## Project3

Friday, July 26, 2019 12:00 AM

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C:\Users\mstro\OneDrive\Documents\cs1652-2019\project3 \1652Project3\Code>java Project

Network Simulator v1.0

Enter trace level (>= 0): [0] 2

Will the link change (1 = Yes, 0 = No): [0] 1

Enter random seed: [random] 12345

Initializing entity 0 at time: 0.0

Sending first distance vector from 0 to 1 at 0.0

Sending first distance vector from 0 to 2 at 0.0

Sending first distance vector from 0 to 3 at 0.0

Initializing entity 1 at time: 0.0

Sending first distance vector from 1 to 0 at 0.0

Sending first distance vector from 1 to 2 at 0.0

Initializing entity 2 at time: 0.0

Sending first distance vector from 2 to 0 at 0.0

Sending first distance vector from 2 to 1 at 0.0

Sending first distance vector from 2 to 3 at 0.0

Initializing entity 3 at time: 0.0

Sending first distance vector from 3 to 0 at 0.0

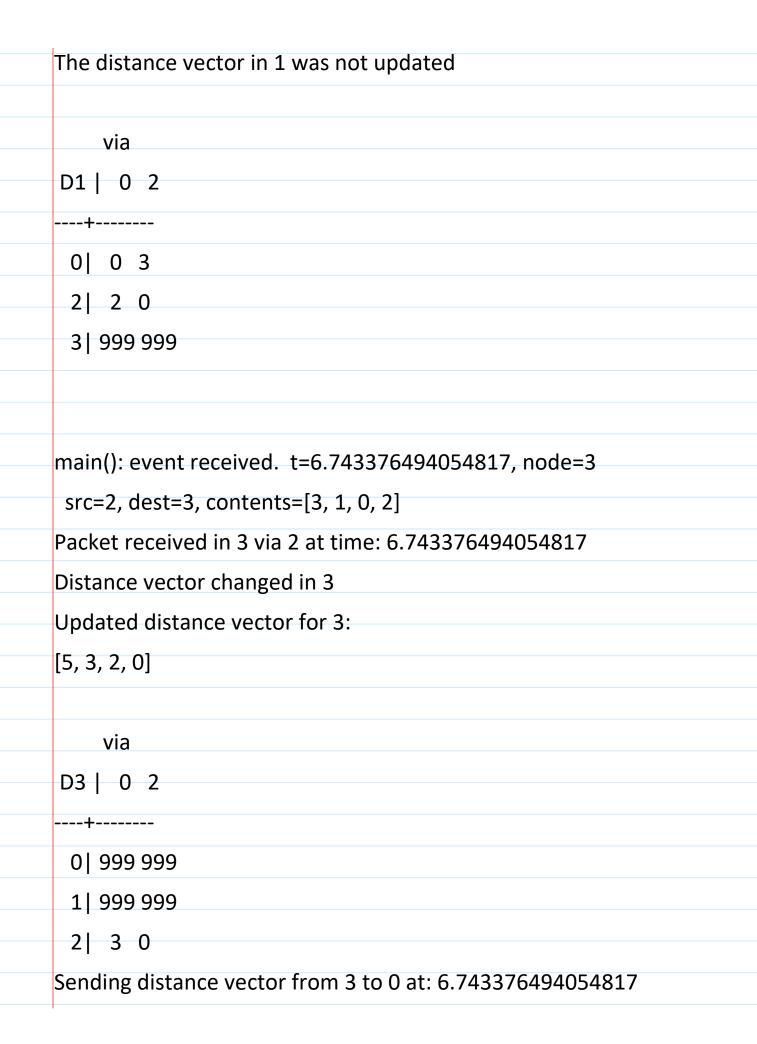
Sending first distance vector from 3 to 2 at 0.0 main(): event received. t=2.4243988896568207, node=0 src=3, dest=0, contents=[7, 999, 2, 0] Packet received in 0 via 3 at time: 2.4243988896568207 The distance vector in 0 was not updated via D0 | 1 2 3 ----+-----1 | 999 999 999 2 | 999 999 999 3 | 999 2 0 main(): event received. t=3.119714115828627, node=2 src=1, dest=2, contents=[1, 0, 1, 999] Packet received in 2 via 1 at time: 3.119714115828627 Distance vector changed in 2 Updated distance vector for 2: · 2's distance vector [2, 1, 0, 2] via

