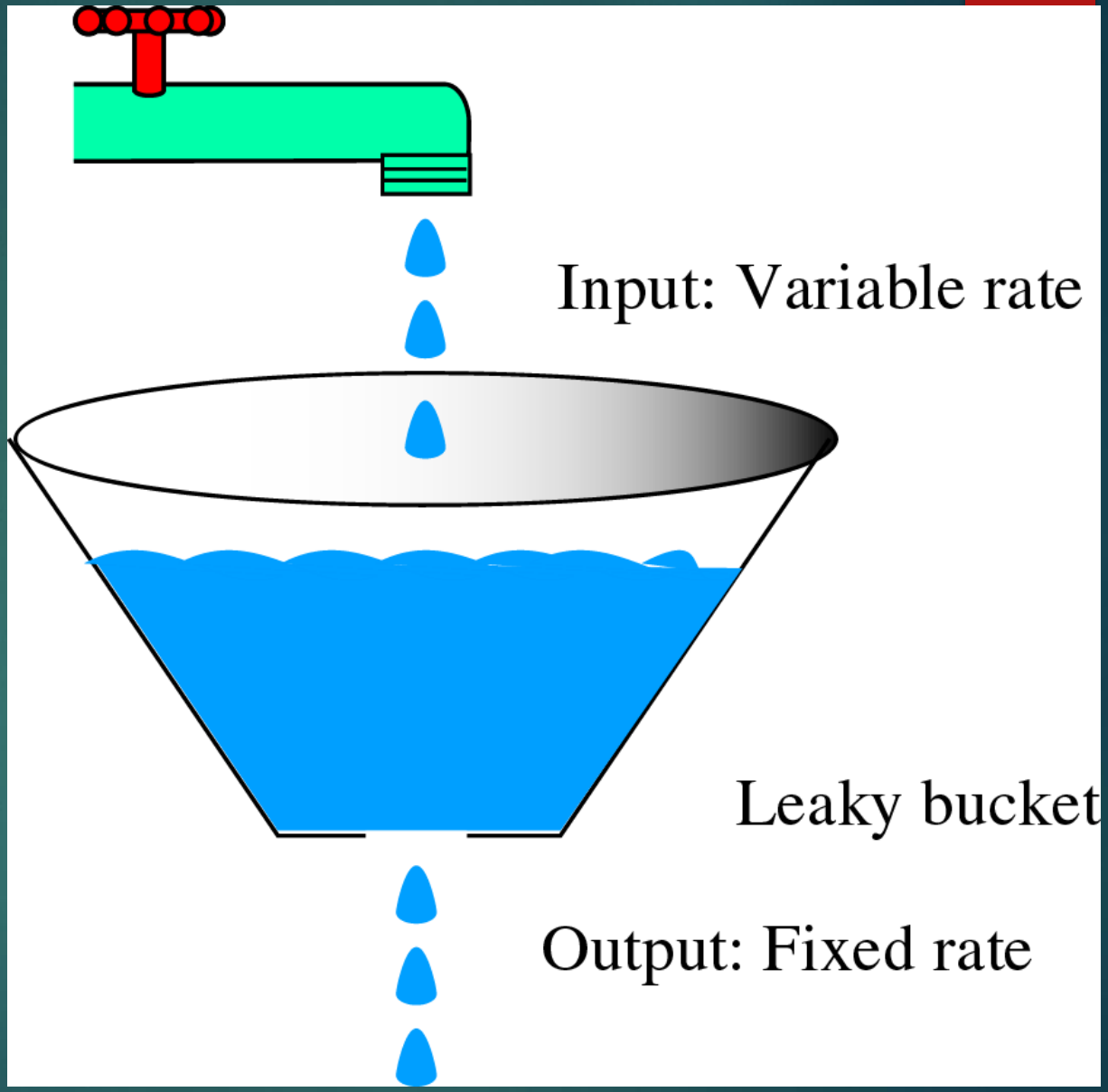
UNIT V

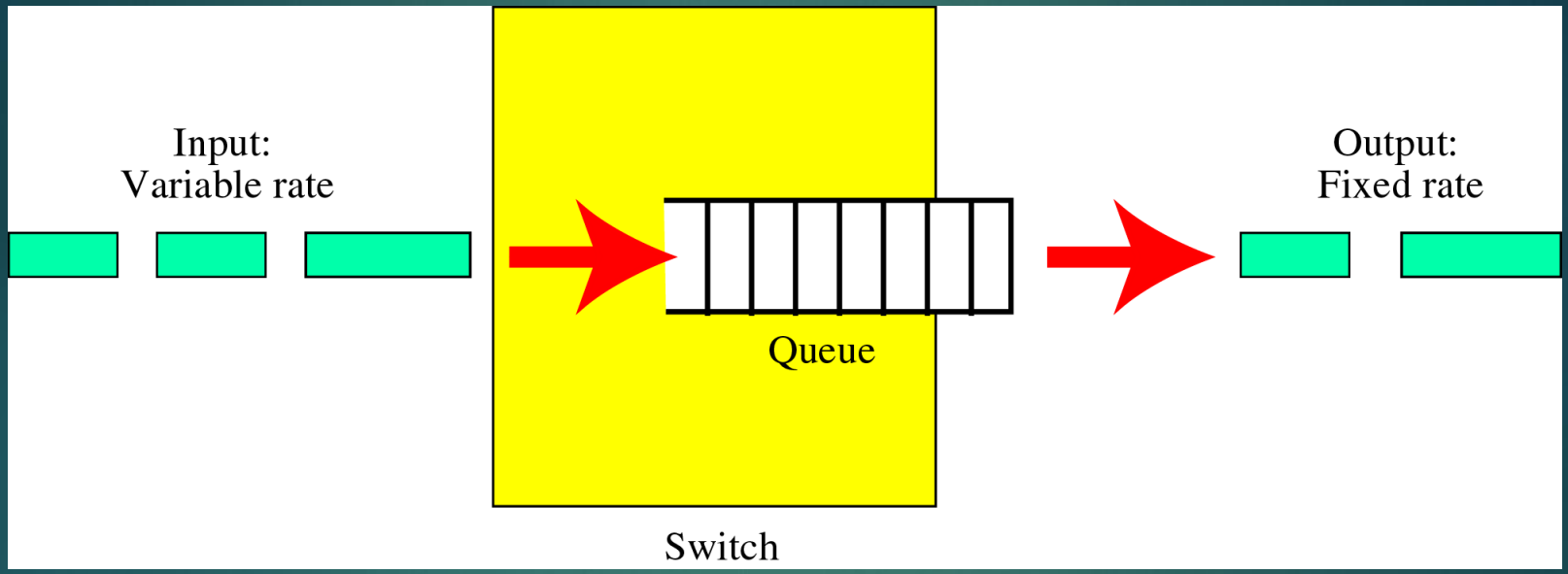
NETWORK LAYER AND TRANSPORT LAYER

By SUCHETA RAUT

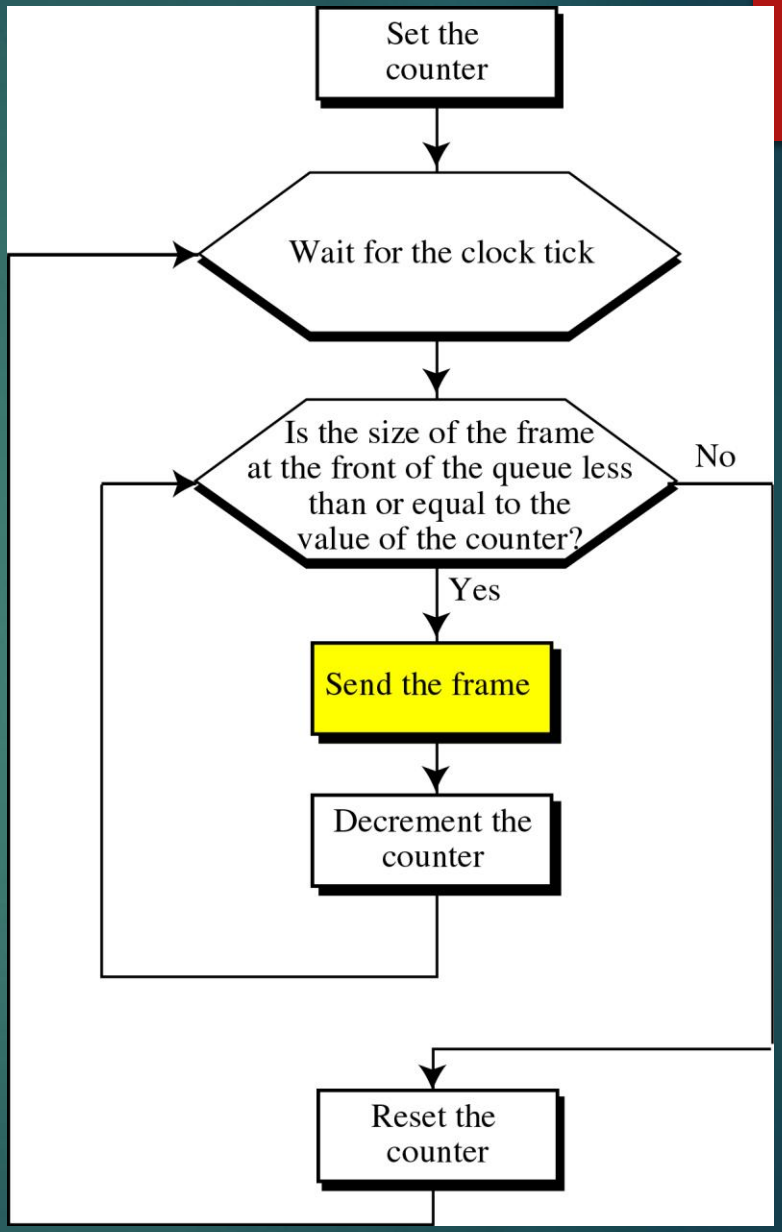
Leaky Bucket



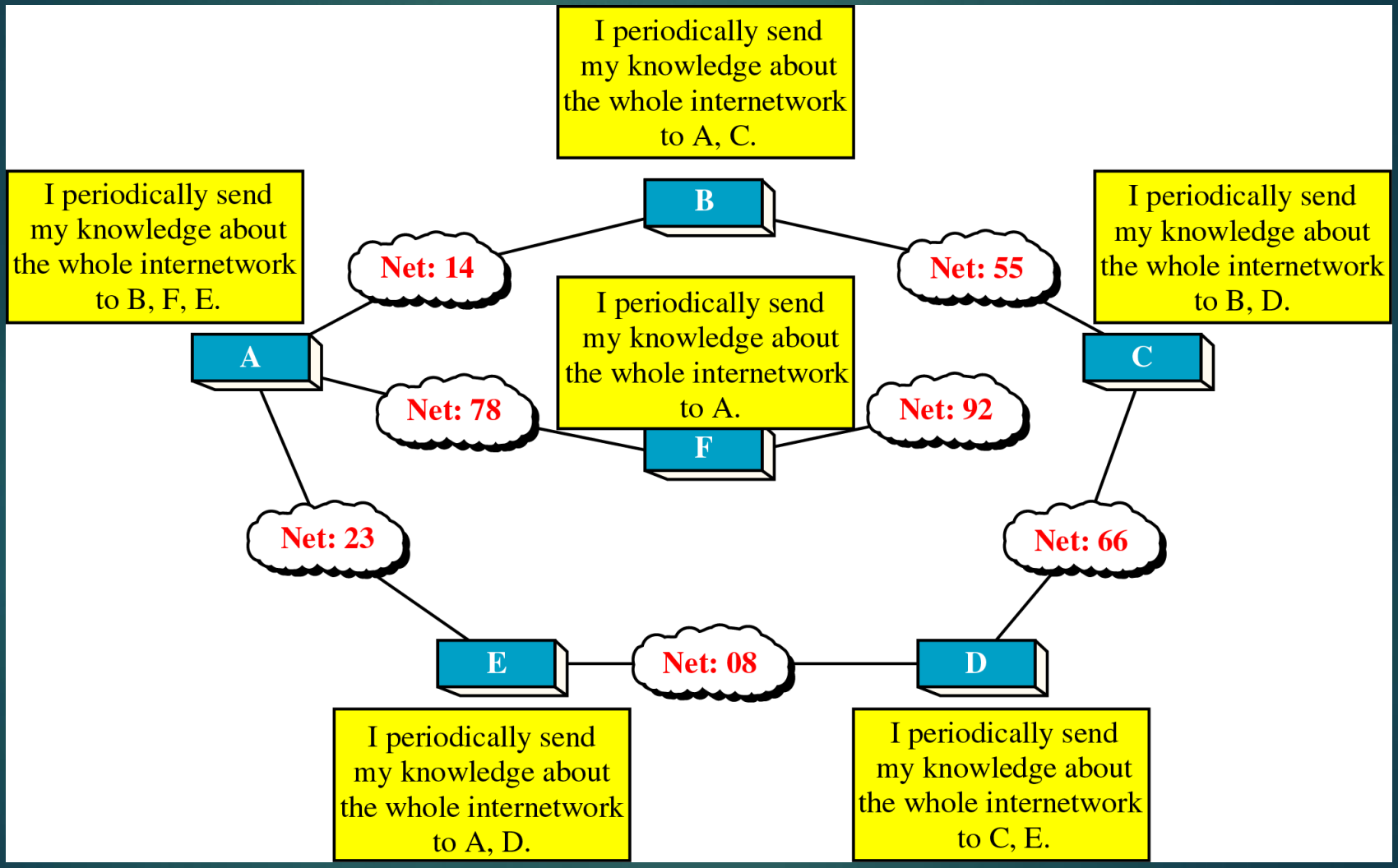
A Switch Controlling the Output Rate



Flowchart for Leaky Bucket Algorithm



