
Subject: [PATCH 1/2] ide: switch /proc/ide/ali to seq_file interface
Posted by [Alexey Dobriyan](#) on Wed, 02 Apr 2008 16:44:49 GMT
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[PATCH 1/2] ide: switch /proc/ide/ali to seq_file interface

Signed-off-by: Alexey Dobriyan <adobriyan@openvz.org>

drivers/ide/pci/alim15x3.c | 66

+++++-----

1 file changed, 39 insertions(+), 27 deletions(-)

--- a/drivers/ide/pci/alim15x3.c

+++ b/drivers/ide/pci/alim15x3.c

```
@@ -52,6 +52,7 @@ static struct pci_dev *isa_dev;
 #if defined(DISPLAY_ALI_TIMINGS) && defined(CONFIG_IDE_PROC_FS)
 #include <linux/stat.h>
 #include <linux/proc_fs.h>
+#include <linux/seq_file.h>
```

```
static u8 ali_proc = 0;
```

```
@@ -96,11 +97,11 @@ static char *channel_status[8] = {
 * anything else that will help with debugging
 */
```

```
-static int ali_get_info (char *buffer, char **addr, off_t offset, int count)
```

```
+static int proc_ide_ali_show(struct seq_file *m, void *v)
```

```
{
 unsigned long bibma;
 u8 reg53h, reg5xh, reg5yh, reg5xh1, reg5yh1, c0, c1, rev, tmp;
- char *q, *p = buffer;
+ char *q;
```

```
/* fetch rev. */
```

```
pci_read_config_byte(bmide_dev, 0x08, &rev);
```

```
@@ -120,52 +121,50 @@ static int ali_get_info (char *buffer, char **addr,
 off_t offset, int count)
```

```
c0 = inb(bibma + 0x02);
c1 = inb(bibma + 0x0a);
```

```
- p += sprintf(p,
- "\n                Ali M15x3 Chipset.\n");
- p += sprintf(p,
- "                -----\n");
+ seq_puts(m, "\n                Ali M15x3 Chipset.\n");
+ seq_puts(m, "                -----\n");
```

```

pci_read_config_byte(bmide_dev, 0x78, &reg53h);
- p += sprintf(p, "PCI Clock: %d.\n", reg53h);
+ seq_printf(m, "PCI Clock: %d.\n", reg53h);

pci_read_config_byte(bmide_dev, 0x53, &reg53h);
- p += sprintf(p,
+ seq_printf(m,
    "CD_ROM FIFO:%s, CD_ROM DMA:%s\n",
    (reg53h & 0x02) ? "Yes" : "No ",
    (reg53h & 0x01) ? "Yes" : "No ");
pci_read_config_byte(bmide_dev, 0x74, &reg53h);
- p += sprintf(p,
+ seq_printf(m,
    "FIFO Status: contains %d Words, runs%s%s\n",
    (reg53h & 0x3f),
    (reg53h & 0x40) ? " OVERWR" : "",
    (reg53h & 0x80) ? " OVERRD." : ".");

- p += sprintf(p,
+ seq_puts(m,
    "-----primary channel"
    "-----secondary channel"
    "-----\n\n");

pci_read_config_byte(bmide_dev, 0x09, &reg53h);
- p += sprintf(p,
+ seq_printf(m,
    "channel status:    %s"
    "                    %s\n",
    (reg53h & 0x20) ? "On " : "Off",
    (reg53h & 0x10) ? "On " : "Off" );

- p += sprintf(p,
+ seq_printf(m,
    "both channels togh: %s"
    "                    %s\n",
    (c0&0x80) ? "No " : "Yes",
    (c1&0x80) ? "No " : "Yes" );

pci_read_config_byte(bmide_dev, 0x76, &reg53h);
- p += sprintf(p,
+ seq_printf(m,
    "Channel state:    %s          %s\n",
    channel_status[reg53h & 0x07],
    channel_status[(reg53h & 0x70) >> 4] );

pci_read_config_byte(bmide_dev, 0x58, &reg5xh);
pci_read_config_byte(bmide_dev, 0x5c, &reg5yh);

