

### 1.1 - Description of modification/addition to Linux

- a) Our group intends to truncate the process of toggling between states(on/off) of a host's Bluetooth controller, by adding additional logic to the Bluetooth Kernel Module.

### 1.2 - Rationale as to why this is a good idea, or what the good points of it are

- a) Instead of going through multiple installation steps, loading in the module, and running both "bluetoothctl" and "power on", the process of toggling between states should be as easy as the GUI implementation.

Further motivation stems from the layers in a networking system that serve as points of interaction among its participating computers. Modifying the Linux kernel to make syntactically shorter bluetooth commands reflects a machine's interactions with the physical layer at the bottom of the stack, with the object of our project as the embedded Bluetooth radio in our laptops. Consequently, we want to work at the link layer by mediating the transmission of sound and byte data, from a fixed or portable device to our PC, through our modified module.

### 1.3 - Preliminary list of [possible] Linux modules that will be modified/affected

- a) bluetooth(bt), including:
  - i) btuart\_cs
  - ii) btaudio
  - iii) bttv
  - iv) bt848
  - v) bt878

### 1.4 - Preliminary list of any new modules that you will produce [or 'Not Applicable' if there are none]

- a) Not Applicable