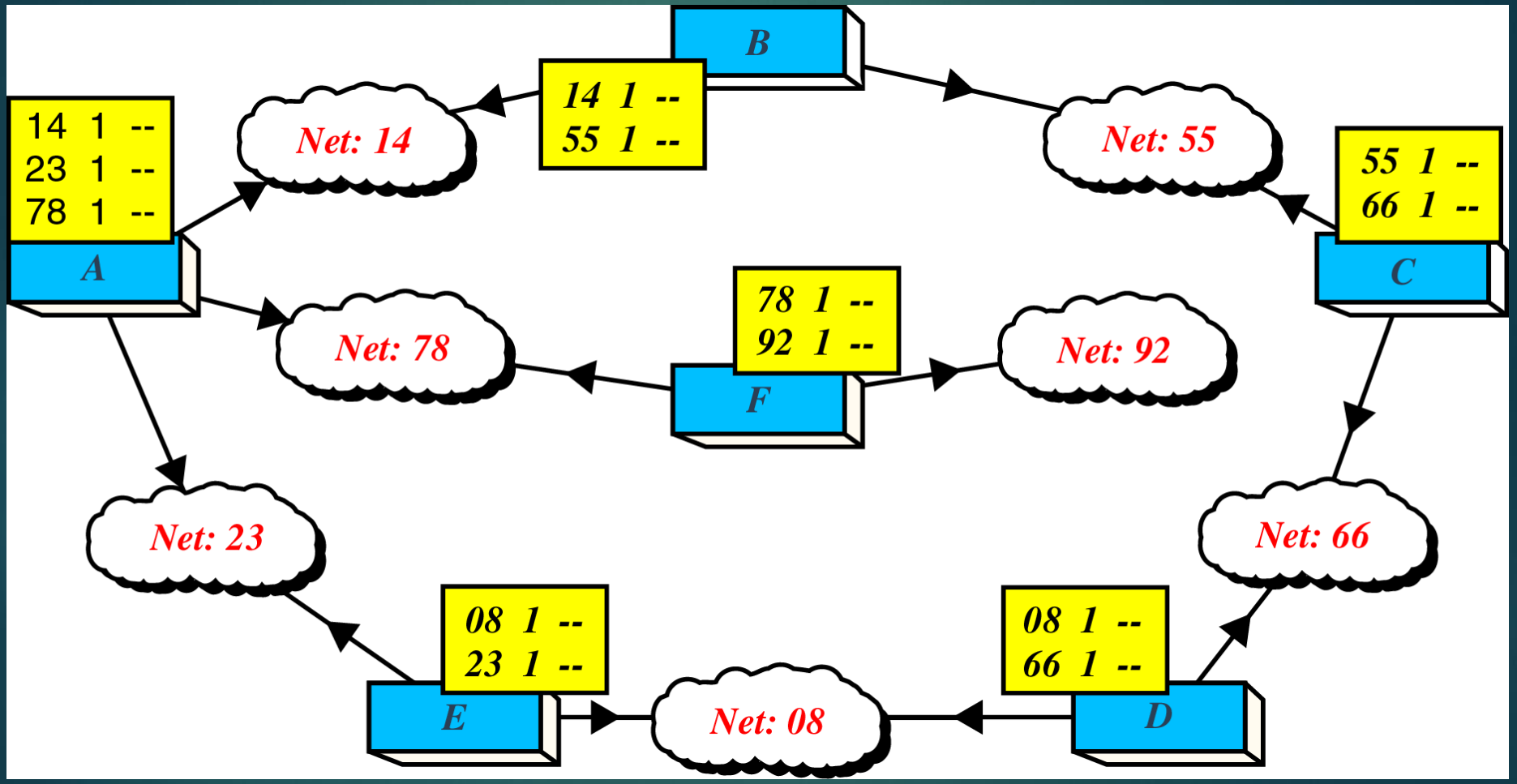
The Concept of Distance Vector Routing



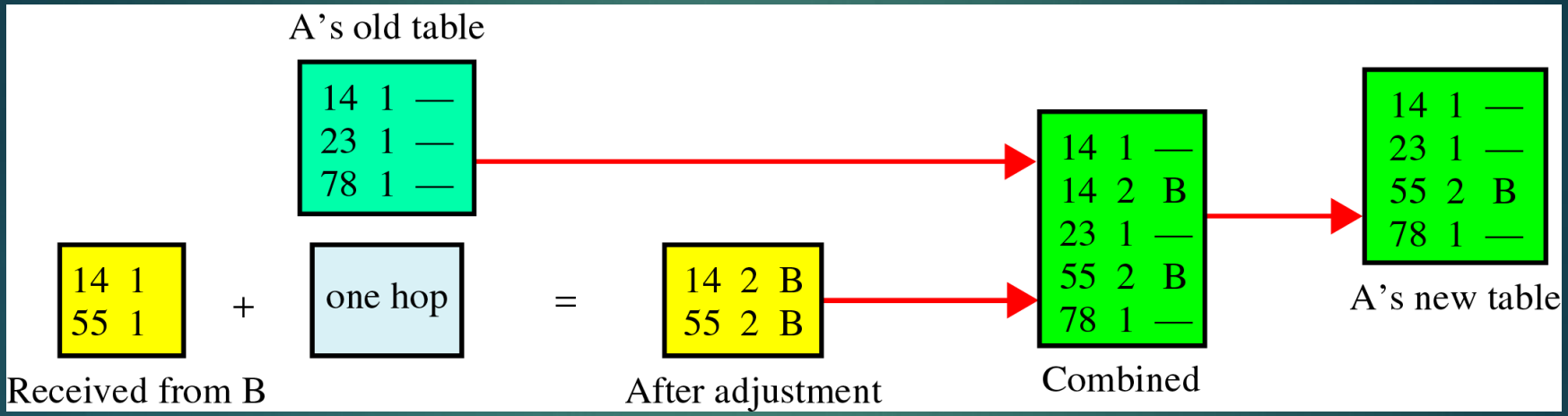
Distance Vector Routing Table

Network ID	Cost	Next Hop
. . . . .	. . . . .	. . . . .
. . . . .	. . . . .	. . . . .
. . . . .	. . . . .	. . . . .
. . . . .	. . . . .	. . . . .
. . . . .	. . . . .	. . . . .