```

```

- p += sprintf(p,
+ seq_printf(m,
  "Add. Setup Timing:  %dT"
  "          %dT\n",
  (reg5xh & 0x07) ? (reg5xh & 0x07) : 8,
@@ -173,7 +172,7 @@ static int ali_get_info (char *buffer, char **addr, off_t
offset, int count)

  pci_read_config_byte(bmide_dev, 0x59, &reg5xh);
  pci_read_config_byte(bmide_dev, 0x5d, &reg5yh);
- p += sprintf(p,
+ seq_printf(m,
  "Command Act. Count:  %dT"
  "          %dT\n"
  "Command Rec. Count:  %dT"
@@ -183,10 +182,10 @@ static int ali_get_info (char *buffer, char **addr,
off_t offset, int count)
  (reg5xh & 0x0f) ? (reg5xh & 0x0f) : 16,
  (reg5yh & 0x0f) ? (reg5yh & 0x0f) : 16 );

- p += sprintf(p,
+ seq_puts(m,
  "-----drive0-----drive1"
  "-----drive0-----drive1-----\n\n");
- p += sprintf(p,
+ seq_printf(m,
  "DMA enabled:   %s      %s"
  "      %s      %s\n",
  (c0&0x20) ? "Yes" : "No ",
@@ -201,9 +200,9 @@ static int ali_get_info (char *buffer, char **addr, off_t
offset, int count)
  if (rev < 0xc1) {
    if ((rev == 0x20) &&
        (pci_read_config_byte(bmide_dev, 0x4f, &tmp), (tmp &= 0x20))) {
- p += sprintf(p, q, 8, 8, 8, 8);
+ seq_printf(m, q, 8, 8, 8, 8);
    } else {
- p += sprintf(p, q,
+ seq_printf(m, q,
  (reg5xh & 0x03) + 12,
  ((reg5xh & 0x30)>>4) + 12,
  (reg5yh & 0x03) + 12,
@@ -214,11 +213,11 @@ static int ali_get_info (char *buffer, char **addr,
off_t offset, int count)
  int t2 = (tmp = ((reg5xh & 0x30)>>4)) ? (tmp << 3) : 4;
  int t3 = (tmp = (reg5yh & 0x03)) ? (tmp << 3) : 4;
  int t4 = (tmp = ((reg5yh & 0x30)>>4)) ? (tmp << 3) : 4;
- p += sprintf(p, q, t1, t2, t3, t4);

```

```

+ seq_printf(m, q, t1, t2, t3, t4);
}

#if 0
- p += sprintf(p,
+ seq_printf(m,
  "FIFO threshold: %2d Words      %2d Words"
  "      %2d Words      %2d Words\n",
  (reg5xh & 0x03) + 12,
@@ -227,7 +226,7 @@ static int ali_get_info (char *buffer, char **addr, off_t
offset, int count)
  ((reg5yh & 0x30)>>4) + 12 );
#endif

- p += sprintf(p,
+ seq_printf(m,
  "FIFO mode:      %s      %s      %s      %s\n",
  fifo[((reg5xh & 0x0c) >> 2)],
  fifo[((reg5xh & 0xc0) >> 6)],
@@ -239,7 +238,7 @@ static int ali_get_info (char *buffer, char **addr, off_t
offset, int count)
  pci_read_config_byte(bmide_dev, 0x5e, &reg5yh);
  pci_read_config_byte(bmide_dev, 0x5f, &reg5yh1);

- p += sprintf(p,/*
+ seq_printf(m,/*
  "-----drive0-----drive1"
  "-----drive0-----drive1-----\n"*)/
  "Dt RW act. Cnt  %2dT      %2dT"
@@ -255,13 +254,13 @@ static int ali_get_info (char *buffer, char **addr,
off_t offset, int count)
  (reg5yh & 0x0f) ? (reg5yh & 0x0f) : 16,
  (reg5yh1 & 0x0f) ? (reg5yh1 & 0x0f) : 16 );

- p += sprintf(p,
+ seq_puts(m,
  "-----UDMA Timings"
  "-----\n\n");

  pci_read_config_byte(bmide_dev, 0x56, &reg5xh);
  pci_read_config_byte(bmide_dev, 0x57, &reg5yh);
- p += sprintf(p,
+ seq_printf(m,
  "UDMA:      %s      %s"
  "      %s      %s\n"
  "UDMA timings:  %s      %s"
@@ -275,8 +274,21 @@ static int ali_get_info (char *buffer, char **addr, off_t
offset, int count)

