COMPLEMENTARY MATERIAL

ON THE COMPLEXITY OF THE SWITCH ALLOCATION PROBLEM

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Numerical Results

This document presents the numerical results obtained from executing the four evaluated algorithms (ILP-GALIAS, MILP-IFLOWS, DP-TS, and DP-N2M2). Each row in the following tables represents a switch allocation problem with a specific number of switches. The m column indicates the number of switches to be allocated, **best ENS** represents the optimal energy not supplied value, and the subsequent four columns show the computational time in seconds required by each algorithm to solve the corresponding problem. Each algorithm was executed for each network and we have considered every possible number of switches, starting from $m = 0$ up to $m = n$. Thus, our benchmark comprises a total of 9,995 instances. For each methodology it was given two hours per network or one hour per instance, halting whenever the first was reached.

Table 1: ENS optimization - R3.

m	best ENS	Time (sec)			
		ILP-GALIAS	**MILP-IFLOWS**	**DP-TS**	**DP-N2M2**
0	11135.20	0.005	0.007	0.000	0.000
1	7298.66	0.001	0.006	0.000	0.000
2	5559.70	0.011	0.005	0.000	0.000
3	4260.74	0.049	0.003	0.000	0.000
4	3391.76	0.036	0.003	0.000	0.000
5	3031.78	0.089	0.004	0.000	0.000
6	2715.24	0.230	0.006	0.000	0.000
7	2601.77	1.035	0.013	0.000	0.000
8	2505.75	2.311	0.022	0.000	0.000
9	2436.24	7.117	0.033	0.000	0.000
10	2372.86	13.735	0.045	0.010	0.000
11	2333.40	29.362	0.112	0.000	0.000
12	2300.69	45.689	0.114	0.000	0.000
13	2269.21	81.378	0.146	0.000	0.000
14	2238.98	105.767	0.160	0.000	0.000
15	2213.58	146.585	0.172	0.000	0.000
16	2193.14	165.597	0.172	0.000	0.000
17	2175.45	159.426	0.160	0.000	0.000
18	2158.37	167.175	0.150	0.000	0.000
19	2144.88	166.860	0.164	0.000	0.000
20	2132.20	190.745	0.184	0.000	0.000
21	2121.00	181.385	0.041	0.000	0.000
22	2114.28	195.062	0.050	0.000	0.000
23	2107.78	178.212	0.058	0.000	0.000
24	2101.43	155.219	0.039	0.000	0.000
25	2095.18	241.293	0.018	0.000	0.000
26	2089.06	133.895	0.012	0.000	0.000
27	2083.60	171.887	0.007	0.010	0.000
28	2078.49	129.053	0.004	0.000	0.000
29	2073.98	126.038	0.001	0.000	0.000
30	2071.62	126.240	0.001	0.000	0.000
31	2069.97	224.223	0.000	0.000	0.000
32	2069.97	165.916	0.000	0.000	0.000
Total		**3494.05**	**1.91**	**0.02**	**0.00**

Table 2: ENS optimization - R4.

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
0	42302.40	0.001	0.000	0.000	0.000
1	35470.40	0.002	0.004	0.000	0.000
2	30373.00	0.012	0.001	0.030	0.000
3	25557.90	0.010	0.001	0.630	0.000
4	21052.60	0.011	0.001	7.270	0.000
5	17272.80	0.012	0.001	53.680	0.000
6	14441.20	0.037	0.001	186.280	0.000
7	11710.90	0.047	0.001	494.020	0.000
8	9568.08	0.094	0.004	1208.170	0.000
<u>9</u>	7697.22	0.192	0.004	<u>2582.700</u>	0.000
10	5968.14	0.353	0.004	-	0.000
11	4242.33	0.757	0.004	-	0.000
12	3688.71	4.745	0.019	-	0.000
13	3353.53	73.468	0.034	-	0.000
<u>14</u>	3130.15	<u>817.892</u>	0.041	-	0.000
15	2990.25	-	0.054	-	0.000
16	2898.94	-	0.053	-	0.000
17	2844.17	-	0.063	-	0.000
18	2802.85	-	0.104	-	0.000
19	2763.33	-	0.098	-	0.000
20	2725.95	-	0.143	-	0.000
21	2691.75	-	0.143	-	0.000
22	2658.92	-	0.197	-	0.000
23	2631.77	-	0.236	-	0.000
24	2605.87	-	0.280	-	0.000
25	2584.01	-	0.473	-	0.000
26	2562.16	-	0.513	-	0.000
27	2540.50	-	0.794	-	0.000
28	2522.22	-	0.560	-	0.000
29	2504.72	-	0.640	-	0.000
30	2489.07	-	0.717	-	0.000
31	2476.32	-	1.676	-	0.000
32	2463.95	-	2.515	-	0.000
33	2452.87	-	5.801	-	0.000
34	2442.98	-	6.266	-	0.000
35	2434.29	-	6.295	-	0.000
36	2426.22	-	14.078	-	0.000
37	2418.76	-	9.409	-	0.000
38	2411.48	-	15.455	-	0.000
39	2404.59	-	31.483	-	0.000
40	2398.36	-	11.652	-	0.000
41	2392.52	-	15.284	-	0.000
42	2387.04	-	12.541	-	0.000
43	2381.95	-	18.017	-	0.000
44	2377.03	-	19.509	-	0.000
45	2372.64	-	5.119	-	0.000
46	2368.80	-	5.388	-	0.000
47	2365.15	-	1.439	-	0.000
48	2361.50	-	1.497	-	0.000
49	2358.23	-	1.705	-	0.000
			Continued on next page		

Table 2 – continued from previous page - R4

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
50	2355.54	-	0.989	-	0.000
51	2353.16	-	0.780	-	0.000
52	2350.98	-	7.393	-	0.000
53	2348.80	-	0.146	-	0.000
54	2347.59	-	1.422	-	0.000
55	2346.49	-	0.500	-	0.000
56	2345.48	-	0.497	-	0.000
57	2344.57	-	0.258	-	0.000
58	2343.84	-	0.133	-	0.000
59	2343.11	-	0.067	-	0.000
60	2342.43	-	0.051	-	0.000
61	2341.85	-	0.021	-	0.000
62	2341.27	-	0.014	-	0.000
63	2340.72	-	0.017	-	0.000
64	2340.50	-	0.007	-	0.000
65	2340.39	-	0.006	-	0.000
66	2340.32	-	0.003	-	0.000
67	2340.32	-	0.002	-	0.000
68	2340.32	-	0.002	-	0.000
69	2340.32	-	0.002	-	0.000
70	2340.32	-	0.002	-	0.000
71	2340.32	-	0.002	-	0.000
72	2340.32	-	0.002	-	0.000
73	2340.32	-	0.002	-	0.000
74	2340.32	-	0.002	-	0.000
75	2340.32	-	0.002	-	0.000
76	2340.32	-	0.002	-	0.000
77	2340.32	-	0.002	-	0.000
78	2340.32	-	0.002	-	0.000
79	2340.32	-	0.002	-	0.000
80	2340.32	-	0.002	-	0.000
81	2340.32	-	0.002	-	0.000
82	2340.32	-	0.002	-	0.000
83	2340.32	-	0.002	-	0.000
84	2340.32	-	0.002	-	0.000
85	2340.32	-	0.003	-	0.000
86	2340.32	-	0.002	-	0.000
87	2340.32	-	0.002	-	0.000
88	2340.32	-	0.002	-	0.000
89	2340.32	-	0.002	-	0.000
90	2340.32	-	0.002	-	0.000
91	2340.32	-	0.002	-	0.000
92	2340.32	-	0.002	-	0.000
93	2340.32	-	0.001	-	0.000
Total		**8097.63**	**202.68**	**9673.00**	**0.00**

Table 3: ENS optimization - R5.

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
0	107230.00	0.002	0.000	0.000	0.000
1	82358.70	0.004	0.008	0.000	0.000
2	66163.10	0.026	0.002	0.010	0.000
3	53973.60	0.033	0.003	0.030	0.000
4	44745.20	0.055	0.003	0.310	0.000
5	35844.70	0.066	0.002	2.300	0.000
6	27888.00	0.106	0.002	13.190	0.000
7	19933.90	0.127	0.002	59.990	0.000
8	14111.00	1.744	0.003	223.680	0.000
9	12149.30	63.307	0.017	721.570	0.000
<u>10</u>	11096.70	<u>1431.279</u>	0.044	<u>1992.820</u>	0.000
11	10156.00	-	0.049	-	0.000
12	9629.24	-	0.157	-	0.000
13	9156.78	-	0.297	-	0.000
14	8791.59	-	0.911	-	0.000
15	8428.62	-	7.473	-	0.000
16	8066.10	-	5.727	-	0.000
17	7751.59	-	5.277	-	0.000
18	7468.47	-	25.352	-	0.000
19	7237.11	-	2.336	-	0.000
20	7025.91	-	12.531	-	0.000
21	6815.29	-	2.449	-	0.000
22	6614.50	-	6.649	-	0.000
23	6418.37	-	2.380	-	0.000
24	6224.88	-	8.333	-	0.000
25	6039.19	-	5.189	-	0.000
26	5893.08	-	7.799	-	0.000
27	5755.29	-	10.143	-	0.000
28	5618.02	-	10.006	-	0.000
29	5488.09	-	9.222	-	0.000
30	5371.94	-	5.994	-	0.000
31	5257.79	-	11.063	-	0.000
32	5144.36	-	14.939	-	0.000
33	5056.61	-	32.905	-	0.000
34	4970.93	-	47.323	-	0.000
35	4885.95	-	67.592	-	0.000
36	4801.43	-	54.421	-	0.000
37	4729.23	-	123.796	-	0.000
38	4669.72	-	282.180	-	0.000
39	4613.05	-	661.853	-	0.000
40	4558.26	-	1345.134	-	0.000
<u>41</u>	4504.61	-	<u>2402.798</u>	-	0.000
42	4452.04	-	-	-	0.000
43	4407.43	-	-	-	0.000
44	4365.06	-	-	-	0.000
45	4326.83	-	-	-	0.000
46	4293.09	-	-	-	0.000
47	4260.94	-	-	-	0.000
48	4231.51	-	-	-	0.000
49	4204.60	-	-	-	0.000
			Continued on next page		

Table 3 – continued from previous page - R5

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
50	4177.97	-	-	-	0.000
51	4153.35	-	-	-	0.000
52	4129.61	-	-	-	0.000
53	4105.97	-	-	-	0.000
54	4082.36	-	-	-	0.000
55	4062.37	-	-	-	0.000
56	4044.67	-	-	-	0.000
57	4028.18	-	-	-	0.000
58	4013.74	-	-	-	0.000
59	3999.84	-	-	-	0.000
60	3986.14	-	-	-	0.000
61	3974.03	-	-	-	0.000
62	3962.07	-	-	-	0.000
63	3950.58	-	-	-	0.000
64	3939.30	-	-	-	0.000
65	3928.03	-	-	-	0.000
66	3917.83	-	-	-	0.000
67	3908.14	-	-	-	0.000
68	3898.65	-	-	-	0.000
69	3889.71	-	-	-	0.000
70	3880.89	-	-	-	0.000
71	3872.28	-	-	-	0.000
72	3864.76	-	-	-	0.000
73	3857.84	-	-	-	0.000
74	3851.48	-	-	-	0.000
75	3845.16	-	-	-	0.000
76	3839.06	-	-	-	0.000
77	3833.50	-	-	-	0.000
78	3828.71	-	-	-	0.000
79	3823.94	-	-	-	0.000
80	3819.23	-	-	-	0.000
81	3815.28	-	-	-	0.000
82	3811.40	-	-	-	0.000
83	3807.55	-	-	-	0.000
84	3803.74	-	-	-	0.000
85	3800.13	-	-	-	0.000
86	3796.71	-	-	-	0.000
87	3793.30	-	-	-	0.000
88	3789.95	-	-	-	0.000
89	3786.63	-	-	-	0.000
90	3783.49	-	-	-	0.000
91	3780.40	-	-	-	0.000
92	3777.57	-	-	-	0.000
93	3774.88	-	-	-	0.000
94	3772.21	-	-	-	0.000
95	3769.63	-	-	-	0.000
96	3767.39	-	-	-	0.000
97	3765.24	-	-	-	0.000
98	3763.14	-	-	-	0.000
99	3761.28	-	-	-	0.000
100	3759.45	-	-	-	0.000
101	3757.78	-	-	-	0.000

Table 3 – continued from previous page - R5

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
102	3756.39	-	-	-	0.000
103	3755.20	-	-	-	0.000
104	3754.20	-	-	-	0.000
105	3753.27	-	-	-	0.000
106	3752.33	-	-	-	0.000
107	3751.46	-	-	-	0.000
108	3750.62	-	-	-	0.000
109	3749.99	-	-	-	0.000
110	3749.40	-	-	-	0.000
111	3748.85	-	-	-	0.000
112	3748.35	-	-	-	0.000
113	3747.90	-	-	-	0.000
114	3747.69	-	-	-	0.000
115	3747.49	-	-	-	0.000
116	3747.42	-	-	-	0.000
117	3747.42	-	-	-	0.000
118	3747.42	-	-	-	0.000
119	3747.42	-	-	-	0.000
120	3747.42	-	-	-	0.000
121	3747.42	-	-	-	0.000
122	3747.42	-	-	-	0.000
123	3747.42	-	-	-	0.000
124	3747.42	-	-	-	0.000
125	3747.42	-	-	-	0.000
126	3747.42	-	-	-	0.000
127	3747.42	-	-	-	0.000
128	3747.42	-	-	-	0.000
129	3747.42	-	-	-	0.000
130	3747.42	-	-	-	0.000
131	3747.42	-	-	-	0.000
132	3747.42	-	-	-	0.000
133	3747.42	-	-	-	0.000
134	3747.42	-	-	-	0.000
135	3747.42	-	-	-	0.000
136	3747.42	-	-	-	0.000
137	3747.42	-	-	-	0.000
138	3747.42	-	-	-	0.000
139	3747.42	-	-	-	0.000
140	3747.42	-	-	-	0.000
141	3747.42	-	-	-	0.000
142	3747.42	-	-	-	0.000
Total		**8696.75**	**8224.92**	**8009.00**	**0.00**

Table 4: ENS optimization - R6.

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
0	20806.50	0.011	0.001	0.000	0.000

Table 4 – continued from previous page - R6

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
1	15630.60	0.029	0.011	0.010	0.000
2	10891.90	0.108	0.006	0.000	0.000
3	6932.57	0.100	0.006	0.010	0.000
4	6325.95	10.683	0.035	0.020	0.000
5	5864.04	293.232	0.109	0.030	0.000
6	5404.43	-	0.115	0.050	0.000
7	4947.98	-	0.065	0.070	0.000
8	4640.53	-	0.172	0.090	0.000
9	4353.60	-	0.143	0.120	0.000
10	4075.70	-	0.121	0.160	0.000
11	3839.55	-	0.182	0.220	0.000
12	3611.17	-	0.147	0.280	0.000
13	3388.69	-	0.319	0.340	0.000
14	3213.89	-	0.275	0.420	0.000
15	3055.73	-	1.288	0.510	0.000
16	2921.73	-	0.429	0.610	0.000
17	2820.67	-	0.555	0.710	0.000
18	2730.54	-	0.922	0.840	0.000
19	2640.63	-	1.076	0.940	0.001
20	2552.11	-	41.652	1.080	0.000
21	2468.27	-	2.328	1.240	0.000
22	2391.79	-	2.531	1.410	0.000
23	2328.35	-	59.092	1.540	0.000
24	2266.18	-	81.517	1.710	0.000
25	2205.00	-	90.344	1.910	0.000
26	2146.64	-	7.074	2.050	0.000
27	2089.25	-	66.394	2.210	0.000
28	2038.52	-	10.746	2.360	0.000
29	1997.66	-	20.438	2.530	0.000
30	1959.61	-	261.623	2.730	0.000
31	1925.50	-	43.668	2.840	0.000
32	1894.89	-	86.736	3.100	0.000
33	1868.14	-	212.019	3.200	0.000
34	1843.27	-	533.246	3.340	0.000
35	1817.08	-	977.702	3.450	0.000
36	1793.97	-	-	3.620	0.000
37	1770.88	-	-	3.720	0.000
38	1748.80	-	-	3.900	0.000
39	1727.42	-	-	3.960	0.000
40	1707.27	-	-	4.180	0.000
41	1689.58	-	-	4.280	0.000
42	1675.16	-	-	4.400	0.000
43	1661.86	-	-	4.560	0.000
44	1648.66	-	-	4.600	0.000
45	1635.70	-	-	4.620	0.000
46	1622.78	-	-	4.770	0.000
47	1610.19	-	-	4.780	0.000
48	1599.13	-	-	4.970	0.000
49	1588.22	-	-	5.070	0.000
50	1577.59	-	-	5.250	0.000
51	1568.09	-	-	5.350	0.000
52	1558.70	-	-	5.200	0.000

Table 4 – continued from previous page - R6

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
53	1549.42	-	-	5.250	0.000
54	1541.13	-	-	5.390	0.000
55	1533.56	-	-	5.410	0.000
56	1528.06	-	-	5.510	0.000
57	1522.75	-	-	5.540	0.000
58	1517.62	-	-	5.690	0.000
59	1512.70	-	-	5.780	0.000
60	1508.08	-	-	5.740	0.000
61	1504.26	-	-	5.800	0.000
62	1500.45	-	-	5.850	0.000
63	1496.73	-	-	5.950	0.000
64	1493.61	-	-	6.070	0.000
65	1490.86	-	-	6.080	0.000
66	1488.32	-	-	6.130	0.000
67	1485.83	-	-	6.140	0.000
68	1483.34	-	-	6.220	0.000
69	1480.88	-	-	6.370	0.000
70	1478.53	-	-	6.540	0.000
71	1476.30	-	-	6.660	0.000
72	1474.09	-	-	6.440	0.000
73	1472.18	-	-	6.410	0.000
74	1470.49	-	-	6.410	0.000
75	1468.83	-	-	6.400	0.000
76	1467.17	-	-	6.350	0.000
77	1465.73	-	-	6.340	0.000
78	1464.37	-	-	6.350	0.000
79	1463.13	-	-	6.300	0.000
80	1461.89	-	-	6.370	0.000
81	1460.84	-	-	6.370	0.000
82	1459.81	-	-	6.220	0.000
83	1458.83	-	-	6.170	0.000
84	1457.86	-	-	6.030	0.000
85	1456.98	-	-	5.980	0.000
86	1456.13	-	-	5.870	0.000
87	1455.30	-	-	5.970	0.000
88	1454.60	-	-	5.780	0.000
89	1453.94	-	-	5.710	0.000
90	1453.31	-	-	5.560	0.000
91	1452.69	-	-	5.420	0.000
92	1452.07	-	-	5.350	0.000
93	1451.47	-	-	5.260	0.000
94	1450.88	-	-	5.200	0.000
95	1450.30	-	-	5.000	0.000
96	1449.74	-	-	4.920	0.000
97	1449.20	-	-	4.770	0.000
98	1448.70	-	-	4.750	0.000
99	1448.20	-	-	4.550	0.000
100	1447.70	-	-	4.420	0.000
101	1447.21	-	-	4.370	0.000
102	1446.74	-	-	4.290	0.000
103	1446.27	-	-	4.170	0.000
104	1445.80	-	-	4.030	0.000

Table 4 – continued from previous page - R6

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
105	1445.34	-	-	3.890	0.000
106	1444.89	-	-	3.820	0.000
107	1444.48	-	-	3.680	0.000
108	1444.09	-	-	3.650	0.000
109	1443.72	-	-	3.590	0.000
110	1443.35	-	-	3.420	0.000
111	1442.98	-	-	3.310	0.000
112	1442.63	-	-	3.360	0.000
113	1442.30	-	-	3.170	0.000
114	1441.97	-	-	3.080	0.000
115	1441.64	-	-	2.930	0.000
116	1441.31	-	-	2.900	0.000
117	1441.01	-	-	2.770	0.000
118	1440.76	-	-	2.690	0.000
119	1440.50	-	-	2.590	0.000
120	1440.25	-	-	2.540	0.000
121	1440.02	-	-	2.470	0.000
122	1439.79	-	-	2.380	0.000
123	1439.58	-	-	2.260	0.000
124	1439.38	-	-	2.200	0.000
125	1439.19	-	-	2.140	0.000
126	1439.02	-	-	2.030	0.000
127	1438.87	-	-	1.930	0.000
128	1438.73	-	-	1.900	0.000
129	1438.63	-	-	1.820	0.000
130	1438.52	-	-	1.760	0.000
131	1438.42	-	-	1.670	0.000
132	1438.33	-	-	1.600	0.000
133	1438.23	-	-	1.510	0.000
134	1438.13	-	-	1.440	0.000
135	1438.04	-	-	1.380	0.000
136	1437.95	-	-	1.340	0.000
137	1437.89	-	-	1.250	0.000
138	1437.83	-	-	1.220	0.000
139	1437.78	-	-	1.120	0.000
140	1437.73	-	-	1.060	0.000
141	1437.68	-	-	1.010	0.000
142	1437.65	-	-	0.950	0.000
143	1437.63	-	-	0.890	0.000
144	1437.63	-	-	0.890	0.000
145	1437.63	-	-	0.810	0.000
146	1437.63	-	-	0.760	0.000
147	1437.63	-	-	0.710	0.000
148	1437.63	-	-	0.680	0.000
149	1437.63	-	-	0.640	0.000
150	1437.63	-	-	0.580	0.000
151	1437.63	-	-	0.570	0.000
152	1437.63	-	-	0.520	0.000
153	1437.63	-	-	0.490	0.000
154	1437.63	-	-	0.460	0.000
155	1437.63	-	-	0.440	0.000
156	1437.63	-	-	0.410	0.000

Continued on next page

Table 4 – continued from previous page - R6

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
157	1437.63	-	-	0.390	0.000
158	1437.63	-	-	0.380	0.000
159	1437.63	-	-	0.350	0.000
160	1437.63	-	-	0.330	0.000
161	1437.63	-	-	0.310	0.000
162	1437.63	-	-	0.290	0.000
163	1437.63	-	-	0.280	0.000
164	1437.63	-	-	0.260	0.000
165	1437.63	-	-	0.240	0.000
166	1437.63	-	-	0.230	0.000
167	1437.63	-	-	0.220	0.000
168	1437.63	-	-	0.200	0.000
169	1437.63	-	-	0.190	0.000
170	1437.63	-	-	0.170	0.000
171	1437.63	-	-	0.160	0.000
172	1437.63	-	-	0.150	0.000
173	1437.63	-	-	0.150	0.000
174	1437.63	-	-	0.130	0.000
175	1437.63	-	-	0.120	0.000
176	1437.63	-	-	0.110	0.000
177	1437.63	-	-	0.110	0.000
178	1437.63	-	-	0.100	0.000
179	1437.63	-	-	0.100	0.000
180	1437.63	-	-	0.080	0.000
181	1437.63	-	-	0.080	0.000
182	1437.63	-	-	0.080	0.000
183	1437.63	-	-	0.060	0.000
184	1437.63	-	-	0.070	0.000
185	1437.63	-	-	0.060	0.000
186	1437.63	-	-	0.050	0.000
187	1437.63	-	-	0.050	0.000
188	1437.63	-	-	0.050	0.000
189	1437.63	-	-	0.040	0.000
190	1437.63	-	-	0.040	0.000
191	1437.63	-	-	0.040	0.000
192	1437.63	-	-	0.030	0.000
193	1437.63	-	-	0.040	0.000
194	1437.63	-	-	0.020	0.000
195	1437.63	-	-	0.030	0.000
196	1437.63	-	-	0.030	0.000
197	1437.63	-	-	0.020	0.000
198	1437.63	-	-	0.020	0.000
199	1437.63	-	-	0.020	0.000
200	1437.63	-	-	0.020	0.000
201	1437.63	-	-	0.020	0.000
202	1437.63	-	-	0.010	0.000
203	1437.63	-	-	0.020	0.000
Total		**7504.17**	**9703.26**	**517.71**	**0.03**

Table 5: ENS optimization - R7.

m	best ENS	Time (sec)			
		ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
0	8974232.50	0.149	0.001	0.000	0.000
1	7035772.35	0.453	0.092	0.030	0.000
2	5866132.54	1.731	0.017	0.050	0.000
3	4726245.09	1.458	0.018	0.250	0.010
4	3673006.64	14.682	0.017	4.050	0.000
5	2690985.53	44.306	0.018	48.800	0.000
6	2100014.02	867.928	0.051	395.550	0.000
7	1518308.94	2772.477	0.061	2121.590	0.000
8	1318995.66	-	0.367	-	0.010
9	1232934.09	-	2.421	-	0.000
10	1153227.35	-	3.213	-	0.010
11	1093491.80	-	7.155	-	0.000
12	1033000.80	-	8.410	-	0.000
13	983783.20	-	18.562	-	0.000
14	937133.46	-	36.754	-	0.000
15	910731.23	-	198.797	-	0.000
16	885747.91	-	1667.820	-	0.010
17	861508.81	-	-	-	0.010
18	836525.49	-	-	-	0.010
19	812671.26	-	-	-	0.010
20	789429.98	-	-	-	0.010
21	768651.09	-	-	-	0.010
22	749473.28	-	-	-	0.010
23	733077.37	-	-	-	0.010
24	717943.07	-	-	-	0.010
25	705231.80	-	-	-	0.010
26	692795.60	-	-	-	0.010
27	680437.23	-	-	-	0.010
28	668572.97	-	-	-	0.020
29	657167.24	-	-	-	0.010
30	646036.50	-	-	-	0.010
31	636776.13	-	-	-	0.010
32	628099.53	-	-	-	0.010
33	620289.81	-	-	-	0.010
34	612527.23	-	-	-	0.010
35	604965.71	-	-	-	0.010
36	597823.54	-	-	-	0.010
37	590773.82	-	-	-	0.010
38	584107.60	-	-	-	0.010
39	577606.50	-	-	-	0.010
40	571662.48	-	-	-	0.010
41	565982.04	-	-	-	0.010
42	560487.47	-	-	-	0.010
43	555083.84	-	-	-	0.010
44	549871.21	-	-	-	0.010
45	544714.85	-	-	-	0.010
46	539577.74	-	-	-	0.010
47	534490.50	-	-	-	0.010
48	529669.53	-	-	-	0.010
49	524911.23	-	-	-	0.010
				Continued on next page	

Table 5 – continued from previous page - R7

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
50	520262.58	-	-	-	0.010
51	515671.85	-	-	-	0.010
52	511091.94	-	-	-	0.010
53	506714.92	-	-	-	0.010
54	502359.25	-	-	-	0.010
55	498186.11	-	-	-	0.010
56	494067.17	-	-	-	0.010
57	489973.67	-	-	-	0.010
58	485992.49	-	-	-	0.010
59	482178.55	-	-	-	0.010
60	478375.08	-	-	-	0.020
61	474705.94	-	-	-	0.010
62	470980.07	-	-	-	0.010
63	467310.94	-	-	-	0.010
64	463718.55	-	-	-	0.010
65	460313.12	-	-	-	0.010
66	456924.08	-	-	-	0.010
67	453651.27	-	-	-	0.010
68	450410.50	-	-	-	0.010
69	447175.51	-	-	-	0.010
70	444037.87	-	-	-	0.010
71	440954.99	-	-	-	0.010
72	437985.66	-	-	-	0.010
73	435119.59	-	-	-	0.000
74	432258.81	-	-	-	0.000
75	429487.13	-	-	-	0.000
76	426749.32	-	-	-	0.000
77	424149.52	-	-	-	0.000
78	421561.04	-	-	-	0.000
79	418997.85	-	-	-	0.000
80	416481.59	-	-	-	0.000
81	413993.45	-	-	-	0.010
82	411517.66	-	-	-	0.010
83	409100.21	-	-	-	0.010
84	406749.60	-	-	-	0.010
85	404459.02	-	-	-	0.010
86	402248.65	-	-	-	0.010
87	400214.26	-	-	-	0.010
88	398253.98	-	-	-	0.010
89	396403.12	-	-	-	0.010
90	394560.69	-	-	-	0.010
91	392796.69	-	-	-	0.010
92	391041.81	-	-	-	0.010
93	389300.33	-	-	-	0.010
94	387600.79	-	-	-	0.010
95	385903.36	-	-	-	0.010
96	384236.72	-	-	-	0.020
97	382694.21	-	-	-	0.010
98	381166.02	-	-	-	0.010
99	379690.84	-	-	-	0.010
100	378224.25	-	-	-	0.010
101	376808.11	-	-	-	0.010

Table 5 – continued from previous page - R7

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
102	375400.31	-	-	-	0.010
103	374000.43	-	-	-	0.010
104	372605.20	-	-	-	0.010
105	371225.02	-	-	-	0.010
106	369844.99	-	-	-	0.010
107	368527.42	-	-	-	0.010
108	367234.25	-	-	-	0.010
109	365999.16	-	-	-	0.010
110	364730.11	-	-	-	0.010
111	363496.17	-	-	-	0.010
112	362270.16	-	-	-	0.010
113	361060.98	-	-	-	0.010
114	359886.27	-	-	-	0.010
115	358737.55	-	-	-	0.010
116	357593.07	-	-	-	0.010
117	356473.37	-	-	-	0.010
118	355403.34	-	-	-	0.010
119	354338.57	-	-	-	0.010
120	353288.77	-	-	-	0.010
121	352248.63	-	-	-	0.010
122	351214.01	-	-	-	0.010
123	350180.19	-	-	-	0.010
124	349164.93	-	-	-	0.010
125	348155.67	-	-	-	0.010
126	347155.50	-	-	-	0.010
127	346162.12	-	-	-	0.010
128	345200.06	-	-	-	0.010
129	344255.62	-	-	-	0.010
130	343293.55	-	-	-	0.010
131	342354.79	-	-	-	0.010
132	341420.94	-	-	-	0.010
133	340482.18	-	-	-	0.010
134	339564.27	-	-	-	0.010
135	338685.54	-	-	-	0.010
136	337812.70	-	-	-	0.010
137	336940.03	-	-	-	0.010
138	336068.59	-	-	-	0.010
139	335207.98	-	-	-	0.010
140	334360.09	-	-	-	0.010
141	333522.07	-	-	-	0.010
142	332690.75	-	-	-	0.010
143	331866.06	-	-	-	0.010
144	331075.70	-	-	-	0.010
145	330307.17	-	-	-	0.010
146	329543.60	-	-	-	0.010
147	328775.08	-	-	-	0.010
148	328024.73	-	-	-	0.010
149	327276.00	-	-	-	0.010
150	326527.91	-	-	-	0.010
151	325798.18	-	-	-	0.010
152	325068.81	-	-	-	0.010
153	324339.62	-	-	-	0.010

