

Re: [PATCH] TSL2550 support (I2C device driver)

Source: <http://linux.derkeiler.com/Mailing-Lists/Kernel/2007-01/msg07954.html>

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 - *Date:* Tue, 30 Jan 2007 11:26:42 +0100
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On Mon, Jan 29, 2007 at 06:39:50PM -0800, Andrew Morton wrote:

```
+/* Insmodule parameters */
+I2C_CLIENT_INSMOD_1(tsl2550);
+
+static int operating_mode = 0;
```

The `= 0' is unneeded and undesirable.

Fixed.

```
...
+static int tsl2550_get_adc_value(struct i2c_client *client, int channel)
+{
+ u8 cmd = channel == 0 ? TSL2550_READ_ADC0 :
TSL2550_READ_ADC1;
+ int timeout, ret;
+
+ /* Read ADC channel waiting at most 400ms (see data sheet for further
+ * info) */
+ for (timeout = 400; timeout > 0; timeout--) {
+ i2c_smbus_write_byte(client, cmd);
+ mdelay(1);
+ ret = i2c_smbus_read_byte(client);
+ if (ret < 0)
+ return ret;
+ else if (ret & 0x0080)
+ break;
+ }
+ if (timeout == 0)
+ return -EIO;
+ return ((u8) ret) & 0x7f; /* remove the "valid" bit */
+}
```

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eek. Is there no way to avoid the busy-wait? We cannot sleep here?

That's why I have to retry reading data for at most 400ms otherwise the chip will start a new ADC conversion.

I can replace `mdelay(1)` with `schedule_timeout(HZ/1000)` but doing this I'm not sure that just 1ms has elapsed. Also the chip has no irq lines to use for that.

```
+/* ---- LUX calculation
----- */
+
+#define TSL2550_MAX_LUX 1846
+
+static u8 ratio_lut[] = {
+ 100, 100, 100, 100, 100, 100, 100, 100,
+ [snip]
+
+static u16 count_lut[] = {
+ 0, 1, 2, 3, 4, 5, 6, 7,
+ [snip]
```

These tables could perhaps be const?

Fixed.

```
+static ssize_t tsl2550_show_power_state(struct device *dev, struct
device_attribute *attr, char *buf)
```

It's preferred to try to fit the code into an 80-col window. (But some people disagree with this specifically for function definitions such as this).

I agree with them. :)

Preferred coding style is

```
err = i2c_detach_client(client);
if (err)
return err;
```

(multiple places)

Re: [PATCH] TSL2550 support (I2C device driver)

Fixed.

I'm going to repost the patch after some tests.

Thanks,

Rodolfo

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