

Issues in Designing a Routing Protocol:

❖ Mobility:

- ✓ Ad hoc is highly dynamic due to the movement of nodes
- ✓ Node movement causes frequent path breaks
- ✓ The path repair in wired network has slow convergence.

❖ Bandwidth Constraint:

- ✓ Wireless has less bandwidth due to the limited radio band, Less data rate and difficult to maintain topology information.
- ✓ Frequent change of topology causes more overhead of topology maintenance

❖ Error-prone shared broadcast radio channel:

- ✓ Wireless links have time varying characteristics in terms of link capacity and link-error probability.
- ✓ Hidden terminal problem causes packet collision.
- ✓ Target: Interact with MAC layer to find better-quality link and find routes with less crowding.

❖ Hidden and exposed terminal problems.

❖ Resource Constraints:

- ✓ Limited battery life and limited processing power