Table 5 – continued from previous page - R7

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
154	323624.56	-	-	-	0.010
155	322912.44	-	-	-	0.010
156	322217.13	-	-	-	0.010
157	321524.28	-	-	-	0.010
158	320834.45	-	-	-	0.010
159	320159.68	-	-	-	0.010
160	319524.17	-	-	-	0.010
161	318844.20	-	-	-	0.010
162	318192.50	-	-	-	0.010
163	317568.87	-	-	-	0.010
164	316950.80	-	-	-	0.010
165	316337.94	-	-	-	0.010
166	315747.41	-	-	-	0.010
167	315174.15	-	-	-	0.010
168	314605.07	-	-	-	0.010
169	314041.68	-	-	-	0.010
170	313492.71	-	-	-	0.010
171	312947.18	-	-	-	0.010
172	312433.28	-	-	-	0.010
173	311927.15	-	-	-	0.000
174	311422.60	-	-	-	0.000
175	310921.13	-	-	-	0.000
176	310423.15	-	-	-	0.000
177	309927.07	-	-	-	0.000
178	309431.42	-	-	-	0.000
179	308953.32	-	-	-	0.000
180	308476.15	-	-	-	0.000
181	308008.13	-	-	-	0.000
182	307542.53	-	-	-	0.000
183	307092.99	-	-	-	0.000
184	306648.34	-	-	-	0.000
185	306226.50	-	-	-	0.000
186	305808.42	-	-	-	0.000
187	305417.01	-	-	-	0.000
188	305007.11	-	-	-	0.000
189	304625.06	-	-	-	0.000
190	304251.40	-	-	-	0.000
191	303879.13	-	-	-	0.000
192	303509.49	-	-	-	0.000
193	303144.00	-	-	-	0.000
194	302780.26	-	-	-	0.000
195	302416.88	-	-	-	0.000
196	302056.42	-	-	-	0.000
197	301701.89	-	-	-	0.000
198	301357.79	-	-	-	0.000
199	301015.75	-	-	-	0.000
200	300679.70	-	-	-	0.000
201	300346.68	-	-	-	0.000
202	300016.57	-	-	-	0.000
203	299687.12	-	-	-	0.000
204	299364.61	-	-	-	0.000
205	299043.04	-	-	-	0.000

Table 5 – continued from previous page - R7

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
206	298726.27	-	-	-	0.000
207	298404.92	-	-	-	0.000
208	298088.16	-	-	-	0.000
209	297785.98	-	-	-	0.000
210	297486.43	-	-	-	0.000
211	297191.09	-	-	-	0.000
212	296896.75	-	-	-	0.000
213	296610.20	-	-	-	0.000
214	296325.28	-	-	-	0.000
215	296047.96	-	-	-	0.000
216	295771.87	-	-	-	0.000
217	295500.65	-	-	-	0.000
218	295237.99	-	-	-	0.000
219	294978.35	-	-	-	0.000
220	294721.56	-	-	-	0.000
221	294467.69	-	-	-	0.000
222	294214.91	-	-	-	0.000
223	293963.38	-	-	-	0.000
224	293713.58	-	-	-	0.000
225	293464.92	-	-	-	0.000
226	293216.81	-	-	-	0.000
227	292969.99	-	-	-	0.000
228	292731.47	-	-	-	0.000
229	292493.77	-	-	-	0.000
230	292257.05	-	-	-	0.000
231	292021.44	-	-	-	0.000
232	291787.47	-	-	-	0.000
233	291555.50	-	-	-	0.000
234	291325.52	-	-	-	0.000
235	291096.99	-	-	-	0.000
236	290871.48	-	-	-	0.000
237	290654.46	-	-	-	0.000
238	290440.96	-	-	-	0.000
239	290230.70	-	-	-	0.000
240	290024.60	-	-	-	0.000
241	289819.61	-	-	-	0.000
242	289616.34	-	-	-	0.000
243	289414.38	-	-	-	0.000
244	289213.28	-	-	-	0.000
245	289012.78	-	-	-	0.000
246	288814.46	-	-	-	0.000
247	288616.76	-	-	-	0.000
248	288419.63	-	-	-	0.000
249	288226.31	-	-	-	0.000
250	288034.11	-	-	-	0.000
251	287844.36	-	-	-	0.000
252	287654.64	-	-	-	0.000
253	287465.58	-	-	-	0.000
254	287281.11	-	-	-	0.000
255	287100.05	-	-	-	0.000
256	286919.75	-	-	-	0.000
257	286739.70	-	-	-	0.000

Table 5 – continued from previous page - R7

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
258	286560.72	-	-	-	0.000
259	286381.90	-	-	-	0.000
260	286204.54	-	-	-	0.000
261	286034.07	-	-	-	0.000
262	285863.91	-	-	-	0.000
263	285693.86	-	-	-	0.000
264	285526.03	-	-	-	0.000
265	285360.58	-	-	-	0.000
266	285195.47	-	-	-	0.000
267	285032.19	-	-	-	0.000
268	284869.47	-	-	-	0.000
269	284709.84	-	-	-	0.000
270	284551.55	-	-	-	0.000
271	284393.45	-	-	-	0.000
272	284237.52	-	-	-	0.000
273	284082.14	-	-	-	0.000
274	283929.05	-	-	-	0.000
275	283778.85	-	-	-	0.000
276	283628.77	-	-	-	0.000
277	283478.95	-	-	-	0.000
278	283331.39	-	-	-	0.000
279	283183.98	-	-	-	0.000
280	283037.70	-	-	-	0.000
281	282891.82	-	-	-	0.000
282	282746.39	-	-	-	0.000
283	282602.38	-	-	-	0.000
284	282458.78	-	-	-	0.000
285	282315.67	-	-	-	0.000
286	282172.79	-	-	-	0.000
287	282031.39	-	-	-	0.000
288	281890.17	-	-	-	0.000
289	281749.40	-	-	-	0.000
290	281610.26	-	-	-	0.000
291	281473.11	-	-	-	0.000
292	281337.73	-	-	-	0.000
293	281203.59	-	-	-	0.000
294	281070.35	-	-	-	0.000
295	280938.26	-	-	-	0.000
296	280808.55	-	-	-	0.000
297	280679.13	-	-	-	0.000
298	280551.39	-	-	-	0.000
299	280423.79	-	-	-	0.000
300	280298.17	-	-	-	0.000
301	280174.15	-	-	-	0.000
302	280052.30	-	-	-	0.000
303	279931.67	-	-	-	0.000
304	279811.24	-	-	-	0.000
305	279690.88	-	-	-	0.000
306	279573.54	-	-	-	0.000
307	279459.14	-	-	-	0.000
308	279344.79	-	-	-	0.000
309	279232.18	-	-	-	0.000

Table 5 – continued from previous page - R7

		Time (sec)			
m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-N2M2
310	279120.43	-	-	-	0.000
311	279008.88	-	-	-	0.000
312	278898.57	-	-	-	0.000
313	278789.02	-	-	-	0.000
314	278683.80	-	-	-	0.000
315	278579.36	-	-	-	0.000
316	278476.06	-	-	-	0.000
317	278372.93	-	-	-	0.000
318	278269.89	-	-	-	0.000
319	278166.96	-	-	-	0.000
320	278065.32	-	-	-	0.000
321	277963.72	-	-	-	0.000
322	277862.13	-	-	-	0.000
323	277761.26	-	-	-	0.000
324	277660.88	-	-	-	0.000
325	277562.42	-	-	-	0.000
326	277463.81	-	-	-	0.000
327	277365.34	-	-	-	0.000
328	277267.06	-	-	-	0.000
329	277170.69	-	-	-	0.000
330	277075.86	-	-	-	0.000
331	276981.95	-	-	-	0.000
332	276888.26	-	-	-	0.000
333	276795.17	-	-	-	0.000
334	276702.08	-	-	-	0.000
335	276611.35	-	-	-	0.000
336	276520.99	-	-	-	0.000
337	276431.60	-	-	-	0.000
338	276344.42	-	-	-	0.000
339	276258.71	-	-	-	0.000
340	276174.71	-	-	-	0.000
341	276090.96	-	-	-	0.000
342	276007.25	-	-	-	0.000
343	275924.44	-	-	-	0.000
344	275842.34	-	-	-	0.000
345	275761.38	-	-	-	0.000
346	275680.45	-	-	-	0.000
347	275599.67	-	-	-	0.000
348	275519.84	-	-	-	0.000
349	275440.33	-	-	-	0.000
350	275363.64	-	-	-	0.000
351	275287.15	-	-	-	0.000
352	275211.48	-	-	-	0.000
353	275135.86	-	-	-	0.000
354	275060.48	-	-	-	0.000
355	274985.51	-	-	-	0.000
356	274910.66	-	-	-	0.000
357	274837.92	-	-	-	0.000
358	274765.35	-	-	-	0.000
359	274693.02	-	-	-	0.000
360	274620.78	-	-	-	0.000
361	274549.28	-	-	-	0.000

Table 5 – continued from previous page - R7

		Time (sec)			
m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
362	274477.95	-	-	-	0.000
363	274406.91	-	-	-	0.000
364	274337.22	-	-	-	0.000
365	274267.57	-	-	-	0.000
366	274198.56	-	-	-	0.000
367	274129.55	-	-	-	0.000
368	274060.58	-	-	-	0.000
369	273992.49	-	-	-	0.000
370	273926.36	-	-	-	0.000
371	273860.33	-	-	-	0.000
372	273795.21	-	-	-	0.000
373	273730.14	-	-	-	0.000
374	273666.90	-	-	-	0.000
375	273603.75	-	-	-	0.000
376	273540.60	-	-	-	0.000
377	273477.55	-	-	-	0.000
378	273415.87	-	-	-	0.000
379	273354.59	-	-	-	0.000
380	273293.32	-	-	-	0.000
381	273232.22	-	-	-	0.000
382	273171.87	-	-	-	0.000
383	273111.55	-	-	-	0.000
384	273051.58	-	-	-	0.000
385	272991.67	-	-	-	0.000
386	272932.61	-	-	-	0.000
387	272874.48	-	-	-	0.000
388	272816.41	-	-	-	0.000
389	272758.84	-	-	-	0.000
390	272702.49	-	-	-	0.000
391	272646.26	-	-	-	0.000
392	272590.18	-	-	-	0.000
393	272536.11	-	-	-	0.000
394	272482.20	-	-	-	0.000
395	272428.45	-	-	-	0.000
396	272375.38	-	-	-	0.000
397	272322.58	-	-	-	0.000
398	272269.91	-	-	-	0.000
399	272217.60	-	-	-	0.000
400	272165.52	-	-	-	0.000
401	272114.10	-	-	-	0.000
402	272062.86	-	-	-	0.000
403	272011.68	-	-	-	0.000
404	271960.90	-	-	-	0.000
405	271910.37	-	-	-	0.000
406	271860.12	-	-	-	0.000
407	271809.94	-	-	-	0.000
408	271759.80	-	-	-	0.000
409	271709.68	-	-	-	0.000
410	271660.11	-	-	-	0.000
411	271610.62	-	-	-	0.000
412	271562.96	-	-	-	0.000
413	271516.39	-	-	-	0.000

Table 5 – continued from previous page - R7

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
414	271470.17	-	-	-	0.000
415	271426.23	-	-	-	0.000
416	271382.92	-	-	-	0.000
417	271339.93	-	-	-	0.000
418	271297.06	-	-	-	0.000
419	271254.24	-	-	-	0.000
420	271212.42	-	-	-	0.000
421	271170.63	-	-	-	0.000
422	271129.22	-	-	-	0.000
423	271088.05	-	-	-	0.000
424	271047.53	-	-	-	0.000
425	271007.46	-	-	-	0.000
426	270968.25	-	-	-	0.000
427	270929.48	-	-	-	0.000
428	270891.08	-	-	-	0.000
429	270853.07	-	-	-	0.000
430	270815.22	-	-	-	0.000
431	270778.09	-	-	-	0.000
432	270742.20	-	-	-	0.000
433	270706.84	-	-	-	0.000
434	270671.68	-	-	-	0.000
435	270636.71	-	-	-	0.000
436	270601.77	-	-	-	0.000
437	270567.10	-	-	-	0.000
438	270532.47	-	-	-	0.000
439	270497.84	-	-	-	0.000
440	270463.46	-	-	-	0.000
441	270429.11	-	-	-	0.000
442	270394.77	-	-	-	0.000
443	270361.22	-	-	-	0.000
444	270327.67	-	-	-	0.000
445	270295.05	-	-	-	0.000
446	270262.76	-	-	-	0.000
447	270230.61	-	-	-	0.000
448	270198.92	-	-	-	0.000
449	270167.75	-	-	-	0.000
450	270136.81	-	-	-	0.000
451	270105.99	-	-	-	0.000
452	270075.78	-	-	-	0.000
453	270045.70	-	-	-	0.000
454	270015.69	-	-	-	0.000
455	269986.01	-	-	-	0.000
456	269956.58	-	-	-	0.000
457	269927.34	-	-	-	0.000
458	269898.24	-	-	-	0.000
459	269869.50	-	-	-	0.000
460	269840.76	-	-	-	0.000
461	269812.02	-	-	-	0.000
462	269783.83	-	-	-	0.000
463	269755.87	-	-	-	0.000
464	269727.96	-	-	-	0.000
465	269700.39	-	-	-	0.000

Table 5 – continued from previous page - R7

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
466	269672.82	-	-	-	0.000
467	269645.25	-	-	-	0.000
468	269617.73	-	-	-	0.000
469	269590.25	-	-	-	0.000
470	269562.90	-	-	-	0.000
471	269535.63	-	-	-	0.000
472	269508.62	-	-	-	0.000
473	269482.24	-	-	-	0.000
474	269456.16	-	-	-	0.000
475	269430.08	-	-	-	0.000
476	269404.25	-	-	-	0.000
477	269378.48	-	-	-	0.000
478	269352.93	-	-	-	0.000
479	269327.51	-	-	-	0.000
480	269302.29	-	-	-	0.000
481	269277.23	-	-	-	0.000
482	269252.52	-	-	-	0.000
483	269228.02	-	-	-	0.000
484	269203.52	-	-	-	0.000
485	269179.03	-	-	-	0.000
486	269154.86	-	-	-	0.000
487	269130.95	-	-	-	0.000
488	269107.06	-	-	-	0.000
489	269083.24	-	-	-	0.000
490	269059.56	-	-	-	0.000
491	269036.10	-	-	-	0.000
492	269013.32	-	-	-	0.000
493	268990.54	-	-	-	0.000
494	268968.17	-	-	-	0.000
495	268945.81	-	-	-	0.000
496	268923.46	-	-	-	0.000
497	268901.10	-	-	-	0.000
498	268878.75	-	-	-	0.000
499	268856.40	-	-	-	0.000
500	268834.04	-	-	-	0.000
501	268811.69	-	-	-	0.000
502	268789.36	-	-	-	0.000
503	268767.14	-	-	-	0.000
504	268745.05	-	-	-	0.000
505	268722.99	-	-	-	0.000
506	268700.93	-	-	-	0.000
507	268678.90	-	-	-	0.000
508	268656.88	-	-	-	0.000
509	268634.85	-	-	-	0.000
510	268612.89	-	-	-	0.000
511	268590.98	-	-	-	0.000
512	268569.28	-	-	-	0.000
513	268547.68	-	-	-	0.000
514	268526.24	-	-	-	0.000
515	268505.62	-	-	-	0.000
516	268485.17	-	-	-	0.000
517	268465.05	-	-	-	0.000

Continued on next page

Table 5 – continued from previous page - R7

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
518	268445.28	-	-	-	0.000
519	268425.73	-	-	-	0.000
520	268406.82	-	-	-	0.000
521	268387.90	-	-	-	0.000
522	268369.47	-	-	-	0.000
523	268351.07	-	-	-	0.000
524	268332.79	-	-	-	0.000
525	268314.62	-	-	-	0.000
526	268296.44	-	-	-	0.000
527	268278.27	-	-	-	0.000
528	268260.11	-	-	-	0.000
529	268242.18	-	-	-	0.000
530	268224.38	-	-	-	0.000
531	268206.61	-	-	-	0.000
532	268188.84	-	-	-	0.000
533	268171.10	-	-	-	0.000
534	268153.38	-	-	-	0.000
535	268135.66	-	-	-	0.000
536	268118.27	-	-	-	0.000
537	268100.96	-	-	-	0.000
538	268083.67	-	-	-	0.000
539	268066.49	-	-	-	0.000
540	268049.34	-	-	-	0.000
541	268032.38	-	-	-	0.000
542	268015.73	-	-	-	0.000
543	267999.09	-	-	-	0.000
544	267982.56	-	-	-	0.000
545	267966.03	-	-	-	0.000
546	267949.73	-	-	-	0.000
547	267933.44	-	-	-	0.000
548	267917.60	-	-	-	0.000
549	267901.91	-	-	-	0.000
550	267886.61	-	-	-	0.000
551	267871.32	-	-	-	0.000
552	267856.03	-	-	-	0.000
553	267840.85	-	-	-	0.000
554	267825.80	-	-	-	0.000
555	267810.91	-	-	-	0.000
556	267796.01	-	-	-	0.000
557	267781.20	-	-	-	0.000
558	267766.74	-	-	-	0.000
559	267752.32	-	-	-	0.000
560	267737.96	-	-	-	0.000
561	267723.63	-	-	-	0.000
562	267709.69	-	-	-	0.000
563	267695.75	-	-	-	0.000
564	267681.97	-	-	-	0.000
565	267668.29	-	-	-	0.000
566	267654.61	-	-	-	0.000
567	267640.97	-	-	-	0.000
568	267627.38	-	-	-	0.000
569	267613.86	-	-	-	0.000

Table 5 – continued from previous page - R7

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
570	267600.59	-	-	-	0.000
571	267587.37	-	-	-	0.000
572	267574.16	-	-	-	0.000
573	267561.17	-	-	-	0.000
574	267548.26	-	-	-	0.000
575	267535.39	-	-	-	0.000
576	267522.68	-	-	-	0.000
577	267510.34	-	-	-	0.000
578	267498.02	-	-	-	0.000
579	267485.75	-	-	-	0.000
580	267473.53	-	-	-	0.000
581	267461.42	-	-	-	0.000
582	267449.42	-	-	-	0.000
583	267437.49	-	-	-	0.000
584	267425.57	-	-	-	0.000
585	267413.72	-	-	-	0.000
586	267402.17	-	-	-	0.000
587	267390.64	-	-	-	0.000
588	267379.76	-	-	-	0.000
589	267368.96	-	-	-	0.000
590	267358.17	-	-	-	0.000
591	267347.46	-	-	-	0.000
592	267336.75	-	-	-	0.000
593	267326.15	-	-	-	0.000
594	267315.56	-	-	-	0.000
595	267305.15	-	-	-	0.000
596	267294.85	-	-	-	0.000
597	267284.70	-	-	-	0.000
598	267274.67	-	-	-	0.000
599	267264.64	-	-	-	0.000
600	267254.70	-	-	-	0.000
601	267244.77	-	-	-	0.000
602	267234.84	-	-	-	0.000
603	267225.01	-	-	-	0.000
604	267215.18	-	-	-	0.000
605	267205.44	-	-	-	0.000
606	267195.81	-	-	-	0.000
607	267186.20	-	-	-	0.000
608	267176.60	-	-	-	0.000
609	267167.11	-	-	-	0.000
610	267157.63	-	-	-	0.000
611	267148.20	-	-	-	0.000
612	267139.05	-	-	-	0.000
613	267129.92	-	-	-	0.000
614	267121.01	-	-	-	0.000
615	267112.11	-	-	-	0.000
616	267103.28	-	-	-	0.000
617	267094.49	-	-	-	0.000
618	267085.72	-	-	-	0.000
619	267077.04	-	-	-	0.000
620	267068.57	-	-	-	0.000
621	267060.13	-	-	-	0.000

Table 5 – continued from previous page - R7

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
622	267051.80	-	-	-	0.000
623	267043.49	-	-	-	0.000
624	267035.20	-	-	-	0.000
625	267026.98	-	-	-	0.000
626	267018.97	-	-	-	0.000
627	267010.98	-	-	-	0.000
628	267003.09	-	-	-	0.000
629	266995.34	-	-	-	0.000
630	266987.59	-	-	-	0.000
631	266979.90	-	-	-	0.000
632	266972.30	-	-	-	0.000
633	266964.95	-	-	-	0.000
634	266957.71	-	-	-	0.000
635	266950.71	-	-	-	0.000
636	266943.83	-	-	-	0.000
637	266937.02	-	-	-	0.000
638	266930.22	-	-	-	0.000
639	266923.41	-	-	-	0.000
640	266916.61	-	-	-	0.000
641	266909.86	-	-	-	0.000
642	266903.17	-	-	-	0.000
643	266896.50	-	-	-	0.000
644	266890.06	-	-	-	0.000
645	266883.72	-	-	-	0.000
646	266877.45	-	-	-	0.000
647	266871.18	-	-	-	0.000
648	266864.98	-	-	-	0.000
649	266858.80	-	-	-	0.000
650	266852.64	-	-	-	0.000
651	266846.48	-	-	-	0.000
652	266840.32	-	-	-	0.000
653	266834.16	-	-	-	0.000
654	266828.14	-	-	-	0.000
655	266822.12	-	-	-	0.000
656	266816.17	-	-	-	0.000
657	266810.25	-	-	-	0.000
658	266804.32	-	-	-	0.000
659	266798.40	-	-	-	0.000
660	266792.50	-	-	-	0.000
661	266786.63	-	-	-	0.000
662	266780.85	-	-	-	0.000
663	266775.12	-	-	-	0.000
664	266769.43	-	-	-	0.000
665	266763.74	-	-	-	0.000
666	266758.06	-	-	-	0.000
667	266752.53	-	-	-	0.000
668	266747.04	-	-	-	0.000
669	266741.54	-	-	-	0.000
670	266736.13	-	-	-	0.000
671	266730.72	-	-	-	0.000
672	266725.32	-	-	-	0.000
673	266719.91	-	-	-	0.000

Table 5 – continued from previous page - R7

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
674	266714.57	-	-	-	0.000
675	266709.24	-	-	-	0.000
676	266703.92	-	-	-	0.000
677	266698.61	-	-	-	0.000
678	266693.31	-	-	-	0.000
679	266688.06	-	-	-	0.000
680	266682.88	-	-	-	0.000
681	266677.73	-	-	-	0.000
682	266672.67	-	-	-	0.000
683	266667.68	-	-	-	0.000
684	266662.82	-	-	-	0.000
685	266658.08	-	-	-	0.000
686	266653.35	-	-	-	0.000
687	266648.64	-	-	-	0.000
688	266643.94	-	-	-	0.000
689	266639.27	-	-	-	0.000
690	266634.61	-	-	-	0.000
691	266629.95	-	-	-	0.000
692	266625.31	-	-	-	0.000
693	266620.73	-	-	-	0.000
694	266616.22	-	-	-	0.000
695	266611.82	-	-	-	0.000
696	266607.42	-	-	-	0.000
697	266603.05	-	-	-	0.000
698	266598.69	-	-	-	0.000
699	266594.36	-	-	-	0.000
700	266590.14	-	-	-	0.000
701	266585.92	-	-	-	0.000
702	266581.79	-	-	-	0.000
703	266577.65	-	-	-	0.000
704	266573.64	-	-	-	0.000
705	266569.73	-	-	-	0.000
706	266565.94	-	-	-	0.000
707	266562.17	-	-	-	0.000
708	266558.40	-	-	-	0.000
709	266554.69	-	-	-	0.000
710	266550.99	-	-	-	0.000
711	266547.33	-	-	-	0.000
712	266543.73	-	-	-	0.000
713	266540.13	-	-	-	0.000
714	266536.52	-	-	-	0.000
715	266533.06	-	-	-	0.000
716	266529.70	-	-	-	0.000
717	266526.34	-	-	-	0.000
718	266523.03	-	-	-	0.000
719	266519.86	-	-	-	0.000
720	266516.74	-	-	-	0.000
721	266513.63	-	-	-	0.000
722	266510.56	-	-	-	0.000
723	266507.50	-	-	-	0.000
724	266504.45	-	-	-	0.000
725	266501.39	-	-	-	0.000

Table 5 – continued from previous page - R7

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
726	266498.36	-	-	-	0.000
727	266495.33	-	-	-	0.000
728	266492.32	-	-	-	0.000
729	266489.41	-	-	-	0.000
730	266486.50	-	-	-	0.000
731	266483.59	-	-	-	0.000
732	266480.71	-	-	-	0.000
733	266477.84	-	-	-	0.000
734	266474.99	-	-	-	0.000
735	266472.16	-	-	-	0.000
736	266469.33	-	-	-	0.000
737	266466.49	-	-	-	0.000
738	266463.66	-	-	-	0.000
739	266460.83	-	-	-	0.000
740	266458.00	-	-	-	0.000
741	266455.17	-	-	-	0.000
742	266452.38	-	-	-	0.000
743	266449.59	-	-	-	0.000
744	266446.83	-	-	-	0.000
745	266444.11	-	-	-	0.000
746	266441.40	-	-	-	0.000
747	266438.88	-	-	-	0.000
748	266436.40	-	-	-	0.000
749	266433.96	-	-	-	0.000
750	266431.54	-	-	-	0.000
751	266429.15	-	-	-	0.000
752	266426.76	-	-	-	0.000
753	266424.38	-	-	-	0.000
754	266422.10	-	-	-	0.000
755	266419.82	-	-	-	0.000
756	266417.54	-	-	-	0.000
757	266415.27	-	-	-	0.000
758	266413.09	-	-	-	0.000
759	266410.94	-	-	-	0.000
760	266408.85	-	-	-	0.000
761	266406.80	-	-	-	0.000
762	266404.74	-	-	-	0.000
763	266402.70	-	-	-	0.000
764	266400.72	-	-	-	0.000
765	266398.74	-	-	-	0.000
766	266396.76	-	-	-	0.000
767	266394.79	-	-	-	0.000
768	266392.82	-	-	-	0.000
769	266390.93	-	-	-	0.000
770	266389.05	-	-	-	0.000
771	266387.19	-	-	-	0.000
772	266385.37	-	-	-	0.000
773	266383.57	-	-	-	0.000
774	266381.76	-	-	-	0.000
775	266379.95	-	-	-	0.000
776	266378.15	-	-	-	0.000
777	266376.35	-	-	-	0.000

Table 5 – continued from previous page - R7

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
778	266374.56	-	-	-	0.000
779	266372.78	-	-	-	0.000
780	266371.05	-	-	-	0.000
781	266369.33	-	-	-	0.000
782	266367.65	-	-	-	0.000
783	266365.97	-	-	-	0.000
784	266364.30	-	-	-	0.000
785	266362.68	-	-	-	0.000
786	266361.11	-	-	-	0.000
787	266359.54	-	-	-	0.000
788	266357.98	-	-	-	0.000
789	266356.46	-	-	-	0.000
790	266354.96	-	-	-	0.000
791	266353.46	-	-	-	0.000
792	266351.98	-	-	-	0.000
793	266350.52	-	-	-	0.000
794	266349.08	-	-	-	0.000
795	266347.68	-	-	-	0.000
796	266346.27	-	-	-	0.000
797	266344.89	-	-	-	0.000
798	266343.50	-	-	-	0.000
799	266342.22	-	-	-	0.000
800	266340.95	-	-	-	0.000
801	266339.69	-	-	-	0.000
802	266338.42	-	-	-	0.000
803	266337.17	-	-	-	0.000
804	266335.93	-	-	-	0.000
805	266334.74	-	-	-	0.000
806	266333.55	-	-	-	0.000
807	266332.37	-	-	-	0.000
808	266331.19	-	-	-	0.000
809	266330.01	-	-	-	0.000
810	266328.89	-	-	-	0.000
811	266327.82	-	-	-	0.000
812	266326.74	-	-	-	0.000
813	266325.66	-	-	-	0.000
814	266324.59	-	-	-	0.000
815	266323.64	-	-	-	0.000
816	266322.69	-	-	-	0.000
817	266321.73	-	-	-	0.000
818	266320.79	-	-	-	0.000
819	266319.89	-	-	-	0.000
820	266319.00	-	-	-	0.000
821	266318.11	-	-	-	0.000
822	266317.23	-	-	-	0.000
823	266316.34	-	-	-	0.000
824	266315.50	-	-	-	0.000
825	266314.66	-	-	-	0.000
826	266313.83	-	-	-	0.000
827	266313.02	-	-	-	0.000
828	266312.22	-	-	-	0.000
829	266311.46	-	-	-	0.000

Table 5 – continued from previous page - R7

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
830	266310.71	-	-	-	0.000
831	266310.03	-	-	-	0.000
832	266309.34	-	-	-	0.000
833	266308.66	-	-	-	0.000
834	266307.98	-	-	-	0.000
835	266307.31	-	-	-	0.000
836	266306.69	-	-	-	0.000
837	266306.11	-	-	-	0.000
838	266305.53	-	-	-	0.000
839	266304.95	-	-	-	0.000
840	266304.40	-	-	-	0.000
841	266303.85	-	-	-	0.000
842	266303.30	-	-	-	0.000
843	266302.76	-	-	-	0.000
844	266302.23	-	-	-	0.000
845	266301.70	-	-	-	0.000
846	266301.16	-	-	-	0.000
847	266300.63	-	-	-	0.000
848	266300.11	-	-	-	0.000
849	266299.58	-	-	-	0.000
850	266299.18	-	-	-	0.000
851	266298.79	-	-	-	0.000
852	266298.39	-	-	-	0.000
853	266298.00	-	-	-	0.000
854	266297.60	-	-	-	0.000
855	266297.21	-	-	-	0.000
856	266296.86	-	-	-	0.000
857	266296.53	-	-	-	0.000
858	266296.23	-	-	-	0.000
859	266295.92	-	-	-	0.000
860	266295.61	-	-	-	0.000
861	266295.31	-	-	-	0.000
862	266295.01	-	-	-	0.000
863	266294.71	-	-	-	0.000
864	266294.46	-	-	-	0.000
865	266294.23	-	-	-	0.000
866	266294.08	-	-	-	0.000
867	266293.94	-	-	-	0.000
868	266293.81	-	-	-	0.000
869	266293.74	-	-	-	0.000
870	266293.69	-	-	-	0.000
871	266293.66	-	-	-	0.000
872	266293.64	-	-	-	0.000
873	266293.63	-	-	-	0.000
874	266293.63	-	-	-	0.000
875	266293.63	-	-	-	0.000
876	266293.63	-	-	-	0.000
877	266293.63	-	-	-	0.000
878	266293.63	-	-	-	0.000
879	266293.63	-	-	-	0.000
Total		**7303.22**	**9143.77**	**10552.00**	**2.00**

Table 6: ENS optimization - pr76zb.

