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Wireless Systems 

Branch : Electrical and Electronics Engineering

Subject : Mobile Communication

Unit : MOBILE NETWORK LAYER AND TRANSPORT LAYER

IP packet delivery

Introduction:

The following explains how an IP packet is delivered from a CN connected via a router to the internet, as are the home network and the foreign network.

Packet delivery to and from the mobile node

- Figure 6.2 illustrates packet delivery to and from the MN


Figure 6.2 Packet deliveries to and from the mobile node


- As shown the packet is delivered in 4 Steps:
- Step 1:** CN sends an IP packet with MN as a destination address and CN as a source. CN does not need to know anything about the MN's current location and sends the packet as usual to the IP address of MN.
- The internet, not having information on the current location of MN, routes the packet to the router responsible for the home network of MN. This is done using the standard routing mechanisms of the internet.
- Step 2:** The HA now intercepts the packet, knowing that MN is currently not in its home network.
- A new header is put in front of the old IP header showing the COA as new destination and HA as source of the encapsulated packet
- Step 3:** The foreign agent now decapsulates the packet, i.e., removes the additional header, and forwards the original packet with CN as source and MN as destination to the MN.
- Again, for the MN mobility is not visible. It receives the packet with the same sender and receiver address as it would have done in the home network.
- Step 4:** The MN sends the packet as usual with its own fixed IP address as source and CN's address as destination
- The router with the FA acts as default router and forwards the packet to CN.


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