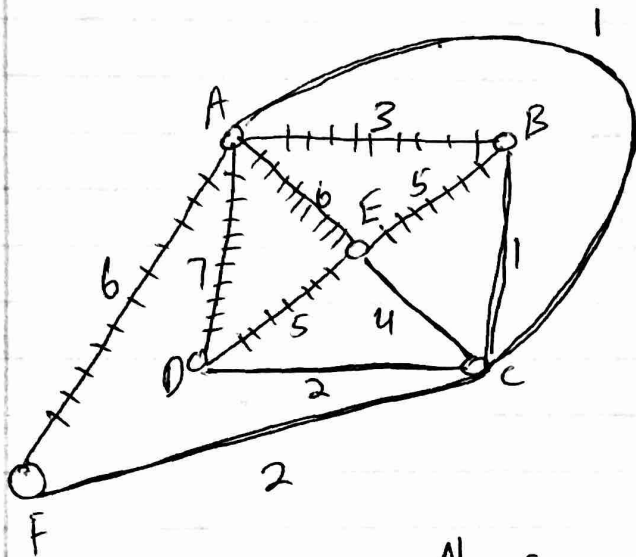


13 - vertices  
12 - edges

Center of tree is Nodes min # of  
Nodes so F and I are centers  
any tree has 1 or 2 centers  
the two centers must be adjacent

Radius = eccentricity of centres (2) = 4  
Diameter = max eccentricity = 7



No of vert - 6

No of edges - 11

Spanning tree needs  $6 - 1 = 5$  edges

We need to drop 6 edges

$$2 + 2 + 4 + 1 + 1 = 10 \text{ Minimum}$$

tie  
Alphabetical

Least cost pth for D(Link state)

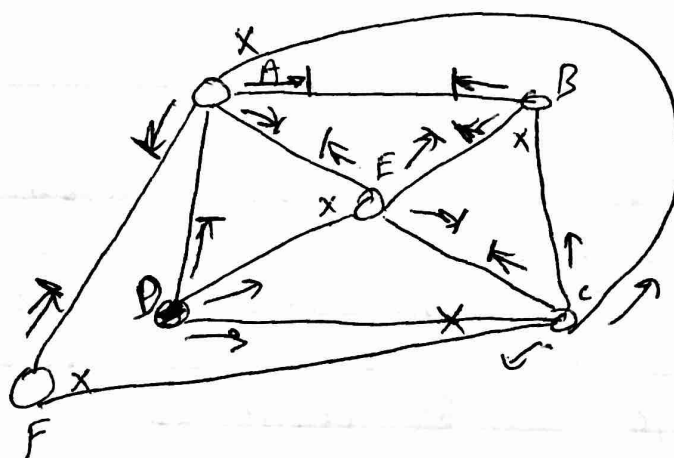
Spanning  
Tree

Iter No	Set N	Paths ✓
1	$\{D\}$	$DA(7), DE(5), DC(2)$
2	$\{D, C\}$	$DCF(4), DCE(6), DCB(3), DCA(3)$
3	$\{D, C, A\}$	$DCAB(6), DCAE(9), DCAF(9)$
4	$\{D, C, A, B\}$	$DCBET(8)$
5	$\{D, C, A, F\}$	DCF ~ No additional path
6	$\{D, C, A, F, E\}$	No additional path

# Forward Table D

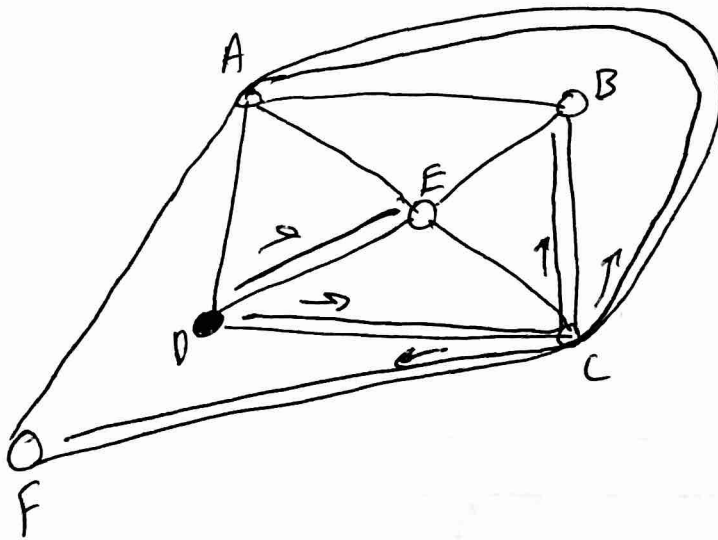
A	C
B	C
C	C
E	E
F	C

Broadcast from D using RPF (Reverse Path Forward)



Put marker  
on Least  
cost path  
least cost  
path is OK  
block others

## Broadcast (center based tree)

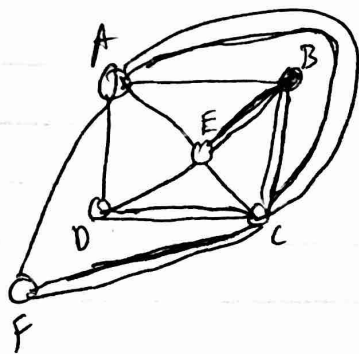


You need a center Not necessarily  
the source

D is elected as the center  
every node sends a free join  
message to the center

D-C-A  
D-C-B  
D-E-F  
D-E  
D-C

So no wasted  
messages like  
RPF



B is center  
Need least cost  
path

B-C-A

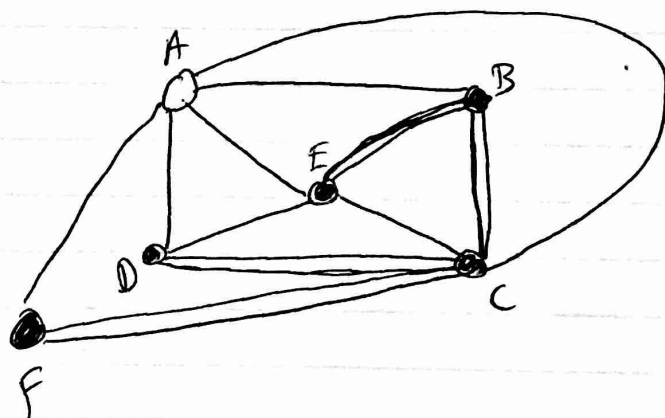
B-C

B-C-D

B-E

B-C-F

Multicast (Group shared Tree) - Center B



~~B~~ B-C-A

B-C

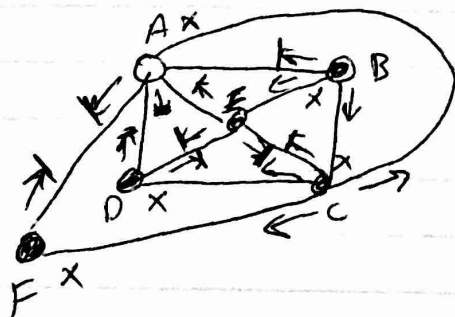
B-C-D

B-E

B-C-F

A is not a member  
of the group

Multi-cast (Source Based Tree) start at B



So A is not  
part of the group  
Works like  
RPF

5 q.s

1  
2  
3  
4

one from last quiz

6 protocols

5) T/F

Review Distance  
Vector