		Time (sec)			
m	**best ENS**	**ILP-GALIAS**	**MILP-IFLOWS**	**DP-TS**	**DP-N2M2**
0	7202.21	0.005	0.004	0.000	0.000
1	4782.33	0.003	0.004	0.000	0.000
2	3658.65	0.035	0.004	0.000	0.000
3	3038.70	0.082	0.007	0.000	0.000
4	2476.75	0.088	0.008	0.000	0.000
5	2114.28	0.273	0.016	0.000	0.000
6	1887.58	1.485	0.015	0.010	0.000
7	1784.09	4.794	0.025	0.000	0.000
8	1702.56	14.584	0.024	0.000	0.000
9	1632.03	35.446	0.027	0.010	0.000
10	1561.84	84.483	0.043	0.000	0.000
11	1502.62	190.086	0.045	0.010	0.000
12	1447.16	378.816	0.060	0.000	0.000
13	1393.84	686.155	0.067	0.010	0.000
14	1340.52	1302.415	0.073	0.000	0.000
<u>15</u>	1296.60	<u>2457.141</u>	0.079	0.010	0.000
16	1253.62	-	0.114	0.010	0.000
17	1215.81	-	0.124	0.000	0.000
18	1179.49	-	0.155	0.010	0.000
19	1144.02	-	0.164	0.000	0.000
20	1114.37	-	0.303	0.010	0.000
21	1083.41	-	0.293	0.010	0.000
22	1054.70	-	0.359	0.010	0.000
23	1026.05	-	0.329	0.000	0.000
24	1000.48	-	0.317	0.010	0.000
25	977.15	-	0.325	0.010	0.000
26	954.60	-	0.362	0.000	0.000
27	933.06	-	0.343	0.010	0.000
28	916.77	-	0.380	0.010	0.000
29	901.07	-	0.419	0.000	0.000
30	885.78	-	0.541	0.010	0.000
31	870.83	-	0.467	0.000	0.000
32	856.97	-	0.570	0.010	0.000
33	844.24	-	0.592	0.010	0.000
34	832.00	-	0.591	0.000	0.000
35	820.13	-	0.647	0.010	0.000
36	808.76	-	0.709	0.000	0.000
37	799.29	-	0.719	0.010	0.000
38	791.31	-	1.035	0.000	0.000
39	783.55	-	1.667	0.010	0.000
40	775.61	-	1.641	0.010	0.000
41	767.85	-	1.654	0.000	0.000
42	760.53	-	1.924	0.010	0.000
43	753.39	-	2.152	0.000	0.000
44	746.07	-	1.658	0.010	0.000
45	739.80	-	1.897	0.000	0.000
46	733.64	-	1.646	0.000	0.000
47	728.54	-	1.749	0.010	0.000
48	723.99	-	1.947	0.000	0.000
49	719.70	-	2.246	0.010	0.000

Table 6 – continued from previous page - pr76zb

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
50	715.50	-	1.986	0.000	0.000
51	712.00	-	2.919	0.000	0.000
52	708.75	-	2.458	0.010	0.000
53	705.75	-	2.749	0.000	0.000
54	702.61	-	3.198	0.010	0.000
55	699.91	-	2.286	0.000	0.000
56	697.24	-	1.892	0.000	0.000
57	694.60	-	1.244	0.010	0.000
58	692.24	-	1.148	0.000	0.000
59	690.15	-	0.880	0.000	0.000
60	688.09	-	0.983	0.000	0.000
61	686.05	-	0.436	0.010	0.000
62	684.64	-	0.361	0.000	0.000
63	683.41	-	0.275	0.000	0.000
64	682.22	-	0.191	0.000	0.000
65	681.05	-	0.111	0.000	0.000
66	680.05	-	0.029	0.010	0.000
67	679.20	-	0.023	0.000	0.000
68	678.52	-	0.015	0.000	0.000
69	677.86	-	0.007	0.000	0.000
70	677.22	-	0.005	0.000	0.000
71	676.75	-	0.004	0.000	0.000
72	676.32	-	0.001	0.000	0.000
73	675.89	-	0.001	0.000	0.000
74	675.89	-	0.000	0.000	0.000
75	675.89	-	0.000	0.000	0.000
76	675.89	-	0.000	0.000	0.000
Total		**8755.89**	**53.74**	**0.30**	**0.01**

Table 7: ENS optimization - pr112zb.

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
0	15958.20	0.003	0.000	0.000	0.000
1	11844.50	0.008	0.004	0.000	0.000
2	9622.72	0.083	0.010	0.000	0.000
3	7463.52	0.140	0.010	0.000	0.000
4	6123.49	0.651	0.014	0.010	0.000
5	5277.61	1.085	0.015	0.000	0.000
6	4915.14	8.541	0.037	0.010	0.000
7	4591.26	38.887	0.082	0.010	0.000
8	4303.65	158.147	0.125	0.000	0.000
9	4076.94	575.926	0.122	0.010	0.000
<u>10</u>	3897.37	<u>2176.144</u>	0.152	0.010	0.000
11	3737.94	-	0.297	0.010	0.000
12	3590.20	-	0.359	0.010	0.000
13	3466.08	-	0.388	0.010	0.000
14	3350.71	-	0.384	0.010	0.000
				Continued on next page	

Table 7 – continued from previous page - pr112zb

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
15	3245.32	-	0.403	0.010	0.000
16	3139.93	-	0.391	0.020	0.000
17	3036.17	-	0.512	0.010	0.000
18	2932.69	-	0.513	0.020	0.000
19	2846.87	-	0.821	0.010	0.000
20	2773.64	-	0.992	0.020	0.000
21	2700.85	-	1.132	0.020	0.000
22	2629.15	-	1.332	0.010	0.000
23	2558.75	-	1.109	0.020	0.000
24	2488.56	-	1.068	0.020	0.000
25	2420.24	-	1.144	0.020	0.000
26	2368.88	-	1.395	0.010	0.000
27	2322.05	-	1.826	0.020	0.000
28	2275.52	-	2.206	0.020	0.000
29	2229.03	-	2.697	0.020	0.000
30	2182.86	-	3.115	0.020	0.000
31	2136.33	-	3.227	0.010	0.000
32	2090.55	-	3.315	0.020	0.000
33	2052.74	-	4.173	0.020	0.000
34	2015.78	-	4.749	0.020	0.000
35	1980.31	-	5.397	0.010	0.000
36	1948.52	-	6.628	0.020	0.000
37	1914.35	-	6.368	0.020	0.000
38	1883.03	-	7.301	0.010	0.000
39	1853.12	-	8.006	0.020	0.000
40	1821.80	-	7.060	0.010	0.000
41	1792.15	-	6.417	0.020	0.000
42	1762.62	-	5.216	0.020	0.000
43	1735.61	-	4.456	0.010	0.000
44	1709.41	-	3.675	0.020	0.000
45	1686.86	-	3.671	0.010	0.000
46	1665.32	-	3.266	0.020	0.000
47	1644.62	-	2.969	0.010	0.000
48	1625.16	-	3.577	0.020	0.000
49	1606.46	-	3.442	0.010	0.000
50	1589.53	-	3.682	0.020	0.000
51	1574.38	-	4.620	0.010	0.000
52	1560.51	-	6.552	0.020	0.000
53	1547.23	-	14.629	0.010	0.000
54	1534.09	-	16.511	0.020	0.000
55	1521.37	-	17.361	0.020	0.000
56	1509.13	-	22.404	0.010	0.000
57	1497.25	-	35.591	0.010	0.000
58	1485.89	-	51.772	0.020	0.000
59	1475.29	-	63.084	0.010	0.000
60	1466.15	-	78.085	0.010	0.000
61	1458.17	-	111.779	0.010	0.000
62	1450.41	-	131.318	0.010	0.000
63	1442.48	-	134.916	0.020	0.000
64	1434.72	-	128.803	0.010	0.000
65	1427.39	-	140.172	0.010	0.000
66	1420.94	-	153.888	0.010	0.000

Table 7 – continued from previous page - pr112zb

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
67	1414.67	-	158.876	0.010	0.000
68	1408.52	-	160.544	0.010	0.000
69	1402.86	-	195.256	0.010	0.000
70	1398.31	-	270.313	0.010	0.000
71	1393.28	-	265.807	0.010	0.000
72	1388.73	-	341.337	0.010	0.000
73	1384.28	-	453.708	0.010	0.000
74	1379.99	-	558.615	0.010	0.000
75	1375.79	-	567.210	0.010	0.000
76	1372.19	-	632.541	0.010	0.000
77	1368.69	-	721.299	0.010	0.000
78	1365.69	-	551.486	0.010	0.000
79	1362.55	-	368.395	0.010	0.000
<u>80</u>	1359.85	-	<u>375.877</u>	0.010	0.000
81	1357.17	-	-	0.000	0.000
82	1354.50	-	-	0.010	0.000
83	1352.14	-	-	0.010	0.000
84	1350.06	-	-	0.010	0.000
85	1348.00	-	-	0.000	0.000
86	1345.96	-	-	0.010	0.000
87	1344.07	-	-	0.000	0.000
88	1342.65	-	-	0.010	0.000
89	1341.41	-	-	0.010	0.000
90	1340.18	-	-	0.000	0.000
91	1338.97	-	-	0.010	0.000
92	1337.78	-	-	0.000	0.000
93	1336.60	-	-	0.010	0.000
94	1335.60	-	-	0.000	0.000
95	1334.62	-	-	0.010	0.000
96	1333.77	-	-	0.000	0.000
97	1333.02	-	-	0.000	0.000
98	1332.31	-	-	0.010	0.000
99	1331.63	-	-	0.000	0.000
100	1330.97	-	-	0.000	0.000
101	1330.34	-	-	0.000	0.000
102	1329.79	-	-	0.010	0.000
103	1329.31	-	-	0.000	0.000
104	1328.87	-	-	0.000	0.000
105	1328.42	-	-	0.000	0.000
106	1327.97	-	-	0.000	0.000
107	1327.54	-	-	0.000	0.000
108	1327.12	-	-	0.010	0.000
109	1326.86	-	-	0.000	0.000
110	1326.86	-	-	0.000	0.000
111	1326.86	-	-	0.000	0.000
112	1326.86	-	-	0.000	0.000
Total		**10159.61**	**7391.90**	**1.16**	**0.01**

Table 8: ENS optimization - pr199zb.

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
0	58226.30	0.005	0.001	0.000	0.000
1	40600.10	0.015	0.011	0.000	0.000
2	26659.80	0.169	0.005	0.000	0.000
3	21246.90	0.126	0.015	0.010	0.000
4	17694.00	3.898	0.020	0.010	0.000
5	15691.50	19.000	0.024	0.020	0.000
6	14129.70	86.690	0.027	0.030	0.000
7	12629.80	440.242	0.033	0.060	0.000
8	11682.60	2168.202	0.063	0.110	0.000
9	10868.70	-	0.131	0.160	0.000
10	10063.70	-	0.176	0.260	0.000
11	9279.62	-	0.137	0.370	0.000
12	8788.67	-	0.195	0.530	0.000
13	8423.90	-	0.287	0.690	0.000
14	8100.02	-	0.310	0.920	0.000
15	7799.98	-	0.418	1.150	0.000
16	7512.38	-	0.576	1.460	0.000
17	7285.67	-	0.984	1.800	0.000
18	7076.93	-	1.277	2.180	0.000
19	6882.73	-	1.457	2.570	0.000
20	6693.08	-	1.683	2.920	0.000
21	6507.08	-	2.070	3.400	0.000
22	6327.51	-	2.158	3.930	0.000
23	6151.95	-	2.559	4.430	0.000
24	5992.52	-	2.793	5.070	0.000
25	5844.77	-	3.376	5.700	0.000
26	5720.66	-	3.486	6.280	0.000
27	5604.15	-	4.007	6.940	0.000
28	5488.78	-	4.419	7.640	0.000
29	5383.38	-	5.169	8.460	0.000
30	5277.99	-	6.280	9.380	0.000
31	5174.24	-	5.516	9.940	0.000
32	5070.75	-	5.908	10.840	0.001
33	4971.78	-	6.218	11.680	0.000
34	4881.06	-	7.647	12.460	0.000
35	4794.75	-	11.196	13.380	0.001
36	4708.94	-	14.132	14.440	0.000
37	4635.70	-	23.398	15.220	0.000
38	4562.92	-	32.894	16.320	0.000
39	4491.22	-	54.902	17.250	0.000
40	4420.82	-	69.520	18.390	0.000
41	4350.63	-	105.535	19.370	0.000
42	4282.14	-	134.385	20.530	0.000
43	4213.82	-	136.850	21.690	0.000
44	4149.29	-	143.730	22.770	0.000
45	4097.92	-	218.613	23.880	0.000
46	4049.22	-	297.438	25.000	0.000
47	4002.40	-	444.198	25.970	0.000
48	3955.87	-	534.629	27.320	0.000
49	3909.38	-	678.595	28.220	0.000

Continued on next page

Table 8 – continued from previous page - pr199zb

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
50	3863.21	-	1282.212	29.210	0.000
51	3816.68	-	1094.963	30.280	0.000
<u>52</u>	3770.89	-	<u>1231.472</u>	31.560	0.000
53	3725.98	-	-	32.540	0.000
54	3685.32	-	-	33.500	0.000
55	3647.51	-	-	34.470	0.000
56	3610.06	-	-	35.700	0.000
57	3573.09	-	-	36.720	0.000
58	3537.62	-	-	37.650	0.000
59	3505.84	-	-	38.460	0.000
60	3471.66	-	-	39.700	0.000
61	3439.95	-	-	40.370	0.000
62	3408.63	-	-	41.650	0.000
63	3378.14	-	-	42.760	0.000
64	3347.40	-	-	43.680	0.000
65	3316.92	-	-	44.800	0.000
66	3287.26	-	-	45.440	0.000
67	3257.73	-	-	46.350	0.000
68	3230.72	-	-	47.440	0.000
69	3204.53	-	-	48.260	0.000
70	3178.59	-	-	49.350	0.000
71	3153.58	-	-	50.280	0.000
72	3130.41	-	-	51.810	0.000
73	3107.84	-	-	52.700	0.000
74	3085.29	-	-	53.230	0.000
75	3063.13	-	-	54.240	0.000
76	3041.58	-	-	55.120	0.000
77	3020.88	-	-	55.840	0.000
78	3001.43	-	-	56.670	0.000
79	2982.40	-	-	57.680	0.000
80	2963.70	-	-	59.040	0.000
81	2945.33	-	-	59.640	0.000
82	2927.03	-	-	60.320	0.000
83	2910.10	-	-	61.360	0.000
84	2893.27	-	-	61.970	0.000
85	2876.55	-	-	63.030	0.000
86	2860.74	-	-	63.310	0.000
87	2845.59	-	-	63.670	0.000
88	2831.52	-	-	64.540	0.000
89	2817.65	-	-	65.020	0.000
90	2803.91	-	-	65.350	0.000
91	2790.30	-	-	65.340	0.000
92	2777.02	-	-	65.910	0.000
93	2763.74	-	-	65.960	0.000
94	2750.60	-	-	66.050	0.000
95	2737.87	-	-	65.720	0.000
96	2725.64	-	-	66.190	0.000
97	2713.43	-	-	66.360	0.000
98	2701.28	-	-	66.030	0.000
99	2689.40	-	-	65.130	0.000
100	2677.70	-	-	65.650	0.000
101	2666.28	-	-	64.860	0.000

Table 8 – continued from previous page - pr199zb

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
102	2654.90	-	-	64.220	0.000
103	2643.53	-	-	63.250	0.000
104	2632.94	-	-	63.880	0.000
105	2623.79	-	-	62.310	0.000
106	2615.53	-	-	61.470	0.000
107	2607.56	-	-	60.450	0.000
108	2599.70	-	-	60.040	0.000
109	2591.86	-	-	58.910	0.000
110	2584.00	-	-	57.860	0.000
111	2576.24	-	-	57.080	0.000
112	2568.61	-	-	56.560	0.000
113	2561.29	-	-	55.340	0.000
114	2554.22	-	-	54.570	0.000
115	2547.77	-	-	53.230	0.000
116	2541.47	-	-	52.620	0.000
117	2535.20	-	-	51.370	0.000
118	2529.05	-	-	49.890	0.000
119	2523.02	-	-	48.770	0.000
120	2517.08	-	-	48.190	0.000
121	2511.42	-	-	46.660	0.000
122	2505.77	-	-	45.980	0.000
123	2500.49	-	-	44.450	0.000
124	2495.41	-	-	43.660	0.000
125	2490.38	-	-	42.410	0.000
126	2485.80	-	-	41.360	0.000
127	2480.80	-	-	40.450	0.000
128	2476.22	-	-	39.520	0.000
129	2471.67	-	-	38.220	0.000
130	2467.23	-	-	37.580	0.000
131	2462.93	-	-	36.370	0.000
132	2458.74	-	-	35.080	0.000
133	2455.13	-	-	33.820	0.000
134	2451.64	-	-	33.580	0.000
135	2448.19	-	-	31.900	0.000
136	2444.93	-	-	31.140	0.000
137	2441.82	-	-	30.100	0.000
138	2438.79	-	-	29.140	0.000
139	2435.68	-	-	28.260	0.000
140	2432.78	-	-	27.410	0.000
141	2430.09	-	-	26.340	0.000
142	2427.40	-	-	25.720	0.000
143	2424.74	-	-	24.920	0.000
144	2422.21	-	-	24.300	0.000
145	2419.79	-	-	23.340	0.000
146	2417.43	-	-	22.720	0.000
147	2415.22	-	-	22.150	0.000
148	2413.12	-	-	21.150	0.000
149	2411.04	-	-	20.300	0.000
150	2408.98	-	-	19.620	0.000
151	2406.94	-	-	18.720	0.000
152	2404.98	-	-	18.220	0.000
153	2403.06	-	-	17.480	0.000

Table 8 – continued from previous page - pr199zb

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
154	2401.17	-	-	16.680	0.000
155	2399.33	-	-	16.220	0.000
156	2397.55	-	-	15.350	0.000
157	2396.03	-	-	14.550	0.000
158	2394.62	-	-	13.910	0.000
159	2393.33	-	-	13.180	0.000
160	2392.07	-	-	12.600	0.000
161	2390.83	-	-	11.880	0.000
162	2389.60	-	-	11.250	0.000
163	2388.39	-	-	10.530	0.000
164	2387.19	-	-	9.860	0.000
165	2386.02	-	-	9.170	0.000
166	2384.94	-	-	8.560	0.000
167	2383.88	-	-	7.850	0.000
168	2382.88	-	-	7.350	0.000
169	2381.90	-	-	6.670	0.000
170	2380.97	-	-	6.100	0.000
171	2380.06	-	-	5.540	0.000
172	2379.16	-	-	4.980	0.000
173	2378.26	-	-	4.510	0.000
174	2377.41	-	-	4.020	0.000
175	2376.67	-	-	3.530	0.000
176	2375.96	-	-	3.120	0.000
177	2375.28	-	-	2.690	0.000
178	2374.61	-	-	2.330	0.000
179	2373.98	-	-	2.020	0.000
180	2373.42	-	-	1.770	0.000
181	2372.87	-	-	1.450	0.000
182	2372.40	-	-	1.220	0.000
183	2371.95	-	-	1.030	0.000
184	2371.50	-	-	0.870	0.000
185	2371.05	-	-	0.710	0.000
186	2370.61	-	-	0.570	0.000
187	2370.18	-	-	0.470	0.000
188	2369.74	-	-	0.380	0.000
189	2369.32	-	-	0.290	0.000
190	2368.95	-	-	0.220	0.000
191	2368.61	-	-	0.180	0.000
192	2368.35	-	-	0.150	0.000
193	2368.11	-	-	0.130	0.000
194	2367.91	-	-	0.110	0.000
195	2367.81	-	-	0.100	0.000
196	2367.81	-	-	0.090	0.000
197	2367.81	-	-	0.090	0.000
198	2367.81	-	-	0.090	0.000
199	2367.81	-	-	0.090	0.000
Total		**9918.35**	**8248.63**	**5495.66**	**0.04**

Table 9: ENS optimization - pr262zb.

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
0	105636.00	0.007	0.001	0.000	0.000
1	78817.40	0.019	0.014	0.000	0.000
2	57773.40	0.189	0.006	0.010	0.002
3	37227.00	0.123	0.006	0.010	0.001
4	29686.60	0.205	0.017	0.020	0.001
5	25315.20	8.540	0.019	0.080	0.000
6	23255.50	76.210	0.027	0.210	0.000
7	21252.90	489.241	0.026	0.520	0.000
<u>8</u>	19691.10	<u>2783.666</u>	0.034	1.130	0.000
9	18270.30	-	0.041	2.200	0.000
10	17286.40	-	0.062	3.990	0.000
11	16339.10	-	0.094	6.570	0.000
12	15525.20	-	0.129	10.390	0.001
13	14720.30	-	0.327	15.600	0.001
14	13936.20	-	0.336	22.490	0.001
15	13299.60	-	0.345	31.790	0.001
16	12718.80	-	0.533	44.670	0.001
17	12227.90	-	0.712	57.830	0.001
18	11749.80	-	0.616	75.080	0.001
19	11375.60	-	1.055	95.880	0.001
20	11010.80	-	1.291	120.660	0.000
21	10687.00	-	1.456	147.660	0.000
22	10386.90	-	1.856	181.620	0.000
23	10099.30	-	2.925	213.810	0.001
24	9872.61	-	5.908	257.980	0.000
25	9663.87	-	8.030	305.340	0.001
26	9469.67	-	12.572	354.210	0.000
27	9280.02	-	19.070	420.580	0.000
28	9094.02	-	22.593	492.220	0.000
29	8914.45	-	26.046	545.120	0.000
30	8737.34	-	29.360	622.880	0.000
31	8561.78	-	37.572	703.710	0.000
32	8394.09	-	56.788	796.840	0.000
<u>33</u>	8234.66	-	75.784	<u>891.760</u>	0.000
34	8086.91	-	103.930	-	0.000
35	7962.80	-	161.121	-	0.000
36	7846.28	-	186.751	-	0.000
37	7729.77	-	208.349	-	0.000
38	7614.39	-	265.843	-	0.000
39	7499.50	-	304.892	-	0.000
40	7394.01	-	342.537	-	0.000
41	7288.62	-	421.873	-	0.000
42	7183.23	-	441.878	-	0.000
43	7079.47	-	477.708	-	0.000
44	6975.99	-	485.787	-	0.000
45	6877.02	-	571.075	-	0.000
46	6778.74	-	606.382	-	0.000
47	6688.03	-	692.006	-	0.000
<u>48</u>	6601.72	-	<u>1033.717</u>	-	0.000
49	6515.90	-	1386.689	-	0.000
			Continued on next page		

Table 9 – continued from previous page - pr262zb

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
50	6432.62	-	-	-	0.000
51	6351.70	-	-	-	0.000
52	6274.74	-	-	-	0.000
53	6198.56	-	-	-	0.000
54	6125.33	-	-	-	0.000
55	6052.54	-	-	-	0.000
56	5980.84	-	-	-	0.000
57	5910.44	-	-	-	0.000
58	5840.25	-	-	-	0.000
59	5771.76	-	-	-	0.000
60	5703.44	-	-	-	0.000
61	5638.62	-	-	-	0.000
62	5574.08	-	-	-	0.000
63	5518.13	-	-	-	0.000
64	5466.77	-	-	-	0.000
65	5418.07	-	-	-	0.000
66	5371.25	-	-	-	0.000
67	5324.71	-	-	-	0.000
68	5278.22	-	-	-	0.000
69	5232.06	-	-	-	0.000
70	5185.52	-	-	-	0.000
71	5139.74	-	-	-	0.000
72	5094.83	-	-	-	0.000
73	5054.17	-	-	-	0.000
74	5016.36	-	-	-	0.000
75	4978.91	-	-	-	0.000
76	4941.94	-	-	-	0.000
77	4906.47	-	-	-	0.000
78	4874.69	-	-	-	0.000
79	4840.51	-	-	-	0.000
80	4808.79	-	-	-	0.000
81	4777.47	-	-	-	0.000
82	4746.99	-	-	-	0.000
83	4716.25	-	-	-	0.000
84	4685.76	-	-	-	0.000
85	4655.37	-	-	-	0.000
86	4624.98	-	-	-	0.000
87	4595.33	-	-	-	0.000
88	4565.80	-	-	-	0.000
89	4538.79	-	-	-	0.000
90	4512.59	-	-	-	0.000
91	4486.66	-	-	-	0.000
92	4460.89	-	-	-	0.000
93	4435.87	-	-	-	0.000
94	4411.78	-	-	-	0.000
95	4388.05	-	-	-	0.000
96	4364.88	-	-	-	0.000
97	4342.31	-	-	-	0.000
98	4319.76	-	-	-	0.000
99	4297.60	-	-	-	0.000
100	4276.05	-	-	-	0.000
101	4255.35	-	-	-	0.000

Table 9 – continued from previous page - pr262zb

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
102	4234.72	-	-	-	0.000
103	4215.26	-	-	-	0.000
104	4196.23	-	-	-	0.000
105	4177.27	-	-	-	0.000
106	4158.57	-	-	-	0.000
107	4140.05	-	-	-	0.000
108	4121.68	-	-	-	0.000
109	4103.38	-	-	-	0.000
110	4086.45	-	-	-	0.000
111	4069.62	-	-	-	0.000
112	4052.90	-	-	-	0.000
113	4037.09	-	-	-	0.000
114	4021.94	-	-	-	0.000
115	4007.87	-	-	-	0.000
116	3992.97	-	-	-	0.000
117	3978.89	-	-	-	0.000
118	3965.03	-	-	-	0.000
119	3951.29	-	-	-	0.000
120	3937.66	-	-	-	0.000
121	3924.05	-	-	-	0.000
122	3910.77	-	-	-	0.000
123	3897.49	-	-	-	0.000
124	3884.34	-	-	-	0.000
125	3871.62	-	-	-	0.000
126	3859.38	-	-	-	0.000
127	3847.18	-	-	-	0.000
128	3835.03	-	-	-	0.000
129	3823.15	-	-	-	0.000
130	3811.38	-	-	-	0.000
131	3799.68	-	-	-	0.000
132	3788.26	-	-	-	0.000
133	3776.87	-	-	-	0.000
134	3765.48	-	-	-	0.000
135	3754.12	-	-	-	0.000
136	3743.52	-	-	-	0.000
137	3733.43	-	-	-	0.000
138	3724.18	-	-	-	0.000
139	3715.03	-	-	-	0.000
140	3706.62	-	-	-	0.000
141	3698.36	-	-	-	0.000
142	3690.38	-	-	-	0.000
143	3682.53	-	-	-	0.000
144	3674.69	-	-	-	0.000
145	3666.83	-	-	-	0.000
146	3659.07	-	-	-	0.000
147	3651.44	-	-	-	0.000
148	3644.11	-	-	-	0.000
149	3637.03	-	-	-	0.000
150	3629.96	-	-	-	0.000
151	3623.30	-	-	-	0.000
152	3616.85	-	-	-	0.000
153	3610.55	-	-	-	0.000

Table 9 – continued from previous page - pr262zb

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
154	3604.28	-	-	-	0.000
155	3598.12	-	-	-	0.000
156	3592.00	-	-	-	0.000
157	3585.98	-	-	-	0.000
158	3579.96	-	-	-	0.000
159	3574.02	-	-	-	0.000
160	3568.25	-	-	-	0.000
161	3562.59	-	-	-	0.000
162	3556.94	-	-	-	0.000
163	3551.42	-	-	-	0.000
164	3546.14	-	-	-	0.000
165	3540.95	-	-	-	0.000
166	3535.88	-	-	-	0.000
167	3530.85	-	-	-	0.000
168	3526.27	-	-	-	0.000
169	3521.27	-	-	-	0.000
170	3516.69	-	-	-	0.000
171	3512.14	-	-	-	0.000
172	3507.69	-	-	-	0.000
173	3503.26	-	-	-	0.000
174	3498.87	-	-	-	0.000
175	3494.58	-	-	-	0.000
176	3490.38	-	-	-	0.000
177	3486.41	-	-	-	0.000
178	3482.81	-	-	-	0.000
179	3479.31	-	-	-	0.000
180	3475.86	-	-	-	0.000
181	3472.52	-	-	-	0.000
182	3469.26	-	-	-	0.000
183	3466.05	-	-	-	0.000
184	3462.94	-	-	-	0.000
185	3459.90	-	-	-	0.000
186	3456.80	-	-	-	0.000
187	3453.90	-	-	-	0.000
188	3451.09	-	-	-	0.000
189	3448.39	-	-	-	0.000
190	3445.71	-	-	-	0.000
191	3443.04	-	-	-	0.000
192	3440.51	-	-	-	0.000
193	3438.04	-	-	-	0.000
194	3435.62	-	-	-	0.000
195	3433.26	-	-	-	0.000
196	3431.06	-	-	-	0.000
197	3428.96	-	-	-	0.000
198	3426.87	-	-	-	0.000
199	3424.81	-	-	-	0.000
200	3422.75	-	-	-	0.000
201	3420.70	-	-	-	0.000
202	3418.66	-	-	-	0.000
203	3416.69	-	-	-	0.000
204	3414.78	-	-	-	0.000
205	3412.89	-	-	-	0.000

Table 9 – continued from previous page - pr262zb

m	best ENS	Time (sec)			
		ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
206	3411.05	-	-	-	0.000
207	3409.27	-	-	-	0.000
208	3407.66	-	-	-	0.000
209	3406.14	-	-	-	0.000
210	3404.73	-	-	-	0.000
211	3403.37	-	-	-	0.000
212	3402.08	-	-	-	0.000
213	3400.80	-	-	-	0.000
214	3399.54	-	-	-	0.000
215	3398.30	-	-	-	0.000
216	3397.06	-	-	-	0.000
217	3395.83	-	-	-	0.000
218	3394.62	-	-	-	0.000
219	3393.43	-	-	-	0.000
220	3392.25	-	-	-	0.000
221	3391.12	-	-	-	0.000
222	3390.03	-	-	-	0.000
223	3388.97	-	-	-	0.000
224	3387.91	-	-	-	0.000
225	3386.91	-	-	-	0.000
226	3385.93	-	-	-	0.000
227	3385.00	-	-	-	0.000
228	3384.09	-	-	-	0.000
229	3383.18	-	-	-	0.000
230	3382.29	-	-	-	0.000
231	3381.44	-	-	-	0.000
232	3380.66	-	-	-	0.000
233	3379.91	-	-	-	0.000
234	3379.20	-	-	-	0.000
235	3378.53	-	-	-	0.000
236	3377.86	-	-	-	0.000
237	3377.23	-	-	-	0.000
238	3376.64	-	-	-	0.000
239	3376.08	-	-	-	0.000
240	3375.53	-	-	-	0.000
241	3375.06	-	-	-	0.000
242	3374.59	-	-	-	0.000
243	3374.14	-	-	-	0.000
244	3373.70	-	-	-	0.000
245	3373.25	-	-	-	0.000
246	3372.80	-	-	-	0.000
247	3372.37	-	-	-	0.000
248	3371.94	-	-	-	0.000
249	3371.52	-	-	-	0.000
250	3371.15	-	-	-	0.000
251	3370.81	-	-	-	0.000
252	3370.55	-	-	-	0.000
253	3370.29	-	-	-	0.000
254	3370.05	-	-	-	0.000
255	3369.85	-	-	-	0.000
256	3369.75	-	-	-	0.000
257	3369.75	-	-	-	0.000

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
258	3369.75	-	-	-	0.000
259	3369.75	-	-	-	0.000
260	3369.75	-	-	-	0.000
261	3369.75	-	-	-	0.000
262	3369.75	-	-	-	0.000
Total		**10558.20**	**7996.19**	**7414.00**	**0.07**

Table 10: ENS optimization - IEEE8500 - n384.