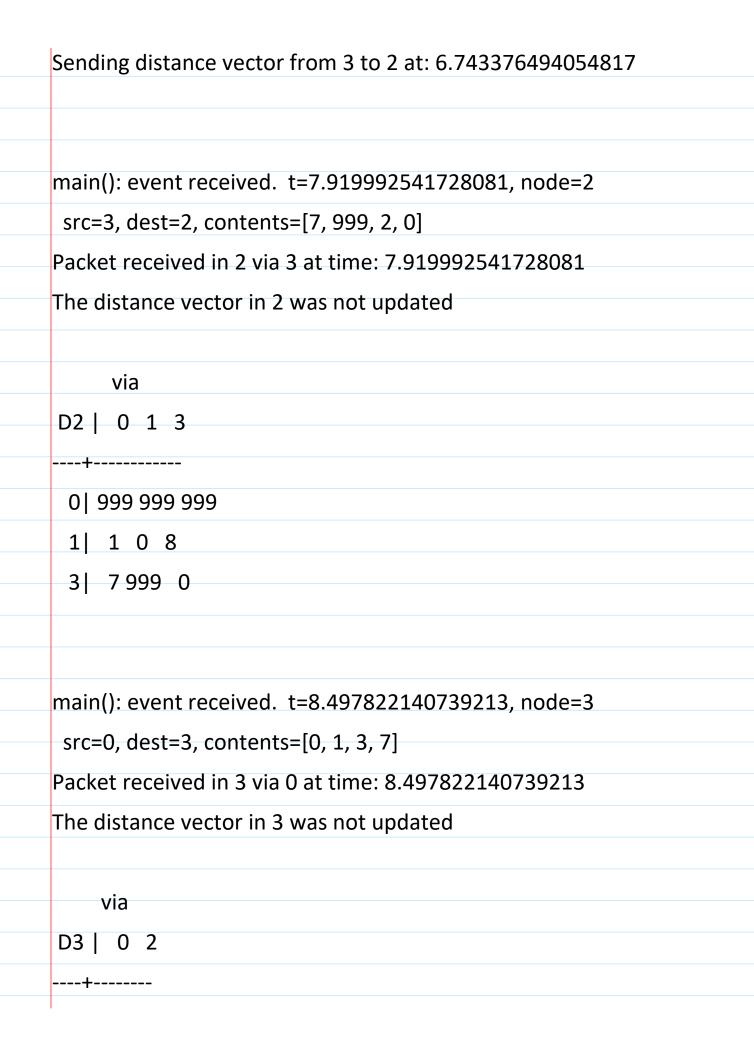
```
D2 | 0 1 3
----+-----
 0 | 999 999 999
 1 1 0 999
 3 | 999 999 999
Sending distance vector from 2 to 0 at: 3.119714115828627
Sending distance vector from 2 to 1 at: 3.119714115828627
Sending distance vector from 2 to 3 at: 3.119714115828627
main(): event received. t=3.9382818061413363, node=0
 src=1, dest=0, contents=[1, 0, 1, 999]
Packet received in 0 via 1 at time: 3.9382818061413363
Distance vector changed in 0
Updated distance vector for 0:
[0, 1, 2, 7]
     via
D0 | 1 2 3
 1 0 1 9 9 9
 2 | 999 999 999
 3 | 999 2 0
Sending distance vector from 0 to 1 at: 3.9382818061413363
```

Sending distance vector from 0 to 2 at: 3.9382818061413363 Sending distance vector from 0 to 3 at: 3.9382818061413363 main(): event received. t=4.14203820962395, node=0 src=2, dest=0, contents=[3, 1, 0, 2] Packet received in 0 via 2 at time: 4.14203820962395 Distance vector changed in 0 Updated distance vector for 0: [0, 1, 2, 5]via D0 | 1 2 3 1 0 1 9 9 9 2 | 1 0 2 3 | 999 2 0 Sending distance vector from 0 to 1 at: 4.14203820962395 Sending distance vector from 0 to 2 at: 4.14203820962395 Sending distance vector from 0 to 3 at: 4.14203820962395 main(): event received. t=4.256227964444246, node=1 src=0, dest=1, contents=[0, 1, 3, 7]

