

```

protocol ip {           /* declaration of datagram header */
    vershl { ip[0:1] }
    vers { (vershl & 0xf0) >> 4 }
    tmphl { (vershl & 0x0f) }
    hlen { tmphl << 2 }
    totlen { ip[2:2] }
    ident { ip[4:2] }
    frags { ip[6:2] }
    ttl { ip[8:1] }
    proto { ip[9:1] }
    cksum { ip[10:2] }
    source { ip[12:4] }
    dest { ip[16:4] }

    demux {
        (proto == 6) { tcp at hlen }
        (proto == 17) { udp at hlen }
        (default) { ipunknown at hlen }

        // note: other protocol types can be added here
    }
}                               // end of datagram header declaration

```