70 (0)

55 (1)

40 (1)

60 (0)

30 (0)

20 (0)

2

2

1

1

10 (1)

15 (1)

1

1

* Inside each square the supply/demand values of source and destination nodes respectively.
* For each rectangle on arcs, Euclidean distance between two nodes and (flow value). 1 means there is a flow on this arc, 0 is for no flow.
* The given solution is optimal for “all” the problem. Cost = 10 + 15 + 40 + 55 = 120.
* Then, we need to assign two nodes from source to destination nodes. So, we check the input arcs to each F nodes with flow value of 1, and select the minimum for each node.
* For the first destination node, it has two input arcs with flow 1, one with cost 10 & other with cost 15. We choose the 10.
* Same for second destination node, it has two input flow arcs, one with cost 40 and other with cost 55. We choose 40.
* **While**, the second source node has an arc to the second destination node with cost 20 which is smaller than 40, but it has 0 flow as it is not optimal for the **whole** problem.
* So, when the number of source nodes is greater than the number of destination nodes, the MCF gets an optimal solution for the whole problem which is not necessarily optimal for our part.