Packet received in 1 via 0 at time: 4.256227964444246 Distance vector changed in 1 Updated distance vector for 1: [1, 0, 1, 8]via D1 | 0 2 0 0 3 2 | 999 999 3 | 999 999 Sending distance vector from 1 to 0 at: 4.256227964444246 Sending distance vector from 1 to 2 at: 4.256227964444246 main(): event received. t=5.032698694238366, node=1 src=2, dest=1, contents=[3, 1, 0, 2] Packet received in 1 via 2 at time: 5.032698694238366 Distance vector changed in 1 Updated distance vector for 1: · l's distance vector [1, 0, 1, 3] via D1 |

+
0  0 3
'
2  3 0
3   999 999
Sending distance vector from 1 to 0 at: 5.032698694238366
Sending distance vector from 1 to 2 at: 5.032698694238366
main(): ovent received t=6.1912020604212995 node=2
main(): event received. t=6.1812020694213885, node=2
src=1, dest=2, contents=[1, 0, 1, 8]
Packet received in 2 via 1 at time: 6.1812020694213885
The distance vector in 2 was not updated
•
via
via
via D2   0 1 3
via D2   0 1 3+
via D2   0 1 3
via D2   0 1 3+
via D2   0 1 3+ 0   999 999 999
via D2   0 1 3+ 0   999 999 999 1   1 0 8
via D2   0 1 3+ 0   999 999 999 1   1 0 8
via D2   0 1 3+ 0   999 999 999 1   1 0 8 3   999 999 999
via  D2   0 1 3 + 0   999 999 999  1   1 0 8  3   999 999 999  main(): event received. t=6.622964060724313, node=1
via D2   0 1 3+ 0   999 999 999 1   1 0 8 3   999 999 999





0  0 3
1  999 999
2  3 0
<u> </u>
main(); event received t=0.0200E1220220662 node=2
main(): event received. t=8.928851229238663, node=2
src=1, dest=2, contents=[1, 0, 1, 3]
Packet received in 2 via 1 at time: 8.928851229238663
The distance vector in 2 was not updated
via
D2   0 1 3
+
0  999 999
1  1 0 3
3  7 999 0
main(): event received. t=9.396941367596868, node=2
src=0, dest=2, contents=[0, 1, 3, 7]
Packet received in 2 via 0 at time: 9.396941367596868
The distance vector in 2 was not updated
via
- 10-

D2   0 1 3
+
0  0 1 7
1 1 0 3
3  7 999 0
main(): event received. t=9.557466317248007, node=1
src=0, dest=1, contents=[0, 1, 2, 7]
Packet received in 1 via 0 at time: 9.557466317248007
The distance vector in 1 was not updated
via
D1   0 2
0  0 2
•
2   2   0
3   999 999
main(): event received. t=10.025020386587439, node=0
src=3, dest=0, contents=[5, 3, 2, 0]
Packet received in 0 via 3 at time: 10.025020386587439
The distance vector in 0 was not updated

via
D0   1 2 3
' +
41 0 4 000
1  0 1999
2  1 0 2
3  3 2 0
. ()
main(): event received. t=10.254830429659705, node=0
src=1, dest=0, contents=[1, 0, 1, 8]
Packet received in 0 via 1 at time: 10.254830429659705
The distance vector in 0 was not updated
•
via
via
D0   1 2 3
+
1  0 1 8
2  1 0 2
3   3 2 0
3  3 2 0
main(): event received. t=13.390218940347001, node=2
src=0, dest=2, contents=[0, 1, 2, 7]

Packet received in 2 via 0 at time: 13.390218940347001 The distance vector in 2 was not updated via D2 | 0 1 3 0 0 1 7 1 1 0 3 3 | 7 9 9 0 main(): event received. t=13.647699329192216, node=0 src=2, dest=0, contents=[2, 1, 0, 2] Packet received in 0 via 2 at time: 13.647699329192216 The distance vector in 0 was not updated via D0 | 1 2 3 ----+-----1 0 1 8 2 1 0 2 3 | 3 2 0

main(): event received. t=15.035457955244045, node=3

src=2, dest=3, contents=[2, 1, 0, 2]

