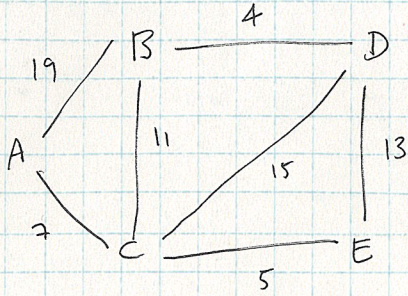


LINK-STATE EXAMPLE

①



1. Advertisements:

- A sends [(B, 19), (C, 7)]
- B sends [(A, 19), (C, 11), (D, 4)]
- C sends [(A, 7), (B, 11), (D, 15), (E, 5)]
- D sends [(B, 4), (C, 15), (E, 13)]
- E sends [(C, 5), (D, 13)]

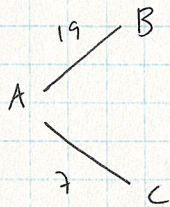
These get flooded, so everyone receives them

2. After flooding, at A

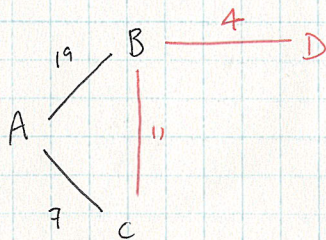
A has received:

- From B: (A, 19), (C, 11), (D, 4)
- C: (A, 7), (B, 11), (D, 15), (E, 5)
- D: (B, 4), (C, 15), (E, 13)
- E: (C, 5), (D, 13)

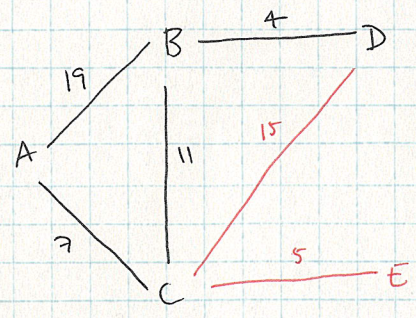
Initially A knew this map of the network:



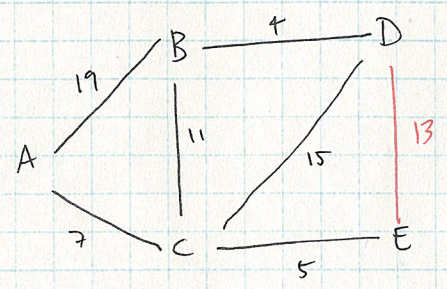
After B's advertisement [(A, 19), (C, 11), (D, 4)]



After C's advertisement $([(A, 7), (B, 11), (D, 15), (E, 5)])$:



After D's advertisement $([(B, 4), (C, 15), (E, 13)])$:



E's advertisement provides no new info

3. A runs Dijkstra's Algorithm:

STEP	u	W	current cost					current route				
			A	B	C	D	E	A	B	C	D	E
0		{A, B, C, D, E}	0	∞	∞	∞	∞	Self	?	?	?	?
1	A	{B, C, D, E}	0	19	7	∞	∞	Self	A→B	A→C	?	?
2	C	{B, D, E}	0	18	7	22	12	Self	A→C	A→C	A→C	A→C
3	E	{B, D}	0	18	7	22	12	Self	A→C	A→C	A→C	A→C
4	B	{D}	0	18	7	22	12	Self	A→C	A→C	A→C	A→C
5	D	∅	0	18	7	22	12	Self	A→C	A→C	A→C	A→C

The cost to D via B was tied with our current cost