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
0	3388.78	0.090	0.004	0.000	0.000
1	2565.67	0.228	0.029	0.010	0.000
2	2128.39	1.922	0.031	0.010	0.003
3	1768.60	5.723	0.031	0.030	0.002
4	1562.15	56.356	0.063	0.050	0.003
5	1389.79	483.837	0.097	0.060	0.002
6	1287.20	-	0.441	0.070	0.002
7	1229.08	-	5.130	0.090	0.003
8	1176.14	-	5.211	0.100	0.003
9	1126.45	-	7.624	0.110	0.004
10	1076.81	-	7.431	0.130	0.003
11	1032.10	-	6.167	0.140	0.002
12	991.69	-	5.842	0.160	0.002
13	954.96	-	8.114	0.160	0.002
14	920.76	-	9.739	0.180	0.002
15	888.58	-	10.452	0.200	0.002
16	858.97	-	14.171	0.210	0.002
17	831.86	-	17.210	0.230	0.002
18	806.72	-	26.896	0.240	0.002
19	781.91	-	56.872	0.260	0.003
20	758.12	-	81.789	0.280	0.003
21	738.65	-	156.244	0.300	0.003
22	723.38	-	438.331	0.300	0.003
23	708.43	-	1471.175	0.310	0.003
24	693.59	-	2976.774	0.340	0.003
25	678.97	-	-	0.360	0.003
26	665.98	-	-	0.380	0.005
27	654.17	-	-	0.380	0.005
28	642.46	-	-	0.400	0.003
29	633.34	-	-	0.420	0.003
30	624.22	-	-	0.420	0.003
31	615.31	-	-	0.430	0.006
32	608.33	-	-	0.440	0.006
33	602.20	-	-	0.450	0.005
34	596.43	-	-	0.460	0.004
35	591.42	-	-	0.460	0.004
36	586.78	-	-	0.480	0.004
				Continued on next page	

Table 10 – continued from previous page - IEEE8500 - n384

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
37	582.50	-	-	0.470	0.004
38	578.28	-	-	0.490	0.004
39	574.10	-	-	0.480	0.004
40	570.05	-	-	0.490	0.004
41	566.04	-	-	0.500	0.004
42	562.04	-	-	0.500	0.004
43	558.08	-	-	0.510	0.004
44	554.17	-	-	0.510	0.004
45	550.39	-	-	0.520	0.004
46	546.76	-	-	0.530	0.005
47	543.51	-	-	0.540	0.005
48	540.35	-	-	0.560	0.005
49	537.21	-	-	0.540	0.005
50	534.32	-	-	0.580	0.005
51	531.63	-	-	0.570	0.005
52	528.96	-	-	0.580	0.005
53	526.49	-	-	0.580	0.005
54	524.12	-	-	0.590	0.005
55	521.84	-	-	0.600	0.005
56	519.79	-	-	0.610	0.005
57	517.77	-	-	0.620	0.005
58	515.79	-	-	0.630	0.005
59	513.90	-	-	0.650	0.005
60	512.03	-	-	0.630	0.005
61	510.18	-	-	0.650	0.005
62	508.59	-	-	0.640	0.005
63	507.02	-	-	0.640	0.005
64	505.46	-	-	0.660	0.005
65	503.98	-	-	0.660	0.005
66	502.56	-	-	0.660	0.005
67	501.23	-	-	0.660	0.005
68	499.94	-	-	0.670	0.005
69	498.69	-	-	0.680	0.005
70	497.53	-	-	0.670	0.005
71	496.42	-	-	0.660	0.005
72	495.36	-	-	0.670	0.005
73	494.38	-	-	0.670	0.005
74	493.46	-	-	0.670	0.005
75	492.55	-	-	0.700	0.005
76	491.66	-	-	0.660	0.005
77	490.87	-	-	0.680	0.005
78	490.09	-	-	0.680	0.006
79	489.34	-	-	0.670	0.006
80	488.60	-	-	0.670	0.006
81	487.88	-	-	0.660	0.006
82	487.15	-	-	0.660	0.006
83	486.43	-	-	0.680	0.006
84	485.73	-	-	0.670	0.006
85	485.02	-	-	0.650	0.016
86	484.32	-	-	0.640	0.008
87	483.65	-	-	0.650	0.007
88	482.99	-	-	0.650	0.017

Table 10 – continued from previous page - IEEE8500 - n384

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
89	482.32	-	-	0.650	0.008
90	481.66	-	-	0.650	0.007
91	481.02	-	-	0.650	0.007
92	480.43	-	-	0.640	0.007
93	479.84	-	-	0.650	0.007
94	479.26	-	-	0.660	0.007
95	478.68	-	-	0.690	0.007
96	478.11	-	-	0.650	0.007
97	477.54	-	-	0.630	0.007
98	476.98	-	-	0.640	0.007
99	476.43	-	-	0.630	0.007
100	475.89	-	-	0.650	0.007
101	475.37	-	-	0.640	0.006
102	474.85	-	-	0.640	0.006
103	474.33	-	-	0.630	0.007
104	473.81	-	-	0.630	0.007
105	473.31	-	-	0.620	0.007
106	472.81	-	-	0.600	0.007
107	472.32	-	-	0.590	0.007
108	471.85	-	-	0.580	0.007
109	471.38	-	-	0.590	0.007
110	470.91	-	-	0.580	0.008
111	470.44	-	-	0.550	0.010
112	469.97	-	-	0.540	0.009
113	469.51	-	-	0.530	0.008
114	469.05	-	-	0.540	0.008
115	468.59	-	-	0.490	0.008
116	468.15	-	-	0.470	0.008
117	467.76	-	-	0.480	0.008
118	467.39	-	-	0.440	0.008
119	467.02	-	-	0.430	0.008
120	466.67	-	-	0.400	0.009
121	466.33	-	-	0.380	0.009
122	465.99	-	-	0.360	0.009
123	465.65	-	-	0.340	0.009
124	465.32	-	-	0.340	0.009
125	465.00	-	-	0.330	0.009
126	464.68	-	-	0.320	0.010
127	464.37	-	-	0.300	0.009
128	464.05	-	-	0.310	0.010
129	463.74	-	-	0.280	0.010
130	463.44	-	-	0.300	0.010
131	463.15	-	-	0.280	0.010
132	462.86	-	-	0.300	0.010
133	462.58	-	-	0.270	0.010
134	462.29	-	-	0.270	0.011
135	462.02	-	-	0.270	0.011
136	461.75	-	-	0.260	0.011
137	461.50	-	-	0.270	0.011
138	461.26	-	-	0.260	0.011
139	461.02	-	-	0.260	0.011
140	460.78	-	-	0.270	0.011

Table 10 – continued from previous page - IEEE8500 - n384

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-N2M2
			Time (sec)		
141	460.54	-	-	0.270	0.011
142	460.31	-	-	0.260	0.010
143	460.08	-	-	0.290	0.010
144	459.85	-	-	0.280	0.010
145	459.63	-	-	0.260	0.009
146	459.42	-	-	0.270	0.010
147	459.20	-	-	0.280	0.010
148	458.99	-	-	0.270	0.010
149	458.79	-	-	0.260	0.010
150	458.58	-	-	0.270	0.010
151	458.38	-	-	0.270	0.009
152	458.18	-	-	0.260	0.009
153	457.98	-	-	0.260	0.009
154	457.79	-	-	0.280	0.009
155	457.61	-	-	0.250	0.009
156	457.42	-	-	0.270	0.009
157	457.24	-	-	0.260	0.008
158	457.06	-	-	0.250	0.008
159	456.90	-	-	0.260	0.008
160	456.73	-	-	0.250	0.008
161	456.57	-	-	0.260	0.008
162	456.40	-	-	0.240	0.009
163	456.24	-	-	0.260	0.009
164	456.08	-	-	0.260	0.009
165	455.93	-	-	0.240	0.009
166	455.78	-	-	0.240	0.009
167	455.63	-	-	0.240	0.009
168	455.50	-	-	0.250	0.009
169	455.36	-	-	0.250	0.009
170	455.23	-	-	0.250	0.011
171	455.09	-	-	0.250	0.010
172	454.96	-	-	0.260	0.008
173	454.83	-	-	0.240	0.008
174	454.70	-	-	0.240	0.007
175	454.58	-	-	0.240	0.007
176	454.45	-	-	0.240	0.007
177	454.33	-	-	0.240	0.007
178	454.22	-	-	0.250	0.006
179	454.12	-	-	0.250	0.006
180	454.02	-	-	0.240	0.006
181	453.92	-	-	0.240	0.006
182	453.82	-	-	0.240	0.006
183	453.72	-	-	0.230	0.006
184	453.62	-	-	0.240	0.006
185	453.53	-	-	0.230	0.006
186	453.44	-	-	0.230	0.006
187	453.36	-	-	0.240	0.006
188	453.27	-	-	0.240	0.006
189	453.19	-	-	0.240	0.005
190	453.11	-	-	0.230	0.005
191	453.03	-	-	0.250	0.005
192	452.95	-	-	0.230	0.005

Table 10 – continued from previous page - IEEE8500 - n384

m	best ENS	Time (sec)			
		ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
193	452.88	-	-	0.230	0.005
194	452.80	-	-	0.240	0.005
195	452.73	-	-	0.230	0.005
196	452.65	-	-	0.230	0.005
197	452.58	-	-	0.230	0.004
198	452.50	-	-	0.240	0.004
199	452.43	-	-	0.230	0.004
200	452.36	-	-	0.230	0.004
201	452.29	-	-	0.230	0.004
202	452.22	-	-	0.230	0.003
203	452.15	-	-	0.240	0.004
204	452.08	-	-	0.220	0.004
205	452.01	-	-	0.230	0.004
206	451.94	-	-	0.230	0.004
207	451.87	-	-	0.230	0.004
208	451.80	-	-	0.230	0.004
209	451.74	-	-	0.230	0.004
210	451.67	-	-	0.240	0.004
211	451.61	-	-	0.240	0.004
212	451.54	-	-	0.240	0.004
213	451.48	-	-	0.220	0.004
214	451.41	-	-	0.240	0.003
215	451.35	-	-	0.240	0.003
216	451.29	-	-	0.240	0.003
217	451.23	-	-	0.240	0.003
218	451.16	-	-	0.230	0.003
219	451.11	-	-	0.250	0.003
220	451.05	-	-	0.230	0.003
221	450.99	-	-	0.240	0.002
222	450.93	-	-	0.230	0.002
223	450.88	-	-	0.240	0.002
224	450.82	-	-	0.240	0.002
225	450.77	-	-	0.240	0.002
226	450.71	-	-	0.250	0.002
227	450.66	-	-	0.240	0.002
228	450.61	-	-	0.250	0.002
229	450.56	-	-	0.240	0.001
230	450.51	-	-	0.240	0.001
231	450.46	-	-	0.240	0.002
232	450.41	-	-	0.270	0.001
233	450.37	-	-	0.240	0.002
234	450.32	-	-	0.250	0.002
235	450.27	-	-	0.270	0.001
236	450.22	-	-	0.250	0.001
237	450.17	-	-	0.250	0.001
238	450.13	-	-	0.240	0.001
239	450.08	-	-	0.250	0.001
240	450.03	-	-	0.260	0.001
241	449.99	-	-	0.250	0.001
242	449.94	-	-	0.260	0.001
243	449.90	-	-	0.250	0.001
244	449.85	-	-	0.270	0.001

Table 10 – continued from previous page - IEEE8500 - n384					
		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
245	449.81	-	-	0.260	0.001
246	449.76	-	-	0.250	0.001
247	449.72	-	-	0.260	0.001
248	449.68	-	-	0.260	0.000
249	449.63	-	-	0.250	0.001
250	449.59	-	-	0.260	0.001
251	449.55	-	-	0.250	0.001
252	449.51	-	-	0.270	0.001
253	449.47	-	-	0.250	0.001
254	449.43	-	-	0.270	0.001
255	449.39	-	-	0.260	0.000
256	449.35	-	-	0.250	0.000
257	449.31	-	-	0.260	0.000
258	449.26	-	-	0.250	0.000
259	449.22	-	-	0.240	0.000
260	449.19	-	-	0.230	0.000
261	449.15	-	-	0.230	0.000
262	449.11	-	-	0.230	0.000
263	449.07	-	-	0.220	0.000
264	449.03	-	-	0.220	0.000
265	449.00	-	-	0.210	0.000
266	448.96	-	-	0.210	0.000
267	448.93	-	-	0.210	0.000
268	448.89	-	-	0.200	0.000
269	448.86	-	-	0.200	0.000
270	448.82	-	-	0.200	0.000
271	448.79	-	-	0.180	0.000
272	448.75	-	-	0.200	0.000
273	448.72	-	-	0.170	0.000
274	448.69	-	-	0.170	0.000
275	448.65	-	-	0.170	0.000
276	448.62	-	-	0.160	0.000
277	448.59	-	-	0.150	0.000
278	448.56	-	-	0.150	0.000
279	448.53	-	-	0.150	0.000
280	448.50	-	-	0.150	0.000
281	448.47	-	-	0.140	0.000
282	448.45	-	-	0.160	0.000
283	448.42	-	-	0.140	0.000
284	448.39	-	-	0.130	0.000
285	448.36	-	-	0.130	0.000
286	448.34	-	-	0.130	0.000
287	448.31	-	-	0.120	0.000
288	448.28	-	-	0.120	0.000
289	448.26	-	-	0.130	0.000
290	448.23	-	-	0.110	0.000
291	448.21	-	-	0.120	0.000
292	448.18	-	-	0.110	0.000
293	448.15	-	-	0.120	0.000
294	448.13	-	-	0.110	0.000
295	448.11	-	-	0.110	0.000
296	448.08	-	-	0.110	0.000
				Continued on next page	

Table 10 – continued from previous page - IEEE8500 - n384

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
297	448.06	-	-	0.110	0.000
298	448.03	-	-	0.110	0.000
299	448.01	-	-	0.110	0.000
300	447.99	-	-	0.100	0.000
301	447.96	-	-	0.100	0.000
302	447.94	-	-	0.100	0.000
303	447.92	-	-	0.100	0.000
304	447.90	-	-	0.100	0.000
305	447.88	-	-	0.100	0.000
306	447.86	-	-	0.090	0.000
307	447.83	-	-	0.090	0.000
308	447.81	-	-	0.090	0.000
309	447.79	-	-	0.090	0.000
310	447.77	-	-	0.090	0.000
311	447.75	-	-	0.090	0.000
312	447.74	-	-	0.080	0.000
313	447.72	-	-	0.080	0.000
314	447.70	-	-	0.080	0.000
315	447.68	-	-	0.080	0.000
316	447.66	-	-	0.080	0.000
317	447.64	-	-	0.070	0.000
318	447.62	-	-	0.070	0.000
319	447.61	-	-	0.080	0.000
320	447.59	-	-	0.070	0.000
321	447.57	-	-	0.060	0.000
322	447.56	-	-	0.070	0.000
323	447.54	-	-	0.070	0.000
324	447.52	-	-	0.060	0.000
325	447.51	-	-	0.070	0.000
326	447.49	-	-	0.060	0.000
327	447.48	-	-	0.070	0.000
328	447.46	-	-	0.060	0.000
329	447.44	-	-	0.070	0.000
330	447.43	-	-	0.060	0.000
331	447.41	-	-	0.070	0.000
332	447.40	-	-	0.060	0.000
333	447.38	-	-	0.070	0.000
334	447.37	-	-	0.070	0.000
335	447.35	-	-	0.060	0.000
336	447.34	-	-	0.050	0.000
337	447.32	-	-	0.060	0.000
338	447.31	-	-	0.050	0.000
339	447.30	-	-	0.050	0.000
340	447.28	-	-	0.050	0.000
341	447.27	-	-	0.060	0.000
342	447.25	-	-	0.050	0.000
343	447.24	-	-	0.050	0.000
344	447.23	-	-	0.050	0.000
345	447.22	-	-	0.060	0.000
346	447.20	-	-	0.040	0.000
347	447.19	-	-	0.050	0.000
348	447.18	-	-	0.050	0.000

Table 10 – continued from previous page - IEEE8500 - n384

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
349	447.17	-	-	0.050	0.000
350	447.16	-	-	0.060	0.000
351	447.15	-	-	0.060	0.000
352	447.14	-	-	0.040	0.000
353	447.13	-	-	0.050	0.000
354	447.12	-	-	0.040	0.000
355	447.11	-	-	0.040	0.000
356	447.10	-	-	0.050	0.000
357	447.09	-	-	0.040	0.000
358	447.09	-	-	0.040	0.000
359	447.08	-	-	0.040	0.000
360	447.07	-	-	0.030	0.000
361	447.06	-	-	0.040	0.000
362	447.06	-	-	0.030	0.000
363	447.05	-	-	0.030	0.000
364	447.04	-	-	0.030	0.000
365	447.03	-	-	0.030	0.000
366	447.03	-	-	0.020	0.000
367	447.02	-	-	0.030	0.000
368	447.02	-	-	0.020	0.000
369	447.01	-	-	0.020	0.000
370	447.01	-	-	0.020	0.000
371	447.00	-	-	0.020	0.000
372	447.00	-	-	0.010	0.000
373	446.99	-	-	0.020	0.000
374	446.99	-	-	0.020	0.000
375	446.98	-	-	0.010	0.000
376	446.98	-	-	0.010	0.000
377	446.98	-	-	0.020	0.000
378	446.97	-	-	0.010	0.000
379	446.97	-	-	0.010	0.000
380	446.97	-	-	0.010	0.000
381	446.96	-	-	0.000	0.000
382	446.96	-	-	0.010	0.000
383	446.96	-	-	0.010	0.000
Total		**7748.20**	**8905.87**	**106.18**	**1.69**

Table 11: ENS optimization - IEEE8500 - n568.

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
0	8812.34	0.249	0.001	0.000	0.000
1	6533.08	0.798	0.050	0.010	0.000
2	4603.88	5.275	0.012	0.020	0.007
3	4022.27	3.433	0.339	0.060	0.005
<u>4</u>	3610.72	<u>1508.626</u>	0.518	0.090	0.005
5	3255.64	-	0.858	0.120	0.005
					Continued on next page

Table 11 – continued from previous page - IEEE8500 - n568

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
6	2942.39	-	1.231	0.130	0.004
7	2678.13	-	1.859	0.170	0.005
8	2484.79	-	2.766	0.180	0.005
9	2371.59	-	6.162	0.230	0.005
10	2279.47	-	18.236	0.260	0.009
11	2188.66	-	31.264	0.260	0.009
12	2107.87	-	43.854	0.290	0.006
13	2029.68	-	63.339	0.310	0.006
14	1951.27	-	83.285	0.350	0.006
15	1876.39	-	90.429	0.430	0.007
16	1809.89	-	176.975	0.480	0.007
17	1743.52	-	256.767	0.510	0.007
18	1693.98	-	366.280	0.530	0.007
19	1644.78	-	398.505	0.580	0.007
20	1599.11	-	716.094	0.560	0.008
21	1553.88	-	654.559	0.590	0.008
22	1516.48	-	1158.400	0.630	0.008
23	1479.98	-	2247.905	0.660	0.016
24	1453.78	-	-	0.700	0.014
25	1428.06	-	-	0.710	0.010
26	1405.17	-	-	0.750	0.010
27	1385.60	-	-	0.770	0.022
28	1366.14	-	-	0.780	0.022
29	1347.05	-	-	0.810	0.012
30	1328.04	-	-	0.830	0.012
31	1309.33	-	-	0.840	0.012
32	1294.23	-	-	0.940	0.012
33	1279.45	-	-	0.940	0.013
34	1264.84	-	-	0.950	0.013
35	1251.90	-	-	0.890	0.014
36	1239.30	-	-	0.910	0.014
37	1226.88	-	-	0.940	0.015
38	1214.97	-	-	0.930	0.015
39	1203.12	-	-	0.920	0.016
40	1191.32	-	-	0.950	0.016
41	1180.18	-	-	0.960	0.016
42	1169.20	-	-	0.990	0.016
43	1158.44	-	-	1.030	0.017
44	1148.00	-	-	1.030	0.018
45	1137.98	-	-	1.020	0.018
46	1128.18	-	-	1.050	0.018
47	1118.96	-	-	1.050	0.018
48	1109.82	-	-	1.080	0.019
49	1102.01	-	-	1.080	0.019
50	1094.36	-	-	1.110	0.019
51	1087.14	-	-	1.110	0.020
52	1080.83	-	-	1.140	0.021
53	1074.59	-	-	1.180	0.023
54	1068.51	-	-	1.180	0.022
55	1062.45	-	-	1.170	0.022
56	1056.95	-	-	1.200	0.023
57	1051.48	-	-	1.210	0.024

Table 11 – continued from previous page - IEEE8500 - n568

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
58	1045.98	-	-	1.240	0.024
59	1040.78	-	-	1.240	0.024
60	1035.75	-	-	1.230	0.024
61	1030.91	-	-	1.240	0.025
62	1026.16	-	-	1.280	0.025
63	1021.55	-	-	1.270	0.025
64	1017.16	-	-	1.310	0.026
65	1013.20	-	-	1.290	0.026
66	1009.26	-	-	1.340	0.027
67	1005.39	-	-	1.340	0.027
68	1001.62	-	-	1.350	0.028
69	998.00	-	-	1.380	0.028
70	994.58	-	-	1.370	0.029
71	991.29	-	-	1.380	0.029
72	988.15	-	-	1.380	0.030
73	985.12	-	-	1.480	0.030
74	982.12	-	-	1.490	0.030
75	979.19	-	-	1.490	0.032
76	976.28	-	-	1.490	0.031
77	973.45	-	-	1.490	0.031
78	970.62	-	-	1.520	0.031
79	967.94	-	-	1.510	0.032
80	965.27	-	-	1.540	0.032
81	962.61	-	-	1.540	0.032
82	959.98	-	-	1.540	0.033
83	957.41	-	-	1.570	0.064
84	954.94	-	-	1.580	0.035
85	952.47	-	-	1.600	0.035
86	950.11	-	-	1.580	0.067
87	947.85	-	-	1.600	0.035
88	945.72	-	-	1.590	0.035
89	943.60	-	-	1.610	0.035
90	941.50	-	-	1.620	0.036
91	939.57	-	-	1.610	0.038
92	937.67	-	-	1.600	0.037
93	935.77	-	-	1.630	0.037
94	933.96	-	-	1.600	0.038
95	932.17	-	-	1.610	0.038
96	930.43	-	-	1.620	0.038
97	928.71	-	-	1.630	0.039
98	927.00	-	-	1.640	0.039
99	925.31	-	-	1.660	0.037
100	923.62	-	-	1.640	0.038
101	921.94	-	-	1.690	0.037
102	920.27	-	-	1.690	0.038
103	918.59	-	-	1.680	0.038
104	916.92	-	-	1.710	0.037
105	915.25	-	-	1.740	0.036
106	913.67	-	-	1.740	0.037
107	912.11	-	-	1.730	0.037
108	910.62	-	-	1.760	0.035
109	909.21	-	-	1.780	0.035

Table 11 – continued from previous page - IEEE8500 - n568

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
110	907.82	-	-	1.820	0.034
111	906.44	-	-	1.800	0.034
112	905.11	-	-	1.810	0.035
113	903.81	-	-	1.840	0.035
114	902.54	-	-	1.830	0.035
115	901.32	-	-	1.860	0.035
116	900.23	-	-	1.940	0.034
117	899.22	-	-	1.890	0.034
118	898.23	-	-	1.890	0.033
119	897.25	-	-	1.920	0.033
120	896.28	-	-	1.910	0.032
121	895.31	-	-	1.890	0.032
122	894.38	-	-	1.920	0.032
123	893.46	-	-	1.910	0.033
124	892.53	-	-	1.950	0.033
125	891.61	-	-	1.970	0.033
126	890.70	-	-	1.950	0.033
127	889.83	-	-	1.980	0.033
128	888.98	-	-	1.980	0.033
129	888.13	-	-	1.940	0.033
130	887.31	-	-	1.990	0.033
131	886.49	-	-	1.930	0.033
132	885.69	-	-	1.960	0.033
133	884.89	-	-	1.940	0.033
134	884.12	-	-	1.960	0.034
135	883.36	-	-	2.040	0.033
136	882.61	-	-	1.960	0.034
137	881.87	-	-	1.960	0.034
138	881.15	-	-	1.960	0.034
139	880.43	-	-	1.960	0.035
140	879.72	-	-	1.940	0.035
141	879.01	-	-	1.930	0.037
142	878.32	-	-	1.960	0.036
143	877.62	-	-	1.910	0.036
144	876.93	-	-	1.980	0.036
145	876.24	-	-	1.930	0.036
146	875.56	-	-	1.950	0.035
147	874.90	-	-	1.930	0.035
148	874.26	-	-	2.000	0.034
149	873.62	-	-	1.950	0.034
150	872.98	-	-	1.980	0.033
151	872.35	-	-	1.970	0.034
152	871.73	-	-	1.960	0.034
153	871.12	-	-	1.950	0.034
154	870.52	-	-	1.930	0.034
155	869.94	-	-	1.890	0.034
156	869.38	-	-	1.920	0.035
157	868.82	-	-	1.890	0.036
158	868.27	-	-	1.850	0.036
159	867.71	-	-	1.840	0.036
160	867.17	-	-	1.790	0.036
161	866.63	-	-	1.780	0.036

		Time (sec)			
m	best ENS	**ILP-GALIAS**	**MILP-IFLOWS**	**DP-TS**	**DP-N2M2**
162	866.11	-	-	1.750	0.036
163	865.61	-	-	1.740	0.037
164	865.11	-	-	1.730	0.037
165	864.62	-	-	1.670	0.037
166	864.15	-	-	1.660	0.037
167	863.67	-	-	1.620	0.038
168	863.20	-	-	1.590	0.038
169	862.74	-	-	1.560	0.038
170	862.28	-	-	1.540	0.039
171	861.82	-	-	1.530	0.039
172	861.37	-	-	1.490	0.039
173	860.91	-	-	1.480	0.040
174	860.46	-	-	1.480	0.040
175	860.08	-	-	1.440	0.040
176	859.71	-	-	1.440	0.040
177	859.34	-	-	1.450	0.040
178	858.97	-	-	1.410	0.040
179	858.60	-	-	1.400	0.041
180	858.24	-	-	1.430	0.041
181	857.88	-	-	1.420	0.041
182	857.52	-	-	1.390	0.042
183	857.18	-	-	1.390	0.042
184	856.84	-	-	1.370	0.042
185	856.50	-	-	1.370	0.042
186	856.16	-	-	1.400	0.042
187	855.83	-	-	1.410	0.044
188	855.50	-	-	1.430	0.043
189	855.17	-	-	1.400	0.041
190	854.85	-	-	1.410	0.041
191	854.53	-	-	1.420	0.040
192	854.21	-	-	1.420	0.040
193	853.89	-	-	1.420	0.040
194	853.58	-	-	1.430	0.038
195	853.27	-	-	1.430	0.038
196	852.96	-	-	1.440	0.038
197	852.65	-	-	1.450	0.038
198	852.34	-	-	1.460	0.038
199	852.04	-	-	1.450	0.039
200	851.73	-	-	1.430	0.039
201	851.43	-	-	1.450	0.039
202	851.12	-	-	1.430	0.040
203	850.83	-	-	1.520	0.040
204	850.53	-	-	1.440	0.038
205	850.23	-	-	1.450	0.038
206	849.94	-	-	1.420	0.037
207	849.65	-	-	1.430	0.037
208	849.36	-	-	1.450	0.036
209	849.08	-	-	1.440	0.036
210	848.79	-	-	1.460	0.035
211	848.52	-	-	1.430	0.035
212	848.25	-	-	1.420	0.035
213	848.00	-	-	1.490	0.035
				Continued on next page	