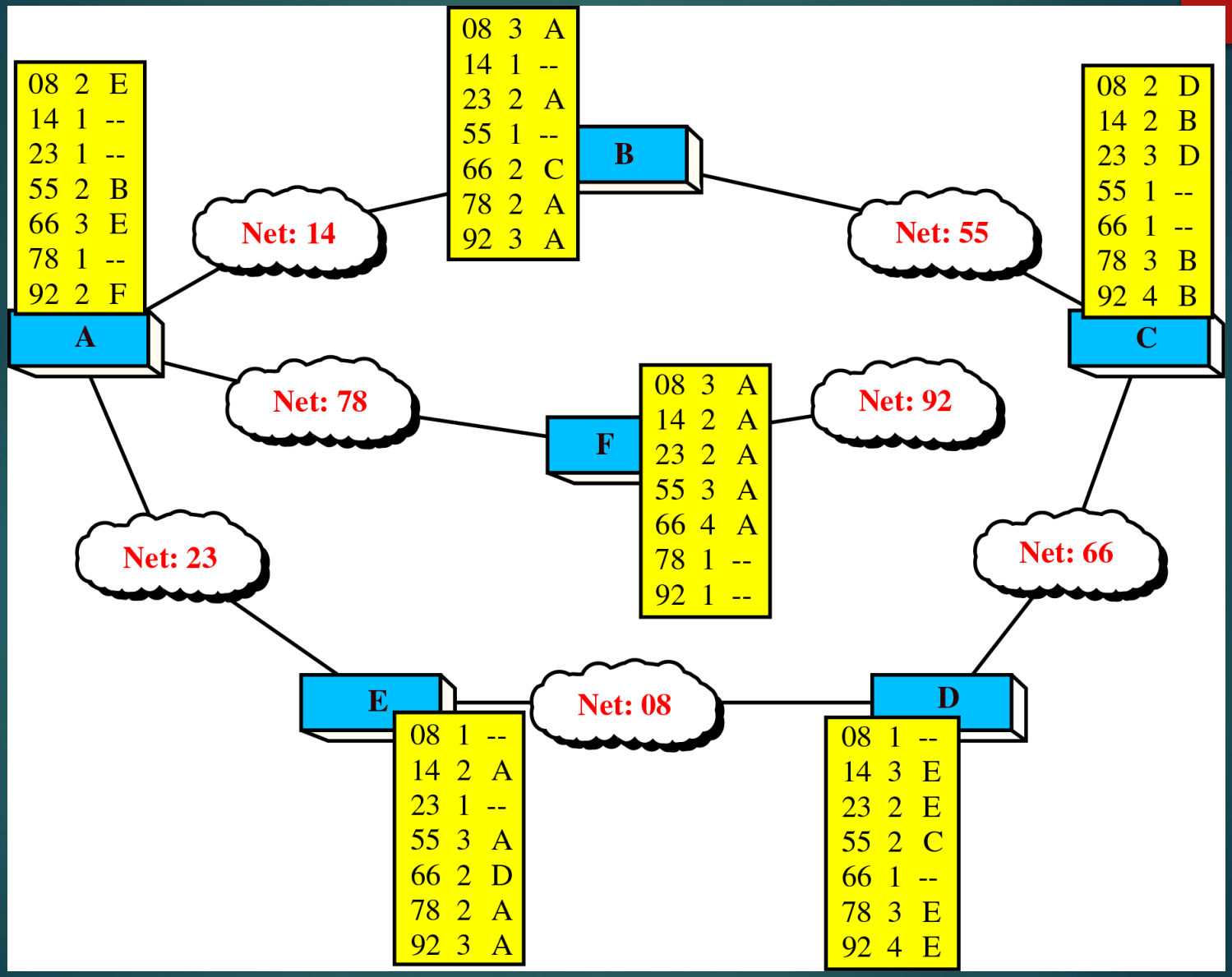
Routing Table Distribution



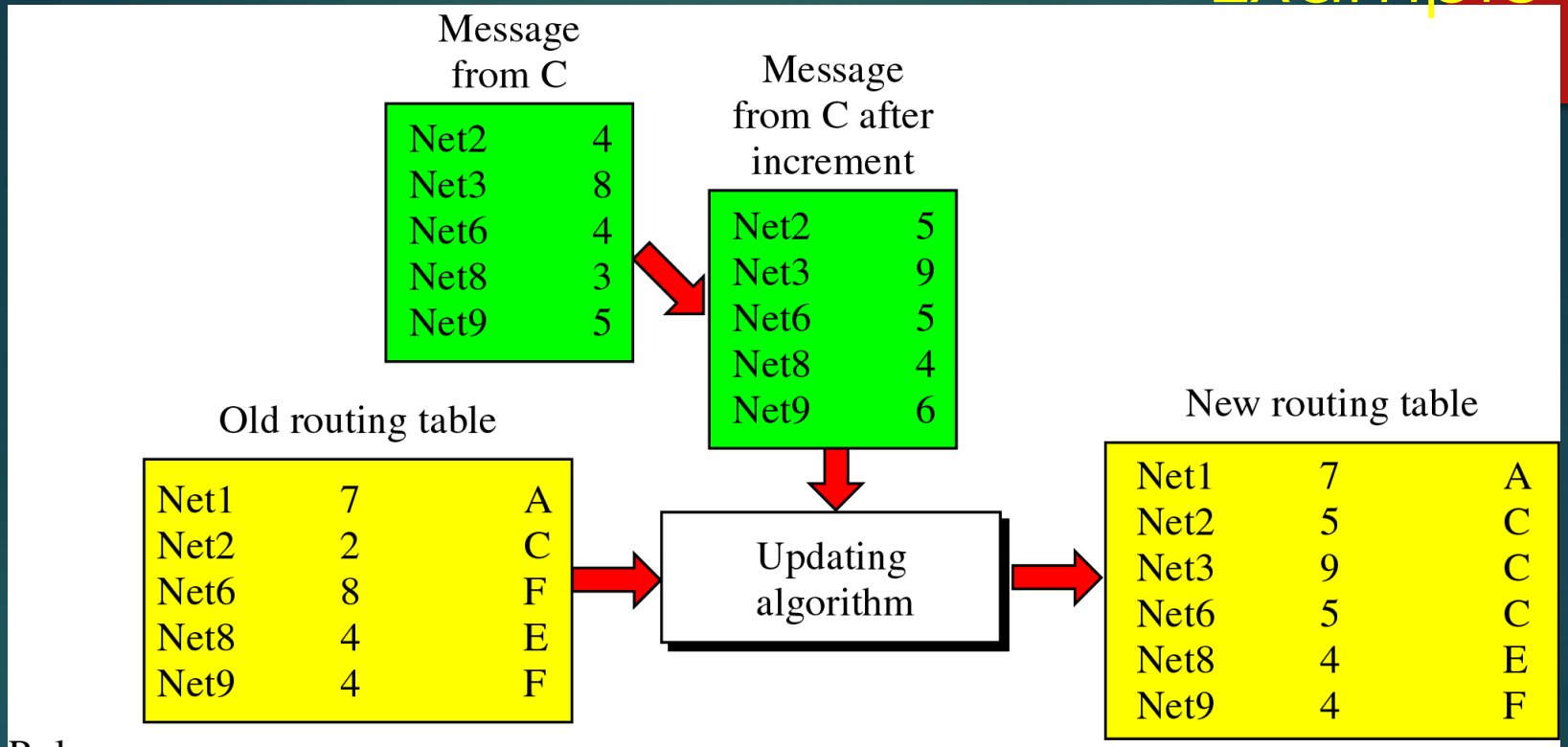
Updating Routing Table for Router A



Final Routing Tables



Example 21.1

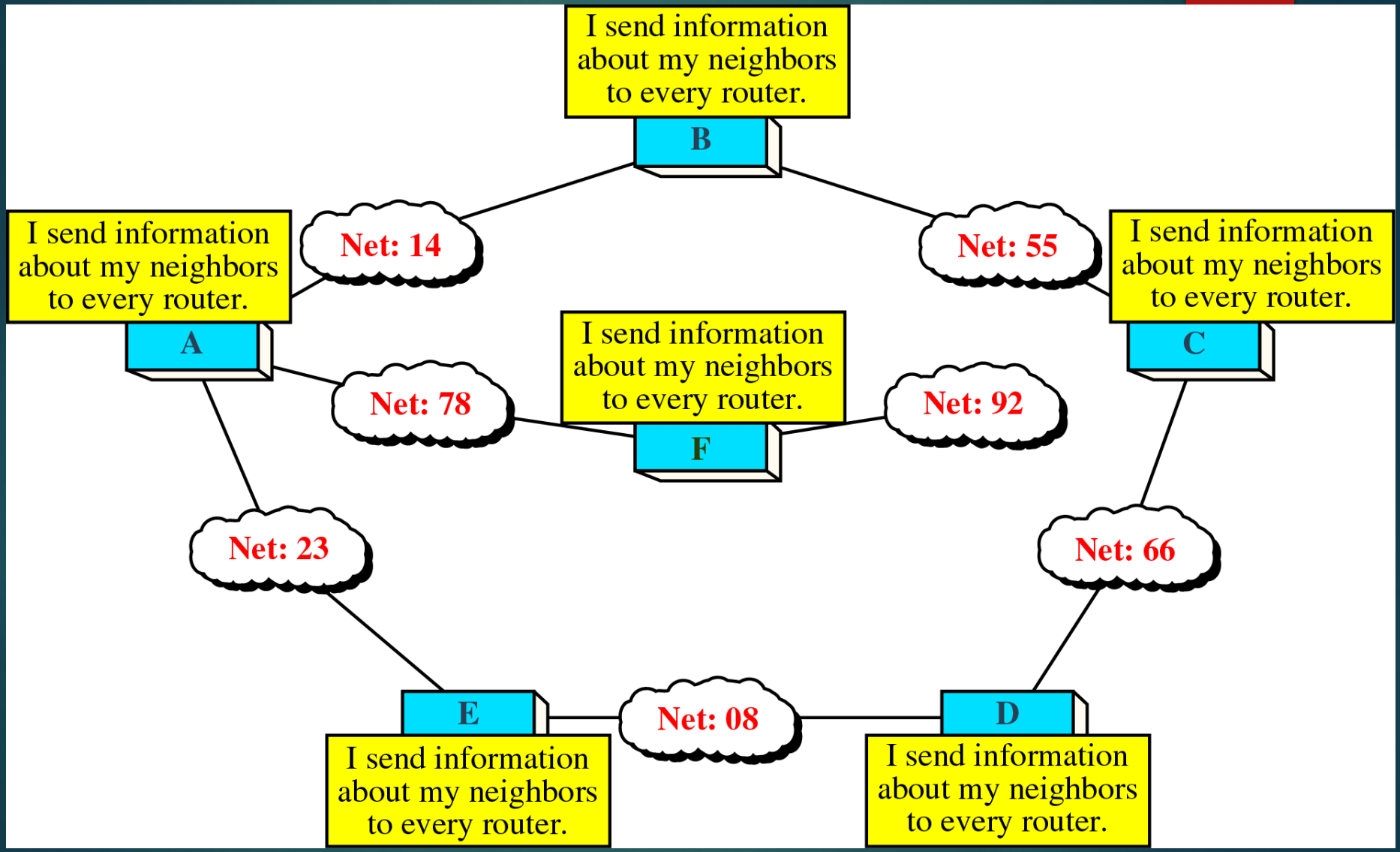


Rules

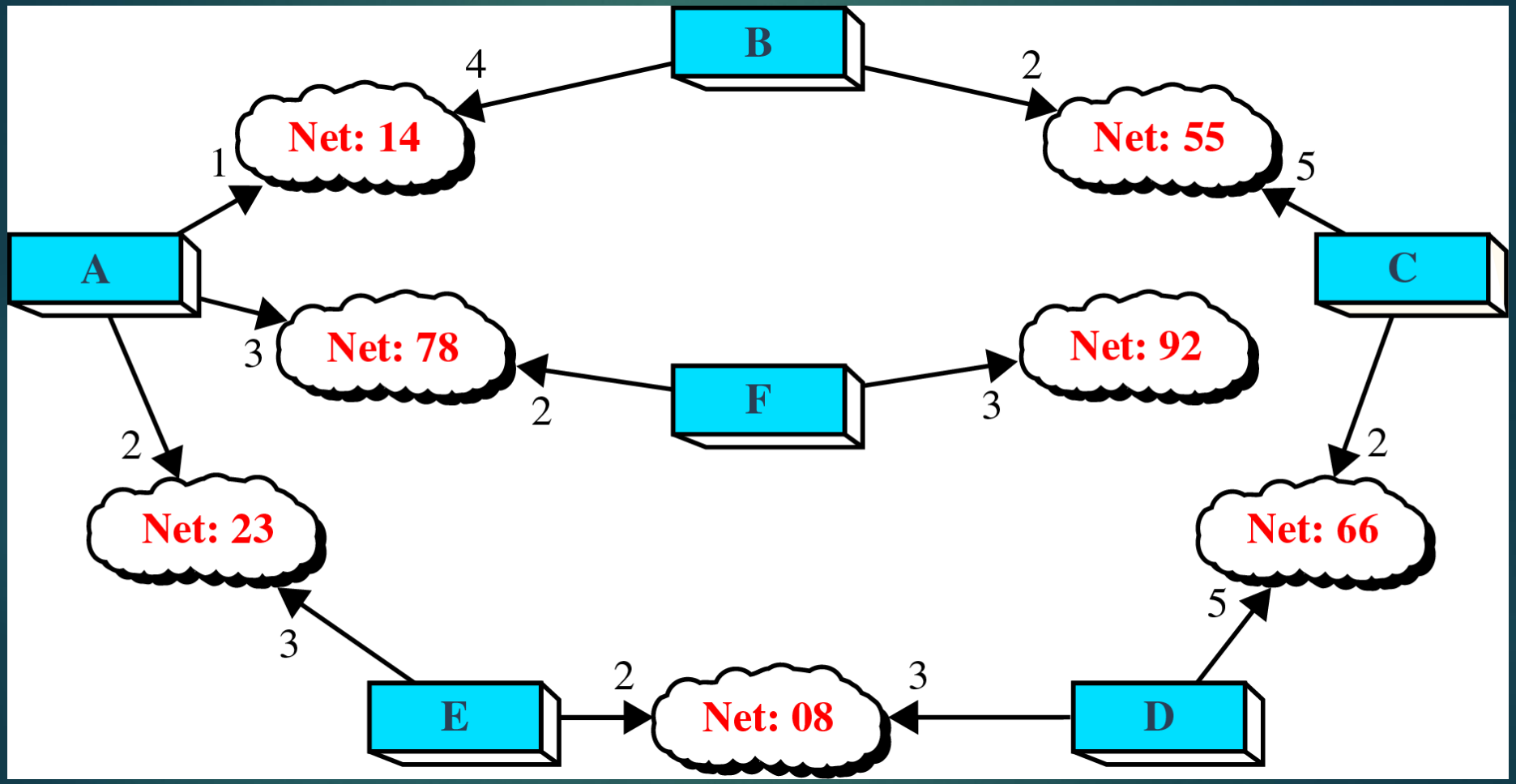
Net2: Replace **(Rule 2.a)**
Net3: Add **(Rule 1)**
Net6: Replace **(Rule 2.b.i)**
Net8: No change **(Rule 2.b.ii)**
Net9: No change **(Rule 2.b.ii)**

Note that there is no news about Net1 in the advertised message, so none of the rules apply to this entry.

