

Übung 5

Montag, 6. Dezember 2010
11:45

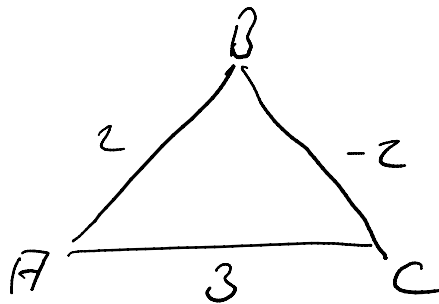
1) If the least cost path is unique

- same result expected

else

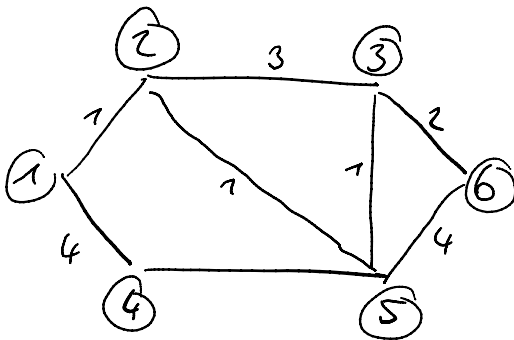
- different results possible

2) No



Dijkstra is a greedy algorithm

3)

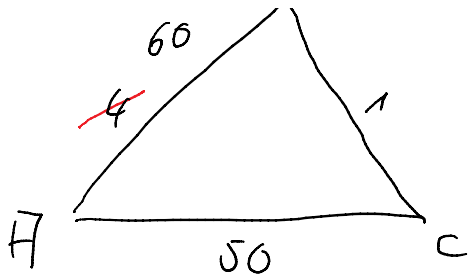


Step	1	2	3	4	5	6
0	1	2, 1	∞	4, 1	∞	∞
1	1, 2		4, 2	4, 1	2, 2	∞
2	1, 2, 5		3, 5	3, 5		6, 5
3	1, 2, 5, 3 1, 2, 5, 4					5, 3

4)



advertise to be able to reach A with a cost



conversion to infinity
to reach H with a cost
of 6

$C \rightarrow B \rightarrow C \rightarrow H$

\rightarrow Count-to-infinity problem

In DV protocols nodes do
not have a complete knowledge
of the network topology

\rightarrow they base their decisions
on limited information

\rightarrow they only find the forwarding
link to each dest.

\Rightarrow routing loops

5)

B	
Dst	Dis
H	5
B	0
C	8
D	12
E	6
F	2

D	
Dst	Dis
H	16
B	12
C	6
D	0
E	9
F	10

E	
Dst	Dis
H	7
B	6
C	3
D	9
E	0
F	4

Measurement	
Dst	Dis
B	6
D	3
E	5

D(C)	B	D	E
H	$6 + 5 = 11$	$3 + 16 = 19$	$5 + 7 = 12$
B	6	15	11
C			
D	18	3	14
E	12	17	5
F	8	13	9