Table 11 – continued from previous page - IEEE8500 - n568

Table 11 – continued from previous page - IEEE8500 - n568

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
214	847.75	-	-	1.440	0.035
215	847.50	-	-	1.440	0.036
216	847.26	-	-	1.460	0.036
217	847.02	-	-	1.460	0.036
218	846.78	-	-	1.440	0.037
219	846.54	-	-	1.440	0.037
220	846.31	-	-	1.410	0.037
221	846.08	-	-	1.420	0.037
222	845.85	-	-	1.480	0.037
223	845.63	-	-	1.430	0.034
224	845.41	-	-	1.440	0.034
225	845.19	-	-	1.430	0.033
226	844.97	-	-	1.460	0.033
227	844.76	-	-	1.450	0.032
228	844.55	-	-	1.470	0.031
229	844.35	-	-	1.440	0.030
230	844.15	-	-	1.440	0.030
231	843.95	-	-	1.450	0.029
232	843.75	-	-	1.430	0.029
233	843.55	-	-	1.480	0.029
234	843.36	-	-	1.440	0.029
235	843.17	-	-	1.460	0.030
236	842.98	-	-	1.400	0.030
237	842.79	-	-	1.460	0.030
238	842.61	-	-	1.420	0.030
239	842.44	-	-	1.410	0.030
240	842.26	-	-	1.450	0.027
241	842.10	-	-	1.420	0.027
242	841.93	-	-	1.440	0.026
243	841.77	-	-	1.410	0.026
244	841.61	-	-	1.430	0.026
245	841.45	-	-	1.380	0.026
246	841.28	-	-	1.400	0.026
247	841.13	-	-	1.370	0.026
248	840.97	-	-	1.420	0.026
249	840.81	-	-	1.370	0.026
250	840.65	-	-	1.340	0.026
251	840.49	-	-	1.340	0.026
252	840.34	-	-	1.340	0.027
253	840.18	-	-	1.340	0.027
254	840.03	-	-	1.320	0.027
255	839.89	-	-	1.330	0.027
256	839.74	-	-	1.290	0.028
257	839.60	-	-	1.290	0.028
258	839.46	-	-	1.300	0.027
259	839.32	-	-	1.300	0.027
260	839.18	-	-	1.290	0.028
261	839.05	-	-	1.290	0.028
262	838.92	-	-	1.320	0.028
263	838.79	-	-	1.280	0.028
264	838.66	-	-	1.280	0.028
265	838.53	-	-	1.270	0.028

Table 11 – continued from previous page - IEEE8500 - n568

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
266	838.40	-	-	1.280	0.028
267	838.27	-	-	1.410	0.029
268	838.15	-	-	1.280	0.029
269	838.02	-	-	1.290	0.029
270	837.90	-	-	1.270	0.029
271	837.78	-	-	1.280	0.029
272	837.66	-	-	1.300	0.029
273	837.55	-	-	1.350	0.029
274	837.44	-	-	1.280	0.029
275	837.33	-	-	1.280	0.029
276	837.22	-	-	1.280	0.027
277	837.11	-	-	1.270	0.027
278	837.00	-	-	1.310	0.025
279	836.89	-	-	1.310	0.024
280	836.79	-	-	1.270	0.023
281	836.69	-	-	1.290	0.023
282	836.59	-	-	1.280	0.023
283	836.49	-	-	1.280	0.023
284	836.39	-	-	1.330	0.023
285	836.29	-	-	1.310	0.023
286	836.19	-	-	1.310	0.024
287	836.09	-	-	1.310	0.024
288	836.00	-	-	1.350	0.024
289	835.90	-	-	1.310	0.024
290	835.81	-	-	1.330	0.024
291	835.72	-	-	1.300	0.024
292	835.63	-	-	1.290	0.024
293	835.54	-	-	1.330	0.022
294	835.45	-	-	1.330	0.022
295	835.36	-	-	1.300	0.021
296	835.28	-	-	1.340	0.021
297	835.19	-	-	1.350	0.021
298	835.11	-	-	1.340	0.021
299	835.03	-	-	1.330	0.020
300	834.95	-	-	1.330	0.020
301	834.87	-	-	1.360	0.019
302	834.79	-	-	1.340	0.018
303	834.72	-	-	1.330	0.017
304	834.64	-	-	1.330	0.017
305	834.56	-	-	1.350	0.016
306	834.49	-	-	1.340	0.015
307	834.41	-	-	1.340	0.014
308	834.34	-	-	1.330	0.014
309	834.26	-	-	1.370	0.014
310	834.19	-	-	1.340	0.014
311	834.11	-	-	1.350	0.014
312	834.04	-	-	1.340	0.014
313	833.97	-	-	1.340	0.014
314	833.90	-	-	1.350	0.014
315	833.83	-	-	1.380	0.013
316	833.76	-	-	1.340	0.013
317	833.69	-	-	1.360	0.013

Table 11 – continued from previous page - IEEE8500 - n568

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
318	833.62	-	-	1.350	0.013
319	833.55	-	-	1.370	0.012
320	833.48	-	-	1.350	0.012
321	833.42	-	-	1.350	0.011
322	833.35	-	-	1.420	0.010
323	833.29	-	-	1.360	0.009
324	833.22	-	-	1.370	0.009
325	833.16	-	-	1.390	0.008
326	833.09	-	-	1.380	0.008
327	833.03	-	-	1.460	0.007
328	832.96	-	-	1.390	0.007
329	832.90	-	-	1.370	0.008
330	832.83	-	-	1.360	0.008
331	832.77	-	-	1.400	0.008
332	832.71	-	-	1.380	0.008
333	832.65	-	-	1.390	0.008
334	832.59	-	-	1.360	0.008
335	832.53	-	-	1.420	0.007
336	832.48	-	-	1.360	0.006
337	832.42	-	-	1.400	0.006
338	832.36	-	-	1.400	0.005
339	832.31	-	-	1.370	0.006
340	832.25	-	-	1.370	0.006
341	832.19	-	-	1.350	0.005
342	832.14	-	-	1.310	0.005
343	832.09	-	-	1.300	0.005
344	832.03	-	-	1.330	0.006
345	831.98	-	-	1.290	0.006
346	831.93	-	-	1.240	0.006
347	831.87	-	-	1.260	0.005
348	831.82	-	-	1.260	0.006
349	831.77	-	-	1.220	0.006
350	831.72	-	-	1.240	0.006
351	831.67	-	-	1.200	0.006
352	831.62	-	-	1.180	0.007
353	831.57	-	-	1.180	0.007
354	831.52	-	-	1.140	0.007
355	831.48	-	-	1.110	0.006
356	831.43	-	-	1.100	0.006
357	831.38	-	-	1.080	0.006
358	831.33	-	-	1.060	0.006
359	831.28	-	-	1.060	0.006
360	831.24	-	-	1.100	0.006
361	831.19	-	-	1.070	0.006
362	831.14	-	-	1.050	0.006
363	831.10	-	-	1.020	0.006
364	831.05	-	-	1.020	0.006
365	831.00	-	-	0.970	0.006
366	830.96	-	-	0.940	0.006
367	830.91	-	-	0.940	0.006
368	830.87	-	-	0.940	0.006
369	830.82	-	-	0.940	0.007

Table 11 – continued from previous page - IEEE8500 - n568

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
370	830.78	-	-	0.920	0.007
371	830.74	-	-	0.910	0.007
372	830.69	-	-	0.890	0.007
373	830.65	-	-	0.890	0.006
374	830.61	-	-	0.850	0.006
375	830.56	-	-	0.820	0.007
376	830.52	-	-	0.810	0.007
377	830.48	-	-	0.790	0.007
378	830.44	-	-	0.770	0.007
379	830.40	-	-	0.750	0.007
380	830.36	-	-	0.760	0.007
381	830.32	-	-	0.770	0.007
382	830.28	-	-	0.730	0.007
383	830.24	-	-	0.730	0.007
384	830.20	-	-	0.700	0.007
385	830.15	-	-	0.690	0.007
386	830.12	-	-	0.670	0.007
387	830.08	-	-	0.680	0.007
388	830.04	-	-	0.690	0.007
389	830.00	-	-	0.680	0.007
390	829.96	-	-	0.650	0.008
391	829.92	-	-	0.630	0.008
392	829.88	-	-	0.650	0.007
393	829.85	-	-	0.620	0.007
394	829.81	-	-	0.610	0.007
395	829.77	-	-	0.610	0.007
396	829.74	-	-	0.600	0.007
397	829.70	-	-	0.580	0.008
398	829.66	-	-	0.580	0.008
399	829.62	-	-	0.580	0.008
400	829.59	-	-	0.560	0.008
401	829.55	-	-	0.560	0.008
402	829.52	-	-	0.530	0.008
403	829.49	-	-	0.540	0.008
404	829.45	-	-	0.530	0.008
405	829.42	-	-	0.510	0.008
406	829.38	-	-	0.510	0.008
407	829.35	-	-	0.500	0.008
408	829.32	-	-	0.480	0.008
409	829.28	-	-	0.480	0.008
410	829.25	-	-	0.490	0.008
411	829.22	-	-	0.480	0.008
412	829.19	-	-	0.480	0.008
413	829.15	-	-	0.460	0.008
414	829.12	-	-	0.450	0.008
415	829.09	-	-	0.440	0.008
416	829.06	-	-	0.440	0.009
417	829.03	-	-	0.430	0.009
418	829.00	-	-	0.420	0.008
419	828.98	-	-	0.420	0.009
420	828.95	-	-	0.430	0.010
421	828.92	-	-	0.410	0.009

Table 11 – continued from previous page - IEEE8500 - n568

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
422	828.89	-	-	0.410	0.009
423	828.86	-	-	0.400	0.009
424	828.84	-	-	0.400	0.009
425	828.81	-	-	0.400	0.009
426	828.78	-	-	0.390	0.009
427	828.76	-	-	0.390	0.009
428	828.73	-	-	0.390	0.009
429	828.70	-	-	0.370	0.009
430	828.68	-	-	0.380	0.009
431	828.65	-	-	0.370	0.009
432	828.63	-	-	0.360	0.009
433	828.60	-	-	0.360	0.009
434	828.58	-	-	0.350	0.009
435	828.55	-	-	0.350	0.009
436	828.53	-	-	0.350	0.009
437	828.50	-	-	0.340	0.009
438	828.48	-	-	0.340	0.009
439	828.46	-	-	0.330	0.009
440	828.43	-	-	0.340	0.009
441	828.41	-	-	0.340	0.009
442	828.39	-	-	0.330	0.009
443	828.36	-	-	0.310	0.009
444	828.34	-	-	0.310	0.009
445	828.32	-	-	0.320	0.009
446	828.30	-	-	0.300	0.009
447	828.27	-	-	0.300	0.010
448	828.25	-	-	0.290	0.010
449	828.23	-	-	0.280	0.010
450	828.21	-	-	0.290	0.010
451	828.19	-	-	0.280	0.010
452	828.17	-	-	0.280	0.010
453	828.15	-	-	0.260	0.010
454	828.13	-	-	0.260	0.010
455	828.11	-	-	0.250	0.010
456	828.09	-	-	0.240	0.010
457	828.07	-	-	0.230	0.010
458	828.05	-	-	0.230	0.010
459	828.03	-	-	0.220	0.010
460	828.01	-	-	0.220	0.010
461	827.99	-	-	0.200	0.010
462	827.97	-	-	0.200	0.010
463	827.95	-	-	0.200	0.010
464	827.93	-	-	0.200	0.010
465	827.91	-	-	0.190	0.010
466	827.90	-	-	0.180	0.010
467	827.88	-	-	0.170	0.010
468	827.86	-	-	0.160	0.010
469	827.84	-	-	0.160	0.010
470	827.83	-	-	0.160	0.010
471	827.81	-	-	0.150	0.011
472	827.79	-	-	0.150	0.011
473	827.77	-	-	0.150	0.010
				Continued on next page	

Table 11 – continued from previous page - IEEE8500 - n568

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
474	827.76	-	-	0.150	0.007
475	827.74	-	-	0.150	0.007
476	827.73	-	-	0.160	0.006
477	827.71	-	-	0.140	0.006
478	827.69	-	-	0.140	0.005
479	827.68	-	-	0.150	0.005
480	827.66	-	-	0.140	0.005
481	827.65	-	-	0.150	0.005
482	827.63	-	-	0.140	0.005
483	827.62	-	-	0.140	0.005
484	827.60	-	-	0.140	0.004
485	827.59	-	-	0.140	0.004
486	827.57	-	-	0.140	0.003
487	827.56	-	-	0.140	0.003
488	827.54	-	-	0.150	0.002
489	827.53	-	-	0.140	0.002
490	827.51	-	-	0.140	0.002
491	827.50	-	-	0.140	0.002
492	827.48	-	-	0.140	0.001
493	827.47	-	-	0.140	0.001
494	827.45	-	-	0.140	0.001
495	827.44	-	-	0.140	0.001
496	827.43	-	-	0.130	0.001
497	827.41	-	-	0.140	0.001
498	827.40	-	-	0.140	0.001
499	827.39	-	-	0.130	0.001
500	827.37	-	-	0.130	0.001
501	827.36	-	-	0.130	0.001
502	827.35	-	-	0.130	0.001
503	827.33	-	-	0.140	0.001
504	827.32	-	-	0.130	0.000
505	827.31	-	-	0.140	0.000
506	827.30	-	-	0.120	0.000
507	827.28	-	-	0.130	0.000
508	827.27	-	-	0.130	0.000
509	827.26	-	-	0.120	0.000
510	827.25	-	-	0.120	0.000
511	827.24	-	-	0.130	0.000
512	827.23	-	-	0.110	0.000
513	827.22	-	-	0.120	0.000
514	827.21	-	-	0.120	0.000
515	827.19	-	-	0.110	0.000
516	827.18	-	-	0.110	0.000
517	827.17	-	-	0.120	0.000
518	827.16	-	-	0.110	0.000
519	827.15	-	-	0.110	0.000
520	827.14	-	-	0.110	0.000
521	827.13	-	-	0.100	0.000
522	827.13	-	-	0.100	0.000
523	827.12	-	-	0.100	0.000
524	827.11	-	-	0.110	0.000
525	827.10	-	-	0.100	0.000
				Continued on next page	

Table 11 – continued from previous page - IEEE8500 - n568

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
526	827.09	-	-	0.100	0.000
527	827.08	-	-	0.100	0.000
528	827.07	-	-	0.090	0.000
529	827.07	-	-	0.090	0.000
530	827.06	-	-	0.090	0.000
531	827.05	-	-	0.100	0.000
532	827.04	-	-	0.090	0.000
533	827.03	-	-	0.090	0.000
534	827.03	-	-	0.090	0.000
535	827.02	-	-	0.080	0.000
536	827.01	-	-	0.090	0.000
537	827.01	-	-	0.080	0.000
538	827.00	-	-	0.080	0.000
539	826.99	-	-	0.080	0.000
540	826.99	-	-	0.090	0.000
541	826.98	-	-	0.070	0.000
542	826.97	-	-	0.070	0.000
543	826.97	-	-	0.060	0.000
544	826.96	-	-	0.070	0.000
545	826.96	-	-	0.060	0.000
546	826.95	-	-	0.060	0.000
547	826.95	-	-	0.060	0.000
548	826.95	-	-	0.050	0.000
549	826.94	-	-	0.050	0.000
550	826.94	-	-	0.050	0.000
551	826.93	-	-	0.040	0.000
552	826.93	-	-	0.050	0.000
553	826.92	-	-	0.040	0.000
554	826.92	-	-	0.040	0.000
555	826.91	-	-	0.040	0.000
556	826.91	-	-	0.040	0.000
557	826.90	-	-	0.030	0.000
558	826.90	-	-	0.040	0.000
559	826.90	-	-	0.030	0.000
560	826.89	-	-	0.030	0.000
561	826.89	-	-	0.030	0.000
562	826.89	-	-	0.030	0.000
563	826.88	-	-	0.020	0.000
564	826.88	-	-	0.030	0.000
565	826.88	-	-	0.020	0.000
566	826.88	-	-	0.030	0.000
567	826.88	-	-	0.020	0.000
Total		**8718.49**	**9527.96**	**559.50**	**11.12**

Table 12: ENS optimization - IEEE8500 - n1149.

		Time (sec)			
m	**best ENS**	**ILP-Galias**	**MILP-Iflows**	**DP-TS**	**DP-n2m2**
0	30093.20	1.512	0.002	0.000	0.000
1	22012.00	4.393	0.075	0.020	0.000
2	15397.00	24.582	0.030	0.050	0.021
3	13459.60	15.930	0.350	0.110	0.019
4	11758.10	-	1.317	0.160	0.017
5	10591.20	-	1.424	0.240	0.017
6	9642.90	-	1.492	0.280	0.019
7	8960.76	-	8.431	0.320	0.051
8	8323.38	-	6.005	0.400	0.026
9	7799.09	-	9.464	0.510	0.029
10	7358.07	-	13.708	0.570	0.031
11	6971.94	-	29.598	0.670	0.034
12	6612.91	-	55.988	0.770	0.036
13	6325.78	-	55.148	0.830	0.039
14	6102.10	-	77.012	0.930	0.041
15	5895.56	-	283.947	0.920	0.044
16	5712.89	-	413.644	1.020	0.078
17	5538.82	-	-	1.110	0.080
18	5381.95	-	-	1.200	0.050
19	5257.70	-	-	1.310	0.051
20	5146.77	-	-	1.410	0.052
21	5036.49	-	-	1.520	0.054
22	4936.81	-	-	1.630	0.056
23	4838.71	-	-	1.750	0.058
24	4741.36	-	-	1.790	0.059
25	4650.34	-	-	1.870	0.062
26	4573.08	-	-	1.960	0.063
27	4503.39	-	-	2.040	0.066
28	4434.62	-	-	2.170	0.069
29	4366.88	-	-	2.200	0.070
30	4303.98	-	-	2.280	0.071
31	4249.50	-	-	2.380	0.073
32	4195.18	-	-	2.420	0.075
33	4142.80	-	-	2.470	0.077
34	4092.05	-	-	2.570	0.079
35	4041.43	-	-	2.610	0.082
36	3991.23	-	-	2.710	0.084
37	3946.91	-	-	2.760	0.085
38	3904.30	-	-	2.770	0.085
39	3863.68	-	-	2.810	0.087
40	3825.89	-	-	2.910	0.088
41	3788.39	-	-	2.930	0.090
42	3752.09	-	-	3.030	0.091
43	3715.97	-	-	3.090	0.094
44	3680.39	-	-	3.110	0.173
45	3645.44	-	-	3.170	0.174
46	3611.20	-	-	3.250	0.089
47	3577.99	-	-	3.300	0.089
48	3550.26	-	-	3.360	0.090
49	3522.81	-	-	3.630	0.092
				Continued on next page	

Table 12 – continued from previous page - IEEE8500 - n1149

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
50	3495.80	-	-	3.670	0.092
51	3469.17	-	-	3.720	0.093
52	3442.92	-	-	3.810	0.093
53	3416.79	-	-	3.670	0.094
54	3391.74	-	-	3.730	0.095
55	3367.21	-	-	3.750	0.095
56	3342.88	-	-	3.780	0.096
57	3319.77	-	-	3.810	0.098
58	3296.92	-	-	3.830	0.099
59	3275.29	-	-	3.900	0.100
60	3253.39	-	-	3.930	0.103
61	3231.84	-	-	3.960	0.104
62	3210.84	-	-	3.950	0.105
63	3191.28	-	-	3.970	0.107
64	3172.21	-	-	4.060	0.107
65	3153.88	-	-	4.050	0.109
66	3135.78	-	-	4.080	0.109
67	3118.17	-	-	4.080	0.110
68	3102.45	-	-	4.110	0.109
69	3087.20	-	-	4.120	0.111
70	3072.06	-	-	4.160	0.110
71	3058.15	-	-	4.200	0.112
72	3044.29	-	-	4.220	0.112
73	3030.98	-	-	4.260	0.115
74	3018.26	-	-	4.290	0.116
75	3005.86	-	-	4.300	0.115
76	2993.54	-	-	4.370	0.117
77	2981.38	-	-	4.410	0.117
78	2969.38	-	-	4.470	0.118
79	2958.50	-	-	4.520	0.118
80	2947.67	-	-	4.550	0.120
81	2937.24	-	-	4.590	0.120
82	2927.30	-	-	4.680	0.122
83	2917.51	-	-	4.740	0.123
84	2907.92	-	-	4.760	0.125
85	2898.48	-	-	4.750	0.124
86	2889.53	-	-	4.870	0.126
87	2880.58	-	-	4.800	0.127
88	2871.63	-	-	4.900	0.129
89	2862.77	-	-	4.890	0.126
90	2854.42	-	-	4.980	0.127
91	2846.28	-	-	5.020	0.128
92	2838.54	-	-	5.130	0.127
93	2830.84	-	-	5.140	0.126
94	2823.18	-	-	5.240	0.126
95	2815.53	-	-	5.300	0.125
96	2808.32	-	-	5.290	0.126
97	2801.14	-	-	5.300	0.125
98	2794.06	-	-	5.360	0.125
99	2787.11	-	-	5.350	0.124
100	2780.18	-	-	5.450	0.126
101	2773.26	-	-	5.420	0.127

Table 12 – continued from previous page - IEEE8500 - n1149

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
102	2766.34	-	-	5.450	0.124
103	2759.65	-	-	5.580	0.123
104	2752.98	-	-	5.590	0.125
105	2746.48	-	-	5.670	0.125
106	2739.98	-	-	5.790	0.126
107	2733.68	-	-	5.790	0.127
108	2727.45	-	-	5.800	0.126
109	2721.60	-	-	5.830	0.126
110	2715.95	-	-	5.930	0.127
111	2710.32	-	-	5.960	0.126
112	2704.75	-	-	6.020	0.125
113	2699.19	-	-	6.020	0.125
114	2693.68	-	-	6.100	0.124
115	2688.17	-	-	6.160	0.125
116	2682.82	-	-	6.180	0.124
117	2677.48	-	-	6.230	0.122
118	2672.22	-	-	6.250	0.123
119	2667.02	-	-	6.220	0.123
120	2662.03	-	-	6.270	0.124
121	2657.11	-	-	6.290	0.123
122	2652.27	-	-	6.330	0.124
123	2647.49	-	-	6.470	0.122
124	2642.73	-	-	6.740	0.122
125	2637.98	-	-	6.730	0.121
126	2633.42	-	-	6.870	0.121
127	2628.87	-	-	6.750	0.122
128	2624.37	-	-	6.830	0.121
129	2619.93	-	-	6.800	0.121
130	2615.50	-	-	6.720	0.120
131	2611.15	-	-	6.740	0.119
132	2606.81	-	-	6.760	0.119
133	2602.61	-	-	6.830	0.118
134	2598.41	-	-	6.800	0.118
135	2594.24	-	-	6.890	0.116
136	2590.09	-	-	6.920	0.115
137	2585.96	-	-	6.880	0.115
138	2581.93	-	-	6.970	0.114
139	2577.94	-	-	6.970	0.115
140	2573.99	-	-	7.040	0.115
141	2570.08	-	-	7.000	0.116
142	2566.18	-	-	7.020	0.117
143	2562.43	-	-	7.090	0.118
144	2558.70	-	-	7.490	0.119
145	2554.97	-	-	7.030	0.120
146	2551.28	-	-	7.080	0.120
147	2547.66	-	-	7.160	0.121
148	2544.14	-	-	7.190	0.122
149	2540.63	-	-	7.320	0.123
150	2537.12	-	-	7.310	0.124
151	2533.61	-	-	7.270	0.125
152	2530.10	-	-	7.340	0.125
153	2526.60	-	-	7.590	0.126

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m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-N2M2
			Time (sec)		
154	2523.18	-	-	7.440	0.128
155	2519.79	-	-	7.860	0.128
156	2516.41	-	-	8.040	0.129
157	2513.04	-	-	8.170	0.130
158	2509.73	-	-	8.010	0.127
159	2506.49	-	-	8.120	0.128
160	2503.31	-	-	8.150	0.127
161	2500.17	-	-	8.380	0.127
162	2497.09	-	-	8.180	0.126
163	2494.06	-	-	8.360	0.128
164	2491.12	-	-	8.240	0.126
165	2488.25	-	-	8.340	0.127
166	2485.42	-	-	8.320	0.313
167	2482.62	-	-	8.570	0.125
168	2479.88	-	-	8.450	0.125
169	2477.41	-	-	8.350	0.124
170	2474.94	-	-	8.470	0.314
171	2472.48	-	-	8.590	0.122
172	2470.04	-	-	8.530	0.122
173	2467.65	-	-	8.560	0.121
174	2465.28	-	-	8.600	0.122
175	2462.91	-	-	8.560	0.121
176	2460.55	-	-	8.580	0.121
177	2458.25	-	-	8.620	0.120
178	2456.05	-	-	8.760	0.120
179	2453.94	-	-	8.630	0.119
180	2451.85	-	-	8.580	0.120
181	2449.84	-	-	8.750	0.120
182	2447.85	-	-	8.800	0.121
183	2445.87	-	-	8.570	0.121
184	2443.91	-	-	8.730	0.122
185	2441.95	-	-	8.650	0.123
186	2440.00	-	-	8.700	0.123
187	2438.06	-	-	8.640	0.124
188	2436.13	-	-	8.750	0.124
189	2434.24	-	-	9.030	0.126
190	2432.42	-	-	9.250	0.126
191	2430.62	-	-	8.830	0.127
192	2428.81	-	-	8.800	0.127
193	2427.03	-	-	8.820	0.128
194	2425.27	-	-	8.810	0.129
195	2423.51	-	-	8.940	0.129
196	2421.82	-	-	8.930	0.130
197	2420.12	-	-	9.000	0.131
198	2418.43	-	-	9.140	0.132
199	2416.74	-	-	9.070	0.132
200	2415.05	-	-	9.070	0.132
201	2413.36	-	-	9.140	0.133
202	2411.68	-	-	9.140	0.134
203	2410.00	-	-	9.210	0.135
204	2408.36	-	-	9.200	0.135
205	2406.72	-	-	9.310	0.132

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		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
206	2405.08	-	-	9.180	0.133
207	2403.48	-	-	9.290	0.132
208	2401.89	-	-	9.440	0.132
209	2400.31	-	-	9.320	0.131
210	2398.74	-	-	9.290	0.132
211	2397.17	-	-	9.280	0.132
212	2395.62	-	-	9.440	0.133
213	2394.08	-	-	9.290	0.134
214	2392.54	-	-	9.340	0.134
215	2391.03	-	-	9.320	0.135
216	2389.54	-	-	9.260	0.136
217	2388.07	-	-	9.340	0.136
218	2386.62	-	-	9.460	0.134
219	2385.19	-	-	9.340	0.134
220	2383.77	-	-	9.250	0.133
221	2382.35	-	-	9.210	0.134
222	2380.94	-	-	9.170	0.132
223	2379.54	-	-	9.020	0.132
224	2378.14	-	-	8.930	0.133
225	2376.75	-	-	8.980	0.134
226	2375.37	-	-	8.980	0.134
227	2374.03	-	-	8.850	0.135
228	2372.71	-	-	8.780	0.135
229	2371.38	-	-	8.780	0.136
230	2370.05	-	-	8.750	0.137
231	2368.73	-	-	8.830	0.137
232	2367.46	-	-	8.500	0.138
233	2366.18	-	-	8.510	0.138
234	2364.92	-	-	8.400	0.140
235	2363.67	-	-	8.340	0.140
236	2362.42	-	-	8.270	0.140
237	2361.18	-	-	8.420	0.141
238	2359.94	-	-	8.220	0.142
239	2358.72	-	-	8.310	0.142
240	2357.50	-	-	8.150	0.139
241	2356.29	-	-	8.060	0.140
242	2355.07	-	-	8.050	0.138
243	2353.87	-	-	8.150	0.138
244	2352.74	-	-	8.130	0.139
245	2351.63	-	-	8.290	0.139
246	2350.53	-	-	8.230	0.140
247	2349.43	-	-	8.260	0.141
248	2348.33	-	-	8.220	0.141
249	2347.24	-	-	8.210	0.142
250	2346.16	-	-	8.220	0.142
251	2345.08	-	-	8.260	0.143
252	2344.01	-	-	8.240	0.143
253	2342.97	-	-	8.130	0.144
254	2341.95	-	-	8.050	0.145
255	2340.94	-	-	8.030	0.146
256	2339.93	-	-	7.990	0.146
257	2338.93	-	-	8.090	0.146

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Table 12 – continued from previous page - IEEE8500 - n1149

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
258	2337.95	-	-	7.940	0.147
259	2336.97	-	-	7.990	0.148
260	2336.00	-	-	7.980	0.148
261	2335.02	-	-	7.920	0.149
262	2334.05	-	-	8.070	0.149
263	2333.07	-	-	8.060	0.151
264	2332.12	-	-	7.970	0.150
265	2331.17	-	-	8.270	0.151
266	2330.23	-	-	8.060	0.152
267	2329.30	-	-	8.090	0.153
268	2328.38	-	-	7.990	0.153
269	2327.45	-	-	8.030	0.153
270	2326.53	-	-	8.170	0.154
271	2325.61	-	-	8.020	0.155
272	2324.71	-	-	8.130	0.155
273	2323.81	-	-	8.140	0.155
274	2322.95	-	-	8.130	0.157
275	2322.10	-	-	8.250	0.157
276	2321.26	-	-	8.230	0.157
277	2320.43	-	-	8.210	0.158
278	2319.62	-	-	8.180	0.159
279	2318.82	-	-	8.310	0.155
280	2318.03	-	-	8.220	0.155
281	2317.25	-	-	8.340	0.153
282	2316.48	-	-	8.350	0.154
283	2315.72	-	-	8.320	0.154
284	2314.96	-	-	8.470	0.150
285	2314.21	-	-	8.280	0.151
286	2313.47	-	-	8.380	0.152
287	2312.73	-	-	8.500	0.152
288	2312.00	-	-	8.440	0.153
289	2311.27	-	-	8.490	0.154
290	2310.54	-	-	8.540	0.154
291	2309.82	-	-	8.590	0.154
292	2309.10	-	-	8.590	0.155
293	2308.39	-	-	8.640	0.156
294	2307.69	-	-	8.730	0.156
295	2307.00	-	-	8.610	0.156
296	2306.31	-	-	8.500	0.157
297	2305.63	-	-	8.680	0.158
298	2304.94	-	-	8.560	0.155
299	2304.27	-	-	8.590	0.155
300	2303.60	-	-	8.710	0.153
301	2302.94	-	-	8.690	0.154
302	2302.28	-	-	8.680	0.151
303	2301.63	-	-	8.740	0.152
304	2300.99	-	-	8.780	0.150
305	2300.36	-	-	8.660	0.151
306	2299.74	-	-	8.780	0.151
307	2299.13	-	-	9.040	0.151
308	2298.52	-	-	8.940	0.152
309	2297.93	-	-	9.430	0.153

