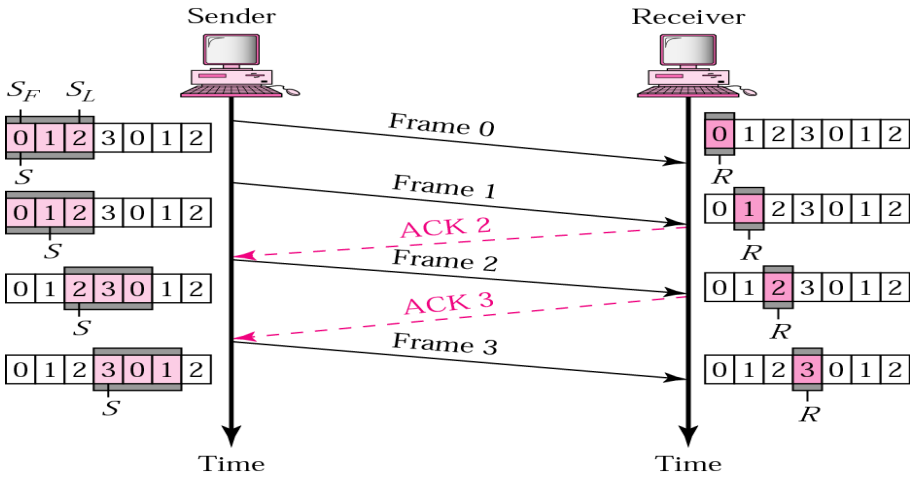
Government Women Engg College,Ajmer
B.Tech VI Semester II Mid Term Examination – April 2018
Subject:Computer Networks **Branch :IT**
Faculty Name:Ms Bhawana Maurya

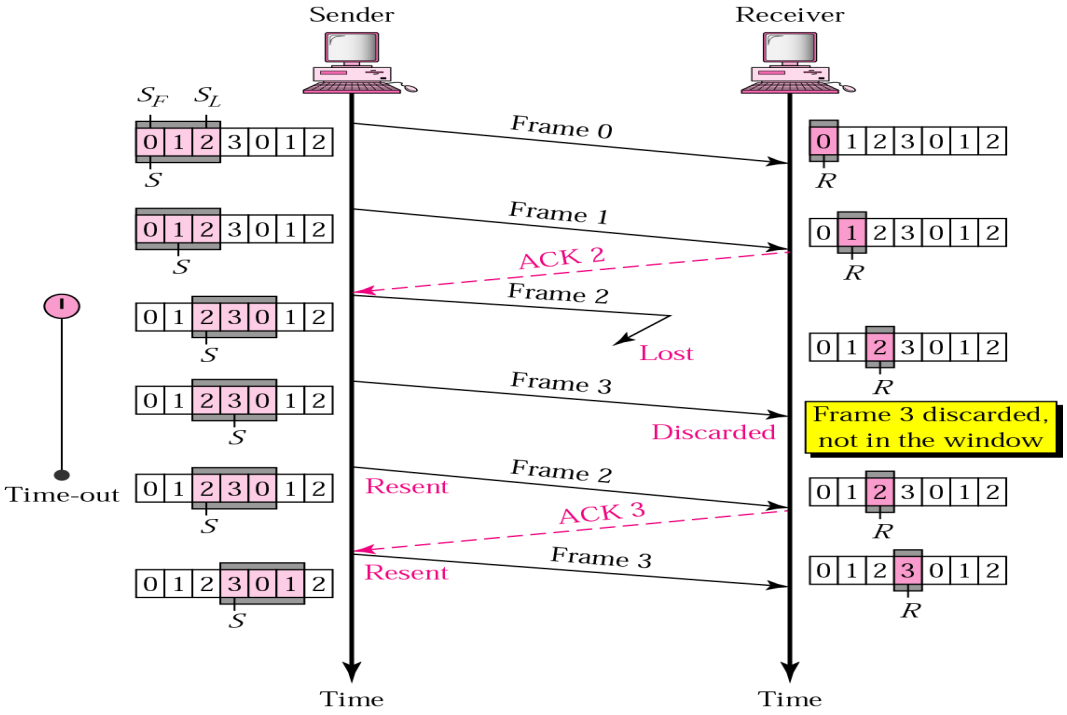
Q1.Define Flow Control and Explain Go Back N Protocol.

Flow control refers to a set of procedures used to restrict the amount of data that the sender can send before

waiting for acknowledgment.

