BCM5974 Driver (bcm5974)

Copyright: © 2008-2009 Henrik Rydberg <rydberg@euromail.se>

The USB initialization and package decoding was made by Scott Shawcroft as part of the touchd user-space driver project:

Copyright: © 2008 Scott Shawcroft (scott.shawcroft@gmail.com)

The BCM5974 driver is based on the appletouch driver:

Copyright: © 2001-2004 Greg Kroah-Hartman (greg@kroah.com)
Copyright: © 2005 Johannes Berg (johannes@sipsolutions.net)
Copyright: © 2005 Stelian Pop (stelian@popies.net)
Copyright: © 2005 Frank Arnold (frank@scirocco-5v-turbo.de)
Copyright: © 2005 Peter Osterlund (petero2@telia.com)
Copyright: © 2005 Michael Hanselmann (linux-kernel@hansmi.ch)
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This driver adds support for the multi-touch trackpad on the new Apple Macbook Air and Macbook Pro laptops. It replaces the appletouch driver on those computers, and integrates well with the synaptics driver of the Xorg system.

Known to work on Macbook Air, Macbook Pro Penryn and the new unibody Macbook 5 and Macbook Pro 5.

Usage

The driver loads automatically for the supported usb device ids, and becomes available both as an event device (/dev/input/event*) and as a mouse via the mousedev driver (/dev/input/mice).

USB Race

The Apple multi-touch trackpads report both mouse and keyboard events via different interfaces of the same usb device. This creates a race condition with the HID driver, which, if not told otherwise, will find the standard HID mouse and keyboard, and claim the whole device. To remedy, the usb product id must be listed in the mouse_ignore list of the hid driver.

Debug output

To ease the development for new hardware version, verbose packet output can be switched on with the debug kernel module parameter. The range [1-9] yields different levels of verbosity. Example (as root):

```
echo -n 9 > /sys/module/bcm5974/parameters/debug

tail -f /var/log/debug

echo -n 0 > /sys/module/bcm5974/parameters/debug
```

Trivia

The driver was developed at the ubuntu forums in June 2008 [1], and now has a more permanent home at bitmath.org [2].

[1]   http://ubuntuforums.org/showthread.php?t=840040

[2]   http://bitmath.org/code/