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		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
310	2297.35	-	-	9.250	0.153
311	2296.77	-	-	8.880	0.153
312	2296.19	-	-	8.850	0.153
313	2295.63	-	-	8.790	0.155
314	2295.06	-	-	8.850	0.155
315	2294.50	-	-	8.760	0.155
316	2293.94	-	-	8.830	0.155
317	2293.38	-	-	8.770	0.151
318	2292.83	-	-	8.880	0.151
319	2292.29	-	-	8.840	0.149
320	2291.74	-	-	8.800	0.149
321	2291.20	-	-	8.860	0.148
322	2290.66	-	-	8.850	0.148
323	2290.12	-	-	8.880	0.146
324	2289.59	-	-	9.100	0.146
325	2289.06	-	-	8.970	0.145
326	2288.54	-	-	9.090	0.145
327	2288.02	-	-	9.140	0.145
328	2287.51	-	-	8.970	0.145
329	2287.01	-	-	9.010	0.147
330	2286.52	-	-	9.090	0.146
331	2286.03	-	-	9.040	0.147
332	2285.55	-	-	8.980	0.147
333	2285.07	-	-	8.920	0.148
334	2284.59	-	-	8.970	0.144
335	2284.12	-	-	9.050	0.144
336	2283.66	-	-	9.070	0.142
337	2283.20	-	-	9.110	0.143
338	2282.74	-	-	9.040	0.142
339	2282.28	-	-	9.040	0.143
340	2281.83	-	-	9.100	0.143
341	2281.38	-	-	9.020	0.144
342	2280.93	-	-	8.920	0.144
343	2280.49	-	-	8.860	0.144
344	2280.04	-	-	8.900	0.145
345	2279.60	-	-	8.920	0.145
346	2279.16	-	-	8.950	0.146
347	2278.71	-	-	8.800	0.146
348	2278.28	-	-	8.930	0.146
349	2277.84	-	-	8.870	0.147
350	2277.42	-	-	8.900	0.147
351	2276.99	-	-	8.860	0.147
352	2276.57	-	-	8.860	0.148
353	2276.15	-	-	8.760	0.149
354	2275.73	-	-	8.820	0.149
355	2275.33	-	-	8.860	0.148
356	2274.92	-	-	8.830	0.149
357	2274.52	-	-	8.830	0.150
358	2274.12	-	-	8.860	0.150
359	2273.73	-	-	8.810	0.150
360	2273.33	-	-	8.890	0.150
361	2272.95	-	-	8.960	0.151

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m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
362	2272.57	-	-	8.990	0.151
363	2272.19	-	-	8.860	0.152
364	2271.81	-	-	8.810	0.152
365	2271.44	-	-	9.090	0.153
366	2271.07	-	-	8.910	0.153
367	2270.71	-	-	8.900	0.153
368	2270.34	-	-	8.870	0.154
369	2269.98	-	-	9.020	0.154
370	2269.62	-	-	8.890	0.154
371	2269.27	-	-	8.910	0.155
372	2268.91	-	-	8.890	0.155
373	2268.55	-	-	8.950	0.155
374	2268.21	-	-	8.890	0.156
375	2267.86	-	-	9.100	0.156
376	2267.52	-	-	8.950	0.157
377	2267.18	-	-	9.080	0.157
378	2266.83	-	-	8.970	0.158
379	2266.49	-	-	8.940	0.158
380	2266.16	-	-	8.990	0.159
381	2265.83	-	-	8.930	0.159
382	2265.50	-	-	8.990	0.159
383	2265.18	-	-	9.140	0.160
384	2264.86	-	-	9.040	0.160
385	2264.54	-	-	9.030	0.160
386	2264.22	-	-	8.970	0.161
387	2263.90	-	-	8.960	0.162
388	2263.58	-	-	9.000	0.162
389	2263.27	-	-	8.920	0.162
390	2262.96	-	-	9.000	0.162
391	2262.65	-	-	9.060	0.163
392	2262.34	-	-	9.020	0.163
393	2262.03	-	-	9.000	0.164
394	2261.72	-	-	9.030	0.164
395	2261.41	-	-	9.030	0.164
396	2261.10	-	-	9.100	0.165
397	2260.80	-	-	9.090	0.165
398	2260.49	-	-	9.100	0.166
399	2260.18	-	-	9.200	0.166
400	2259.88	-	-	9.190	0.162
401	2259.57	-	-	9.040	0.162
402	2259.27	-	-	9.060	0.160
403	2258.97	-	-	9.100	0.160
404	2258.67	-	-	9.330	0.158
405	2258.37	-	-	9.120	0.159
406	2258.07	-	-	9.200	0.159
407	2257.77	-	-	9.110	0.160
408	2257.47	-	-	9.250	0.160
409	2257.18	-	-	9.100	0.160
410	2256.88	-	-	9.150	0.161
411	2256.59	-	-	9.290	0.161
412	2256.30	-	-	9.280	0.161
413	2256.00	-	-	9.280	0.162
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m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
414	2255.72	-	-	9.320	0.162
415	2255.43	-	-	9.620	0.163
416	2255.14	-	-	9.260	0.163
417	2254.86	-	-	9.690	0.161
418	2254.58	-	-	9.430	0.161
419	2254.29	-	-	9.420	0.159
420	2254.01	-	-	9.380	0.160
421	2253.73	-	-	9.500	0.160
422	2253.45	-	-	9.330	0.160
423	2253.17	-	-	9.450	0.158
424	2252.89	-	-	9.420	0.158
425	2252.62	-	-	9.410	0.156
426	2252.34	-	-	9.470	0.156
427	2252.08	-	-	9.520	0.155
428	2251.81	-	-	9.540	0.155
429	2251.54	-	-	9.540	0.153
430	2251.28	-	-	9.510	0.154
431	2251.01	-	-	9.500	0.152
432	2250.76	-	-	9.570	0.152
433	2250.50	-	-	9.550	0.153
434	2250.25	-	-	9.720	0.153
435	2249.99	-	-	9.660	0.153
436	2249.74	-	-	9.650	0.154
437	2249.49	-	-	9.770	0.154
438	2249.24	-	-	9.760	0.154
439	2248.99	-	-	9.710	0.152
440	2248.75	-	-	9.740	0.153
441	2248.51	-	-	9.640	0.153
442	2248.27	-	-	9.710	0.153
443	2248.03	-	-	9.770	0.152
444	2247.80	-	-	9.660	0.152
445	2247.56	-	-	9.800	0.150
446	2247.33	-	-	9.850	0.151
447	2247.10	-	-	9.740	0.149
448	2246.87	-	-	9.900	0.149
449	2246.64	-	-	9.850	0.148
450	2246.41	-	-	9.820	0.148
451	2246.19	-	-	9.890	0.148
452	2245.97	-	-	9.880	0.148
453	2245.76	-	-	9.990	0.149
454	2245.54	-	-	10.090	0.149
455	2245.32	-	-	9.950	0.150
456	2245.10	-	-	10.020	0.150
457	2244.88	-	-	9.950	0.150
458	2244.67	-	-	9.930	0.151
459	2244.45	-	-	9.970	0.149
460	2244.23	-	-	9.940	0.149
461	2244.02	-	-	10.050	0.148
462	2243.80	-	-	10.010	0.148
463	2243.59	-	-	10.090	0.148
464	2243.38	-	-	10.000	0.148
465	2243.17	-	-	10.020	0.140

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m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
466	2242.97	-	-	9.950	0.140
467	2242.76	-	-	10.020	0.141
468	2242.56	-	-	9.900	0.141
469	2242.36	-	-	9.900	0.141
470	2242.16	-	-	9.740	0.134
471	2241.96	-	-	9.780	0.134
472	2241.77	-	-	9.790	0.134
473	2241.57	-	-	10.110	0.127
474	2241.38	-	-	9.690	0.127
475	2241.19	-	-	9.850	0.123
476	2241.00	-	-	9.670	0.123
477	2240.81	-	-	9.720	0.118
478	2240.62	-	-	9.790	0.118
479	2240.43	-	-	9.600	0.119
480	2240.25	-	-	9.550	0.119
481	2240.06	-	-	9.510	0.114
482	2239.88	-	-	9.560	0.114
483	2239.70	-	-	9.370	0.109
484	2239.52	-	-	9.350	0.110
485	2239.35	-	-	9.450	0.110
486	2239.18	-	-	9.390	0.110
487	2239.01	-	-	9.340	0.110
488	2238.84	-	-	9.350	0.106
489	2238.67	-	-	9.260	0.106
490	2238.50	-	-	9.300	0.102
491	2238.34	-	-	9.110	0.102
492	2238.17	-	-	9.190	0.102
493	2238.01	-	-	9.140	0.102
494	2237.84	-	-	9.160	0.103
495	2237.68	-	-	9.020	0.103
496	2237.52	-	-	9.130	0.103
497	2237.36	-	-	9.090	0.103
498	2237.20	-	-	9.050	0.103
499	2237.04	-	-	9.130	0.104
500	2236.88	-	-	9.120	0.104
501	2236.72	-	-	9.010	0.104
502	2236.56	-	-	9.020	0.104
503	2236.41	-	-	9.010	0.104
504	2236.25	-	-	8.980	0.100
505	2236.09	-	-	8.920	0.100
506	2235.94	-	-	8.980	0.096
507	2235.78	-	-	9.000	0.096
508	2235.63	-	-	8.830	0.093
509	2235.47	-	-	8.860	0.093
510	2235.32	-	-	8.840	0.089
511	2235.17	-	-	8.890	0.089
512	2235.02	-	-	8.930	0.085
513	2234.87	-	-	8.860	0.085
514	2234.72	-	-	8.860	0.082
515	2234.57	-	-	8.750	0.082
516	2234.42	-	-	8.770	0.079
517	2234.28	-	-	8.790	0.079

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Table 12 – continued from previous page - IEEE8500 - n1149

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
518	2234.13	-	-	8.720	0.075
519	2233.99	-	-	8.660	0.075
520	2233.84	-	-	8.710	0.072
521	2233.70	-	-	8.800	0.072
522	2233.55	-	-	8.640	0.072
523	2233.41	-	-	8.640	0.072
524	2233.27	-	-	8.720	0.072
525	2233.14	-	-	8.590	0.073
526	2233.00	-	-	8.700	0.073
527	2232.86	-	-	8.580	0.073
528	2232.73	-	-	8.650	0.073
529	2232.59	-	-	8.550	0.073
530	2232.46	-	-	8.510	0.073
531	2232.32	-	-	8.640	0.073
532	2232.19	-	-	8.540	0.073
533	2232.05	-	-	8.590	0.074
534	2231.92	-	-	8.560	0.073
535	2231.79	-	-	8.680	0.068
536	2231.66	-	-	8.680	0.067
537	2231.53	-	-	8.680	0.064
538	2231.40	-	-	8.570	0.064
539	2231.27	-	-	8.720	0.064
540	2231.14	-	-	8.810	0.064
541	2231.01	-	-	8.580	0.064
542	2230.89	-	-	8.570	0.064
543	2230.76	-	-	8.600	0.064
544	2230.63	-	-	8.560	0.061
545	2230.51	-	-	8.570	0.061
546	2230.38	-	-	8.520	0.061
547	2230.26	-	-	8.520	0.061
548	2230.14	-	-	8.480	0.061
549	2230.01	-	-	8.510	0.061
550	2229.89	-	-	8.480	0.061
551	2229.77	-	-	8.460	0.061
552	2229.65	-	-	8.420	0.058
553	2229.53	-	-	8.440	0.058
554	2229.41	-	-	8.360	0.058
555	2229.29	-	-	8.430	0.058
556	2229.17	-	-	8.370	0.055
557	2229.06	-	-	8.420	0.055
558	2228.94	-	-	8.430	0.051
559	2228.82	-	-	8.500	0.051
560	2228.71	-	-	8.380	0.052
561	2228.59	-	-	8.370	0.051
562	2228.48	-	-	8.380	0.048
563	2228.36	-	-	8.340	0.048
564	2228.25	-	-	8.380	0.045
565	2228.14	-	-	8.460	0.045
566	2228.02	-	-	8.270	0.045
567	2227.91	-	-	8.280	0.045
568	2227.80	-	-	8.360	0.042
569	2227.69	-	-	8.340	0.042

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Table 12 – continued from previous page - IEEE8500 - n1149

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
570	2227.58	-	-	8.290	0.042
571	2227.47	-	-	8.350	0.042
572	2227.36	-	-	8.320	0.042
573	2227.25	-	-	8.310	0.042
574	2227.14	-	-	8.250	0.039
575	2227.03	-	-	8.240	0.039
576	2226.93	-	-	8.330	0.037
577	2226.82	-	-	8.230	0.036
578	2226.71	-	-	8.460	0.034
579	2226.60	-	-	8.170	0.034
580	2226.50	-	-	8.320	0.031
581	2226.39	-	-	8.180	0.031
582	2226.29	-	-	8.210	0.029
583	2226.18	-	-	8.230	0.029
584	2226.08	-	-	8.230	0.029
585	2225.98	-	-	8.290	0.029
586	2225.88	-	-	8.250	0.026
587	2225.78	-	-	8.350	0.026
588	2225.68	-	-	8.220	0.024
589	2225.58	-	-	8.290	0.024
590	2225.48	-	-	8.390	0.022
591	2225.38	-	-	8.460	0.022
592	2225.28	-	-	8.120	0.020
593	2225.19	-	-	8.220	0.020
594	2225.09	-	-	8.100	0.020
595	2224.99	-	-	7.990	0.020
596	2224.90	-	-	7.990	0.020
597	2224.80	-	-	7.890	0.020
598	2224.71	-	-	7.910	0.020
599	2224.61	-	-	7.920	0.020
600	2224.52	-	-	7.750	0.020
601	2224.43	-	-	7.640	0.020
602	2224.34	-	-	7.630	0.020
603	2224.25	-	-	7.570	0.020
604	2224.16	-	-	7.570	0.020
605	2224.07	-	-	7.540	0.020
606	2223.98	-	-	7.490	0.020
607	2223.89	-	-	7.380	0.020
608	2223.81	-	-	7.410	0.020
609	2223.72	-	-	7.400	0.020
610	2223.63	-	-	7.340	0.020
611	2223.54	-	-	7.370	0.020
612	2223.46	-	-	7.170	0.020
613	2223.37	-	-	7.200	0.020
614	2223.29	-	-	7.170	0.020
615	2223.20	-	-	7.280	0.020
616	2223.12	-	-	7.240	0.020
617	2223.03	-	-	7.100	0.020
618	2222.95	-	-	7.030	0.020
619	2222.87	-	-	7.000	0.020
620	2222.78	-	-	6.910	0.021
621	2222.70	-	-	6.910	0.021

Table 12 – continued from previous page - IEEE8500 - n1149

		Time (sec)			
m	best ENS	**ILP-GALIAS**	**MILP-IFLOWS**	**DP-TS**	**DP-N2M2**
622	2222.62	-	-	6.830	0.021
623	2222.54	-	-	6.730	0.021
624	2222.46	-	-	6.720	0.021
625	2222.37	-	-	6.580	0.021
626	2222.29	-	-	6.570	0.021
627	2222.21	-	-	6.520	0.021
628	2222.13	-	-	6.480	0.021
629	2222.05	-	-	6.490	0.021
630	2221.97	-	-	6.530	0.021
631	2221.89	-	-	6.390	0.021
632	2221.81	-	-	6.380	0.021
633	2221.73	-	-	6.330	0.021
634	2221.65	-	-	6.380	0.021
635	2221.57	-	-	6.230	0.021
636	2221.49	-	-	6.270	0.021
637	2221.42	-	-	6.190	0.021
638	2221.34	-	-	6.150	0.021
639	2221.26	-	-	6.160	0.021
640	2221.19	-	-	6.140	0.021
641	2221.11	-	-	6.100	0.021
642	2221.03	-	-	6.080	0.021
643	2220.96	-	-	6.100	0.021
644	2220.88	-	-	6.060	0.021
645	2220.81	-	-	5.990	0.021
646	2220.74	-	-	6.040	0.021
647	2220.66	-	-	6.040	0.021
648	2220.59	-	-	5.930	0.021
649	2220.51	-	-	5.940	0.022
650	2220.44	-	-	5.910	0.022
651	2220.37	-	-	5.890	0.022
652	2220.30	-	-	5.870	0.022
653	2220.22	-	-	5.890	0.022
654	2220.15	-	-	5.790	0.022
655	2220.08	-	-	5.810	0.022
656	2220.01	-	-	5.750	0.022
657	2219.94	-	-	5.780	0.022
658	2219.87	-	-	5.770	0.022
659	2219.80	-	-	5.700	0.022
660	2219.73	-	-	5.660	0.022
661	2219.66	-	-	5.730	0.022
662	2219.59	-	-	5.640	0.022
663	2219.52	-	-	5.640	0.022
664	2219.45	-	-	5.640	0.022
665	2219.38	-	-	5.610	0.022
666	2219.31	-	-	5.600	0.022
667	2219.24	-	-	5.550	0.022
668	2219.17	-	-	5.510	0.022
669	2219.11	-	-	5.460	0.022
670	2219.04	-	-	5.520	0.022
671	2218.97	-	-	5.430	0.022
672	2218.91	-	-	5.440	0.022
673	2218.84	-	-	5.500	0.022

Table 12 – continued from previous page - IEEE8500 - n1149

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
674	2218.77	-	-	5.390	0.022
675	2218.71	-	-	5.350	0.023
676	2218.64	-	-	5.360	0.023
677	2218.58	-	-	5.280	0.023
678	2218.51	-	-	5.260	0.023
679	2218.45	-	-	5.370	0.023
680	2218.38	-	-	5.250	0.023
681	2218.32	-	-	5.200	0.023
682	2218.25	-	-	5.140	0.023
683	2218.19	-	-	5.170	0.023
684	2218.12	-	-	5.170	0.023
685	2218.06	-	-	5.170	0.023
686	2218.00	-	-	5.090	0.023
687	2217.93	-	-	5.110	0.023
688	2217.87	-	-	5.030	0.023
689	2217.81	-	-	5.080	0.023
690	2217.75	-	-	5.060	0.023
691	2217.68	-	-	5.000	0.023
692	2217.62	-	-	5.010	0.023
693	2217.56	-	-	4.950	0.023
694	2217.50	-	-	4.980	0.023
695	2217.44	-	-	4.940	0.023
696	2217.38	-	-	4.890	0.023
697	2217.32	-	-	4.910	0.023
698	2217.27	-	-	4.920	0.023
699	2217.21	-	-	4.920	0.023
700	2217.15	-	-	4.810	0.023
701	2217.09	-	-	4.840	0.023
702	2217.04	-	-	4.850	0.023
703	2216.98	-	-	4.800	0.024
704	2216.92	-	-	4.830	0.024
705	2216.87	-	-	4.730	0.023
706	2216.81	-	-	4.790	0.024
707	2216.75	-	-	4.770	0.024
708	2216.70	-	-	4.830	0.024
709	2216.64	-	-	5.000	0.024
710	2216.59	-	-	4.940	0.024
711	2216.53	-	-	4.690	0.024
712	2216.47	-	-	4.690	0.024
713	2216.42	-	-	4.750	0.024
714	2216.36	-	-	4.680	0.024
715	2216.31	-	-	4.890	0.024
716	2216.26	-	-	4.610	0.024
717	2216.20	-	-	4.660	0.024
718	2216.15	-	-	4.580	0.024
719	2216.10	-	-	4.520	0.024
720	2216.04	-	-	4.550	0.024
721	2215.99	-	-	4.520	0.024
722	2215.94	-	-	4.470	0.024
723	2215.88	-	-	4.470	0.024
724	2215.83	-	-	4.430	0.024
725	2215.78	-	-	4.420	0.024

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		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
726	2215.73	-	-	4.400	0.024
727	2215.68	-	-	4.410	0.024
728	2215.63	-	-	4.450	0.024
729	2215.57	-	-	4.310	0.024
730	2215.52	-	-	4.270	0.024
731	2215.47	-	-	4.370	0.024
732	2215.42	-	-	4.270	0.024
733	2215.37	-	-	4.290	0.024
734	2215.32	-	-	4.320	0.025
735	2215.27	-	-	4.180	0.025
736	2215.22	-	-	4.210	0.025
737	2215.17	-	-	4.120	0.025
738	2215.12	-	-	4.130	0.025
739	2215.07	-	-	4.120	0.025
740	2215.02	-	-	4.100	0.025
741	2214.98	-	-	4.110	0.025
742	2214.93	-	-	4.080	0.025
743	2214.88	-	-	4.020	0.025
744	2214.83	-	-	4.020	0.025
745	2214.79	-	-	4.000	0.025
746	2214.74	-	-	4.000	0.025
747	2214.69	-	-	3.950	0.025
748	2214.64	-	-	3.990	0.025
749	2214.60	-	-	3.930	0.025
750	2214.55	-	-	3.900	0.025
751	2214.50	-	-	3.910	0.025
752	2214.46	-	-	3.870	0.025
753	2214.41	-	-	3.920	0.025
754	2214.37	-	-	3.770	0.025
755	2214.32	-	-	3.800	0.025
756	2214.28	-	-	3.800	0.025
757	2214.23	-	-	3.740	0.025
758	2214.19	-	-	3.720	0.025
759	2214.14	-	-	3.690	0.025
760	2214.10	-	-	3.750	0.025
761	2214.05	-	-	3.660	0.025
762	2214.01	-	-	3.700	0.025
763	2213.96	-	-	3.750	0.025
764	2213.92	-	-	3.590	0.025
765	2213.87	-	-	3.700	0.026
766	2213.83	-	-	3.590	0.026
767	2213.79	-	-	3.560	0.026
768	2213.74	-	-	3.500	0.026
769	2213.70	-	-	3.540	0.026
770	2213.66	-	-	3.490	0.026
771	2213.61	-	-	3.460	0.026
772	2213.57	-	-	3.500	0.026
773	2213.53	-	-	3.520	0.026
774	2213.48	-	-	3.440	0.026
775	2213.44	-	-	3.420	0.026
776	2213.40	-	-	3.390	0.026
777	2213.36	-	-	3.410	0.026
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Table 12 – continued from previous page - IEEE8500 - n1149

			Time (sec)		
m	best ENS	**ILP-GALIAS**	**MILP-IFLOWS**	**DP-TS**	**DP-N2M2**
778	2213.31	-	-	3.380	0.026
779	2213.27	-	-	3.360	0.026
780	2213.23	-	-	3.340	0.026
781	2213.19	-	-	3.390	0.026
782	2213.15	-	-	3.280	0.026
783	2213.10	-	-	3.320	0.026
784	2213.06	-	-	3.280	0.026
785	2213.02	-	-	3.300	0.026
786	2212.98	-	-	3.330	0.026
787	2212.94	-	-	3.230	0.026
788	2212.90	-	-	3.200	0.026
789	2212.86	-	-	3.320	0.026
790	2212.82	-	-	3.190	0.026
791	2212.78	-	-	3.180	0.026
792	2212.74	-	-	3.170	0.026
793	2212.70	-	-	3.140	0.027
794	2212.66	-	-	3.140	0.027
795	2212.62	-	-	3.120	0.027
796	2212.59	-	-	3.130	0.027
797	2212.55	-	-	3.150	0.027
798	2212.51	-	-	3.080	0.027
799	2212.47	-	-	3.080	0.027
800	2212.44	-	-	3.080	0.027
801	2212.40	-	-	3.040	0.027
802	2212.36	-	-	3.040	0.027
803	2212.32	-	-	3.070	0.027
804	2212.28	-	-	3.030	0.027
805	2212.25	-	-	3.010	0.027
806	2212.21	-	-	3.010	0.027
807	2212.17	-	-	3.010	0.027
808	2212.14	-	-	2.960	0.027
809	2212.10	-	-	3.000	0.027
810	2212.06	-	-	2.990	0.027
811	2212.03	-	-	2.950	0.027
812	2211.99	-	-	2.950	0.027
813	2211.95	-	-	2.940	0.027
814	2211.92	-	-	2.940	0.027
815	2211.88	-	-	2.960	0.027
816	2211.85	-	-	2.920	0.027
817	2211.81	-	-	2.910	0.027
818	2211.78	-	-	3.020	0.027
819	2211.74	-	-	2.870	0.027
820	2211.71	-	-	2.840	0.028
821	2211.67	-	-	2.970	0.027
822	2211.64	-	-	2.910	0.028
823	2211.60	-	-	2.820	0.028
824	2211.57	-	-	2.780	0.028
825	2211.53	-	-	2.780	0.028
826	2211.50	-	-	2.820	0.028
827	2211.47	-	-	2.730	0.028
828	2211.43	-	-	2.770	0.028
829	2211.40	-	-	2.800	0.028

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m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
830	2211.36	-	-	2.800	0.028
831	2211.33	-	-	2.750	0.028
832	2211.30	-	-	2.720	0.028
833	2211.26	-	-	2.720	0.028
834	2211.23	-	-	2.750	0.028
835	2211.20	-	-	2.720	0.028
836	2211.17	-	-	2.720	0.028
837	2211.13	-	-	2.710	0.028
838	2211.10	-	-	2.630	0.028
839	2211.07	-	-	2.670	0.028
840	2211.04	-	-	2.700	0.028
841	2211.01	-	-	2.630	0.028
842	2210.98	-	-	2.610	0.028
843	2210.94	-	-	2.600	0.028
844	2210.91	-	-	2.590	0.028
845	2210.88	-	-	2.580	0.028
846	2210.85	-	-	2.570	0.028
847	2210.82	-	-	2.560	0.028
848	2210.79	-	-	2.530	0.028
849	2210.76	-	-	2.520	0.029
850	2210.73	-	-	2.500	0.029
851	2210.70	-	-	2.530	0.029
852	2210.67	-	-	2.470	0.029
853	2210.64	-	-	2.470	0.029
854	2210.61	-	-	2.460	0.029
855	2210.58	-	-	2.500	0.029
856	2210.55	-	-	2.470	0.029
857	2210.52	-	-	2.420	0.029
858	2210.50	-	-	2.430	0.029
859	2210.47	-	-	2.420	0.029
860	2210.44	-	-	2.410	0.029
861	2210.41	-	-	2.390	0.029
862	2210.38	-	-	2.360	0.029
863	2210.35	-	-	2.350	0.029
864	2210.33	-	-	2.350	0.029
865	2210.30	-	-	2.340	0.029
866	2210.27	-	-	2.330	0.029
867	2210.24	-	-	2.300	0.029
868	2210.22	-	-	2.270	0.029
869	2210.19	-	-	2.260	0.029
870	2210.16	-	-	2.260	0.029
871	2210.13	-	-	2.280	0.029
872	2210.11	-	-	2.250	0.029
873	2210.08	-	-	2.240	0.029
874	2210.05	-	-	2.240	0.029
875	2210.03	-	-	2.250	0.029
876	2210.00	-	-	2.220	0.029
877	2209.98	-	-	2.200	0.029
878	2209.95	-	-	2.200	0.029
879	2209.92	-	-	2.200	0.030
880	2209.90	-	-	2.200	0.030
881	2209.87	-	-	2.170	0.030

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m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
882	2209.85	-	-	2.200	0.030
883	2209.82	-	-	2.180	0.030
884	2209.80	-	-	2.190	0.030
885	2209.77	-	-	2.170	0.030
886	2209.74	-	-	2.130	0.030
887	2209.72	-	-	2.140	0.030
888	2209.70	-	-	2.140	0.030
889	2209.67	-	-	2.140	0.030
890	2209.65	-	-	2.100	0.030
891	2209.62	-	-	2.080	0.030
892	2209.60	-	-	2.080	0.030
893	2209.58	-	-	2.070	0.030
894	2209.55	-	-	2.070	0.030
895	2209.53	-	-	2.070	0.030
896	2209.50	-	-	2.070	0.030
897	2209.48	-	-	2.080	0.030
898	2209.46	-	-	2.040	0.030
899	2209.43	-	-	2.030	0.030
900	2209.41	-	-	2.010	0.030
901	2209.39	-	-	2.010	0.032
902	2209.36	-	-	2.040	0.031
903	2209.34	-	-	1.970	0.031
904	2209.32	-	-	1.970	0.031
905	2209.30	-	-	1.970	0.031
906	2209.27	-	-	1.980	0.031
907	2209.25	-	-	1.950	0.031
908	2209.23	-	-	1.940	0.031
909	2209.21	-	-	1.930	0.031
910	2209.18	-	-	1.940	0.031
911	2209.16	-	-	1.900	0.031
912	2209.14	-	-	1.920	0.031
913	2209.12	-	-	1.920	0.031
914	2209.10	-	-	1.890	0.031
915	2209.07	-	-	1.890	0.031
916	2209.05	-	-	1.910	0.031
917	2209.03	-	-	1.870	0.031
918	2209.01	-	-	1.890	0.031
919	2208.99	-	-	1.850	0.031
920	2208.97	-	-	1.810	0.031
921	2208.95	-	-	1.830	0.032
922	2208.93	-	-	1.820	0.032
923	2208.91	-	-	1.800	0.032
924	2208.89	-	-	1.790	0.032
925	2208.87	-	-	1.810	0.032
926	2208.84	-	-	1.790	0.032
927	2208.82	-	-	1.770	0.032
928	2208.80	-	-	1.780	0.032
929	2208.78	-	-	1.760	0.032
930	2208.77	-	-	1.720	0.032
931	2208.75	-	-	1.730	0.032
932	2208.73	-	-	1.730	0.032
933	2208.71	-	-	1.750	0.032