Packet received in 3 via 2 at time: 15.035457955244045

Distance vector changed in 3

Updated distance vector for 3:

[4, 3, 2, 0]

· 3's distance vector

via

D3 | 0 2

----+-----

0 0 3

1 | 999 999

2 | 2 0

Sending distance vector from 3 to 0 at: 15.035457955244045

Sending distance vector from 3 to 2 at: 15.035457955244045

main(): event received. t=15.184607470151414, node=2

src=3, dest=2, contents=[5, 3, 2, 0]

Packet received in 2 via 3 at time: 15.184607470151414

The distance vector in 2 was not updated

via

D2 | 0 1 3

0 0 1 7 1 1 0 3 3 | 5 3 0 main(): event received. t=15.730604219073927, node=3 src=0, dest=3, contents=[0, 1, 2, 7] Packet received in 3 via 0 at time: 15.730604219073927 The distance vector in 3 was not updated via D3 | 0 2 ---+----0 0 2 1 | 999 999 2 | 2 0 main(): event received. t=16.461467186332673, node=0 src=3, dest=0, contents=[4, 3, 2, 0] Packet received in 0 via 3 at time: 16.461467186332673 The distance vector in 0 was not updated

via
D0   1 2 3
+
1 0 1 8
'
2   1 0 2
3  3 2 0
main(): event received. t=17.54279372389734, node=3
src=0, dest=3, contents=[0, 1, 2, 5]
Packet received in 3 via 0 at time: 17.54279372389734
The distance vector in 3 was not updated
The distance vector in 5 was not updated
_
via
D3   0 2
+
0  0 2
1  999 999
2  2 0
2  2 0
main(): event received. t=17.547979044931378, node=2
src=0, dest=2, contents=[0, 1, 2, 5]
Packet received in 2 via 0 at time: 17.547979044931378

The distance vector in 2 was not updated
via
D2   0 1 3
+
0  0 1 5
1 1 0 3
3  5 3 0
: ()
main(): event received. t=17.991100653020034, node=2
src=3, dest=2, contents=[4, 3, 2, 0]
Packet received in 2 via 3 at time: 17.991100653020034
The distance vector in 2 was not updated
via
D2   0 1 3
t
0  0 1 5
1 1 0 3
3  4 3 0

main(): event received. t=18.803526120866138, node=1

src=0, dest=1, contents=[0, 1, 2, 5]

Packet received in 1 via 0 at time: 18.803526120866138

The distance vector in 1 was not updated

via

D1 | 0 2

01 0 2

2 | 2 0

3 | 999 999

main(): event received. t=19.75405545678855, node=0

src=1, dest=0, contents=[1, 0, 1, 3]

Packet received in 0 via 1 at time: 19.75405545678855

Distance vector changed in 0

Updated distance vector for 0:

[0, 1, 2, 4]

1 0 1 3

2 1 0 2

· O's distance vector

ofinal distance table for

entity of before link change

2 | 1 0 2 3 | 3 2 0 Cruny

Sending distance vector from 0 to 1 at: 19.75405545678855 Sending distance vector from 0 to 2 at: 19.75405545678855 Sending distance vector from 0 to 3 at: 19.75405545678855

main(): event received. t=22.839068912714534, node=3 src=0, dest=3, contents=[0, 1, 2, 4]

Packet received in 3 via 0 at time: 22.839068912714534

The distance vector in 3 was not updated

ofinal distance table for entity 3 before link change

main(): event received. t=24.33622582436163, node=2 src=0, dest=2, contents=[0, 1, 2, 4]

Packet received in 2 via 0 at time: 24.33622582436163

The distance vector in 2 was not updated

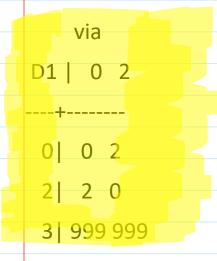
via						
D2	0	1	3			
+-						
0	0	1	4			
1	1	0	3			
3	4	3	0			

ofinal distance table for entity I before link change

main(): event received. t=28.405368396796703, node=1 src=0, dest=1, contents=[0, 1, 2, 4]

Packet received in 1 via 0 at time: 28.405368396796703

The distance vector in 1 was not updated



ofmal distance table
for entity 1
before
ink change

main(): event received. t=10000.0, node=0

Link cost change.