```

```

udmaT[reg5yh & 0x07],
udmaT[(reg5yh & 0x70) >> 4]);

- return p-buffer; /* => must be less than 4k! */
+ return 0;
+}
+
+static int proc_ide_ali_open(struct inode *inode, struct file *file)
+{
+ return single_open(file, proc_ide_ali_show, NULL);
+}
+
+static const struct file_operations ide_ali_proc_fops = {
+ .owner = THIS_MODULE,
+ .open = proc_ide_ali_open,
+ .read = seq_read,
+ .llseek = seq_lseek,
+ .release = single_release,
+};
#endif /* defined(DISPLAY_ALI_TIMINGS) && defined(CONFIG_IDE_PROC_FS) */

/**
@@ -469,7 +481,7 @@ static unsigned int __devinit init_chipset_ali15x3 (struct
pci_dev *dev, const c
if (!ali_proc) {
ali_proc = 1;
bmide_dev = dev;
- ide_pci_create_host_proc("ali", ali_get_info);
+ proc_create("ide/ali", 0, NULL, &ide_ali_proc_fops);
}
#endif /* defined(DISPLAY_ALI_TIMINGS) && defined(CONFIG_IDE_PROC_FS) */

```

Subject: Re: [PATCH 1/2] ide: switch /proc/ide/ali to seq_file interface

Posted by [Bartłomiej Zolnierkie](#) on Wed, 02 Apr 2008 19:20:28 GMT

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Hi,

On Wednesday 02 April 2008, Alexey Dobriyan wrote:

> [PATCH 1/2] ide: switch /proc/ide/ali to seq_file interface

>

> Signed-off-by: Alexey Dobriyan <adobriyan@openvz.org>

Could you please re-do patch #1/2 to remove /proc/ide/ali instead?

[like we did for all other /proc/ide/<host_driver> files]

Rationale is that the same can be done from user-space and is not especially interesting even when debugging problems (raw PCI config space dump is far more useful).

Thanks,
Bart

Subject: [PATCH 1/2] ide: remove /proc/ide/ali
Posted by [Alexey Dobriyan](#) on Thu, 03 Apr 2008 13:49:23 GMT
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On Wednesday 02 April 2008 23:20:28 Bartłomiej Zolnierkiewicz wrote:
> Could you please re-do patch #1/2 to remove /proc/ide/ali instead?
>
> [like we did for all other /proc/ide/<host_driver> files]

Oh, even better!

[PATCH 1/2] ide: remove /proc/ide/ali

Bart says: "can be done from user-space and is not especially interesting even when debugging problems (raw PCI config space dump is far more useful)."

Signed-off-by: Alexey Dobriyan <adobriyan@openvz.org>

drivers/ide/pci/alim15x3.c | 240 -----
1 file changed, 240 deletions(-)

