Re: 2.6.5 yenta_socket irq 10: nobody cared!

Source: http://linux.derkeiler.com/Mailing−Lists/Kernel/2004−04/1918.html

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From: Daniel Ritz (*daniel.ritz_at_gmx.ch*)
Date: 04/08/04

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To: Kitt Tientanopajai <kitt@gear.kku.ac.th>
Date:   Thu, 8 Apr 2004 17:17:15 +0200
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On Thursday 08 April 2004 09:37, Kitt Tientanopajai wrote:
> Hi,
>
> > ok, try the attached one...at least it compiles..
> >
> > rgds
> > −daniel
>
> Yes, the patch does work :) Now, I can insert card to the slot controlled by o2micro, no freeze :) My orinoco on TI controller works nicely too, no TX error anymore :)
>
> Thank you very much for your help.
> kitt
>

you're welcome. but i now have the feeling that it's wrong. so another question:
my patch also changes the interrupt assignment for the USB controller at 00:1d.1
so the question is: does this one work ok? or is there an interrupt storm as soon
as you use the device? (like with yenta_socket before)

i looked at the spec of the o2micro controller. from your kernel 2.4−with−pcmcia−cs
output i can see that the o2micro is configured in pci/way mode which means
interrupts are serialized. so it is possible that the INTA/INTB pins are not
connected on the o2micro. the serial interrupt controller in the 82801CAM
assignes INTA on serial to PIRQA, INTB to PIRQB and so on...

so if the o2micro's INTA are actually connected, it's easy: just set the bit
in the config register and be done with it. if it's not connected than it's
harder. we need to find the right interrupt assignment for the serial
interrupt controller.

can you please undo my previous patch and apply the attached one instead.
the socket may be not working, but it prints the relevant registers from
the o2micro chip.

−daniel

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===== drivers/pcmcia/yenta_socket.c 1.53 vs edited =====
−−− 1.53/drivers/pcmcia/yenta_socket.c Thu Mar 25 11:20:36 2004
+++ edited/drivers/pcmcia/yenta_socket.c Thu Apr 8 16:56:07 2004
@@ −665,6 +665,7 @@
 #include "ti113x.h"
 #include "ricoh.h"
 #include "topic.h"
+#include "o2micro.h"

 enum {
        CARDBUS_TYPE_DEFAULT = −1,
@@ −673,7 +674,8 @@
        CARDBUS_TYPE_TI12XX,
        CARDBUS_TYPE_TI1250,
        CARDBUS_TYPE_RICOH,
− CARDBUS_TYPE_TOPIC97
+ CARDBUS_TYPE_TOPIC97,
+ CARDBUS_TYPE_O2MICRO,
 };

 /*
@@ −713,6 +715,9 @@
        [CARDBUS_TYPE_TOPIC97] = {
                .override = topic97_override,
        },
+ [CARDBUS_TYPE_O2MICRO] = {
+ .override = o2micro_override,
+ },
 };


@@ −1030,6 +1035,13 @@

        CB_ID(PCI_VENDOR_ID_TOSHIBA, PCI_DEVICE_ID_TOSHIBA_TOPIC97, TOPIC97),
        CB_ID(PCI_VENDOR_ID_TOSHIBA, PCI_DEVICE_ID_TOSHIBA_TOPIC100, TOPIC97),
+
+ CB_ID(PCI_VENDOR_ID_O2, PCI_DEVICE_ID_O2_6729, O2MICRO),
+ CB_ID(PCI_VENDOR_ID_O2, PCI_DEVICE_ID_O2_6730, O2MICRO),
+ CB_ID(PCI_VENDOR_ID_O2, PCI_DEVICE_ID_O2_6812, O2MICRO),
+ CB_ID(PCI_VENDOR_ID_O2, PCI_DEVICE_ID_O2_6832, O2MICRO),
+ CB_ID(PCI_VENDOR_ID_O2, PCI_DEVICE_ID_O2_6836, O2MICRO),
+ CB_ID(PCI_VENDOR_ID_O2, PCI_DEVICE_ID_O2_6933, O2MICRO),

        /* match any cardbus bridge */
        CB_ID(PCI_ANY_ID, PCI_ANY_ID, DEFAULT),
===== drivers/pcmcia/i82365.c 1.49 vs edited =====
−−− 1.49/drivers/pcmcia/i82365.c Sun Mar 14 21:10:41 2004
+++ edited/drivers/pcmcia/i82365.c Thu Apr 8 17:07:06 2004
@@ −65,7 +65,6 @@
 #include "cirrus.h"
 #include "vg468.h"
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 #include "ricoh.h"
−#include "o2micro.h"

 #ifdef DEBUG
 static const char *version =
===== drivers/pcmcia/o2micro.h 1.3 vs edited =====
−−− 1.3/drivers/pcmcia/o2micro.h Sat Oct 19 01:11:25 2002
+++ edited/drivers/pcmcia/o2micro.h Thu Apr 8 16:59:14 2004
@@ −48,6 +48,9 @@
 #ifndef PCI_DEVICE_ID_O2_6812
 #define PCI_DEVICE_ID_O2_6812 0x6872
 #endif
+#ifndef PCI_DEVICE_ID_O2_6933
+#define PCI_DEVICE_ID_O2_6933 0x6933
+#endif

 /* Additional PCI configuration registers */

@@ −103,6 +106,10 @@
 #define O2_MODE_D_W97_IRQ 0x40
 #define O2_MODE_D_ISA_IRQ 0x80

+#define O2_MODE_D_IRQ_PCPCI 0x00
+#define O2_MODE_D_IRQ_SER 0x02
+#define O2_MODE_D_IRQ_PCI 0x03
+
 #define O2_MHPG_DMA 0x3c
 #define O2_MHPG_CHANNEL 0x07
 #define O2_MHPG_CINT_ENA 0x08
@@ −119,5 +126,25 @@
 #define O2_MODE_E_SPKR_OUT 0x02
 #define O2_MODE_E_LED_OUT 0x08
 #define O2_MODE_E_SKTA_ACTV 0x10
+
+static int o2micro_override(struct yenta_socket *socket)
+{
+ u8 mode_d;
+ u32 mux_ctrl;
+
+ mode_d = config_readb(socket, O2_MODE_D);
+ mux_ctrl = config_readl(socket, O2_MUX_CONTROL);
+
+ printk(KERN_INFO "Yenta O2: socket %s, Mux Ctrk: %08x, Mode D: %02x\n",
+ pci_name(socket−>dev), mux_ctrl, mode_d);
+
+ /* XXX: hack: make sure PCI interrupt are not serialized */
+ if ((mode_d & O2_MODE_D_IRQ_MODE) == O2_MODE_D_IRQ_SER) {
+ mux_ctrl &= ~O2_MUX_SER_PCI;
+ config_writel(socket, O2_MUX_CONTROL, mux_ctrl);
+ }
+
```

```
+ return 0;
+}

 #endif /* _LINUX_O2MICRO_H */
```

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