

To: Hussein Badr  
Subject: PF\_PACKET useful link

Dear Professor,

As we have discussed, I am sending you the PF\_PACKET link which I found really useful when writing a small program to check PF\_PACKET & RAW\_SOCKET communication:

[http://aschauf.landshut.org/fh/linux/udp\\_vs\\_raw/ch01s03.html#id2766267](http://aschauf.landshut.org/fh/linux/udp_vs_raw/ch01s03.html#id2766267)

(note that `PF_PACKET` and `AF_PACKET` can be used interchangeably when declaring the socket)

A few words of caution:

- People who are going to use this they have to make sure to provide their own protocol number at the following place:

```
s = socket(PF_PACKET, SOCK_RAW, htons(USID_PROTO));  
                                     /*### sender and receiver side */  
eh->h_proto = USID_PROTO;
```

Here `USID_PROTO` will be the student's own protocol number.

- Take care when mentioning the interface. For example, suppose,

```
/*index of the network device*/  
socket_address.sll_ifindex = 2;  
/* ##### here we have to put the correct network interface index  
otherwise it will not work*/
```

The MAC addresses should be filled based on the designated interface and the neighbouring node off that interface; e.g.,

```
/*MAC address on interface 2*/  
unsigned char src_mac[6] = {0x00, 0x01, 0x02, 0xFA, 0x70, 0xAA};  
/*neighbour host MAC address*/  
unsigned char dest_mac[6] = {0x00, 0x04, 0x75, 0xC8, 0x28, 0xE5};  
  
/*MAC - begin*/  
socket_address.sll_addr[0] = 0x00;  
socket_address.sll_addr[1] = 0x04;  
socket_address.sll_addr[2] = 0x75;  
socket_address.sll_addr[3] = 0xC8;  
socket_address.sll_addr[4] = 0x28;  
socket_address.sll_addr[5] = 0xE5;  
/*MAC - end*/  
socket_address.sll_addr[6] = 0x00; /*not used*/  
socket_address.sll_addr[7] = 0x00; /*not used*/
```

The rest of the code should be pretty straightforward to follow.