Link cost change detected in 0 for : Link 1 with newCost: 20 at time: 10000.0
10000.0  Distance vector changed in 0  increuse
Updated distance vector for 0:
[0, 4, 3, 5] 0'5 distance vector
0 3 0.5
via
D0   1 2 3
+
1  0 1 3
2  1 0 2
3  3 2 0
Sending distance vector from 0 to 1 at: 10000.0
Sending distance vector from 0 to 2 at: 10000.0
Sending distance vector from 0 to 3 at: 10000.0
Link cost change detected in 1 for: Link 0 with newCost: 20 at time:
10000.0
Distance vector changed in 1
Updated distance vector for 1:
[3, 0, 1, 3]
via
D1   0 2

0 0 2 2 | 2 0 3 | 999 999 Sending distance vector from 1 to 0 at: 10000.0 Sending packet from 1 to 0 in init Sending distance vector from 1 to 2 at: 10000.0 Sending packet from 1 to 2 in init main(): event received. t=10001.599752599835, node=2 src=0, dest=2, contents=[0, 4, 3, 5] Packet received in 2 via 0 at time: 10001.599752599835 The distance vector in 2 was not updated via D2 | 0 1 3 0 0 4 5 1 1 0 3 3 | 4 3 0

main(): event received. t=10001.924149081846, node=3

src=0, dest=3, contents=[0, 4, 3, 5] Packet received in 3 via 0 at time: 10001.924149081846 The distance vector in 3 was not updated via D3 | 0 2 0 0 3 1 | 999 999 2 | 2 0 main(): event received. t=10002.404125088864, node=1 src=0, dest=1, contents=[0, 4, 3, 5] Packet received in 1 via 0 at time: 10002.404125088864 The distance vector in 1 was not updated via D1 | 0 2 0 0 3 2 | 2 0 3 | 999 999

main(): event received. t=10004.399968033475, node=2

src=1, dest=2, contents=[3, 0, 1, 3]

Packet received in 2 via 1 at time: 10004.399968033475

Distance vector changed in 2

Updated distance vector for 2:

[3, 1, 0, 2]

7's distance vector

via

D2 | 0 1 3

----+-----

0 0 4 5

1 3 0 3

3 4 3 0

Sending distance vector from 2 to 0 at: 10004.399968033475

Sending distance vector from 2 to 1 at: 10004.399968033475

Sending distance vector from 2 to 3 at: 10004.399968033475

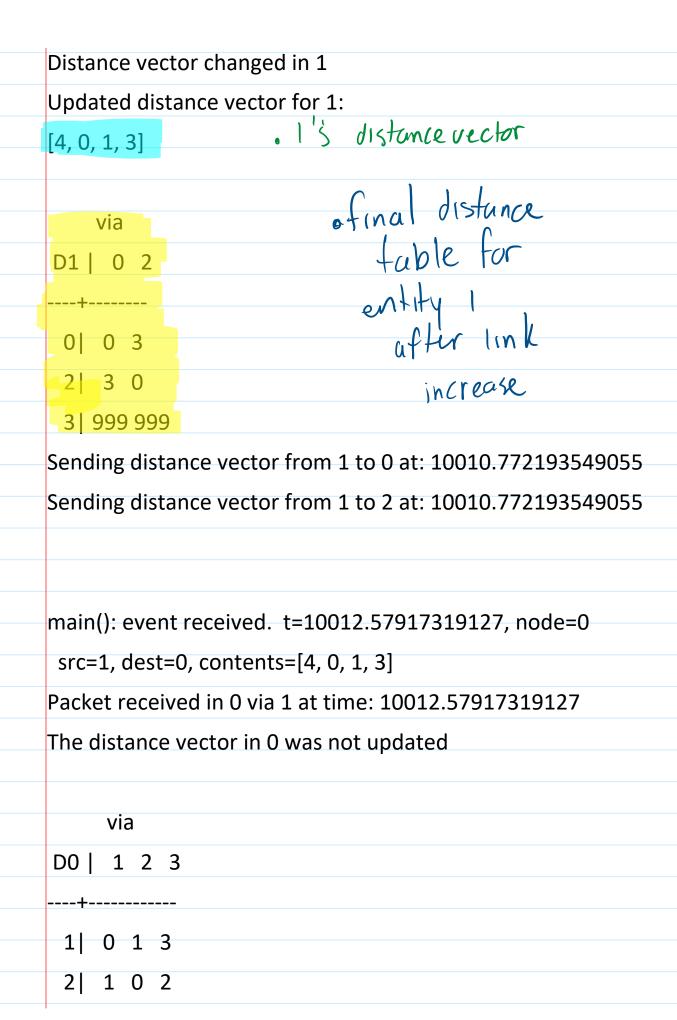
main(): event received. t=10006.323733762363, node=0