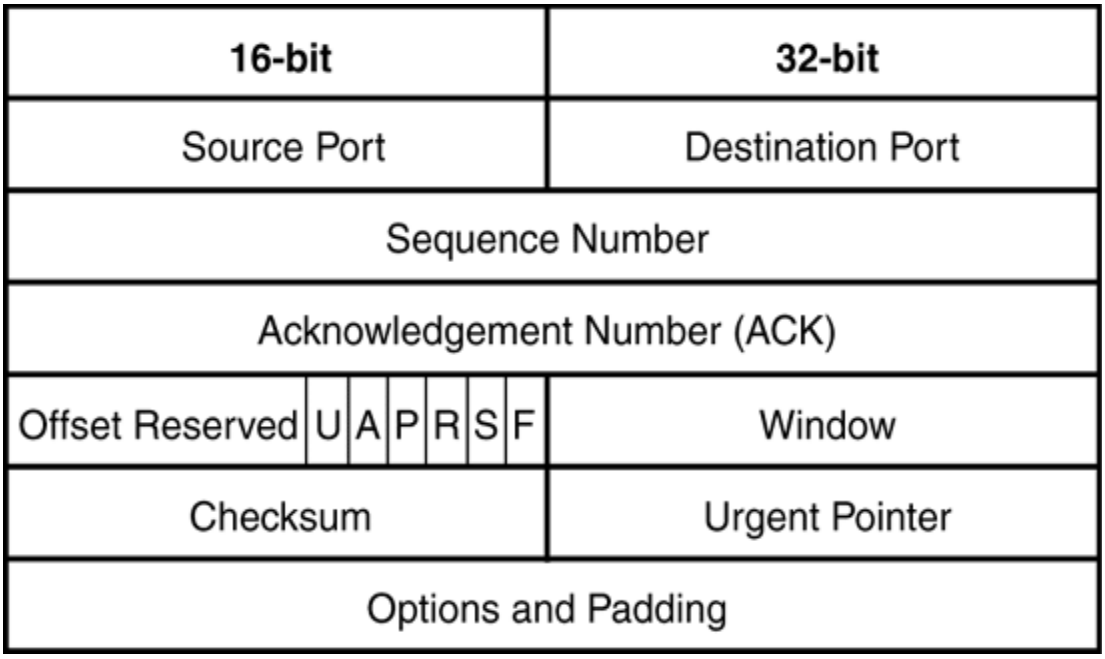
Go Back N Protocol :
1.We can send up to W frames before worrying about ACKs.
2.We keep a copy of these frames until the ACKs arrive.
3.This procedure requires additional features to be added to Stop-and-Wait ARQ.
4.Frames from a sender are numbered sequentially.
5.If the header of the frame allows m bits for sequence number, the sequence numbers range from 0 to 2 m – 1. for m = 3, sequence numbers are: 1, 2, 3, 4, 5, 6, 7.





Q2.Draw and Explain UDP and TCP Header.

TCP Header Structure:



UDP Header Structure:

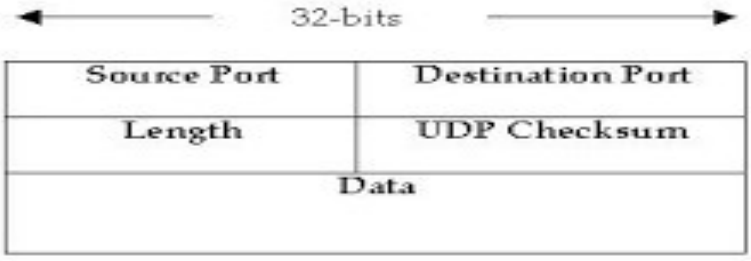


Figure 8: UDP segment structure

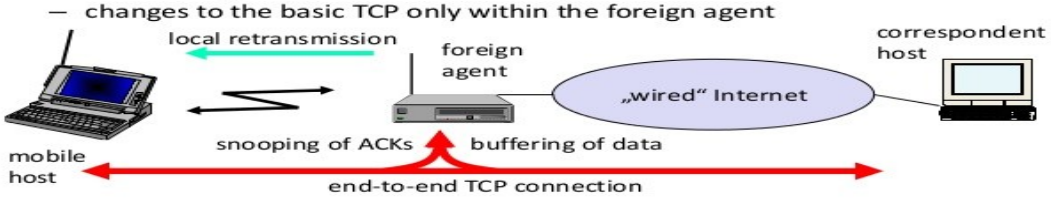
TCP	UDP
Reliable—monitors message transmission, tracks data transfer to ensure receipt of all packets	Unreliable—no concept of acknowledgment, retransmission, or timeout –
Ordered—buffering provisions to ensure correct order of data packets	Not ordered—data arrives in order of receipt
Heavyweight—dedicated connection, provisions for speed and congestion control	Lightweight—no dedicated end-to-end connection, no congestion control
Streaming	Datagram oriented
Heavy overhead	Light overhead
Lower speed	Higher speed

Q3.Explain Indirect,Snooping and Mobile TCP.

