Emulate a Bluetooth Keyboard on a Raspberry Pi
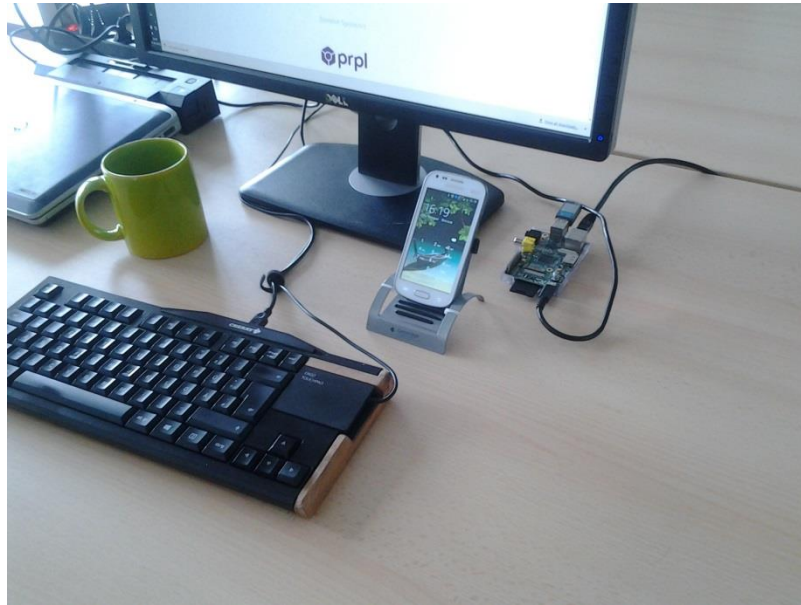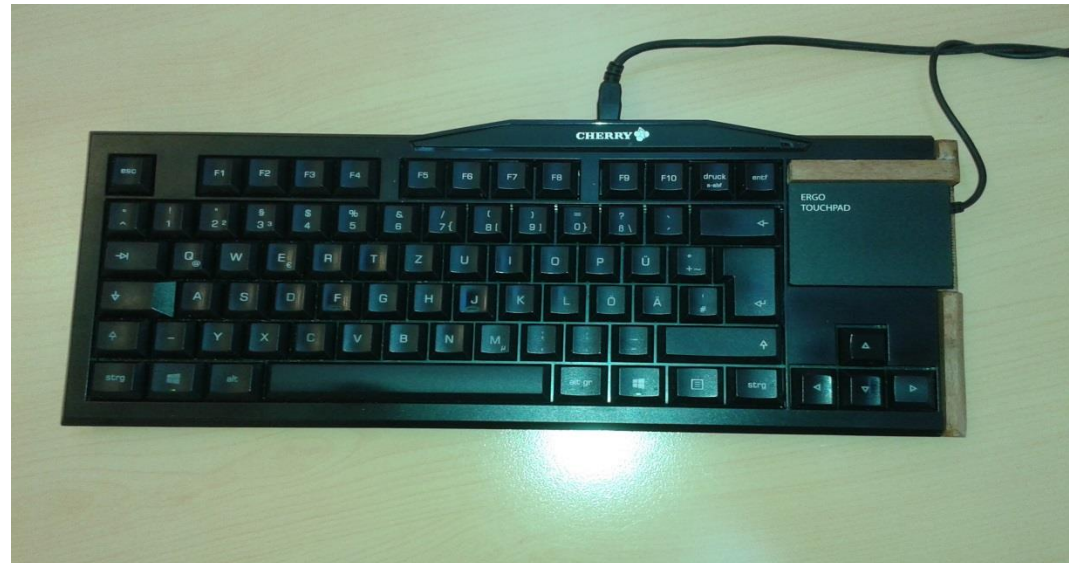

Every keyboard can be a bluetooth keyboard

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https://github.com/rdubois440/btkbdemu

What is it good for

- When I sit at my desk, I want to use my comfortable keyboard for everything I have to type
- A single keyboard on my desk (and no mouse)
- Easily switch from main computer to phone, to tablet…(Unlimited number)
- Very convenient when the phone is charging