src=1, dest=0, contents=[3, 0, 1, 3]

Packet received in 0 via 1 at time: 10006.323733762363

The distance vector in 0 was not updated

via
D0   1 2 3
+
1 0 1 3
2 1 0 2
3  3 2 0
main(): event received. t=10009.86089685751, node=0
src=2, dest=0, contents=[3, 1, 0, 2]
Packet received in 0 via 2 at time: 10009.86089685751
The distance vector in 0 was not updated
via
via D0   1 2 3
D0   1 2 3 +
D0   1 2 3+ 1   0 1 3 2   1 0 2 3   3 2 0
D0   1 2 3+ 1   0 1 3 2   1 0 2 3   3 2 0  main(): event received. t=10010.772193549055, node=1
D0   1 2 3+ 1   0 1 3 2   1 0 2 3   3 2 0



3 | 3 2 0

main(): event received. t=10013.476542783523, node=2

src=1, dest=2, contents=[4, 0, 1, 3]

Packet received in 2 via 1 at time: 10013.476542783523

The distance vector in 2 was not updated

via

D2 | 0 1 3

----+-----

0 0 4 5

1 4 0 3

3 | 4 3 0

main(): event received. t=10013.603840305866, node=3

src=2, dest=3, contents=[3, 1, 0, 2]

Packet received in 3 via 2 at time: 10013.603840305866

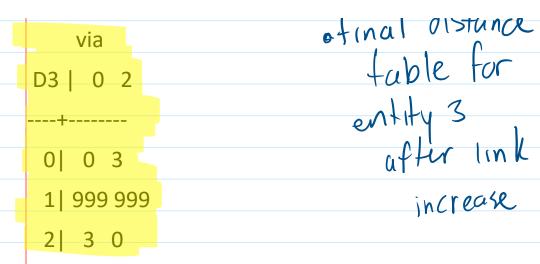
Distance vector changed in 3

Updated distance vector for 3:

[5, 3, 2, 0]

ofinal distance

via



Sending distance vector from 3 to 0 at: 10013.603840305866 Sending distance vector from 3 to 2 at: 10013.603840305866

main(): event received. t=10019.344347164491, node=0 src=3, dest=0, contents=[5, 3, 2, 0]

Packet received in 0 via 3 at time: 10019.344347164491

The distance vector in 0 was not updated

via

DO | 1 2 3

final distance

table for

entity 0

after link

3 | 3 2 0

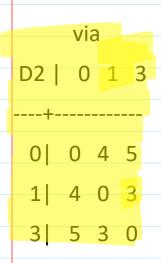
increase

main(): event received. t=10023.261683467023, node=2

src=3, dest=2, contents=[5, 3, 2, 0]

Packet received in 2 via 3 at time: 10023.261683467023

The distance vector in 2 was not updated



main(): event received. t=20000.0, node=0

Link cost change.