Continued on next page

Table 12 – continued from previous page - IEEE8500 - n1149

		Time (sec)			
m	best ENS	**ILP-GALIAS**	**MILP-IFLOWS**	**DP-TS**	**DP-N2M2**
934	2208.69	-	-	1.710	0.032
935	2208.67	-	-	1.720	0.032
936	2208.65	-	-	1.700	0.032
937	2208.63	-	-	1.680	0.032
938	2208.61	-	-	1.700	0.032
939	2208.59	-	-	1.660	0.032
940	2208.58	-	-	1.650	0.032
941	2208.56	-	-	1.640	0.032
942	2208.54	-	-	1.630	0.032
943	2208.52	-	-	1.640	0.032
944	2208.50	-	-	1.620	0.032
945	2208.49	-	-	1.580	0.032
946	2208.47	-	-	1.600	0.032
947	2208.45	-	-	1.600	0.032
948	2208.43	-	-	1.590	0.032
949	2208.42	-	-	1.550	0.033
950	2208.40	-	-	1.580	0.033
951	2208.38	-	-	1.540	0.032
952	2208.36	-	-	1.570	0.033
953	2208.35	-	-	1.530	0.033
954	2208.33	-	-	1.540	0.033
955	2208.31	-	-	1.510	0.033
956	2208.30	-	-	1.500	0.033
957	2208.28	-	-	1.460	0.033
958	2208.26	-	-	1.500	0.033
959	2208.25	-	-	1.470	0.033
960	2208.23	-	-	1.460	0.033
961	2208.21	-	-	1.470	0.033
962	2208.20	-	-	1.450	0.033
963	2208.18	-	-	1.420	0.033
964	2208.17	-	-	1.430	0.033
965	2208.15	-	-	1.410	0.033
966	2208.13	-	-	1.380	0.033
967	2208.12	-	-	1.390	0.033
968	2208.10	-	-	1.350	0.033
969	2208.09	-	-	1.330	0.033
970	2208.07	-	-	1.340	0.033
971	2208.06	-	-	1.330	0.033
972	2208.04	-	-	1.310	0.033
973	2208.03	-	-	1.300	0.033
974	2208.01	-	-	1.290	0.034
975	2207.99	-	-	1.300	0.034
976	2207.98	-	-	1.290	0.033
977	2207.96	-	-	1.280	0.033
978	2207.95	-	-	1.240	0.033
979	2207.93	-	-	1.260	0.034
980	2207.92	-	-	1.220	0.034
981	2207.90	-	-	1.230	0.033
982	2207.89	-	-	1.200	0.034
983	2207.87	-	-	1.190	0.034
984	2207.86	-	-	1.170	0.034
985	2207.84	-	-	1.180	0.034

Table 12 – continued from previous page - IEEE8500 - n1149

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
986	2207.83	-	-	1.190	0.034
987	2207.82	-	-	1.150	0.034
988	2207.80	-	-	1.140	0.034
989	2207.79	-	-	1.150	0.034
990	2207.77	-	-	1.110	0.034
991	2207.76	-	-	1.110	0.034
992	2207.74	-	-	1.090	0.034
993	2207.73	-	-	1.110	0.034
994	2207.72	-	-	1.070	0.034
995	2207.70	-	-	1.060	0.034
996	2207.69	-	-	1.070	0.034
997	2207.67	-	-	1.040	0.034
998	2207.66	-	-	1.030	0.034
999	2207.65	-	-	1.030	0.034
1000	2207.63	-	-	1.000	0.034
1001	2207.62	-	-	1.000	0.034
1002	2207.61	-	-	0.980	0.034
1003	2207.59	-	-	0.970	0.034
1004	2207.58	-	-	0.970	0.034
1005	2207.57	-	-	0.950	0.034
1006	2207.55	-	-	0.940	0.034
1007	2207.54	-	-	0.930	0.034
1008	2207.53	-	-	0.930	0.034
1009	2207.51	-	-	0.920	0.034
1010	2207.50	-	-	0.900	0.035
1011	2207.49	-	-	0.890	0.034
1012	2207.48	-	-	0.890	0.035
1013	2207.46	-	-	0.870	0.035
1014	2207.45	-	-	0.860	0.035
1015	2207.44	-	-	0.840	0.035
1016	2207.43	-	-	0.850	0.035
1017	2207.42	-	-	0.810	0.035
1018	2207.40	-	-	0.810	0.035
1019	2207.39	-	-	0.800	0.035
1020	2207.38	-	-	0.800	0.035
1021	2207.37	-	-	0.780	0.035
1022	2207.36	-	-	0.780	0.035
1023	2207.34	-	-	0.760	0.035
1024	2207.33	-	-	0.750	0.035
1025	2207.32	-	-	0.790	0.035
1026	2207.31	-	-	0.740	0.035
1027	2207.30	-	-	0.720	0.035
1028	2207.29	-	-	0.710	0.035
1029	2207.28	-	-	0.700	0.035
1030	2207.27	-	-	0.690	0.035
1031	2207.26	-	-	0.670	0.035
1032	2207.25	-	-	0.660	0.035
1033	2207.24	-	-	0.650	0.035
1034	2207.23	-	-	0.670	0.035
1035	2207.22	-	-	0.630	0.035
1036	2207.20	-	-	0.600	0.035
1037	2207.19	-	-	0.610	0.035

Table 12 – continued from previous page - IEEE8500 - n1149

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
1038	2207.18	-	-	0.590	0.035
1039	2207.17	-	-	0.570	0.035
1040	2207.16	-	-	0.560	0.035
1041	2207.15	-	-	0.550	0.036
1042	2207.15	-	-	0.540	0.036
1043	2207.14	-	-	0.520	0.036
1044	2207.13	-	-	0.510	0.036
1045	2207.12	-	-	0.500	0.036
1046	2207.11	-	-	0.480	0.036
1047	2207.10	-	-	0.480	0.036
1048	2207.09	-	-	0.460	0.036
1049	2207.08	-	-	0.450	0.036
1050	2207.07	-	-	0.450	0.036
1051	2207.06	-	-	0.430	0.036
1052	2207.05	-	-	0.410	0.036
1053	2207.05	-	-	0.420	0.036
1054	2207.04	-	-	0.410	0.035
1055	2207.03	-	-	0.410	0.027
1056	2207.02	-	-	0.420	0.026
1057	2207.01	-	-	0.410	0.024
1058	2207.00	-	-	0.400	0.024
1059	2206.99	-	-	0.400	0.024
1060	2206.99	-	-	0.400	0.024
1061	2206.98	-	-	0.400	0.024
1062	2206.97	-	-	0.390	0.023
1063	2206.96	-	-	0.400	0.021
1064	2206.96	-	-	0.400	0.020
1065	2206.95	-	-	0.400	0.018
1066	2206.94	-	-	0.390	0.018
1067	2206.93	-	-	0.390	0.016
1068	2206.93	-	-	0.400	0.015
1069	2206.92	-	-	0.390	0.013
1070	2206.91	-	-	0.390	0.013
1071	2206.90	-	-	0.390	0.011
1072	2206.89	-	-	0.380	0.010
1073	2206.89	-	-	0.370	0.008
1074	2206.88	-	-	0.390	0.008
1075	2206.87	-	-	0.380	0.008
1076	2206.86	-	-	0.370	0.008
1077	2206.86	-	-	0.380	0.008
1078	2206.85	-	-	0.370	0.008
1079	2206.84	-	-	0.370	0.008
1080	2206.83	-	-	0.370	0.008
1081	2206.83	-	-	0.370	0.009
1082	2206.82	-	-	0.360	0.008
1083	2206.81	-	-	0.360	0.007
1084	2206.80	-	-	0.360	0.006
1085	2206.80	-	-	0.360	0.005
1086	2206.79	-	-	0.350	0.005
1087	2206.78	-	-	0.350	0.005
1088	2206.78	-	-	0.340	0.005
1089	2206.77	-	-	0.350	0.005

Table 12 – continued from previous page - IEEE8500 - n1149

		Time (sec)			
m	best ENS	**ILP-Galias**	**MILP-Iflows**	**DP-TS**	**DP-n2m2**
1090	2206.76	-	-	0.320	0.005
1091	2206.76	-	-	0.330	0.005
1092	2206.75	-	-	0.330	0.005
1093	2206.75	-	-	0.310	0.005
1094	2206.74	-	-	0.320	0.005
1095	2206.73	-	-	0.310	0.003
1096	2206.73	-	-	0.310	0.003
1097	2206.72	-	-	0.310	0.003
1098	2206.72	-	-	0.300	0.003
1099	2206.71	-	-	0.300	0.003
1100	2206.71	-	-	0.290	0.003
1101	2206.70	-	-	0.290	0.003
1102	2206.70	-	-	0.290	0.003
1103	2206.69	-	-	0.280	0.004
1104	2206.69	-	-	0.280	0.003
1105	2206.68	-	-	0.270	0.004
1106	2206.68	-	-	0.280	0.004
1107	2206.68	-	-	0.270	0.004
1108	2206.67	-	-	0.260	0.004
1109	2206.67	-	-	0.270	0.004
1110	2206.66	-	-	0.270	0.003
1111	2206.66	-	-	0.260	0.002
1112	2206.65	-	-	0.260	0.002
1113	2206.65	-	-	0.270	0.001
1114	2206.64	-	-	0.250	0.001
1115	2206.64	-	-	0.260	0.001
1116	2206.63	-	-	0.250	0.001
1117	2206.63	-	-	0.240	0.001
1118	2206.62	-	-	0.250	0.001
1119	2206.62	-	-	0.240	0.001
1120	2206.62	-	-	0.230	0.001
1121	2206.61	-	-	0.230	0.000
1122	2206.61	-	-	0.230	0.000
1123	2206.60	-	-	0.210	0.000
1124	2206.60	-	-	0.210	0.000
1125	2206.59	-	-	0.200	0.000
1126	2206.59	-	-	0.190	0.000
1127	2206.58	-	-	0.180	0.000
1128	2206.58	-	-	0.180	0.000
1129	2206.58	-	-	0.170	0.000
1130	2206.57	-	-	0.170	0.000
1131	2206.57	-	-	0.170	0.000
1132	2206.56	-	-	0.160	0.000
1133	2206.56	-	-	0.160	0.000
1134	2206.56	-	-	0.150	0.000
1135	2206.55	-	-	0.150	0.000
1136	2206.55	-	-	0.150	0.000
1137	2206.55	-	-	0.140	0.000
1138	2206.54	-	-	0.140	0.000
1139	2206.54	-	-	0.130	0.000
1140	2206.54	-	-	0.140	0.000
1141	2206.53	-	-	0.120	0.000

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
1142	2206.53	-	-	0.120	0.000
1143	2206.53	-	-	0.120	0.000
1144	2206.53	-	-	0.120	0.000
1145	2206.52	-	-	0.110	0.000
1146	2206.52	-	-	0.120	0.000
1147	2206.52	-	-	0.110	0.000
1148	2206.52	-	-	0.110	0.000
Total		**7246.69**	**8157.64**	**6091.76**	**89.51**

Table 13: ENS optimization - IEEE8500 - n2250.

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
0	98575.40	8.929	0.004	0.020	0.000
1	73457.20	42.642	0.135	0.050	0.000
2	51488.40	3553.158	0.056	0.140	0.078
3	42512.30	-	0.171	0.240	0.092
4	36869.00	-	1.264	0.410	0.114
5	33277.40	-	2.820	0.530	0.133
6	30418.70	-	8.111	0.670	0.095
7	27921.10	-	11.404	0.790	0.109
8	26030.00	-	24.382	0.920	0.115
9	24436.50	-	100.647	1.160	0.127
10	22985.70	-	165.421	1.270	0.217
11	21774.50	-	279.056	1.510	0.229
12	20593.70	-	598.683	1.680	0.140
13	19888.90	-	3238.707	1.920	0.148
14	19205.30	-	-	2.120	0.153
15	18541.20	-	-	2.450	0.164
16	17941.80	-	-	2.680	0.170
17	17366.60	-	-	2.820	0.178
18	16835.80	-	-	2.940	0.185
19	16353.20	-	-	3.180	0.193
20	15941.70	-	-	3.400	0.199
21	15590.90	-	-	3.620	0.209
22	15251.70	-	-	3.830	0.214
23	14928.10	-	-	4.010	0.220
24	14648.70	-	-	4.100	0.227
25	14370.90	-	-	4.270	0.235
26	14106.10	-	-	4.490	0.433
27	13861.70	-	-	4.630	0.448
28	13647.00	-	-	4.800	0.238
29	13440.20	-	-	4.990	0.242
30	13240.00	-	-	5.080	0.244
31	13041.30	-	-	5.280	0.249
32	12847.20	-	-	5.580	0.250
33	12654.10	-	-	5.710	0.256
34	12470.80	-	-	5.870	0.256
				Continued on next page	

Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
35	12310.60	-	-	6.550	0.265
36	12154.60	-	-	6.830	0.265
37	12005.00	-	-	6.990	0.271
38	11858.70	-	-	7.190	0.274
39	11715.30	-	-	7.470	0.277
40	11576.30	-	-	7.090	0.279
41	11437.90	-	-	7.220	0.282
42	11302.70	-	-	7.320	0.285
43	11169.20	-	-	7.620	0.290
44	11035.90	-	-	7.760	0.289
45	10905.70	-	-	7.930	0.295
46	10785.00	-	-	8.160	0.295
47	10672.30	-	-	8.250	0.301
48	10559.90	-	-	8.480	0.303
49	10447.20	-	-	8.680	0.308
50	10335.40	-	-	8.790	0.310
51	10223.90	-	-	9.030	0.314
52	10119.70	-	-	9.210	0.316
53	10018.50	-	-	9.490	0.318
54	9921.14	-	-	9.700	0.321
55	9825.00	-	-	9.730	0.325
56	9728.95	-	-	10.070	0.328
57	9637.56	-	-	10.150	0.328
58	9548.48	-	-	10.440	0.333
59	9463.24	-	-	10.690	0.332
60	9380.82	-	-	10.720	0.335
61	9298.53	-	-	11.090	0.338
62	9225.12	-	-	11.170	0.342
63	9142.83	-	-	11.270	0.344
64	9070.31	-	-	11.540	0.347
65	9001.72	-	-	11.720	0.353
66	8934.74	-	-	11.860	0.356
67	8868.55	-	-	12.130	0.362
68	8805.65	-	-	12.280	0.365
69	8746.18	-	-	12.480	0.369
70	8690.23	-	-	12.500	0.377
71	8635.65	-	-	13.020	0.380
72	8581.82	-	-	13.170	0.379
73	8528.30	-	-	13.310	0.381
74	8476.05	-	-	13.540	0.386
75	8424.05	-	-	13.610	0.389
76	8374.07	-	-	13.850	0.394
77	8325.62	-	-	14.090	0.396
78	8278.56	-	-	13.700	0.401
79	8234.08	-	-	13.750	0.404
80	8191.06	-	-	14.080	0.410
81	8148.47	-	-	13.930	0.414
82	8106.01	-	-	14.190	0.418
83	8064.52	-	-	14.210	0.834
84	8023.38	-	-	14.300	0.417
85	7982.51	-	-	14.500	0.834
86	7942.03	-	-	14.570	0.405

Table 13 – continued from previous page - IEEE8500 - n2250

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
87	7901.88	-	-	14.650	0.409
88	7861.78	-	-	14.760	0.414
89	7822.71	-	-	15.130	0.415
90	7784.24	-	-	15.280	0.419
91	7746.45	-	-	15.300	0.422
92	7710.14	-	-	15.560	0.426
93	7674.50	-	-	15.720	0.429
94	7639.61	-	-	16.080	0.434
95	7605.07	-	-	16.190	0.438
96	7570.57	-	-	16.150	0.442
97	7538.16	-	-	16.350	0.444
98	7507.13	-	-	16.320	0.447
99	7478.45	-	-	16.360	0.449
100	7450.50	-	-	16.470	0.453
101	7422.90	-	-	16.640	0.454
102	7395.73	-	-	16.620	0.457
103	7368.64	-	-	16.830	0.460
104	7341.72	-	-	16.880	0.464
105	7315.15	-	-	17.250	0.467
106	7288.78	-	-	17.230	0.472
107	7263.45	-	-	17.280	0.480
108	7238.89	-	-	17.430	0.477
109	7215.91	-	-	17.650	0.479
110	7193.09	-	-	17.870	0.480
111	7170.42	-	-	17.840	0.482
112	7148.14	-	-	18.030	0.487
113	7126.59	-	-	18.020	0.489
114	7105.07	-	-	18.190	0.493
115	7083.57	-	-	18.550	0.492
116	7062.10	-	-	18.660	0.497
117	7040.69	-	-	18.530	0.496
118	7019.59	-	-	18.740	0.500
119	6998.82	-	-	18.710	0.499
120	6978.15	-	-	18.910	0.501
121	6957.62	-	-	19.270	0.500
122	6937.53	-	-	19.490	0.501
123	6917.82	-	-	19.470	0.498
124	6898.43	-	-	19.640	0.500
125	6880.94	-	-	19.860	0.499
126	6863.58	-	-	19.950	0.500
127	6846.24	-	-	20.090	0.503
128	6828.92	-	-	20.330	0.499
129	6811.73	-	-	20.650	0.501
130	6795.54	-	-	20.840	0.498
131	6779.36	-	-	21.410	0.499
132	6763.63	-	-	21.200	0.500
133	6747.97	-	-	21.660	0.501
134	6732.84	-	-	21.980	0.496
135	6718.08	-	-	22.270	0.499
136	6703.94	-	-	22.550	0.496
137	6689.86	-	-	22.830	0.500
138	6675.85	-	-	23.150	0.496

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		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
139	6662.01	-	-	23.090	0.493
140	6648.44	-	-	23.550	0.492
141	6634.89	-	-	23.880	0.493
142	6621.59	-	-	23.530	0.494
143	6608.36	-	-	23.580	0.494
144	6595.14	-	-	23.780	0.493
145	6582.09	-	-	23.830	0.492
146	6569.10	-	-	24.240	0.495
147	6556.20	-	-	24.190	0.489
148	6543.33	-	-	24.630	0.490
149	6530.56	-	-	24.660	0.487
150	6518.17	-	-	24.790	0.487
151	6506.34	-	-	24.920	0.486
152	6494.60	-	-	24.930	0.486
153	6482.91	-	-	25.390	0.486
154	6471.46	-	-	25.510	0.488
155	6460.01	-	-	25.190	0.487
156	6448.61	-	-	25.550	0.487
157	6437.69	-	-	25.900	0.487
158	6426.80	-	-	25.970	0.487
159	6416.00	-	-	25.950	0.487
160	6405.24	-	-	26.360	0.486
161	6394.68	-	-	26.180	0.486
162	6384.31	-	-	26.450	0.488
163	6374.02	-	-	26.950	0.488
164	6363.78	-	-	27.090	0.484
165	6353.72	-	-	27.120	0.484
166	6343.94	-	-	26.980	0.487
167	6334.17	-	-	26.970	0.483
168	6324.60	-	-	27.530	0.482
169	6315.10	-	-	27.790	0.484
170	6305.66	-	-	27.850	0.484
171	6296.25	-	-	27.690	0.483
172	6286.83	-	-	28.390	0.483
173	6277.57	-	-	28.660	0.482
174	6268.33	-	-	28.530	0.484
175	6259.45	-	-	28.780	0.480
176	6250.71	-	-	29.050	0.478
177	6242.01	-	-	29.130	0.472
178	6233.78	-	-	29.920	0.475
179	6225.57	-	-	29.700	0.468
180	6217.36	-	-	29.780	0.471
181	6209.17	-	-	29.370	0.466
182	6200.98	-	-	29.550	0.468
183	6192.90	-	-	29.560	0.468
184	6184.89	-	-	29.610	0.469
185	6176.88	-	-	29.740	0.464
186	6168.94	-	-	30.190	0.463
187	6161.02	-	-	32.970	0.462
188	6153.36	-	-	33.280	0.461
189	6145.71	-	-	33.320	0.463
190	6138.06	-	-	33.640	0.465

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Table 13 – continued from previous page - IEEE8500 - n2250

		Time (sec)			
m	best ENS	**ILP-Galias**	**MILP-Iflows**	**DP-TS**	**DP-n2m2**
191	6130.41	-	-	33.530	0.467
192	6122.76	-	-	33.600	0.466
193	6115.12	-	-	34.180	0.469
194	6107.62	-	-	34.060	0.471
195	6100.19	-	-	34.400	0.473
196	6092.89	-	-	34.780	0.472
197	6085.70	-	-	34.570	0.470
198	6078.57	-	-	34.850	0.469
199	6071.45	-	-	34.970	0.469
200	6064.34	-	-	35.590	0.469
201	6057.52	-	-	35.600	0.465
202	6050.72	-	-	35.510	0.464
203	6043.95	-	-	35.830	0.466
204	6037.26	-	-	35.910	0.468
205	6030.62	-	-	35.770	0.465
206	6024.01	-	-	36.020	0.467
207	6017.44	-	-	36.130	0.466
208	6010.91	-	-	36.100	0.468
209	6004.45	-	-	36.160	0.470
210	5998.33	-	-	36.600	0.473
211	5992.28	-	-	36.830	0.474
212	5986.41	-	-	37.110	0.476
213	5980.63	-	-	37.080	0.475
214	5974.86	-	-	37.390	0.477
215	5969.13	-	-	37.170	0.475
216	5963.49	-	-	37.440	0.477
217	5957.85	-	-	37.710	0.480
218	5952.21	-	-	37.880	0.482
219	5946.58	-	-	38.220	0.484
220	5941.00	-	-	38.430	0.478
221	5935.43	-	-	38.880	0.480
222	5929.87	-	-	39.280	0.478
223	5924.35	-	-	39.500	0.480
224	5918.82	-	-	39.460	0.478
225	5913.36	-	-	39.660	0.480
226	5908.03	-	-	39.680	0.482
227	5902.75	-	-	39.540	0.484
228	5897.46	-	-	39.440	0.486
229	5892.18	-	-	39.770	0.489
230	5886.97	-	-	39.630	0.491
231	5881.74	-	-	39.740	0.493
232	5876.55	-	-	39.970	0.494
233	5871.34	-	-	39.990	0.497
234	5866.13	-	-	40.400	0.499
235	5860.98	-	-	40.770	0.501
236	5855.89	-	-	40.800	0.504
237	5850.81	-	-	40.900	0.506
238	5845.92	-	-	41.120	0.508
239	5841.03	-	-	41.050	0.510
240	5836.18	-	-	41.110	0.512
241	5831.35	-	-	41.730	0.514
242	5826.55	-	-	41.850	0.516

Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
243	5821.76	-	-	42.090	0.519
244	5817.04	-	-	41.950	0.520
245	5812.37	-	-	42.330	0.522
246	5807.73	-	-	42.470	0.524
247	5803.12	-	-	42.510	0.526
248	5798.55	-	-	42.690	0.529
249	5793.95	-	-	43.100	0.531
250	5789.38	-	-	43.160	0.533
251	5784.82	-	-	43.250	0.535
252	5780.28	-	-	43.760	0.530
253	5775.74	-	-	44.220	0.527
254	5771.20	-	-	44.730	0.529
255	5766.66	-	-	44.380	0.526
256	5762.12	-	-	44.490	0.524
257	5757.58	-	-	44.770	0.522
258	5753.05	-	-	44.720	0.521
259	5748.51	-	-	45.070	0.518
260	5744.00	-	-	45.030	0.516
261	5739.47	-	-	45.100	0.506
262	5734.94	-	-	45.520	0.508
263	5730.43	-	-	45.390	0.498
264	5726.01	-	-	45.680	0.500
265	5721.68	-	-	46.280	0.496
266	5717.40	-	-	45.880	0.491
267	5713.13	-	-	45.950	0.493
268	5708.86	-	-	46.290	0.496
269	5704.60	-	-	46.270	0.497
270	5700.37	-	-	46.500	0.495
271	5696.19	-	-	46.560	0.497
272	5692.05	-	-	47.200	0.494
273	5687.93	-	-	47.220	0.490
274	5683.86	-	-	47.220	0.488
275	5679.93	-	-	47.500	0.484
276	5676.00	-	-	47.930	0.482
277	5672.10	-	-	48.320	0.483
278	5668.19	-	-	48.700	0.485
279	5664.38	-	-	49.330	0.480
280	5660.57	-	-	49.000	0.482
281	5656.77	-	-	49.490	0.477
282	5653.05	-	-	49.690	0.478
283	5649.54	-	-	50.040	0.480
284	5645.90	-	-	50.080	0.482
285	5642.39	-	-	50.560	0.484
286	5638.91	-	-	49.860	0.485
287	5635.44	-	-	50.160	0.487
288	5632.00	-	-	50.470	0.489
<u>289</u>	5628.63	-	-	<u>50.490</u>	0.490
290	5625.31	-	-	-	0.492
291	5621.98	-	-	-	0.493
292	5618.66	-	-	-	0.495
293	5615.34	-	-	-	0.496
294	5612.02	-	-	-	0.498

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
295	5608.77	-	-	-	0.500
296	5605.58	-	-	-	0.502
297	5602.40	-	-	-	0.503
298	5599.22	-	-	-	0.505
299	5596.08	-	-	-	0.507
300	5592.95	-	-	-	0.509
301	5589.83	-	-	-	0.510
302	5586.78	-	-	-	0.512
303	5583.75	-	-	-	0.514
304	5580.75	-	-	-	0.516
305	5577.80	-	-	-	0.510
306	5574.85	-	-	-	0.511
307	5571.92	-	-	-	0.509
308	5569.09	-	-	-	0.511
309	5566.29	-	-	-	0.508
310	5563.53	-	-	-	0.510
311	5560.77	-	-	-	0.512
312	5558.00	-	-	-	0.513
313	5555.28	-	-	-	0.515
314	5552.56	-	-	-	0.517
315	5549.86	-	-	-	0.519
316	5547.18	-	-	-	0.520
317	5544.62	-	-	-	0.514
318	5542.09	-	-	-	0.516
319	5539.63	-	-	-	0.511
320	5537.20	-	-	-	0.512
321	5534.78	-	-	-	0.507
322	5532.43	-	-	-	0.509
323	5530.10	-	-	-	0.510
324	5527.77	-	-	-	0.512
325	5525.44	-	-	-	0.514
326	5523.14	-	-	-	0.515
327	5520.83	-	-	-	0.517
328	5518.57	-	-	-	0.519
329	5516.30	-	-	-	0.520
330	5514.04	-	-	-	0.522
331	5511.79	-	-	-	0.523
332	5509.54	-	-	-	0.525
333	5507.34	-	-	-	0.527
334	5505.13	-	-	-	0.529
335	5502.95	-	-	-	0.531
336	5500.76	-	-	-	0.532
337	5498.58	-	-	-	0.534
338	5496.39	-	-	-	0.535
339	5494.21	-	-	-	0.537
340	5492.04	-	-	-	0.538
341	5489.88	-	-	-	0.540
342	5487.72	-	-	-	0.542
343	5485.59	-	-	-	0.543
344	5483.50	-	-	-	0.545
345	5481.45	-	-	-	0.547
346	5479.40	-	-	-	0.549

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m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
347	5477.36	-	-	-	0.550
348	5475.33	-	-	-	0.552
349	5473.30	-	-	-	0.553
350	5471.27	-	-	-	0.555
351	5469.25	-	-	-	0.556
352	5467.22	-	-	-	0.558
353	5465.20	-	-	-	0.560
354	5463.20	-	-	-	0.561
355	5461.20	-	-	-	0.563
356	5459.22	-	-	-	1.476
357	5457.23	-	-	-	0.561
358	5455.26	-	-	-	0.563
359	5453.29	-	-	-	0.557
360	5451.35	-	-	-	0.558
361	5449.42	-	-	-	0.552
362	5447.49	-	-	-	1.477
363	5445.57	-	-	-	0.538
364	5443.66	-	-	-	0.540
365	5441.74	-	-	-	0.541
366	5439.82	-	-	-	0.542
367	5437.91	-	-	-	0.544
368	5436.00	-	-	-	0.545
369	5434.13	-	-	-	0.547
370	5432.26	-	-	-	0.548
371	5430.39	-	-	-	0.549
372	5428.53	-	-	-	0.551
373	5426.67	-	-	-	0.553
374	5424.81	-	-	-	0.553
375	5422.97	-	-	-	0.555
376	5421.12	-	-	-	0.556
377	5419.28	-	-	-	0.558
378	5417.44	-	-	-	0.560
379	5415.61	-	-	-	0.553
380	5413.80	-	-	-	0.554
381	5411.99	-	-	-	0.549
382	5410.22	-	-	-	0.550
383	5408.46	-	-	-	0.544
384	5406.70	-	-	-	0.545
385	5404.97	-	-	-	0.546
386	5403.24	-	-	-	0.548
387	5401.55	-	-	-	0.549
388	5399.86	-	-	-	0.550
389	5398.17	-	-	-	0.543
390	5396.51	-	-	-	0.544
391	5394.85	-	-	-	0.546
392	5393.20	-	-	-	0.547
393	5391.56	-	-	-	0.549
394	5389.95	-	-	-	0.550
395	5388.35	-	-	-	0.552
396	5386.77	-	-	-	0.553
397	5385.19	-	-	-	0.547
398	5383.62	-	-	-	0.548
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m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
399	5382.06	-	-	-	0.532
400	5380.51	-	-	-	0.533
401	5378.96	-	-	-	0.524
402	5377.43	-	-	-	0.525
403	5375.90	-	-	-	0.526
404	5374.36	-	-	-	0.518
405	5372.83	-	-	-	0.512
406	5371.30	-	-	-	0.513
407	5369.77	-	-	-	0.514
408	5368.24	-	-	-	0.516
409	5366.71	-	-	-	0.517
410	5365.19	-	-	-	0.518
411	5363.68	-	-	-	0.520
412	5362.19	-	-	-	0.521
413	5360.70	-	-	-	0.523
414	5359.22	-	-	-	0.523
415	5357.74	-	-	-	0.525
416	5356.28	-	-	-	0.526
417	5354.84	-	-	-	0.527
418	5353.41	-	-	-	0.528
419	5351.98	-	-	-	0.522
420	5350.55	-	-	-	0.523
421	5349.14	-	-	-	0.524
422	5347.73	-	-	-	0.525
423	5346.32	-	-	-	0.520
424	5344.93	-	-	-	0.521
425	5343.55	-	-	-	0.513
426	5342.17	-	-	-	0.509
427	5340.81	-	-	-	0.510
428	5339.48	-	-	-	0.507
429	5338.15	-	-	-	0.507
430	5336.83	-	-	-	0.504
431	5335.53	-	-	-	0.505
432	5334.25	-	-	-	0.501
433	5332.97	-	-	-	0.501
434	5331.69	-	-	-	0.503
435	5330.42	-	-	-	0.504
436	5329.16	-	-	-	0.500
437	5327.91	-	-	-	0.501
438	5326.66	-	-	-	0.502
439	5325.42	-	-	-	0.503
440	5324.18	-	-	-	0.505
441	5322.95	-	-	-	0.506
442	5321.72	-	-	-	0.506
443	5320.49	-	-	-	0.507
444	5319.26	-	-	-	0.509
445	5318.04	-	-	-	0.509
446	5316.81	-	-	-	0.511
447	5315.59	-	-	-	0.512
448	5314.38	-	-	-	0.512
449	5313.17	-	-	-	0.513
450	5311.98	-	-	-	0.515
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Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
451	5310.80	-	-	-	0.516
452	5309.64	-	-	-	0.517
453	5308.48	-	-	-	0.517
454	5307.33	-	-	-	0.519
455	5306.17	-	-	-	0.520
456	5305.02	-	-	-	0.521
457	5303.88	-	-	-	0.522
458	5302.76	-	-	-	0.509
459	5301.66	-	-	-	0.510
460	5300.56	-	-	-	0.506
461	5299.47	-	-	-	0.508
462	5298.39	-	-	-	0.504
463	5297.31	-	-	-	0.504
464	5296.23	-	-	-	0.501
465	5295.15	-	-	-	0.501
466	5294.07	-	-	-	0.497
467	5293.02	-	-	-	0.498
468	5291.96	-	-	-	0.495
469	5290.90	-	-	-	0.495
470	5289.84	-	-	-	0.492
471	5288.79	-	-	-	0.493
472	5287.74	-	-	-	0.489
473	5286.69	-	-	-	0.489
474	5285.64	-	-	-	0.490
475	5284.60	-	-	-	0.491
476	5283.56	-	-	-	0.492
477	5282.53	-	-	-	0.493
478	5281.51	-	-	-	0.494
479	5280.49	-	-	-	0.495
480	5279.48	-	-	-	0.496
481	5278.46	-	-	-	0.497
482	5277.46	-	-	-	0.498
483	5276.46	-	-	-	0.490
484	5275.46	-	-	-	0.491
485	5274.47	-	-	-	0.487
486	5273.49	-	-	-	0.488
487	5272.50	-	-	-	0.484
488	5271.52	-	-	-	0.485
489	5270.55	-	-	-	0.487
490	5269.57	-	-	-	0.487
491	5268.59	-	-	-	0.488
492	5267.62	-	-	-	0.489
493	5266.64	-	-	-	0.490
494	5265.68	-	-	-	0.491
495	5264.74	-	-	-	0.492
496	5263.79	-	-	-	0.493
497	5262.84	-	-	-	0.494
498	5261.91	-	-	-	0.495
499	5260.99	-	-	-	0.495
500	5260.07	-	-	-	0.496
501	5259.16	-	-	-	0.497
502	5258.25	-	-	-	0.498

