

CS8601 –MOBILE COMPUTING

UNIT 4

MOBILE TRANSPORT AND APPLICATION LAYER

4.3. Wireless datagram protocol (WDP)

WDP operates on top of many different bearer services capable of carrying data.

At the T-SAP WDP offers a consistent datagram transport service independent of the underlying bearer. To offer this consistent service, the adaptation needed in the transport layer can differ depending on the services of the bearer. If the bearer already offers IP services, UDP is used as WDP. WDP offers source and destination port numbers used for multiplexing and demultiplexing of data respectively.

Service primitive:

i. T-DUnitdata.req : To send a datagram

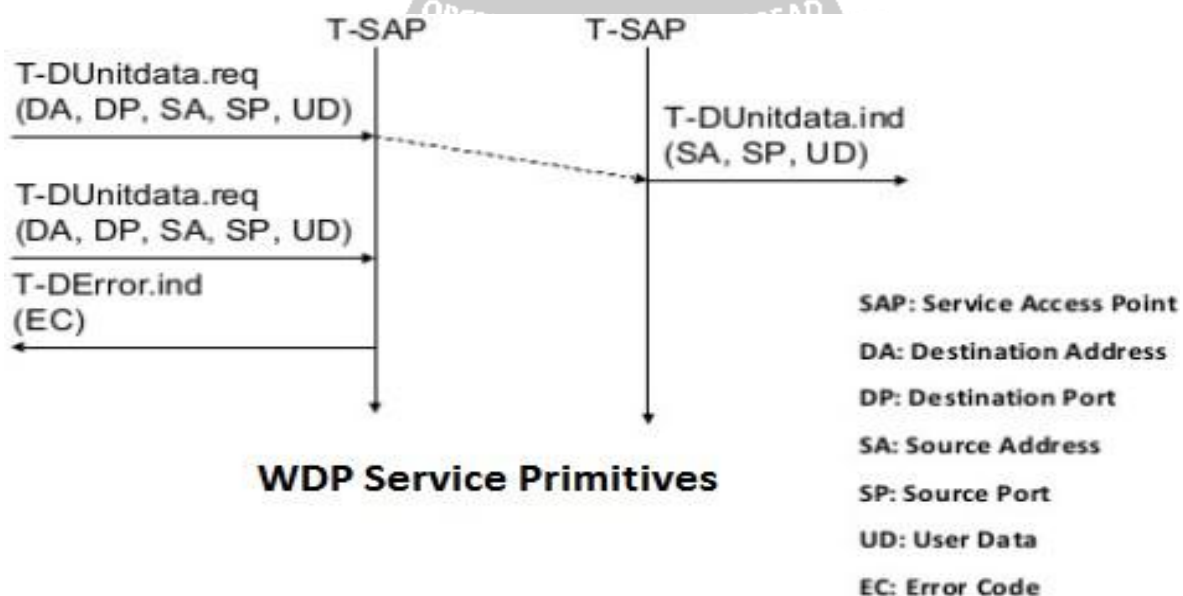
Parameters: destination address (DA), destination port (DP), Source address (SA), source port (SP), and user data (UD)

ii. T-DUnitdata.ind : Indicates the reception of data.

Parameters: Destination address and port are only optional parameters.

iii. T-DError.ind: Indicates error.

Parameters: An error code (EC) indicating the reason for the error to the higher layer.



WCMP (Wireless Control Message Protocol):

- Provides error handling mechanisms for WDP.
- Contains control messages like the internet control message protocol (ICMP) messages.
- WCMP can be used by WDP nodes and gateways to report errors.

WCMP messages are:

- ✓ Destination unreachable (route, port, address unreachable)
- ✓ Parameter problem (errors in the packet header)
- ✓ Message too big
- ✓ Reassembly failure
- ✓ Echo request/reply.

WDP management entity :

- Vendor-specific
- Supports WDP and provides information about changes in the environment, which may influence the correct operation of WDP.
- Important information:
 - Current configuration of the device
 - Currently available bearer services
 - Processing and memory resources etc.....

