TCP OVER AD HOC WIRELESS NETWORK: ....cntd

Feedback-based TCP (TCP Feedback – TCP-F)

- Requires the support of a reliable link layer and a routing protocol that can provide feedback to the TCP sender about the path breaks.
- The routing protocol is expected to repair the broken path within a reasonable time period.

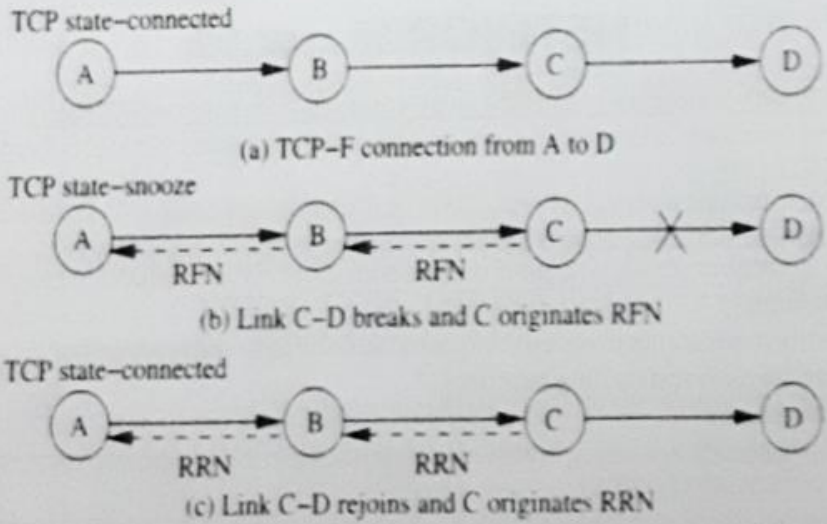

Figure 9.6. Operation of TCP-F.

TCP-Feedback

TCP-feedback mechanism is specially designed for the purpose of providing feedback whenever a route fails and when network congestion occurs because of the reception of the route failure message from all the intermediate nodes. The main idea of this mechanism is that it moves TCP into snooze state as soon as it receives the failure notification. In this state it prevents sending of packets and stops all the timer and congestion window when there is no alternate route available. Once the sender receives a route reestablishment message from the routing protocol it resumes back to transmission of packets using the same timers and variables. Another route failure timer is also embedded in order to stop RRN messages to wait infinitely and get initiated as soon as it receives a RFN message. All the values of the TCP times are reset once the timer expires so as to allow the working of TCP congestion control as usual. Hence, as a result use of TCP feedback lead to increase in the delay of the route reestablishment and for transmitting this RRN and RFN message a routing protocol was never considered and developed.