Razercfg - Sniffing the USB protocol

When adding support for a new mouse, or when debugging issues, it can be usefull to capture the original protocol with Razer official configuration software.

Requirements

No matter the method, the basic requirements are:

- a Windows machine with [Razer Synapse](#) installed (note: you'll need to register)
- another mouse: to reduce protocol chatter by avoiding moving the mouse spied on

Using USBPcap or Wireshark

You can sniff the USB protocol on Windows using [USBPcap](#). Take a look at the [illustrated tour](#) for more information. Altenatively you can use [Wireshark](#).

Using a guest VirtualBox VM and usbmon or QEMU and usbmon

1. Install Windows: you can get an evaluation copy (usable for 90 days) of [Windows 8/8.1/10](#) (note: you'll need to register)

2. Find your mouse USB bus and device numbers:

```
$ lsusb | grep 'ID 1532'
Bus 005 Device 010: ID 1532:0040 Razer USA, Ltd
$ bus=5 dev=10
```

1. configure VM access to the host USB: see the relevant [USB support](#) section in the [VirtualBox manual](#)

2. load the usbmon module:

```
sudo modprobe usbmon
```

1. monitor the bus, filtering for device specific messages:

```
sudo cat /sys/kernel/debug/usb/usbmon/${bus}u | awk "{ if (\$4 ~ /:0*${bus}:0*${dev}:[0-9]+$/) print \$0 }"
```

See the [usbmon documentation](#) for the details of the output format.

Alternatively to VirtualBox VM, you may use [QEMU](#).