Concept of Link State Routing



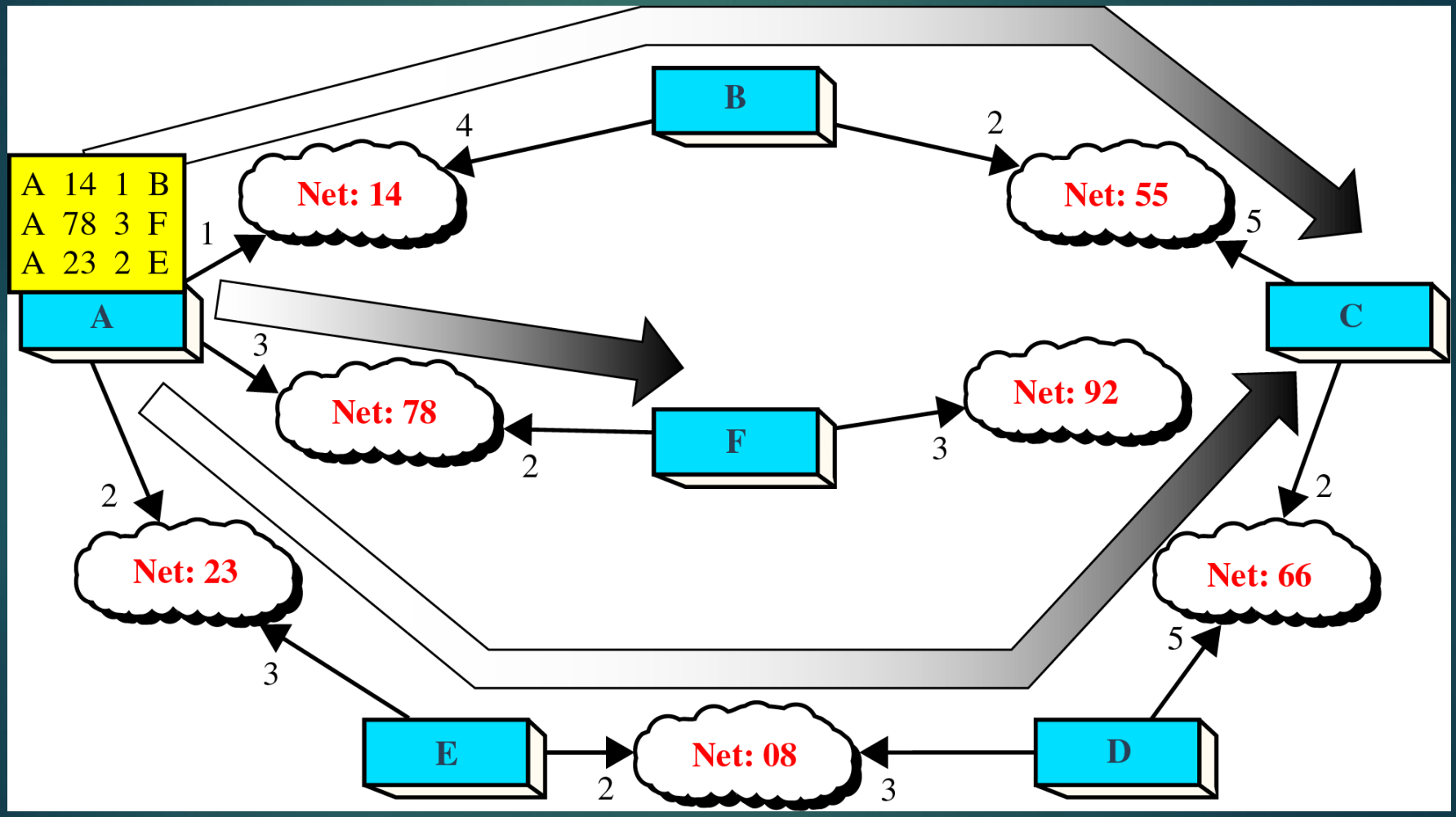
Cost in Link State Routing



Link State Packet

Advertiser	Network	Cost	Neighbor
. . . . .	. . . . .	. . . . .	. . . . .
. . . . .	. . . . .	. . . . .	. . . . .
. . . . .	. . . . .	. . . . .	. . . . .

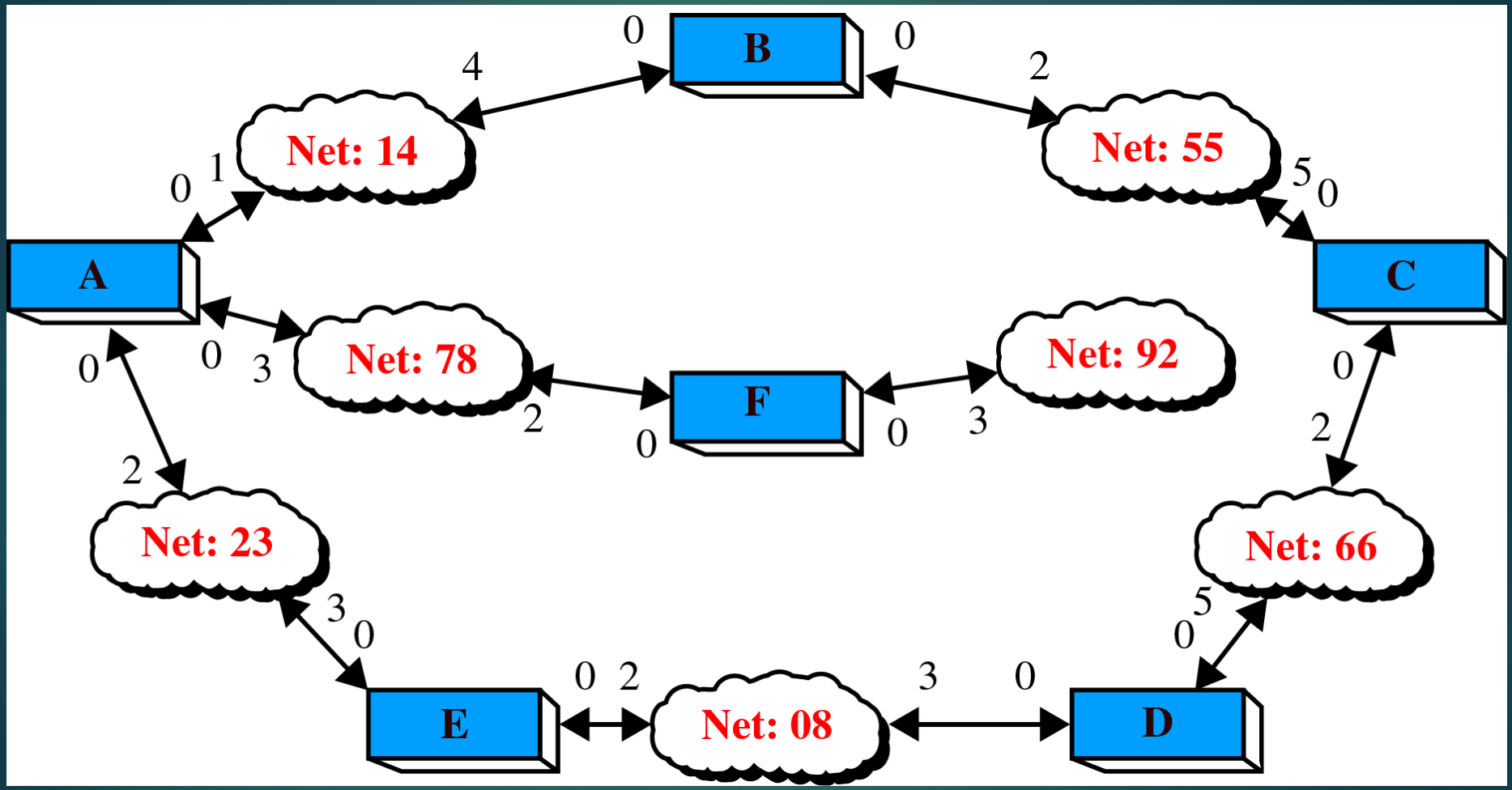
Flooding of A's LSP



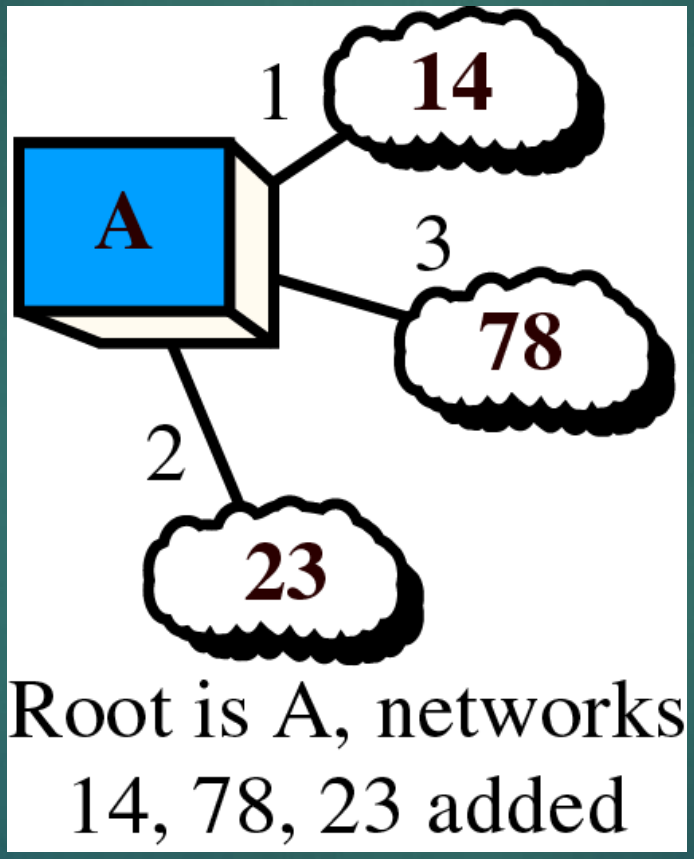
Link State Database

Advertiser	Network	Cost	Neighbor
A	14	1	B
A	78	3	F
A	23	2	E
B	**14**	**4**	**A**
B	**55**	**2**	**C**
C	55	5	B
C	66	2	D
D	**66**	**5**	**C**
D	**08**	**3**	**E**
E	23	3	A
E	08	2	D
F	**78**	**2**	**A**
F	**92**	**3**	**—**

