PUSHED
BUT #2 IS PUSHED
BUT #2 IS PUSHED
BUT #2 IS PUSHED
BUT #3 IS PUSHED
BUT #3 IS PUSHED
BUT #3 IS PUSHED
BUT #3 IS PUSHED
BUT #3 IS PUSHED
BUT #3 IS PUSHED
BUT #3 IS PUSHED
BUT #3 IS PUSHED
BUT #3 IS PUSHED
BUT #3 IS PUSHED
BUT #6 IS PUSHED
BUT #6 IS PUSHED
BUT #6 IS PUSHED
BUT #6 IS PUSHED
BUT #6 IS PUSHED
BUT #6 IS PUSHED
BUT #6 IS PUSHED
BUT #4 IS PUSHED
BUT #4 IS PUSHED
BUT #4 IS PUSHED
BUT #4 IS PUSHED
BUT #4 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
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BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
```

```
BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
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BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
BUT #5 IS PUSHED
leds_close
t1 = 567993619


*** End of BUTs driver test ***
```

Advance driver

Ce programme attend qu'un bouton soit pressé pour allumer la LED correspondante.

```
MINI2440 BY NUTS# tftp
dm9000 i/o: 0x20000300, id: 0x90000a46
DM9000: running in 16 bit mode
MAC: 08:08:11:18:12:27
TFTP from server 192.168.1.100; our IP address is 192.168.1.101
Filename 'but.img'.
Load address: 0x32000000
Loading: T T T ############
done
Bytes transferred = 175644 (2ae1c hex)
MINI2440 BY NUTS# bootm
## Booting kernel from Legacy Image at 32000000 ...
   Image Name:   RTEMS Application
   Created:      2012-11-27  12:14:24 UTC
   Image Type:   ARM RTEMS Kernel Image (uncompressed)
   Data Size:    175580 Bytes = 171.5 kB
   Load Address: 30000100
   Entry Point:  30000100
   Verifying Checksum ... OK
   Loading Kernel Image ... OK
OK
## Transferring control to RTEMS (at address 30000100) ...


*** BUTs driver test ***
```

```
buts_open
leds_open
but_fd = 3
led_fd = 4
All BUTs and LEDs OFF
status= 805479732 errno= 0 =>
t0 = 567993600
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
BUT #4 IS PUSHED
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
BUT #1 IS PUSHED
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
BUT #3 IS PUSHED
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
BUT #2 IS PUSHED
PRESS A BUTTON
PRESS A BUTTON
BUT #1 IS PUSHED
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
```

```
PRESS A BUTTON
BUT #4 IS PUSHED
BUT #4 IS PUSHED
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
BUT #1 IS PUSHED
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
BUT #3 IS PUSHED
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
PRESS A BUTTON
buts_close
t1 = 567993619


*** End of BUTs and LEDs driver test ***
```