Network architecture is set of layers and protocols

Protocol refers to both specification and implementation

Network communication very complex, so layering used

Reduces design complexity and testing, maintenance simplified

Easy to replace layers with different versions as well

Application layer: service location – support multimedia – wired and wireless access to www

Presentation layer: conversion of data structures from abstract to concrete, e.g., a banking record

Session layer: dialogue control

Transport layer: accept data from the above layer, split in smaller units and pass to the network layer, establish an end-to-end connection – quality of service – flow and congestion control

Network layer: control the operation in a subnet, routing packets – addressing - handover between networks.

Data link layer: transform a raw transmission in a line free of undetected transmission errors, Accessing the medium – multiplexing (break the data in data frames) - error correction – synchronization

Physical layer: conversion of stream of bits into signals