Equipment

- Raspberry Pi connected to the network

- Power Supply

- SD Memory Card

- Bluetooth Dongle
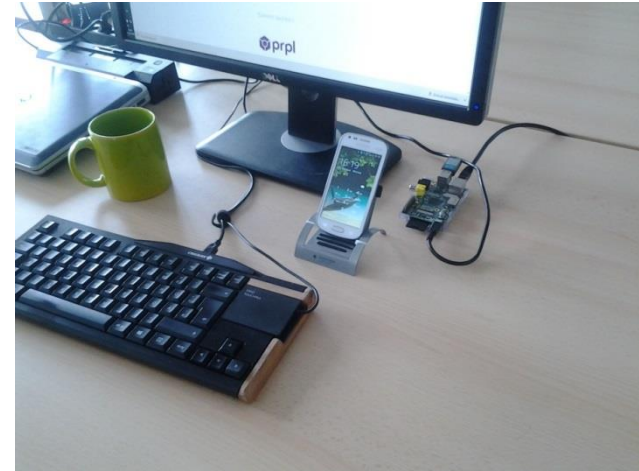
How to Use it?


```
192.168.7.2 - PuTTY

pkg[2] pkg[4]:  00 52
Press F12 to exit

Input 1b 5b  41
pkg[2] pkg[4]:  00 52
Press F12 to exit

Input 1b 5b  41
pkg[2] pkg[4]:  00 52
Press F12 to exit
```

- telnet or ssh to the Raspberry PI
- (One time pairing)
- Run the program btkbdemu
- Type …
- F12 to terminate

OpenWrt Configuration

- Use Default OpenWrt for Raspberry Pi
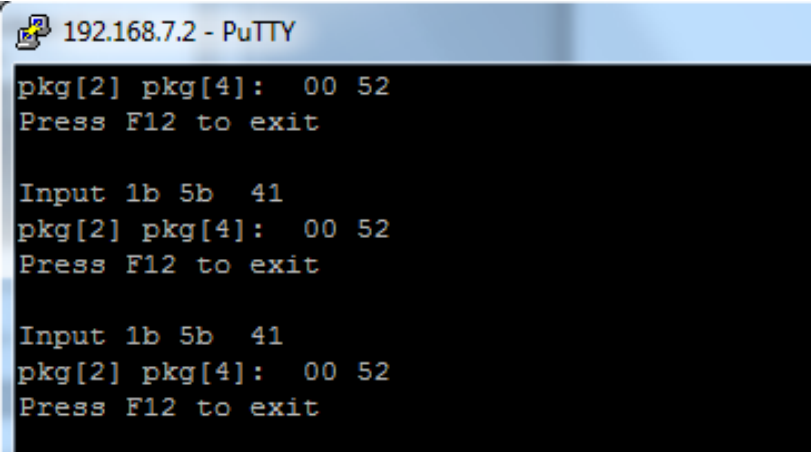
- Configure Bluetooth and dependencies
- Create and enable the module btkbdemu

btkbdemu Program

- Runs as a console program

- Configured to emulate a bluetooth keyboard

- Reads keystrokes from stdin, translates and passes to the bluetooth interface

Future Improvements

- Some keyboard keys are captured by the desktop, and not available in btkbdemu (capture the keyboard and mouse like the virtual machines do)

- Handle the mouse

- Show the screen on the Desktop... Or just use VNC, but this is a different project

- Beaglebone Black support on OpenWrt

Pairing

- Start 2 windows on Raspi – First window create the sdp record with
  ```
  /root/rene/btkbdemu -s
  ```

- - Second window – Check the sdp record
  ```
  sdptool browse local
  Browsing FF:FF:FF:00:00:00 ...
  Service Name: Collin's Fake Bluetooth Keyboard
  Service Description: http://www.mulliner.org/bluetooth
  ```

- From the phone, scan for bt devices.
  Raspi should appear as a keyboard ! not a computer

- On Raspi, start the pairing with
  ```
  bluez-simple-agent hci0    FC:19:10:FE:DE:9F
  RequestPinCode (/org/bluez/599/hci0/dev_FC_19_10_FE_DE_9F)
  Enter PIN Code:
  ```

- Start the pairing form the device.
  Device will provide a pin. Enter the pin in the Raspi. Pairing process should succeed !

- ```
  Enter PIN Code: 337080
  Release
  New device (/org/bluez/599/hci0/dev_FC_19_10_FE_DE_9F)
  ```
- Done !

More Information

- https://github.com/rdubois440/btkbdemu

Credits

- http://www.mulliner.org/bluetooth/xkbdbthid.php
- http://www.linuxuser.co.uk/tutorials/emulate-a-bluetooth-keyboard-with-the-raspberry-pi
- https://delog.wordpress.com/2014/10/29/bluetooth-on-raspberry-pi-with-buildroot/
- https://hacks.pmf.io/2015/06/24/the-beaglebone-black-as-a-smart-kvm/