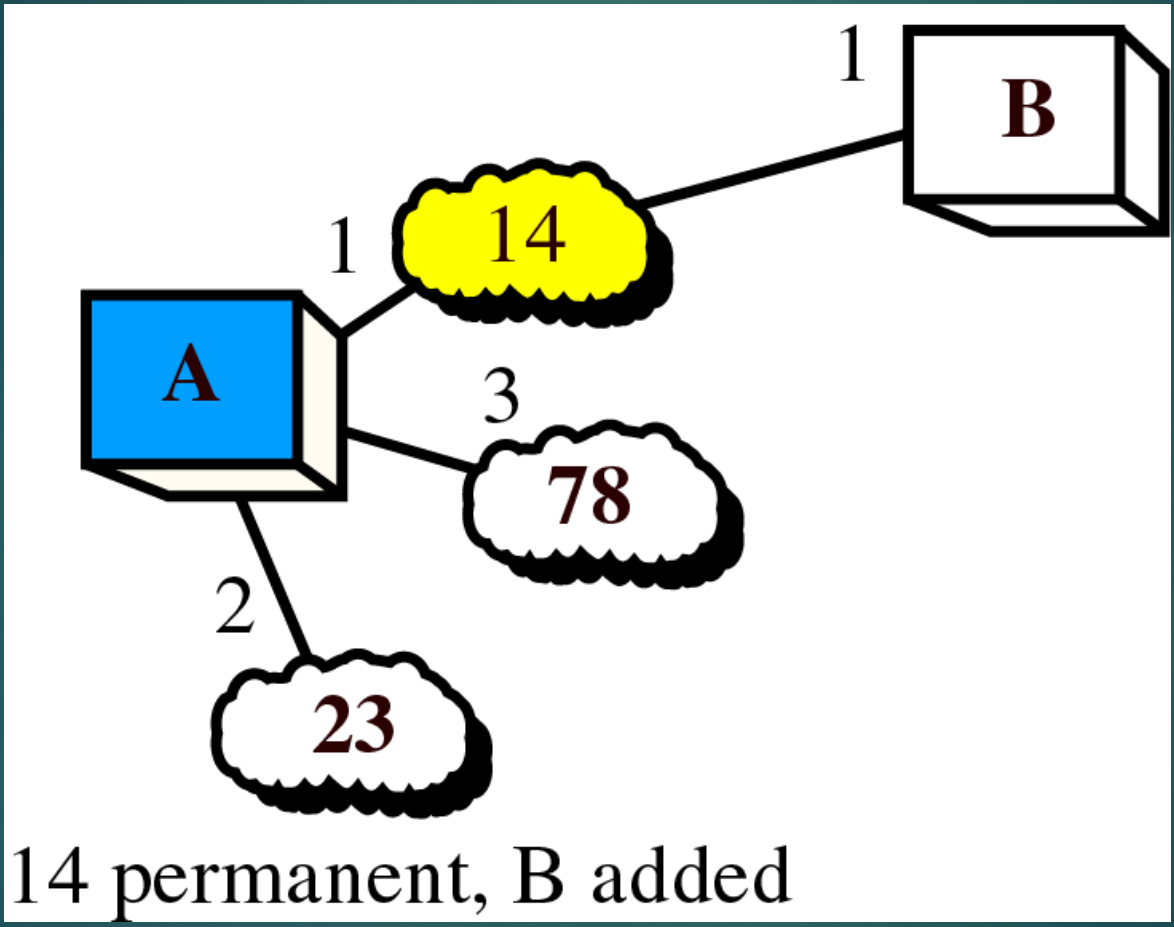
Costs in the Dijkstra Algorithm



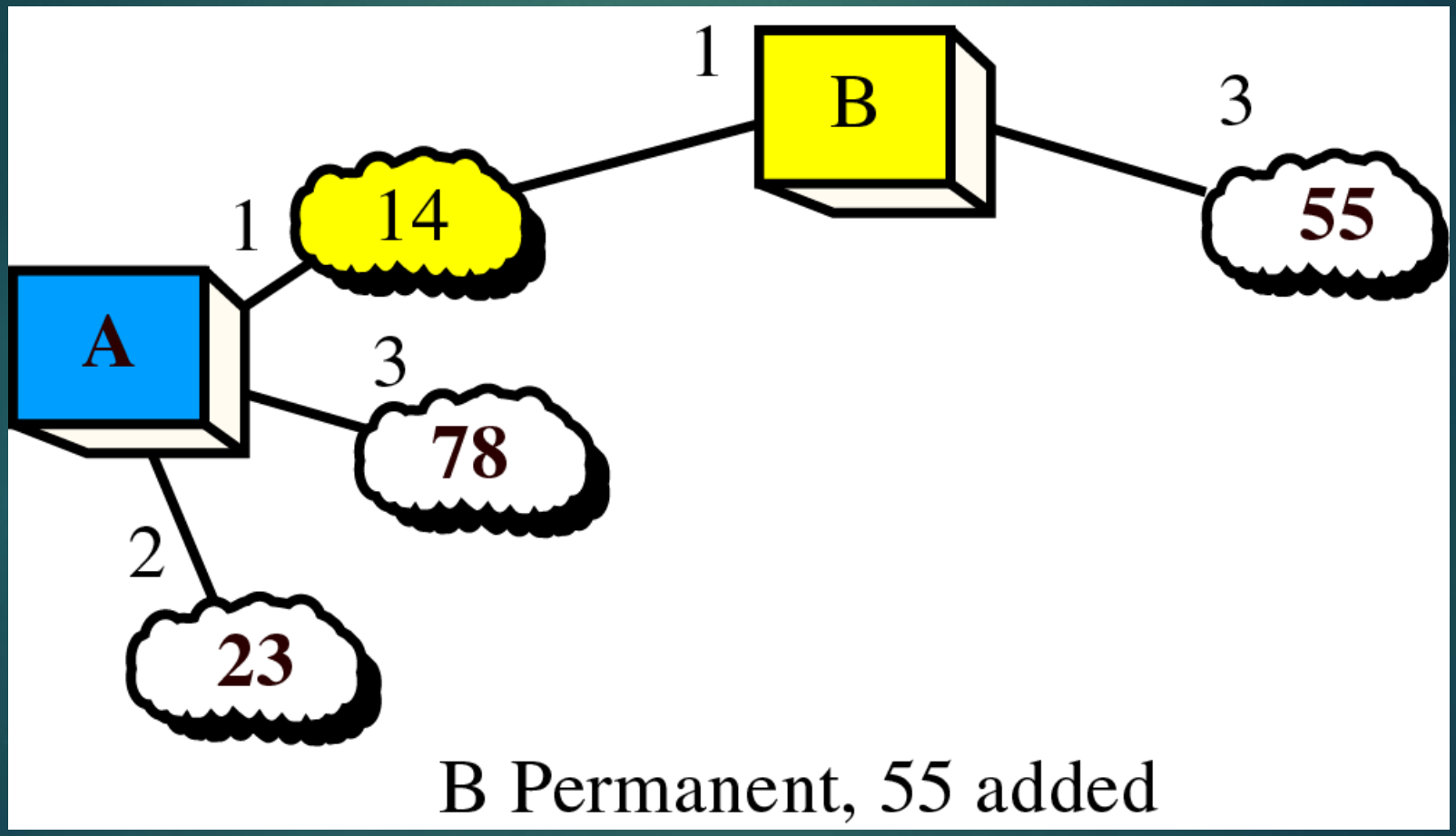
Shortest Path Calculation, Part I



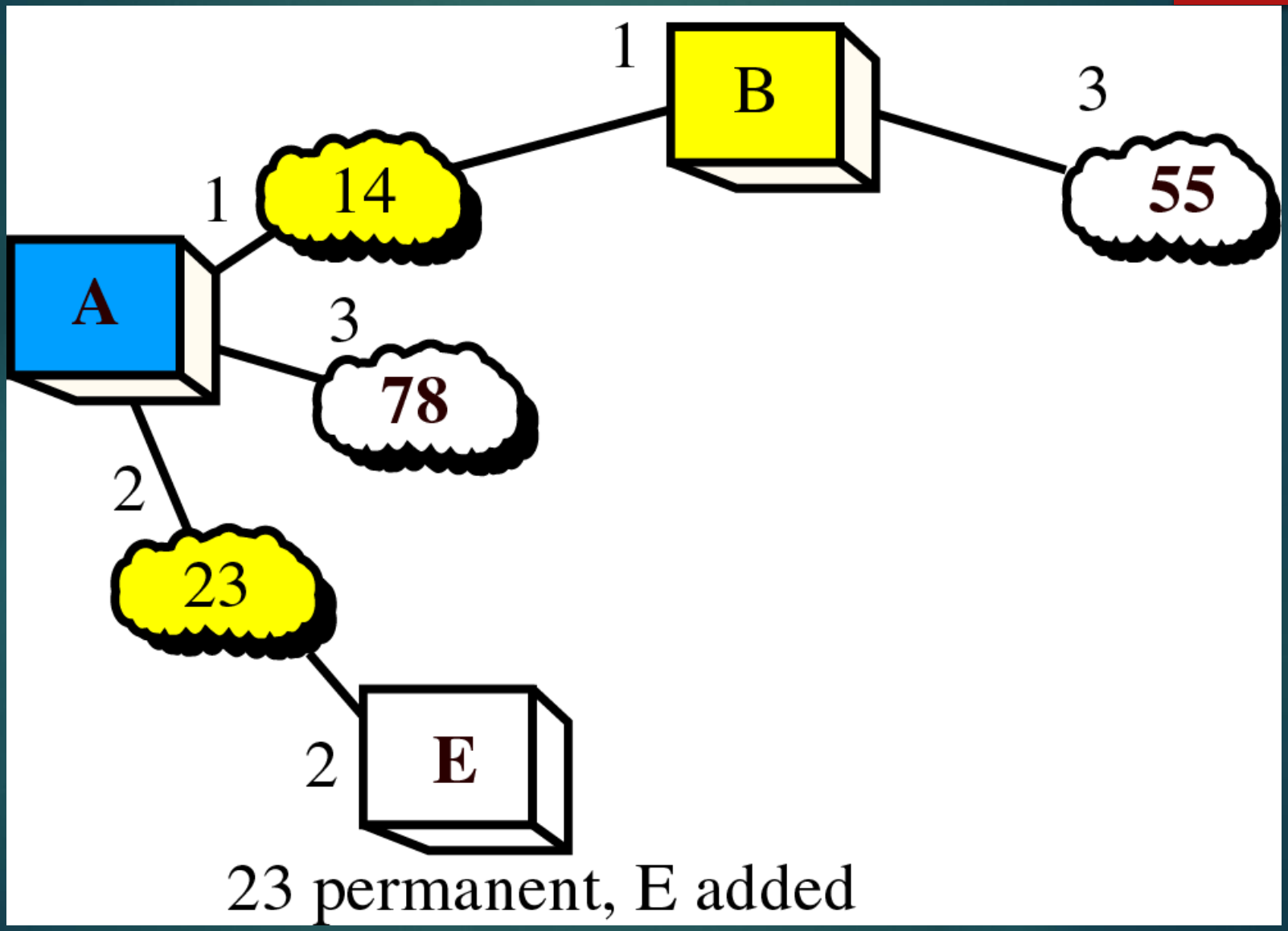
Shortest Path Calculation, Part II



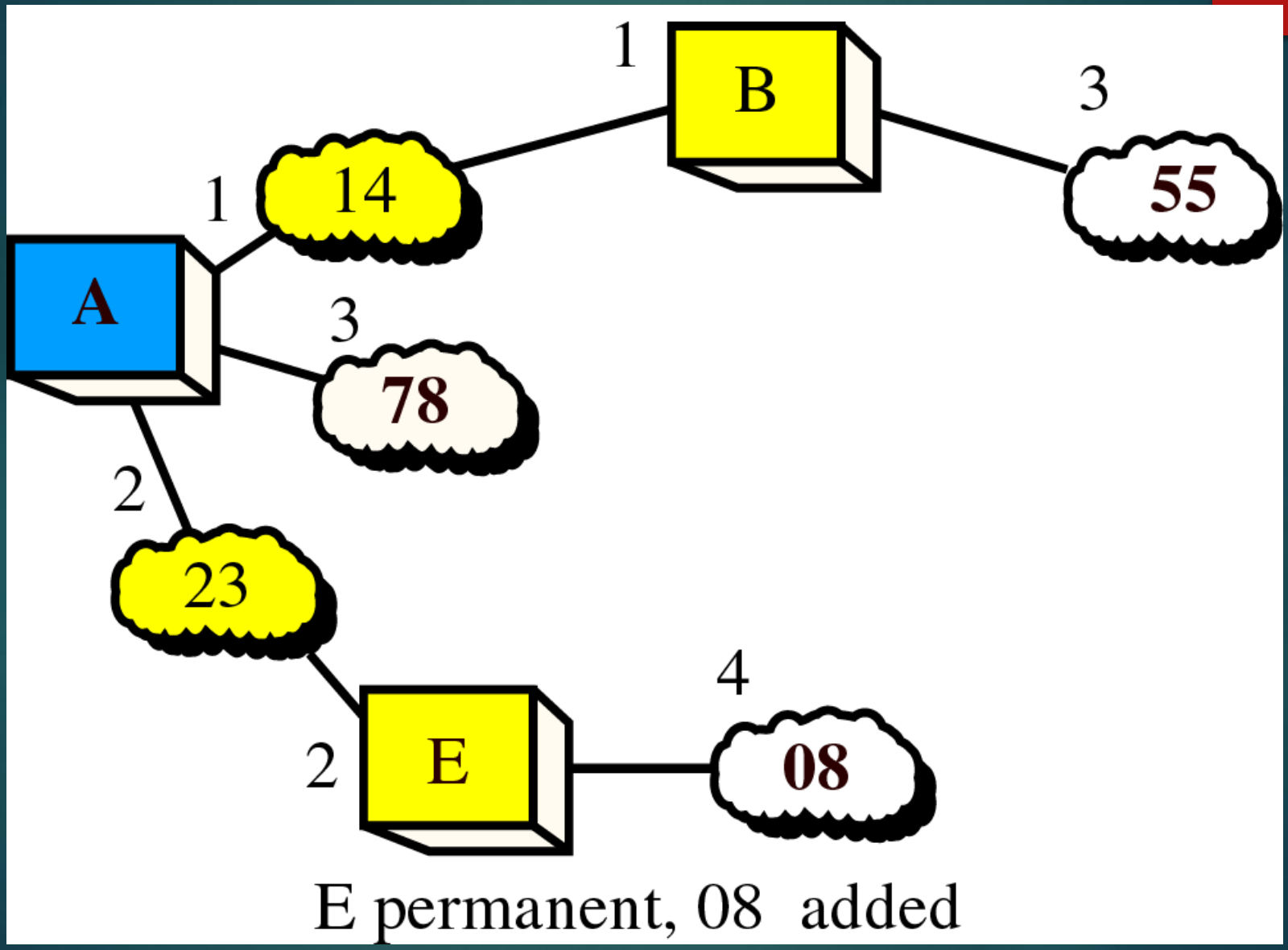
Shortest Path Calculation, Part III



