

Exercises of lecture  
**Mobile Ad Hoc Networks**  
Summer 2007  
Sheet 9

**SECTION 1:**  
MANET Routing Protocols

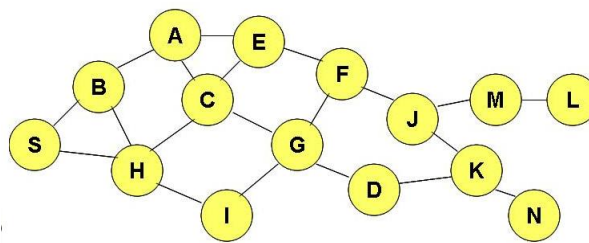


Figure 1: AODV

1. Given a figure-1, apply Ad hoc On Demand Distance Vector (AODV) to find route from node S to D, clearly showing Route Request (RREQ) and Route Reply (RREP). Furthermore, also indicate forward links from S to D.

**Solutions:**

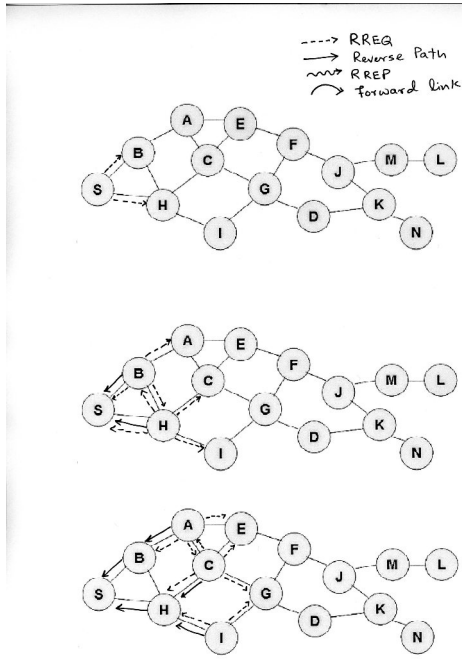


Figure 2: Working of AODV

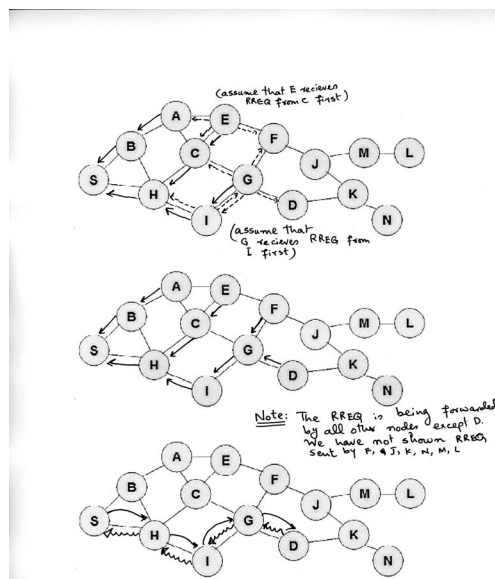


Figure 3: Working of AODV

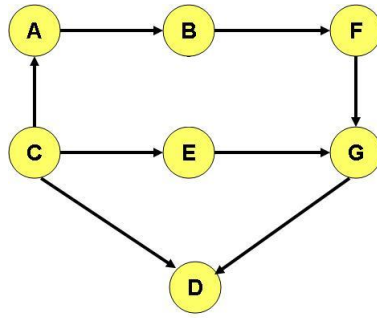


Figure 4: DAG with destination D

2. For the Directed acyclic graph (DAG) given in figure-4, created for destination D a link between node F and G fails. Use Partial link reversal method to restore DAG for destination D, showing each intermediate steps.

**Solutions:**

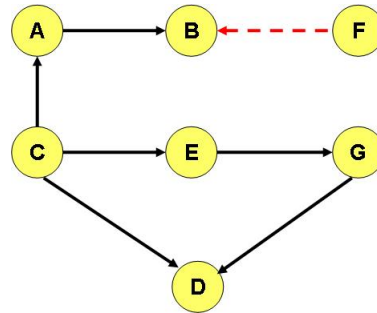


Figure 5: Working of partial link reversal

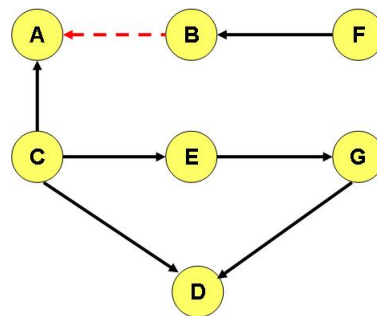


Figure 6: Working of partial link reversal

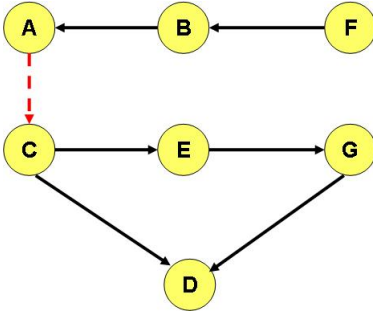


Figure 7: Working of partial link reversal

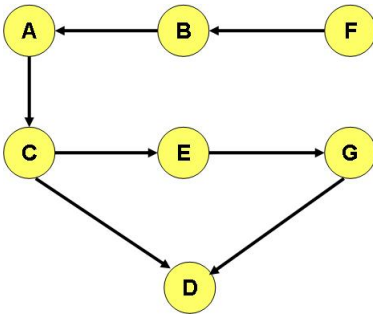


Figure 8: Working of partial link reversal