--- a/drivers/ide/pci/alim15x3.c
+++ b/drivers/ide/pci/alim15x3.c
@@ -38,8 +38,6 @@

```
#include <asm/io.h>
```

```
+#define DISPLAY_ALI_TIMINGS
```

```
-
```

```
/*
```

```
 * ALi devices are not plug in. Otherwise these static values would  
 * need to go. They ought to go away anyway
```

```
@@ -49,236 +47,6 @@ static u8 m5229_revision;  
static u8 chip_is_1543c_e;  
static struct pci_dev *isa_dev;
```

```
+#if defined(DISPLAY_ALI_TIMINGS) && defined(CONFIG_IDE_PROC_FS)
```

```
+#include <linux/stat.h>
```

```

-#include <linux/proc_fs.h>
-
-static u8 ali_proc = 0;
-
-static struct pci_dev *bmide_dev;
-
-static char *fifo[4] = {
- "FIFO Off",
- "FIFO On ",
- "DMA mode",
- "PIO mode" };
-
-static char *udmaT[8] = {
- "1.5T",
- " 2T",
- "2.5T",
- " 3T",
- "3.5T",
- " 4T",
- " 6T",
- " 8T"
-};
-
-static char *channel_status[8] = {
- "OK      ",
- "busy    ",
- "DRQ     ",
- "DRQ busy",
- "error   ",
- "error busy",
- "error DRQ",
- "error DRQ busy"
-};
-
-/**
- * ali_get_info - generate proc file for ALi IDE
- * @buffer: buffer to fill
- * @addr: address of user start in buffer
- * @offset: offset into 'file'
- * @count: buffer count
- *
- * Walks the Ali devices and outputs summary data on the tuning and
- * anything else that will help with debugging
- */
-
-static int ali_get_info (char *buffer, char **addr, off_t offset, int count)
-{
- unsigned long bibma;

```

```

- u8 reg53h, reg5xh, reg5yh, reg5xh1, reg5yh1, c0, c1, rev, tmp;
- char *q, *p = buffer;
-
- /* fetch rev. */
- pci_read_config_byte(bmide_dev, 0x08, &rev);
- if (rev >= 0xc1) /* M1543C or newer */
-   udmaT[7] = " ???";
- else
-   fifo[3] = " ??? ";
-
- /* first fetch bibma: */
-
- bibma = pci_resource_start(bmide_dev, 4);
-
- /*
- * at that point bibma+0x2 et bibma+0xa are byte
- * registers to investigate:
- */
- c0 = inb(bibma + 0x02);
- c1 = inb(bibma + 0x0a);
-
- p += sprintf(p,
-             "\n                Ali M15x3 Chipset.\n");
- p += sprintf(p,
-             "                -----\n");
- pci_read_config_byte(bmide_dev, 0x78, &reg53h);
- p += sprintf(p, "PCI Clock: %d.\n", reg53h);
-
- pci_read_config_byte(bmide_dev, 0x53, &reg53h);
- p += sprintf(p,
-             "CD_ROM FIFO:%s, CD_ROM DMA:%s\n",
-             (reg53h & 0x02) ? "Yes" : "No ",
-             (reg53h & 0x01) ? "Yes" : "No ");
- pci_read_config_byte(bmide_dev, 0x74, &reg53h);
- p += sprintf(p,
-             "FIFO Status: contains %d Words, runs%s%s\n",
-             (reg53h & 0x3f),
-             (reg53h & 0x40) ? " OVERWR" : "",
-             (reg53h & 0x80) ? " OVERRD." : ".");
-
- p += sprintf(p,
-             "-----primary channel"
-             "-----secondary channel"
-             "-----\n\n");
-
- pci_read_config_byte(bmide_dev, 0x09, &reg53h);
- p += sprintf(p,
-             "channel status:    %s"