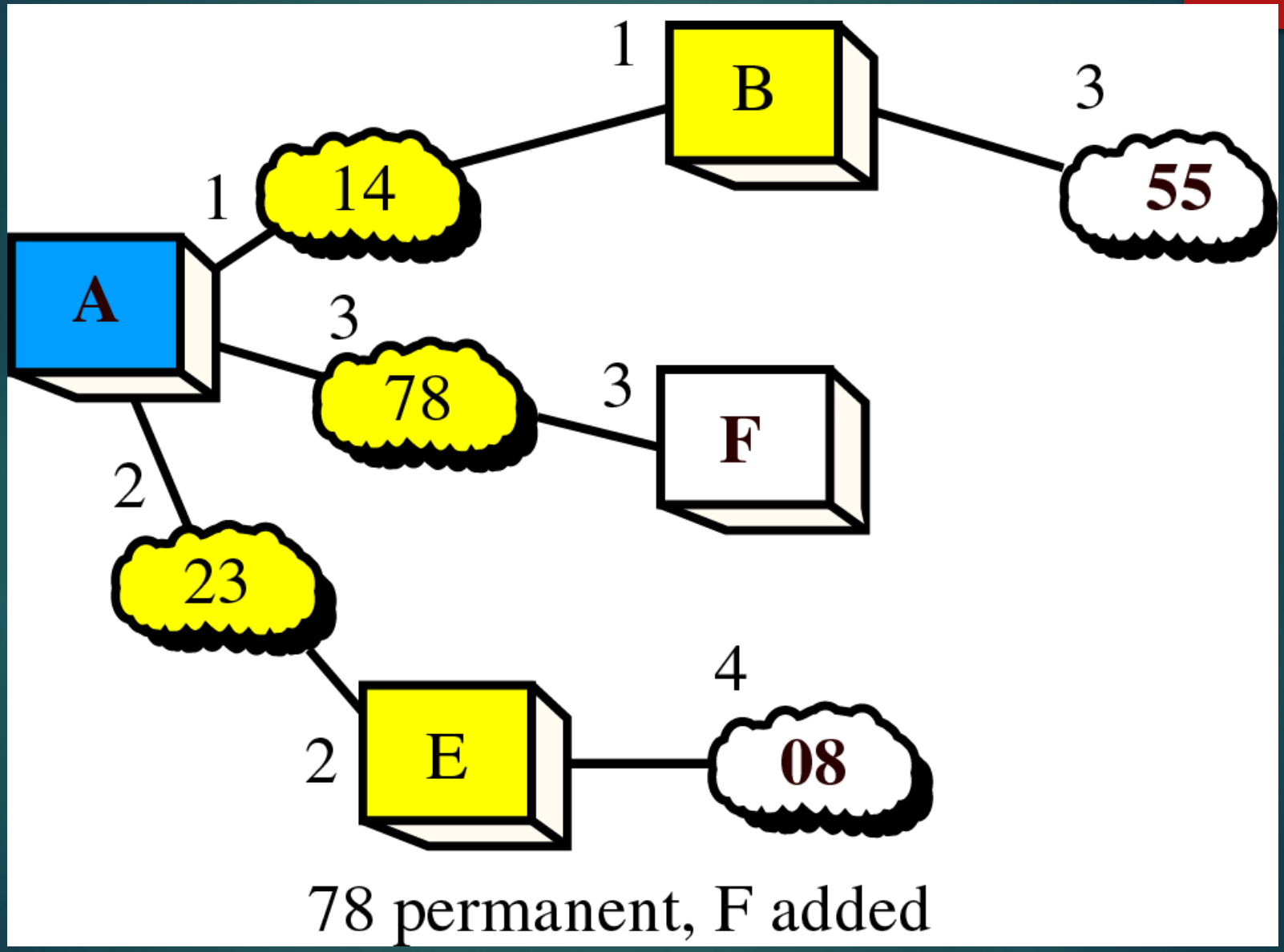
Shortest Path Calculation, Part IV



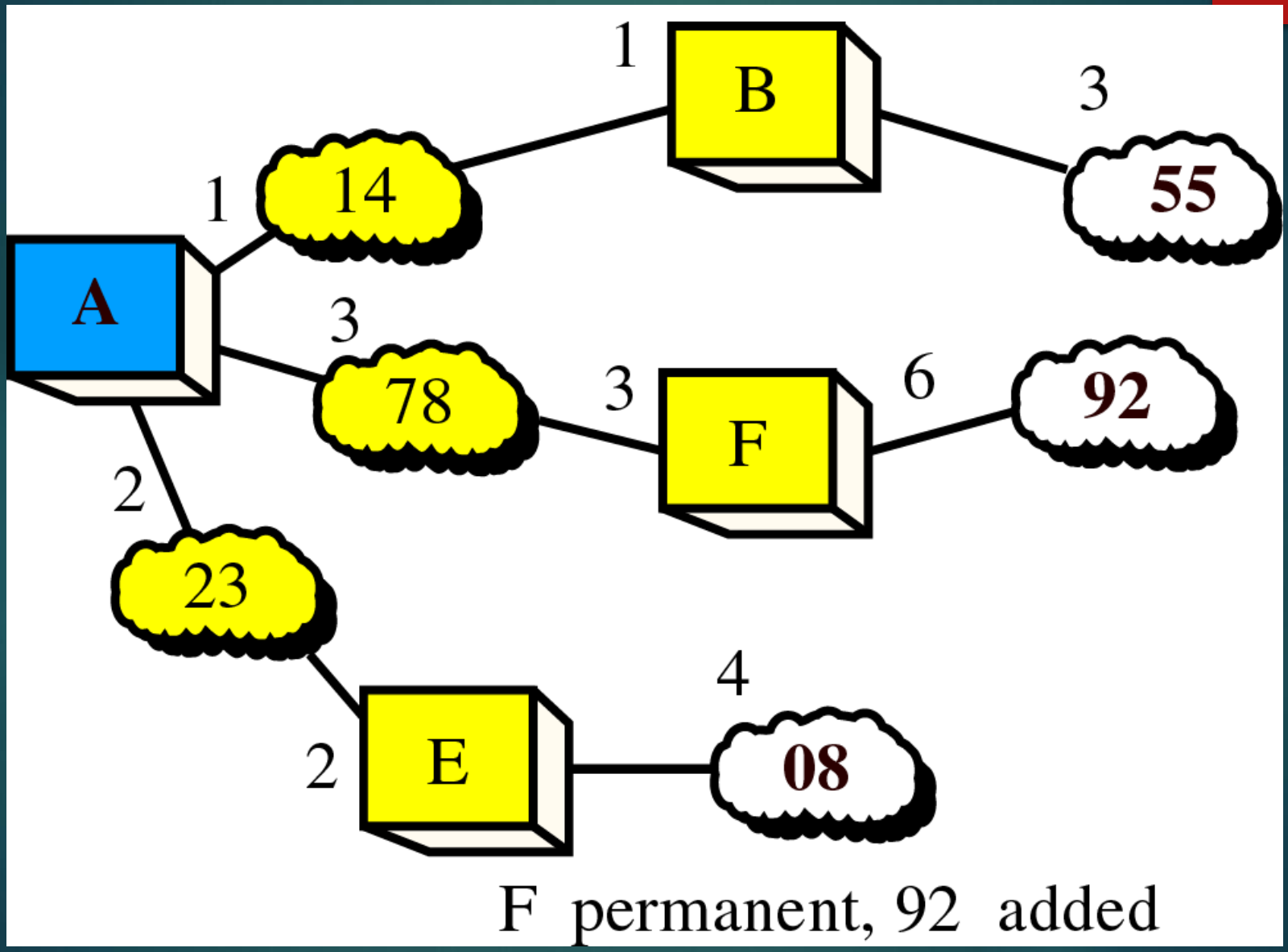
Shortest Path Calculation, Part V



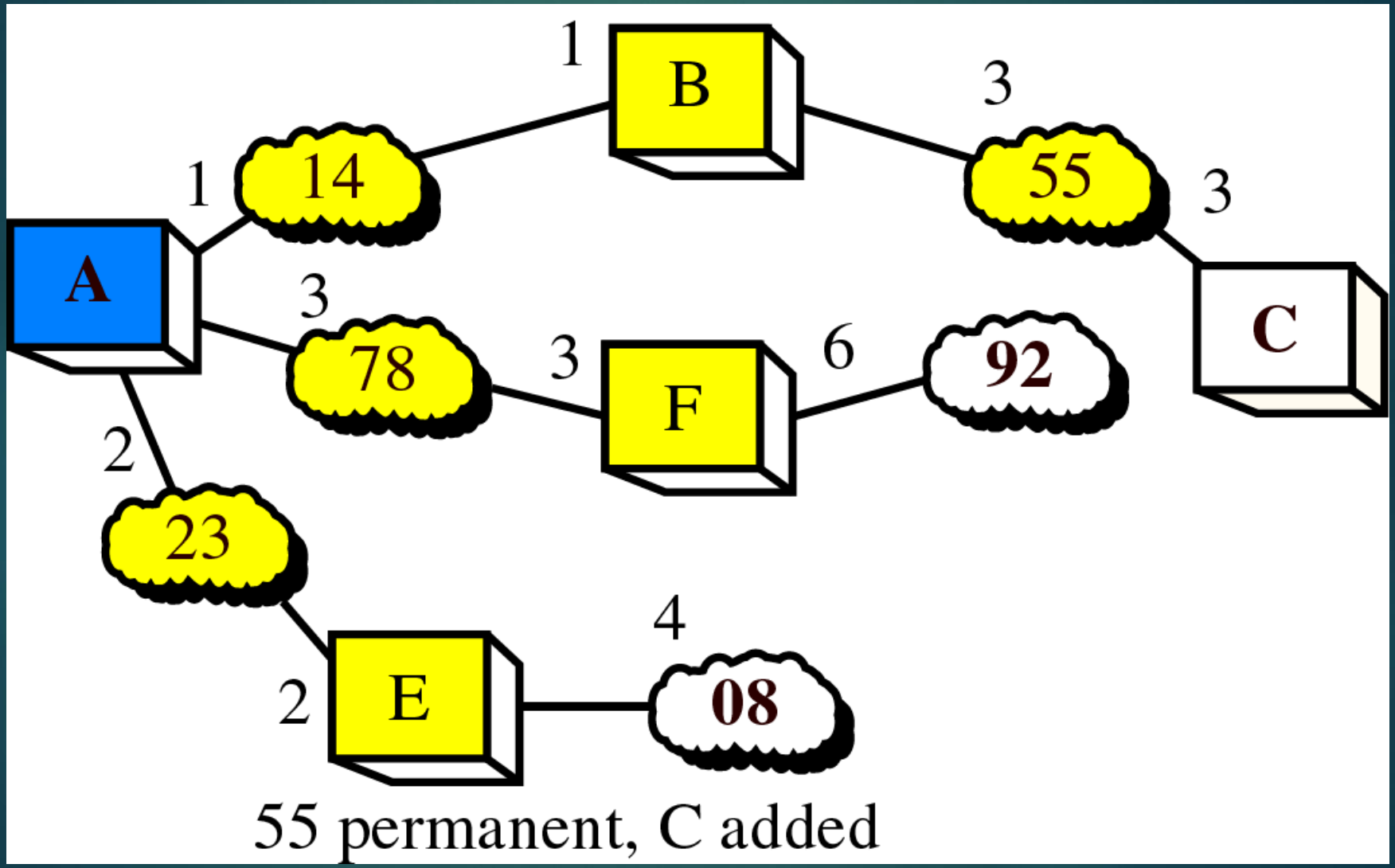
Shortest Path Calculation, Part VI



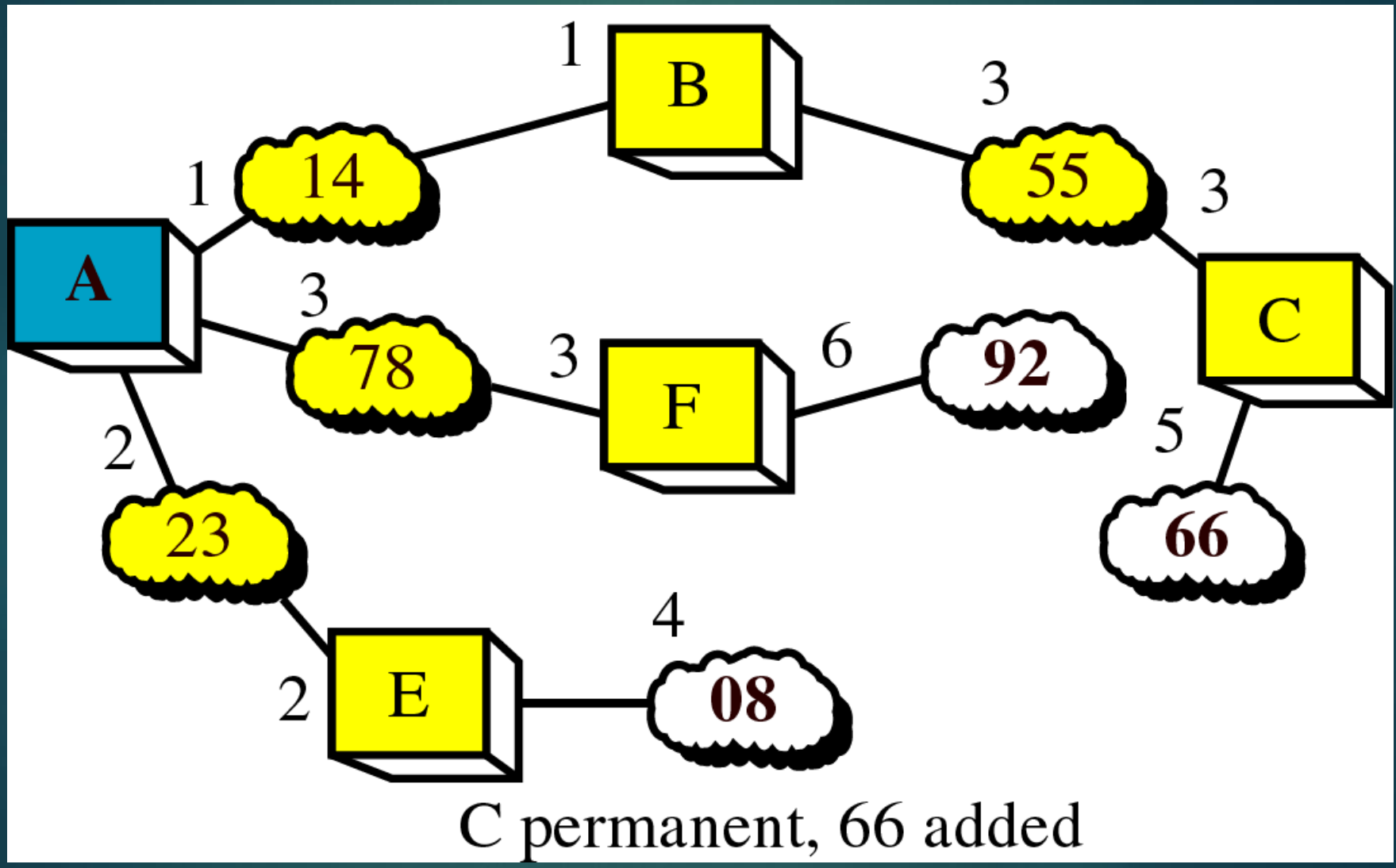