Link cost change detected in 0 for: Link 1 with newCost: 1 at time:

20000.0

Distance vector changed in 0

Updated distance vector for 0:

olink cost decreuse

.0's distance vector

via

D0 | 1 2 3

---+-----

1 0 1 3

2 | 1 0 2 3 | 3 2 0 Sending distance vector from 0 to 1 at: 20000.0 Sending distance vector from 0 to 2 at: 20000.0 Sending distance vector from 0 to 3 at: 20000.0 Link cost change detected in 1 for: Link 0 with new cost: 1 at time: 20000.0 Distance vector changed in 1 Updated distance vector for 1: . I's distance [1, 0, 1, 3]vector via D1 | 0 2 0 0 3 2 | 3 0 3 | 999 999 Sending distance vector from 1 to 0 at: 20000.0 Sending packet from 1 to 0 in init Sending distance vector from 1 to 2 at: 20000.0 Sending packet from 1 to 2 in init

main(): event received. t=20001.016960636403, node=2

src=1, dest=2, contents=[1, 0, 1, 3]

Packet received in 2 via 1 at time: 20001.016960636403

Distance vector changed in 2

Updated distance vector for 2:

[2, 1, 0, 2]

· 1's distance vector

via

D2 | 0 1 3

---+-----

0 0 4 5

1 1 0 3

3 | 5 3 0

Sending distance vector from 2 to 0 at: 20001.016960636403

Sending distance vector from 2 to 1 at: 20001.016960636403

Sending distance vector from 2 to 3 at: 20001.016960636403

main(): event received. t=20005.31820264754, node=1

src=0, dest=1, contents=[0, 1, 2, 4]

Packet received in 1 via 0 at time: 20005.31820264754

The distance vector in 1 was not updated

via

D1   0 2
+
0  0 2
2  3 0
3   999 999
main(): event received. t=20005.349850182505, node=0
src=1, dest=0, contents=[1, 0, 1, 3]
Packet received in 0 via 1 at time: 20005.349850182505
The distance vector in 0 was not updated
via
D0   1 2 3
+
1 0 1 3
2 1 0 2
3  3 2 0
main(): event received. t=20005.631397151123, node=2
src=0, dest=2, contents=[0, 1, 2, 4]
src=0, dest=2, contents=[0, 1, 2, 4]  Packet received in 2 via 0 at time: 20005.631397151123

via

D2 | 0 1 3

0 0 1 4

1 1 0 3

3 | 5 3 0

main(): event received. t=20007.280652164478, node=1 src=2, dest=1, contents=[2, 1, 0, 2]

Packet received in 1 via 2 at time: 20007.280652164478

The distance vector in 1 was not updated

via

0 0 2

2 | 2 0

3 | 999 999

ofinal distance table for entity after link decrease

main(): event received. t=20007.500672285496, node=0

src=2, dest=0, contents=[2, 1, 0, 2]

Packet received in 0 via 2 at time: 20007.500672285496 The distance vector in 0 was not updated via D0 | 1 2 3 1 0 1 3 2 | 1 0 2 3 | 3 2 0 main(): event received. t=20008.24323596357, node=3 src=0, dest=3, contents=[0, 1, 2, 4] Packet received in 3 via 0 at time: 20008.24323596357 The distance vector in 3 was not updated via D3 | 0 2 ----+-----0 0 2 1 | 999 999 2 3 0

main(): event received. t=20008.254744298072, node=3

src=2, dest=3, contents=[2, 1, 0, 2]

Packet received in 3 via 2 at time: 20008.254744298072

Distance vector changed in 3

Updated distance vector for 3:

[4, 3, 2, 0]

3's distance vector

via

D3 | 0 2

0 0 2

1 | 999 999

2 | 2 | 0

ofinal distance table for entity 3 after link decrease

Sending distance vector from 3 to 0 at: 20008.254744298072

Sending distance vector from 3 to 2 at: 20008.254744298072

main(): event received. t=20010.365481081968, node=2

src=3, dest=2, contents=[4, 3, 2, 0]

Packet received in 2 via 3 at time: 20010.365481081968

The distance vector in 2 was not updated

D2	0	1	. 3	
+				
0	0	1	4	
1	1	0	3	
3	4	3	0	

ofinal distance table for entity 2 after link decrease

main(): event received. t=20015.021932634005, node=0 src=3, dest=0, contents=[4, 3, 2, 0]

Packet received in 0 via 3 at time: 20015.021932634005

The distance vector in 0 was not updated

ofinal distance table for entity of after link decrease

Simulator terminated at t=20015.021932634005, no packets in medium.

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\1652Project3\Code>