```



```

- "                %s\n",
- (reg53h & 0x20) ? "On " : "Off",
- (reg53h & 0x10) ? "On " : "Off" );
-
- p += sprintf(p,
- "both channels togh: %s"
- "                %s\n",
- (c0&0x80) ? "No " : "Yes",
- (c1&0x80) ? "No " : "Yes" );
-
- pci_read_config_byte(bmide_dev, 0x76, &reg53h);
- p += sprintf(p,
- "Channel state:    %s                %s\n",
- channel_status[reg53h & 0x07],
- channel_status[(reg53h & 0x70) >> 4] );
-
- pci_read_config_byte(bmide_dev, 0x58, &reg5xh);
- pci_read_config_byte(bmide_dev, 0x5c, &reg5yh);
- p += sprintf(p,
- "Add. Setup Timing:  %dT"
- "                %dT\n",
- (reg5xh & 0x07) ? (reg5xh & 0x07) : 8,
- (reg5yh & 0x07) ? (reg5yh & 0x07) : 8 );
-
- pci_read_config_byte(bmide_dev, 0x59, &reg5xh);
- pci_read_config_byte(bmide_dev, 0x5d, &reg5yh);
- p += sprintf(p,
- "Command Act. Count: %dT"
- "                %dT\n"
- "Command Rec. Count: %dT"
- "                %dT\n\n",
- (reg5xh & 0x70) ? ((reg5xh & 0x70) >> 4) : 8,
- (reg5yh & 0x70) ? ((reg5yh & 0x70) >> 4) : 8,
- (reg5xh & 0x0f) ? (reg5xh & 0x0f) : 16,
- (reg5yh & 0x0f) ? (reg5yh & 0x0f) : 16 );
-
- p += sprintf(p,
- "-----drive0-----drive1"
- "-----drive0-----drive1-----\n\n");
- p += sprintf(p,
- "DMA enabled:    %s                %s"
- "                %s                %s\n",
- (c0&0x20) ? "Yes" : "No ",
- (c0&0x40) ? "Yes" : "No ",
- (c1&0x20) ? "Yes" : "No ",
- (c1&0x40) ? "Yes" : "No " );
-
- pci_read_config_byte(bmide_dev, 0x54, &reg5xh);

```

```

- pci_read_config_byte(bmide_dev, 0x55, &reg5yh);
- q = "FIFO threshold:  %2d Words      %2d Words"
- "      %2d Words      %2d Words\n";
- if (rev < 0xc1) {
- if ((rev == 0x20) &&
- (pci_read_config_byte(bmide_dev, 0x4f, &tmp), (tmp &= 0x20))) {
- p += sprintf(p, q, 8, 8, 8, 8);
- } else {
- p += sprintf(p, q,
- (reg5xh & 0x03) + 12,
- ((reg5xh & 0x30)>>4) + 12,
- (reg5yh & 0x03) + 12,
- ((reg5yh & 0x30)>>4) + 12 );
- }
- } else {
- int t1 = (tmp = (reg5xh & 0x03)) ? (tmp << 3) : 4;
- int t2 = (tmp = ((reg5xh & 0x30)>>4)) ? (tmp << 3) : 4;
- int t3 = (tmp = (reg5yh & 0x03)) ? (tmp << 3) : 4;
- int t4 = (tmp = ((reg5yh & 0x30)>>4)) ? (tmp << 3) : 4;
- p += sprintf(p, q, t1, t2, t3, t4);
- }
-
-#if 0
- p += sprintf(p,
- "FIFO threshold:  %2d Words      %2d Words"
- "      %2d Words      %2d Words\n",
- (reg5xh & 0x03) + 12,
- ((reg5xh & 0x30)>>4) + 12,
- (reg5yh & 0x03) + 12,
- ((reg5yh & 0x30)>>4) + 12 );
-#endif
-
- p += sprintf(p,
- "FIFO mode:      %s      %s      %s      %s\n",
- fifo[((reg5xh & 0x0c) >> 2)],
- fifo[((reg5xh & 0xc0) >> 6)],
- fifo[((reg5yh & 0x0c) >> 2)],
- fifo[((reg5yh & 0xc0) >> 6)] );
-
- pci_read_config_byte(bmide_dev, 0x5a, &reg5xh);
- pci_read_config_byte(bmide_dev, 0x5b, &reg5xh1);
- pci_read_config_byte(bmide_dev, 0x5e, &reg5yh);
- pci_read_config_byte(bmide_dev, 0x5f, &reg5yh1);
-
- p += sprintf(p,/*
- "-----drive0-----drive1"
- "-----drive0-----drive1-----\n")*/
- "Dt RW act. Cnt  %2dT      %2dT"

