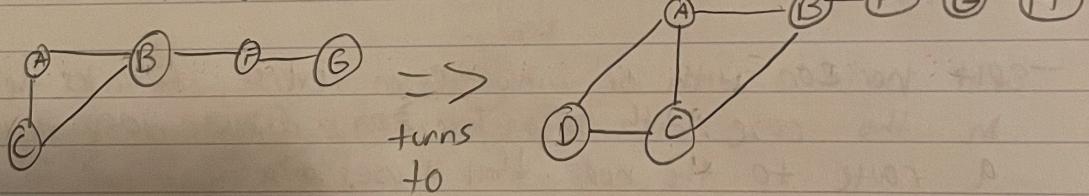


## Homework #3-2

3.58- Answer: We will implement hold down as follows:  
 When an update record is received indicating that a destination is unreachable all further updates within some given intervals will be ignored and discarded. If this happens in the EAB... network A will ignore B's reaching news for one time interval during that very time. A might reach B with information of the correct unreachability.  
 But unfortunately in this case of EABD this also means that A will further ignore the valid B-D-E path. Now let us suppose that A reports its failure to B and D report its valid path to B and then D reports to A, all in rapid succession. This new route will then be ignored. To avoid delay discovery of the B-D-E path is to keep the hold down time interval as short as possible relying on the updates to spread the news of unreachability news as soon as possible.

- 3.59- Suppose the B-F link fails, and the following then occur in sequence  
 a) Node H is added to the right side with connection to G  
 b) Node D is added to the left side with a connection to C  
 c) A new link D-A is added



Ans, First a packet is sent  $G \rightarrow F$  with sequence #1. It then transverses from  $F \rightarrow B \rightarrow C \rightarrow A$ . When D is connected to C. Another packet with sequence #1 originate from C to A and B. Now this packet from B will traverse from  $B \rightarrow F \rightarrow G \rightarrow H$ . Then A-D link is setup. A LSB packet originating from D with sequence #1 will go to C to A and B. Now this packet from B will traverse  $B \rightarrow F \rightarrow G \rightarrow H$ .

At the same time a packet from A also announces about the A-D link. Now at the same time A also sends a LSB packet with sequence #1 to C to D and B. Now this packet from B will traverse  $B \rightarrow F \rightarrow G \rightarrow H$ . Now the link A and B is restored. A LSB will originate from A with sequence #2 to C and D.