Shortest Path Calculation, Part VII



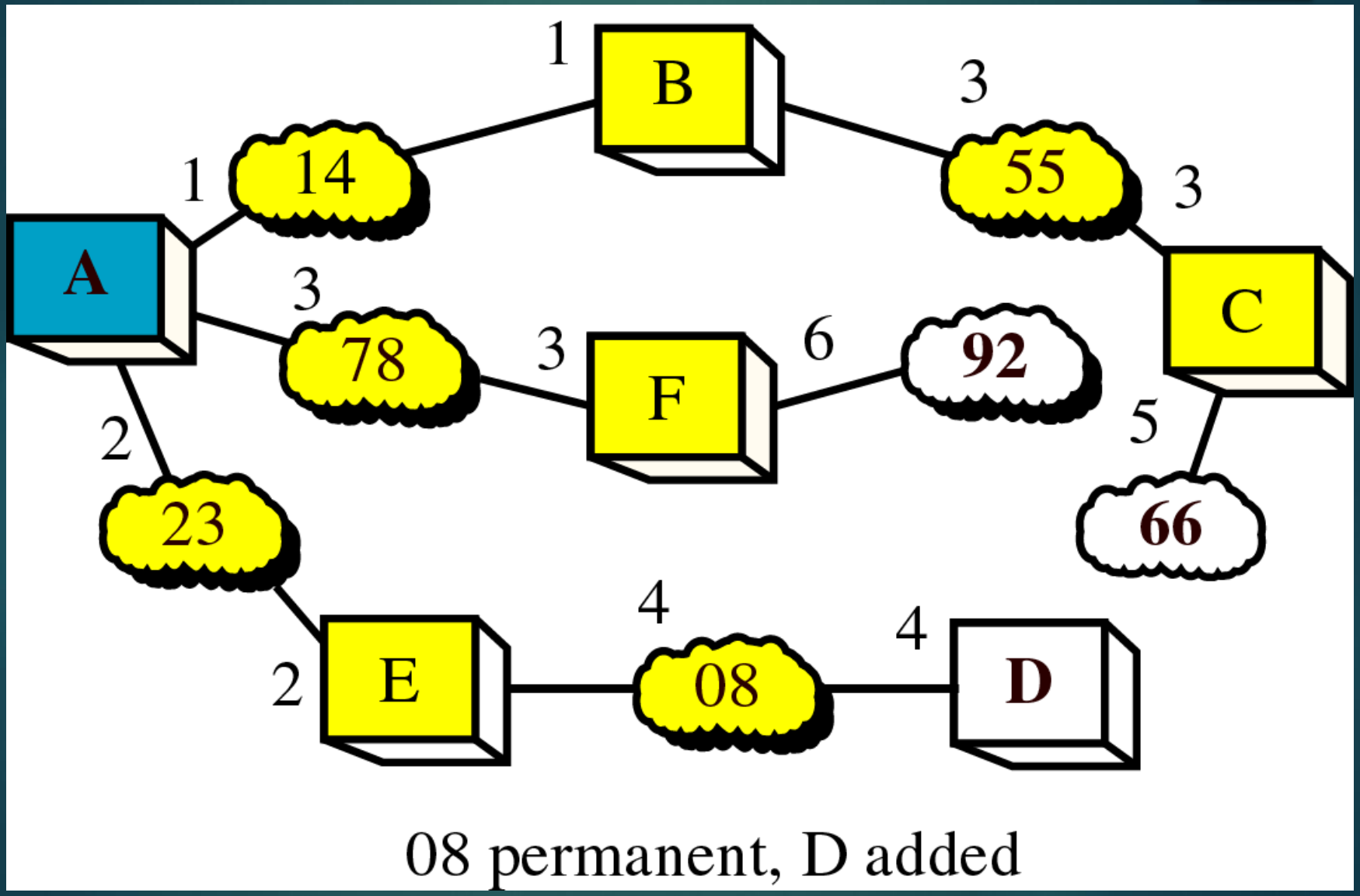
Shortest Path Calculation, Part VIII



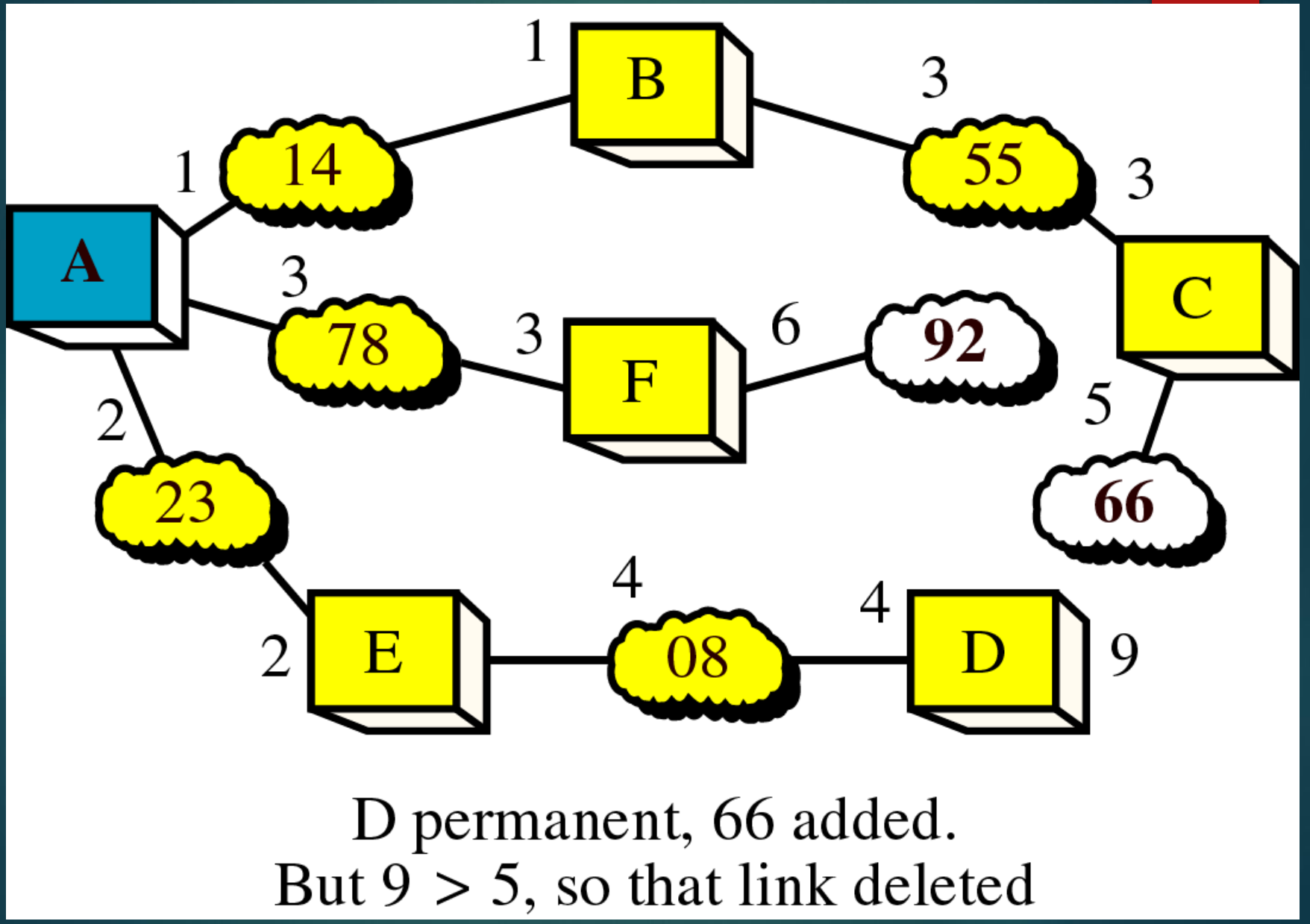
Shortest Path Calculation, Part IX



Shortest Path Calculation, Part X

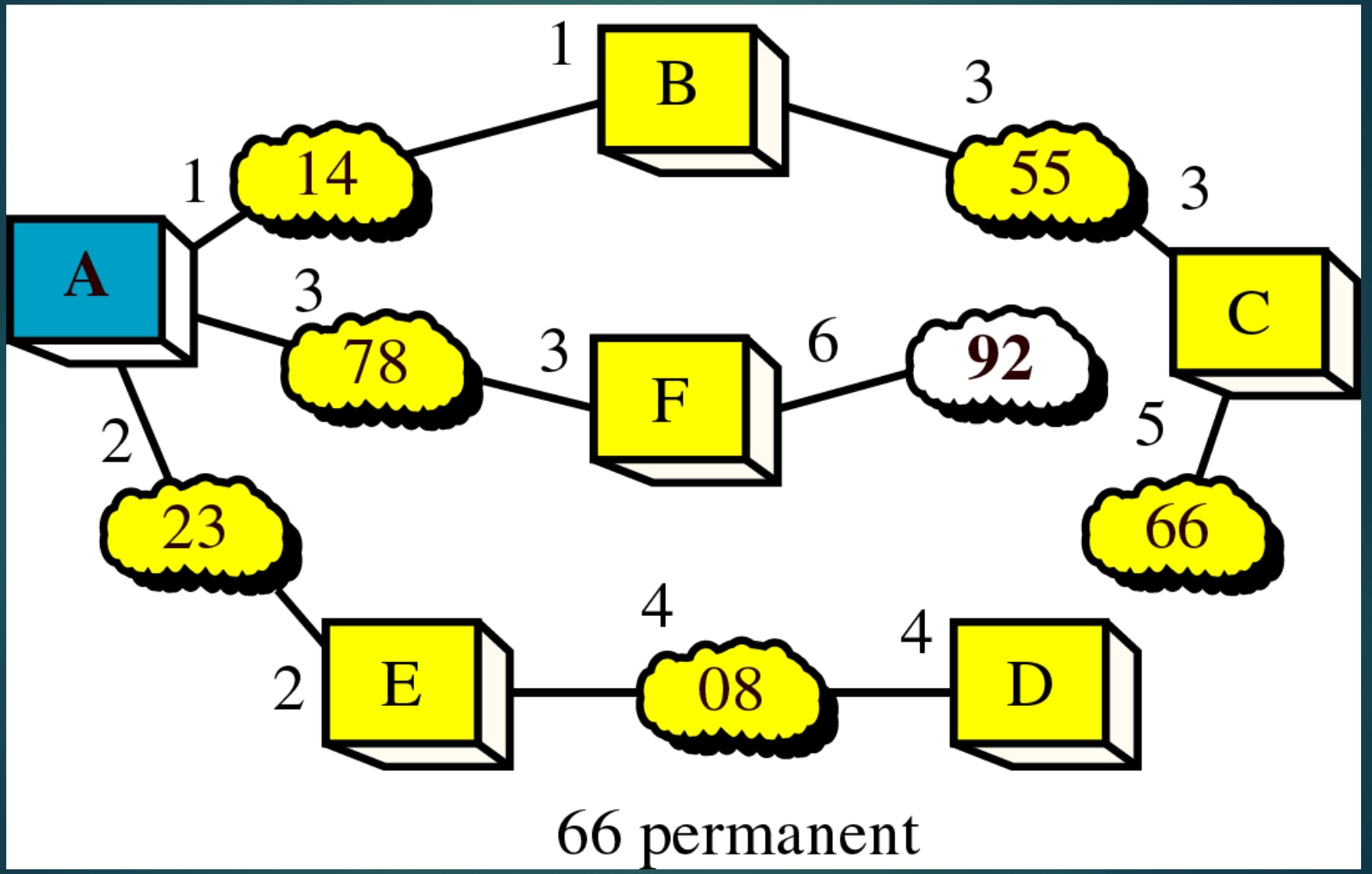


Shortest Path Calculation, Part XI