```

```

- "          %2dT          %2dT\n"
- "Dt RW rec. Cnt  %2dT          %2dT"
- "          %2dT          %2dT\n\n",
- (reg5xh & 0x70) ? ((reg5xh & 0x70) >> 4) : 8,
- (reg5xh1 & 0x70) ? ((reg5xh1 & 0x70) >> 4) : 8,
- (reg5yh & 0x70) ? ((reg5yh & 0x70) >> 4) : 8,
- (reg5yh1 & 0x70) ? ((reg5yh1 & 0x70) >> 4) : 8,
- (reg5xh & 0x0f) ? (reg5xh & 0x0f) : 16,
- (reg5xh1 & 0x0f) ? (reg5xh1 & 0x0f) : 16,
- (reg5yh & 0x0f) ? (reg5yh & 0x0f) : 16,
- (reg5yh1 & 0x0f) ? (reg5yh1 & 0x0f) : 16 );
-
- p += sprintf(p,
- "-----UDMA Timings"
- "-----\n\n");
-
- pci_read_config_byte(bmide_dev, 0x56, &reg5xh);
- pci_read_config_byte(bmide_dev, 0x57, &reg5yh);
- p += sprintf(p,
- "UDMA:          %s          %s"
- "          %s          %s\n"
- "UDMA timings:  %s          %s"
- "          %s          %s\n\n",
- (reg5xh & 0x08) ? "OK" : "No",
- (reg5xh & 0x80) ? "OK" : "No",
- (reg5yh & 0x08) ? "OK" : "No",
- (reg5yh & 0x80) ? "OK" : "No",
- udmaT[(reg5xh & 0x07)],
- udmaT[(reg5xh & 0x70) >> 4],
- udmaT[reg5yh & 0x07],
- udmaT[(reg5yh & 0x70) >> 4] );
-
- return p-buffer; /* => must be less than 4k! */
-}
-#endif /* defined(DISPLAY_ALI_TIMINGS) && defined(CONFIG_IDE_PROC_FS) */
-
/**
 * ali_set_pio_mode - set host controller for PIO mode
 * @drive: drive
@@ -465,14 +233,6 @@ static unsigned int __devinit init_chipset_ali15x3 (struct pci_dev *dev,
const c

    isa_dev = pci_get_device(PCI_VENDOR_ID_AL, PCI_DEVICE_ID_AL_M1533, NULL);

-#if defined(DISPLAY_ALI_TIMINGS) && defined(CONFIG_IDE_PROC_FS)
- if (!ali_proc) {
- ali_proc = 1;
- bmide_dev = dev;

```

```
- ide_pci_create_host_proc("ali", ali_get_info);
- }
-#endif /* defined(DISPLAY_ALI_TIMINGS) && defined(CONFIG_IDE_PROC_FS) */
-
  local_irq_save(flags);

  if (m5229_revision < 0xC2) {
```

Subject: Re: [PATCH 1/2] ide: remove /proc/ide/ali
Posted by [Bartlomiej Zolnierkie](#) on Thu, 03 Apr 2008 21:50:41 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Thursday 03 April 2008, Alexey Dobriyan wrote:
> On Wednesday 02 April 2008 23:20:28 Bartlomiej Zolnierkiewicz wrote:
> > Could you please re-do patch #1/2 to remove /proc/ide/ali instead?
> >
> > [like we did for all other /proc/ide/<host_driver> files]
>
> Oh, even better!
>
>
> [PATCH 1/2] ide: remove /proc/ide/ali
>
> Bart says: "can be done from user-space and is not especially interesting
> even when debugging problems (raw PCI config space dump is far more useful)."
>
> Signed-off-by: Alexey Dobriyan <adobriyan@openvz.org>

thanks, applied
