• Mail
  o RFC 822 cared about how header fields were defined
  o MIME (Multi-purpose Internet Mail Extension) – provided new header fields concerned with body of message
  o SMIME (Secure MIME) – Security enhancement; 4 new functionalities to MIME:
    ▪ Enveloped data
    ▪ Signed data – need SMIME interface
    ▪ Clearsigned data – don’t need SMIME client
    ▪ Signed and enveloped
  o DKIM (Domain Keys Identified Mail)
    ▪ Authenticates at domain/administrative level
    ▪ One domain can query another domain
    ▪ Domains can verify that they sent messages
  o MHS (Message Handling System)
    ▪ MUA (Message User Agent)
    ▪ MSA (Message Submission Agent)
    ▪ MTA (Message Transfer Agent)
    ▪ MDA (Message Delivery Agent)
• SSL (Secure Socket Layer) – same as TLS (Transport Layer Security)
  o Two-layer protocol
    ▪ Bottom layer is record protocol
    ▪ Top layer can have any high level protocols, but the 3 that are required are handshake, cyber spec, and alert protocols