<untitled> #344

MODELS
Model-01   Flashlight
Model-02   Radio
Model-03   Toy Car
Model-04   Ball Point Pen

If model-01 is disassemble in line -- 1; otherwise -- 0 = 0
If model-02 is disassemble in line -- 1; otherwise -- 0 = 1
If model-03 is disassemble in line -- 1; otherwise -- 0 = 1
If model-04 is disassemble in line -- 1; otherwise -- 0 = 0

Warning: your license will expire in 4 days

Using license file C:\gurobi903\win64\bin\gurobi.lic
Academic license - for non-commercial use only
Gurobi Optimizer version 9.0.3 build v9.0.3rc0 (win64)
Optimize a model with 83137 rows, 6393 columns and 415743 nonzeros
Model fingerprint: 0xd095f7e9
Variable types: 127 continuous, 6266 integer (6266 binary)
Coefficient statistics:
  Matrix range   [1e+00, 1e+05]
  Objective range [1e-06, 1e+00]
  Bounds range   [1e+00, 1e+00]
  RHS range   [1e+00, 3e+05]
Presolve removed 66325 rows and 2533 columns
Presolve time: 2.21s
Presolved: 16812 rows, 3860 columns, 82949 nonzeros
Variable types: 107 continuous, 3753 integer (3753 binary)
Found heuristic solution: objective 3.0102260

Root relaxation: objective 2.012209e+00, 236 iterations, 0.04 seconds

Nodes		Current Node		Objective Bounds		Work	
Expl Unexpl		Obj Depth IntInf		Incumbent BestBd	Gap	It/Node Time	
0 0		3.00923 0 27		3.01023 3.00923	0.03%	- 2s	
0 0		3.00924 0 27		3.01023 3.00924	0.03%	- 2s	
0 0		3.00924 0 41		3.01023 3.00924	0.03%	- 4s	
0 0		3.00927 0 45		3.01023 3.00927	0.03%	- 4s	
0 0		3.00927 0 26		3.01023 3.00927	0.03%	- 4s	
0 0		cutoff 0		3.01023 3.01023	0.00%	- 4s	

Cutting planes:
  Learned: 3
  Gomory: 1
  Cover: 8
  Implied bound: 1
  Clique: 2
  MIR: 25

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  StrongCG: 1
  Flow cover: 13
  GUB cover: 3
  RLT: 4
  Relax-and-lift: 4

Explored 1 nodes (889 simplex iterations) in 4.91 seconds
Thread count was 4 (of 4 available processors)

Solution count 2: 3.01023 3.01023

Optimal solution found (tolerance 1.00e-04)
Best objective 3.010226000000e+00, best bound 3.010226000000e+00, gap 0.0000%
<gurobi.Model MIP instance MILP Model: 83137 constrs, 6393 vars, No parameter changes>

Solution Results

Time = 11.454448223114014 second
Total number of stations opened from both sides   :   2.0
Total number of stations opened from only one side :   1.0
Total number of stations opened   :   5.0
MODEL- m2

(m, i)	(j,s)	Processing Time	Starting Time	Ending Time
('m2', 1) :	[(1, 2)]	11	0.0	11.0
('m2', 3) :	[(1, 1)]	20	11.0	31.0
('m2', 4) :	[(2, 1)]	14	0.0	14.0
('m2', 5) :	[(3, 2)]	19	0.0	19.0
('m2', 6) :	[(3, 2)]	1	18.99999999999916	19.99999999999916
('m2', 9) :	[(3, 1)]	6	34.000000000000306	40.000000000000306
('m2', 17) :	[(3, 2)]	6	19.99999999999916	25.99999999999916
('m2', 29) :	[(3, 2)]	4	30.000000000000306	34.000000000000306
('m2', 30) :	[(1, 1)]	5	31.0	36.0

MODEL- m3

(m, i)	(j,s)	Processing Time	Starting Time	Ending Time
('m3', 1) :	[(1, 1)]	37	0.0	37.0
('m3', 4) :	[(3, 1)]	3	14.0	17.0
('m3', 13) :	[(3, 1)]	2	28.0	30.0
('m3', 33) :	[(3, 1)]	10	30.0	40.0
('m3', 48) :	[(2, 1)]	11	0.0	11.0
('m3', 89) :	[(2, 1)]	29	11.0	40.0
('m3', 95) :	[(3, 2)]	34	0.0	34.0
('m3', 97) :	[(3, 1)]	14	0.0	14.0