Snooping TCP

„Transparent“ extension of TCP within the foreign agent

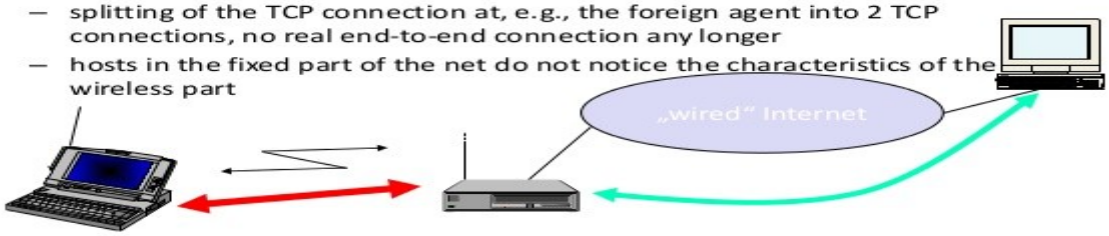
- buffering of packets sent to the mobile host
- lost packets on the wireless link (both directions!) will be retransmitted immediately by the mobile host or foreign agent, respectively (so called “local” retransmission)
- the foreign agent therefore “snoops” the packet flow and recognizes acknowledgements in both directions, it also filters ACKs
- changes to the basic TCP only within the foreign agent



Indirect TCP I

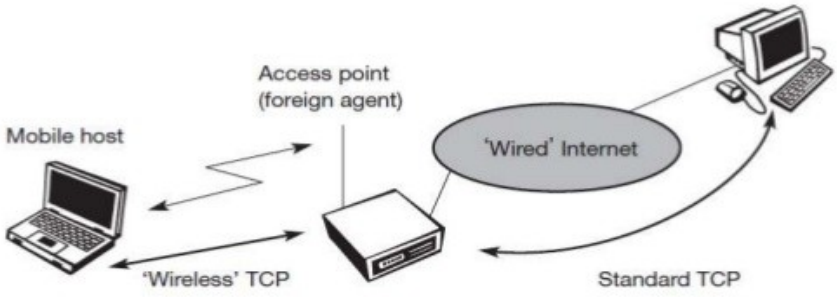
Indirect TCP or I-TCP segments the connection

- no changes to the TCP protocol for hosts connected to the wired Internet, millions of computers use (variants of) this protocol
- optimized TCP protocol for mobile hosts
- splitting of the TCP connection at, e.g., the foreign agent into 2 TCP connections, no real end-to-end connection any longer
- hosts in the fixed part of the net do not notice the characteristics of the wireless part



Mobile TCP - Working

- M-TCP splits the TCP connection into two parts as I-TCP does. An unmodified TCP is used on the standard host-**supervisory host (SH)** connection, while an optimized TCP is used on the SH-MH connection.



Q4.Write Short Note on WWW and DNS.

Answer : The World Wide Web (abbreviated WWW or the Web) is an information space where documents and other web resources are identified by Uniform Resource Locators (URLs), interlinked by hypertext links, and can be accessed via the Internet.[1] English scientist Tim Berners-Lee invented the World Wide Web in 1989.Many formal standards and other technical specifications and software define the operation of different aspects of the World Wide Web, the Internet, and computer information exchange. Usually, when web standards are discussed, the following publications are seen as foundational:

1. Recommendations for markup languages, especially HTML and XHTML, from the W3C. These define the structure and interpretation of hypertext documents.
2. Recommendations for stylesheets, especially CSS, from the W3C
3. Standards for ECMAScript (usually in the form of JavaScript), from Ecma International
4. Recommendations for the Document Object Model, from W3C.

Additional publications provide definitions of other essential technologies for the World Wide Web

1.Uniform Resource Identifier (URI), which is a universal system for referencing resources on the Internet

2.HyperText Transfer Protocol (HTTP), especially as defined by RFC 2616: HTTP/1.1 and RFC 2617: HTTP Authentication, which specify how the browser and server authenticate each other.

II. DNS:

The Domain Name System (DNS) is a hierarchical decentralized naming system for computers, services, or other resources connected to the Internet or a private network. It associates various information with domain names assigned to each of the participating entities. Most prominently, it translates more readily memorized domain names to the numerical IP addresses needed for locating and identifying computer services and devices with the underlying network protocols.The Domain Name System delegates the responsibility of assigning domain names and mapping those names to Internet resources by designating authoritative name servers for each domain.

Domain name space:

1.The domain name space consists of a tree data structure. Each node or leaf in the tree has a label and zero or more resource records (RR), which hold information associated with the domain name. The domain name itself consists of the label, possibly concatenated with the name of its parent node on the right, separated by a dot

2.The tree sub-divides into zones beginning at the root zone. A DNS zone may consist of only one domain, or may consist of many domains and sub-domains, depending on the administrative choices of the zone manager. DNS can also be partitioned according to class where the separate classes can be thought of as an array of parallel namespace trees.

3.Administrative responsibility for any zone may be divided by creating additional zones. Authority over the new zone is said to be delegated to a designated name server. The parent zone ceases to be authoritative for the new zone.