

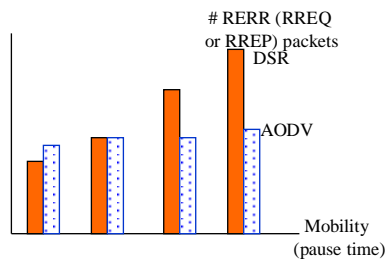
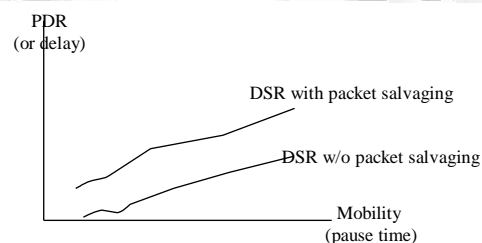
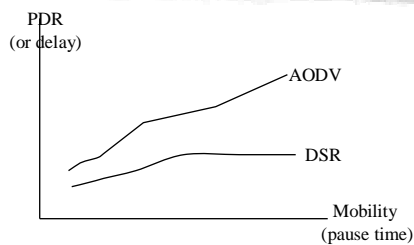
Homework #2: Routing layer (due Monday, Feb. 26)

- ❑ Goal: Network protocol is the most difficult part in mobile networks as new routing paths must be discovered dynamically in the presence of node mobility. This homework is to compare two most popular routing layer protocols (DSR and AODV) to understand the dynamics of those protocols.
- ❑ Simulation input: 50-node in 300x1500m² network, 802.11 MAC, TwoRayGround, 0~20m/second speed, 30 CBR sources, 4 512-byte packets/second (use cbrgen.tcl)
- ❑ Simulation variation: Pause time of 0, 20, 50, 100, 300, 500, 900 seconds
- ❑ Simulation output: PDR (packet delivery ratio) and delay
- ❑ Report: Includes xgraph (or excel) charts with explanation and discussion.
- ❑ Bonus: Consider to measure different metrics such as the number of route discoveries or RERR/RREQ/RREP messages generated in case of DSR/AODV. Consider also to enable/disable features of DSR/AODV to see their effects on performance. (See DSR/AODV source files to know the features.)

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Homework #2: Routing layer



References

- (1) J. Broch, D. A. Maltz, D. B. Johnson, Y.-C. Hu and J. Jetcheva, "Performance Comparison of Multi-Hop Wireless Ad Hoc Network Routing Protocols," MobiCom'98, Oct. 1998.
- (2) S. R. Das, C. E. Perkins, E. M. Royer, "Performance Comparison of Two On-Demand Routing Protocols for Ad Hoc Networks," INFOCOM 2000.

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