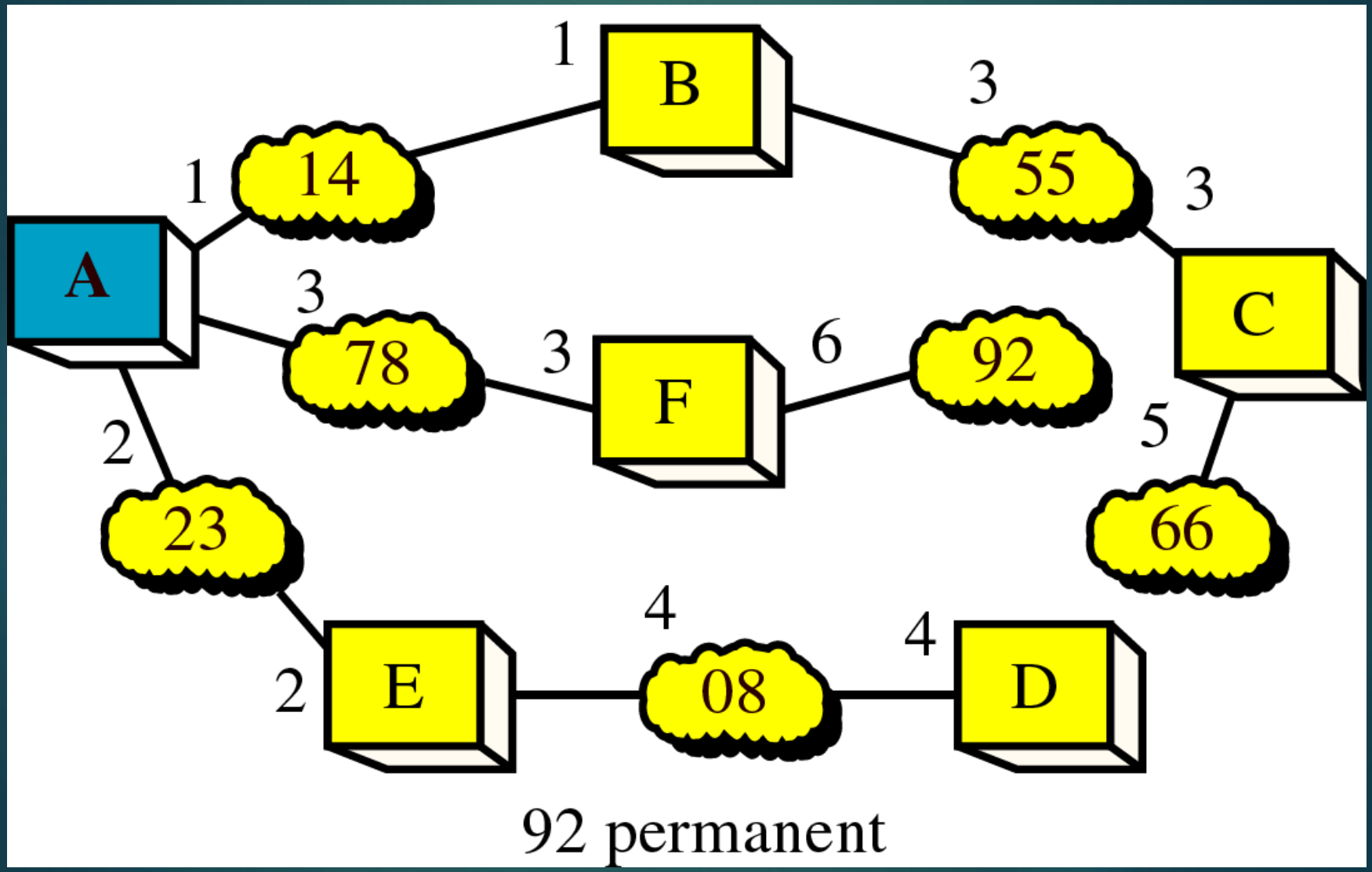


D permanent, 66 added.
But 9 > 5, so that link deleted

Shortest Path Calculation, Part XII



Shortest Path Calculation, Part XIII



Routing Table for Router A

Net	Cost	Next router
08	4	E
14	1	--
23	2	--
55	3	B
66	5	B
78	3	--
92	6	F