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Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
503	5257.34	-	-	-	0.499
504	5256.44	-	-	-	0.500
505	5255.53	-	-	-	0.501
506	5254.63	-	-	-	0.502
507	5253.73	-	-	-	0.503
508	5252.83	-	-	-	0.503
509	5251.93	-	-	-	0.505
510	5251.04	-	-	-	0.506
511	5250.15	-	-	-	0.507
512	5249.26	-	-	-	0.508
513	5248.38	-	-	-	0.509
514	5247.50	-	-	-	0.510
515	5246.62	-	-	-	0.511
516	5245.75	-	-	-	0.512
517	5244.87	-	-	-	0.513
518	5244.00	-	-	-	0.514
519	5243.13	-	-	-	0.515
520	5242.27	-	-	-	0.516
521	5241.40	-	-	-	0.517
522	5240.54	-	-	-	0.517
523	5239.68	-	-	-	0.518
524	5238.83	-	-	-	0.520
525	5237.99	-	-	-	0.521
526	5237.16	-	-	-	0.522
527	5236.33	-	-	-	0.523
528	5235.50	-	-	-	0.524
529	5234.69	-	-	-	0.525
530	5233.88	-	-	-	0.525
531	5233.08	-	-	-	0.526
532	5232.29	-	-	-	0.527
533	5231.51	-	-	-	0.528
534	5230.73	-	-	-	0.529
535	5229.95	-	-	-	0.530
536	5229.18	-	-	-	0.531
537	5228.41	-	-	-	0.532
538	5227.64	-	-	-	0.533
539	5226.87	-	-	-	0.534
540	5226.11	-	-	-	0.535
541	5225.35	-	-	-	0.535
542	5224.59	-	-	-	0.536
543	5223.83	-	-	-	0.538
544	5223.07	-	-	-	0.539
545	5222.31	-	-	-	0.540
546	5221.56	-	-	-	0.541
547	5220.81	-	-	-	0.543
548	5220.06	-	-	-	0.543
549	5219.32	-	-	-	0.544
550	5218.59	-	-	-	0.544
551	5217.85	-	-	-	0.545
552	5217.12	-	-	-	0.547
553	5216.39	-	-	-	0.547
554	5215.67	-	-	-	0.548

Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
555	5214.97	-	-	-	0.549
556	5214.27	-	-	-	0.550
557	5213.56	-	-	-	0.551
558	5212.87	-	-	-	0.552
559	5212.17	-	-	-	0.553
560	5211.48	-	-	-	0.555
561	5210.79	-	-	-	0.555
562	5210.11	-	-	-	0.556
563	5209.42	-	-	-	0.558
564	5208.74	-	-	-	0.559
565	5208.06	-	-	-	0.559
566	5207.38	-	-	-	0.560
567	5206.71	-	-	-	0.561
568	5206.05	-	-	-	0.562
569	5205.41	-	-	-	0.563
570	5204.77	-	-	-	0.564
571	5204.12	-	-	-	0.565
572	5203.48	-	-	-	0.566
573	5202.84	-	-	-	0.567
574	5202.20	-	-	-	0.568
575	5201.57	-	-	-	0.569
576	5200.93	-	-	-	0.570
577	5200.30	-	-	-	0.571
578	5199.67	-	-	-	0.572
579	5199.04	-	-	-	0.563
580	5198.41	-	-	-	0.564
581	5197.79	-	-	-	0.559
582	5197.16	-	-	-	0.559
583	5196.54	-	-	-	0.561
584	5195.92	-	-	-	0.561
585	5195.30	-	-	-	0.557
586	5194.68	-	-	-	0.558
587	5194.06	-	-	-	0.555
588	5193.45	-	-	-	0.555
589	5192.84	-	-	-	0.551
590	5192.23	-	-	-	0.552
591	5191.62	-	-	-	0.553
592	5191.02	-	-	-	0.554
593	5190.42	-	-	-	0.555
594	5189.83	-	-	-	0.556
595	5189.24	-	-	-	0.557
596	5188.65	-	-	-	0.558
597	5188.06	-	-	-	0.559
598	5187.47	-	-	-	0.559
599	5186.89	-	-	-	0.560
600	5186.31	-	-	-	0.561
601	5185.73	-	-	-	0.562
602	5185.15	-	-	-	0.563
603	5184.58	-	-	-	0.564
604	5184.00	-	-	-	0.566
605	5183.43	-	-	-	0.567
606	5182.85	-	-	-	0.555

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m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
		Time (sec)			
607	5182.28	-	-	-	0.551
608	5181.71	-	-	-	0.542
609	5181.13	-	-	-	0.539
610	5180.57	-	-	-	0.531
611	5180.00	-	-	-	0.531
612	5179.44	-	-	-	0.532
613	5178.89	-	-	-	0.528
614	5178.33	-	-	-	0.528
615	5177.78	-	-	-	0.525
616	5177.23	-	-	-	0.525
617	5176.68	-	-	-	0.521
618	5176.13	-	-	-	0.522
619	5175.58	-	-	-	0.519
620	5175.04	-	-	-	0.519
621	5174.49	-	-	-	0.516
622	5173.95	-	-	-	0.517
623	5173.41	-	-	-	0.518
624	5172.87	-	-	-	0.520
625	5172.33	-	-	-	0.520
626	5171.80	-	-	-	0.521
627	5171.27	-	-	-	0.522
628	5170.74	-	-	-	0.523
629	5170.22	-	-	-	0.523
630	5169.70	-	-	-	0.524
631	5169.18	-	-	-	0.524
632	5168.67	-	-	-	0.525
633	5168.15	-	-	-	0.526
634	5167.64	-	-	-	0.526
635	5167.13	-	-	-	0.527
636	5166.62	-	-	-	0.528
637	5166.13	-	-	-	0.529
638	5165.63	-	-	-	0.529
639	5165.14	-	-	-	0.530
640	5164.66	-	-	-	0.526
641	5164.18	-	-	-	0.527
642	5163.70	-	-	-	0.528
643	5163.23	-	-	-	0.528
644	5162.75	-	-	-	0.530
645	5162.28	-	-	-	0.530
646	5161.81	-	-	-	0.531
647	5161.34	-	-	-	0.524
648	5160.87	-	-	-	0.525
649	5160.40	-	-	-	0.522
650	5159.94	-	-	-	0.522
651	5159.47	-	-	-	0.519
652	5159.01	-	-	-	0.520
653	5158.55	-	-	-	0.518
654	5158.10	-	-	-	0.519
655	5157.64	-	-	-	0.515
656	5157.19	-	-	-	0.516
657	5156.74	-	-	-	0.517
658	5156.29	-	-	-	0.518
					Continued on next page

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		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
659	5155.84	-	-	-	0.519
660	5155.39	-	-	-	0.519
661	5154.95	-	-	-	0.520
662	5154.51	-	-	-	0.520
663	5154.07	-	-	-	0.521
664	5153.62	-	-	-	0.522
665	5153.18	-	-	-	0.519
666	5152.74	-	-	-	0.520
667	5152.30	-	-	-	0.518
668	5151.87	-	-	-	0.518
669	5151.44	-	-	-	0.516
670	5151.00	-	-	-	0.517
671	5150.57	-	-	-	0.518
672	5150.14	-	-	-	0.519
673	5149.71	-	-	-	0.520
674	5149.29	-	-	-	0.520
675	5148.87	-	-	-	0.521
676	5148.45	-	-	-	0.522
677	5148.03	-	-	-	0.523
678	5147.61	-	-	-	0.523
679	5147.20	-	-	-	0.524
680	5146.79	-	-	-	0.525
681	5146.38	-	-	-	0.525
682	5145.97	-	-	-	0.526
683	5145.56	-	-	-	0.527
684	5145.15	-	-	-	0.528
685	5144.74	-	-	-	0.528
686	5144.33	-	-	-	0.529
687	5143.92	-	-	-	0.530
688	5143.52	-	-	-	0.531
689	5143.11	-	-	-	0.532
690	5142.70	-	-	-	0.532
691	5142.30	-	-	-	0.532
692	5141.89	-	-	-	0.533
693	5141.49	-	-	-	0.534
694	5141.09	-	-	-	0.535
695	5140.68	-	-	-	0.536
696	5140.28	-	-	-	0.536
697	5139.89	-	-	-	0.537
698	5139.49	-	-	-	0.538
699	5139.09	-	-	-	0.538
700	5138.70	-	-	-	0.539
701	5138.31	-	-	-	0.540
702	5137.91	-	-	-	0.541
703	5137.53	-	-	-	0.542
704	5137.14	-	-	-	0.542
705	5136.75	-	-	-	0.544
706	5136.37	-	-	-	0.544
707	5135.99	-	-	-	0.546
708	5135.61	-	-	-	0.546
709	5135.24	-	-	-	0.547
710	5134.86	-	-	-	0.548

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		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
711	5134.49	-	-	-	0.548
712	5134.12	-	-	-	0.549
713	5133.75	-	-	-	0.549
714	5133.38	-	-	-	0.550
715	5133.01	-	-	-	0.551
716	5132.64	-	-	-	0.552
717	5132.28	-	-	-	0.553
718	5131.91	-	-	-	0.553
719	5131.55	-	-	-	0.554
720	5131.18	-	-	-	0.555
721	5130.82	-	-	-	0.556
722	5130.46	-	-	-	0.556
723	5130.10	-	-	-	0.558
724	5129.74	-	-	-	0.558
725	5129.39	-	-	-	0.559
726	5129.03	-	-	-	0.559
727	5128.67	-	-	-	0.561
728	5128.32	-	-	-	0.560
729	5127.98	-	-	-	0.561
730	5127.63	-	-	-	0.562
731	5127.29	-	-	-	0.562
732	5126.94	-	-	-	0.564
733	5126.60	-	-	-	0.564
734	5126.26	-	-	-	0.565
735	5125.92	-	-	-	0.565
736	5125.59	-	-	-	0.566
737	5125.25	-	-	-	0.567
738	5124.92	-	-	-	0.567
739	5124.59	-	-	-	0.568
740	5124.26	-	-	-	0.569
741	5123.93	-	-	-	0.570
742	5123.60	-	-	-	0.572
743	5123.28	-	-	-	0.572
744	5122.95	-	-	-	0.573
745	5122.63	-	-	-	0.573
746	5122.30	-	-	-	0.574
747	5121.98	-	-	-	0.575
748	5121.65	-	-	-	0.575
749	5121.33	-	-	-	0.576
750	5121.01	-	-	-	0.577
751	5120.69	-	-	-	0.578
752	5120.37	-	-	-	0.578
753	5120.04	-	-	-	0.580
754	5119.72	-	-	-	0.580
755	5119.40	-	-	-	0.580
756	5119.09	-	-	-	0.581
757	5118.77	-	-	-	0.581
758	5118.46	-	-	-	0.582
759	5118.14	-	-	-	0.583
760	5117.83	-	-	-	0.583
761	5117.52	-	-	-	0.586
762	5117.21	-	-	-	0.586
				Continued on next page	

Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
763	5116.90	-	-	-	0.587
764	5116.60	-	-	-	0.587
765	5116.30	-	-	-	0.587
766	5116.00	-	-	-	0.588
767	5115.69	-	-	-	0.589
768	5115.39	-	-	-	0.590
769	5115.10	-	-	-	0.590
770	5114.80	-	-	-	0.591
771	5114.50	-	-	-	0.593
772	5114.21	-	-	-	0.593
773	5113.92	-	-	-	0.594
774	5113.62	-	-	-	0.594
775	5113.33	-	-	-	0.595
776	5113.04	-	-	-	0.596
777	5112.76	-	-	-	0.596
778	5112.47	-	-	-	0.597
779	5112.18	-	-	-	0.598
780	5111.89	-	-	-	0.599
781	5111.61	-	-	-	0.600
782	5111.32	-	-	-	0.600
783	5111.04	-	-	-	0.601
784	5110.76	-	-	-	0.601
785	5110.48	-	-	-	0.603
786	5110.20	-	-	-	0.604
787	5109.93	-	-	-	0.604
788	5109.65	-	-	-	0.606
789	5109.38	-	-	-	0.606
790	5109.12	-	-	-	0.607
791	5108.85	-	-	-	0.608
792	5108.58	-	-	-	0.610
793	5108.31	-	-	-	0.609
794	5108.05	-	-	-	0.610
795	5107.78	-	-	-	0.610
796	5107.52	-	-	-	0.611
797	5107.25	-	-	-	0.612
798	5106.99	-	-	-	0.613
799	5106.73	-	-	-	0.614
800	5106.47	-	-	-	0.615
801	5106.21	-	-	-	0.615
802	5105.96	-	-	-	0.616
803	5105.70	-	-	-	0.617
804	5105.44	-	-	-	0.618
805	5105.19	-	-	-	0.619
806	5104.93	-	-	-	0.619
807	5104.68	-	-	-	0.620
808	5104.42	-	-	-	0.621
809	5104.17	-	-	-	0.622
810	5103.92	-	-	-	0.623
811	5103.66	-	-	-	0.623
812	5103.41	-	-	-	0.624
813	5103.17	-	-	-	0.625
814	5102.92	-	-	-	0.626

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m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
815	5102.67	-	-	-	0.626
816	5102.43	-	-	-	0.627
817	5102.18	-	-	-	0.627
818	5101.94	-	-	-	0.629
819	5101.69	-	-	-	0.629
820	5101.45	-	-	-	0.630
821	5101.21	-	-	-	0.630
822	5100.98	-	-	-	0.643
823	5100.74	-	-	-	0.642
824	5100.50	-	-	-	0.643
825	5100.27	-	-	-	0.644
826	5100.03	-	-	-	0.645
827	5099.79	-	-	-	0.645
828	5099.56	-	-	-	0.647
829	5099.33	-	-	-	0.647
830	5099.10	-	-	-	0.650
831	5098.86	-	-	-	0.649
832	5098.63	-	-	-	0.649
833	5098.40	-	-	-	0.650
834	5098.17	-	-	-	0.651
835	5097.94	-	-	-	0.652
836	5097.71	-	-	-	0.652
837	5097.49	-	-	-	0.653
838	5097.26	-	-	-	0.654
839	5097.04	-	-	-	0.655
840	5096.81	-	-	-	0.656
841	5096.59	-	-	-	0.657
842	5096.37	-	-	-	0.657
843	5096.15	-	-	-	0.657
844	5095.93	-	-	-	0.659
845	5095.71	-	-	-	0.660
846	5095.49	-	-	-	0.660
847	5095.27	-	-	-	0.661
848	5095.05	-	-	-	0.662
849	5094.83	-	-	-	0.663
850	5094.62	-	-	-	0.664
851	5094.41	-	-	-	0.664
852	5094.20	-	-	-	0.666
853	5093.99	-	-	-	0.666
854	5093.78	-	-	-	0.666
855	5093.57	-	-	-	0.667
856	5093.36	-	-	-	0.668
857	5093.16	-	-	-	0.668
858	5092.95	-	-	-	0.669
859	5092.75	-	-	-	0.670
860	5092.54	-	-	-	0.671
861	5092.33	-	-	-	0.671
862	5092.13	-	-	-	0.672
863	5091.93	-	-	-	0.673
864	5091.73	-	-	-	0.674
865	5091.52	-	-	-	0.674
866	5091.32	-	-	-	0.675

Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
867	5091.12	-	-	-	0.676
868	5090.92	-	-	-	0.677
869	5090.73	-	-	-	0.678
870	5090.53	-	-	-	0.679
871	5090.33	-	-	-	0.679
872	5090.14	-	-	-	0.680
873	5089.94	-	-	-	0.681
874	5089.75	-	-	-	0.682
875	5089.56	-	-	-	0.683
876	5089.36	-	-	-	0.684
877	5089.17	-	-	-	0.684
878	5088.98	-	-	-	0.685
879	5088.79	-	-	-	0.686
880	5088.60	-	-	-	0.687
881	5088.41	-	-	-	0.688
882	5088.23	-	-	-	0.688
883	5088.04	-	-	-	0.690
884	5087.85	-	-	-	0.689
885	5087.66	-	-	-	0.691
886	5087.48	-	-	-	0.692
887	5087.29	-	-	-	0.692
888	5087.10	-	-	-	0.693
889	5086.92	-	-	-	0.693
890	5086.73	-	-	-	0.695
891	5086.55	-	-	-	0.696
892	5086.36	-	-	-	0.696
893	5086.18	-	-	-	0.697
894	5085.99	-	-	-	0.697
895	5085.81	-	-	-	0.698
896	5085.63	-	-	-	0.699
897	5085.44	-	-	-	0.700
898	5085.26	-	-	-	0.701
899	5085.08	-	-	-	0.701
900	5084.90	-	-	-	0.701
901	5084.72	-	-	-	0.702
902	5084.54	-	-	-	0.703
903	5084.36	-	-	-	0.704
904	5084.18	-	-	-	0.705
905	5084.00	-	-	-	0.706
906	5083.82	-	-	-	0.707
907	5083.64	-	-	-	0.707
908	5083.47	-	-	-	0.707
909	5083.29	-	-	-	0.709
910	5083.12	-	-	-	0.710
911	5082.94	-	-	-	0.710
912	5082.77	-	-	-	0.711
913	5082.59	-	-	-	0.712
914	5082.42	-	-	-	0.713
915	5082.25	-	-	-	0.713
916	5082.08	-	-	-	0.705
917	5081.91	-	-	-	0.704
918	5081.74	-	-	-	0.705
				Continued on next page	

Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
919	5081.57	-	-	-	0.705
920	5081.41	-	-	-	0.706
921	5081.24	-	-	-	0.707
922	5081.07	-	-	-	0.708
923	5080.91	-	-	-	0.709
924	5080.74	-	-	-	0.710
925	5080.57	-	-	-	0.711
926	5080.41	-	-	-	0.711
927	5080.24	-	-	-	0.712
928	5080.08	-	-	-	0.714
929	5079.91	-	-	-	0.714
930	5079.75	-	-	-	0.716
931	5079.59	-	-	-	0.715
932	5079.42	-	-	-	0.716
933	5079.26	-	-	-	0.717
934	5079.10	-	-	-	0.716
935	5078.94	-	-	-	0.718
936	5078.78	-	-	-	0.719
937	5078.61	-	-	-	0.720
938	5078.45	-	-	-	0.720
939	5078.29	-	-	-	0.721
940	5078.13	-	-	-	0.722
941	5077.97	-	-	-	0.723
942	5077.81	-	-	-	0.723
943	5077.65	-	-	-	0.725
944	5077.50	-	-	-	0.725
945	5077.34	-	-	-	0.725
946	5077.18	-	-	-	0.726
947	5077.02	-	-	-	0.728
948	5076.86	-	-	-	0.728
949	5076.71	-	-	-	0.729
950	5076.55	-	-	-	0.730
951	5076.39	-	-	-	0.744
952	5076.24	-	-	-	0.744
953	5076.08	-	-	-	0.745
954	5075.93	-	-	-	0.746
955	5075.77	-	-	-	0.747
956	5075.62	-	-	-	0.748
957	5075.46	-	-	-	0.749
958	5075.31	-	-	-	0.739
959	5075.15	-	-	-	0.738
960	5075.00	-	-	-	0.738
961	5074.85	-	-	-	0.739
962	5074.69	-	-	-	0.740
963	5074.54	-	-	-	0.741
964	5074.39	-	-	-	0.742
965	5074.24	-	-	-	0.743
966	5074.09	-	-	-	0.744
967	5073.94	-	-	-	0.744
968	5073.79	-	-	-	0.745
969	5073.64	-	-	-	0.746
970	5073.49	-	-	-	0.750

Table 13 – continued from previous page - IEEE8500 - n2250

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
971	5073.34	-	-	-	0.747
972	5073.20	-	-	-	0.749
973	5073.05	-	-	-	0.749
974	5072.90	-	-	-	0.750
975	5072.75	-	-	-	0.751
976	5072.61	-	-	-	0.751
977	5072.46	-	-	-	0.752
978	5072.31	-	-	-	0.753
979	5072.16	-	-	-	0.768
980	5072.02	-	-	-	0.767
981	5071.87	-	-	-	0.768
982	5071.73	-	-	-	0.768
983	5071.58	-	-	-	0.769
984	5071.44	-	-	-	0.770
985	5071.29	-	-	-	0.771
986	5071.15	-	-	-	0.772
987	5071.01	-	-	-	0.773
988	5070.87	-	-	-	0.774
989	5070.73	-	-	-	0.775
990	5070.58	-	-	-	0.775
991	5070.44	-	-	-	0.776
992	5070.30	-	-	-	0.776
993	5070.16	-	-	-	0.779
994	5070.02	-	-	-	0.779
995	5069.88	-	-	-	0.779
996	5069.74	-	-	-	0.779
997	5069.60	-	-	-	0.780
998	5069.47	-	-	-	0.782
999	5069.33	-	-	-	0.783
1000	5069.20	-	-	-	0.784
1001	5069.06	-	-	-	0.784
1002	5068.93	-	-	-	0.785
1003	5068.79	-	-	-	0.786
1004	5068.66	-	-	-	0.786
1005	5068.52	-	-	-	0.787
1006	5068.39	-	-	-	0.789
1007	5068.25	-	-	-	0.791
1008	5068.12	-	-	-	0.790
1009	5067.99	-	-	-	0.791
1010	5067.85	-	-	-	0.792
1011	5067.72	-	-	-	0.792
1012	5067.59	-	-	-	0.793
1013	5067.46	-	-	-	0.794
1014	5067.33	-	-	-	0.794
1015	5067.20	-	-	-	0.796
1016	5067.07	-	-	-	0.796
1017	5066.93	-	-	-	0.797
1018	5066.80	-	-	-	0.798
1019	5066.67	-	-	-	0.798
1020	5066.54	-	-	-	0.800
1021	5066.41	-	-	-	0.801
1022	5066.28	-	-	-	0.802
				Continued on next page	

Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
		Time (sec)			
1023	5066.15	-	-	-	0.803
1024	5066.02	-	-	-	0.803
1025	5065.89	-	-	-	0.804
1026	5065.77	-	-	-	0.805
1027	5065.64	-	-	-	0.806
1028	5065.51	-	-	-	0.808
1029	5065.39	-	-	-	0.809
1030	5065.26	-	-	-	0.810
1031	5065.14	-	-	-	0.810
1032	5065.01	-	-	-	0.811
1033	5064.88	-	-	-	0.811
1034	5064.76	-	-	-	0.813
1035	5064.63	-	-	-	0.815
1036	5064.51	-	-	-	0.813
1037	5064.39	-	-	-	0.773
1038	5064.26	-	-	-	0.773
1039	5064.14	-	-	-	0.762
1040	5064.02	-	-	-	0.760
1041	5063.89	-	-	-	0.761
1042	5063.77	-	-	-	0.762
1043	5063.65	-	-	-	0.762
1044	5063.53	-	-	-	0.733
1045	5063.41	-	-	-	0.734
1046	5063.28	-	-	-	0.734
1047	5063.16	-	-	-	0.706
1048	5063.04	-	-	-	0.706
1049	5062.92	-	-	-	0.682
1050	5062.80	-	-	-	0.681
1051	5062.68	-	-	-	0.661
1052	5062.56	-	-	-	0.662
1053	5062.44	-	-	-	0.663
1054	5062.32	-	-	-	0.663
1055	5062.20	-	-	-	0.664
1056	5062.08	-	-	-	0.663
1057	5061.96	-	-	-	0.648
1058	5061.84	-	-	-	0.648
1059	5061.72	-	-	-	0.634
1060	5061.60	-	-	-	0.634
1061	5061.49	-	-	-	0.618
1062	5061.37	-	-	-	0.618
1063	5061.25	-	-	-	0.619
1064	5061.13	-	-	-	0.619
1065	5061.01	-	-	-	0.622
1066	5060.90	-	-	-	0.621
1067	5060.78	-	-	-	0.622
1068	5060.66	-	-	-	0.622
1069	5060.55	-	-	-	0.623
1070	5060.43	-	-	-	0.623
1071	5060.32	-	-	-	0.624
1072	5060.20	-	-	-	0.624
1073	5060.09	-	-	-	0.626
1074	5059.97	-	-	-	0.625

Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
		Time (sec)			
1075	5059.86	-	-	-	0.626
1076	5059.74	-	-	-	0.626
1077	5059.63	-	-	-	0.610
1078	5059.51	-	-	-	0.610
1079	5059.40	-	-	-	0.611
1080	5059.28	-	-	-	0.611
1081	5059.17	-	-	-	0.612
1082	5059.06	-	-	-	0.598
1083	5058.95	-	-	-	0.598
1084	5058.83	-	-	-	0.580
1085	5058.72	-	-	-	0.580
1086	5058.61	-	-	-	0.581
1087	5058.50	-	-	-	0.581
1088	5058.38	-	-	-	0.582
1089	5058.27	-	-	-	0.582
1090	5058.16	-	-	-	0.583
1091	5058.05	-	-	-	0.583
1092	5057.94	-	-	-	0.584
1093	5057.83	-	-	-	0.584
1094	5057.72	-	-	-	0.584
1095	5057.61	-	-	-	0.586
1096	5057.50	-	-	-	0.586
1097	5057.39	-	-	-	0.586
1098	5057.28	-	-	-	0.587
1099	5057.18	-	-	-	0.588
1100	5057.07	-	-	-	0.588
1101	5056.96	-	-	-	0.588
1102	5056.85	-	-	-	0.589
1103	5056.75	-	-	-	0.590
1104	5056.64	-	-	-	0.590
1105	5056.54	-	-	-	0.590
1106	5056.43	-	-	-	0.591
1107	5056.33	-	-	-	0.591
1108	5056.22	-	-	-	0.603
1109	5056.12	-	-	-	0.603
1110	5056.01	-	-	-	0.604
1111	5055.91	-	-	-	0.604
1112	5055.81	-	-	-	0.604
1113	5055.71	-	-	-	0.605
1114	5055.60	-	-	-	0.606
1115	5055.50	-	-	-	0.607
1116	5055.40	-	-	-	0.607
1117	5055.30	-	-	-	0.607
1118	5055.19	-	-	-	0.608
1119	5055.09	-	-	-	0.608
1120	5054.99	-	-	-	0.609
1121	5054.89	-	-	-	0.609
1122	5054.79	-	-	-	0.610
1123	5054.69	-	-	-	0.611
1124	5054.59	-	-	-	0.611
1125	5054.49	-	-	-	0.612
1126	5054.39	-	-	-	0.604

Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
1127	5054.29	-	-	-	0.603
1128	5054.19	-	-	-	0.604
1129	5054.09	-	-	-	0.605
1130	5053.99	-	-	-	0.605
1131	5053.89	-	-	-	0.606
1132	5053.79	-	-	-	0.606
1133	5053.70	-	-	-	0.606
1134	5053.60	-	-	-	0.608
1135	5053.50	-	-	-	0.608
1136	5053.40	-	-	-	0.612
1137	5053.31	-	-	-	0.609
1138	5053.21	-	-	-	0.610
1139	5053.11	-	-	-	0.610
1140	5053.02	-	-	-	0.611
1141	5052.92	-	-	-	0.611
1142	5052.82	-	-	-	0.612
1143	5052.73	-	-	-	0.613
1144	5052.63	-	-	-	0.613
1145	5052.54	-	-	-	0.614
1146	5052.44	-	-	-	0.614
1147	5052.35	-	-	-	0.614
1148	5052.25	-	-	-	0.615
1149	5052.16	-	-	-	0.615
1150	5052.06	-	-	-	0.615
1151	5051.97	-	-	-	0.617
1152	5051.88	-	-	-	0.629
1153	5051.78	-	-	-	0.626
1154	5051.69	-	-	-	0.627
1155	5051.60	-	-	-	0.627
1156	5051.50	-	-	-	0.628
1157	5051.41	-	-	-	0.630
1158	5051.32	-	-	-	0.631
1159	5051.22	-	-	-	0.631
1160	5051.13	-	-	-	0.631
1161	5051.04	-	-	-	0.632
1162	5050.95	-	-	-	0.633
1163	5050.86	-	-	-	0.634
1164	5050.77	-	-	-	0.634
1165	5050.68	-	-	-	0.634
1166	5050.59	-	-	-	0.635
1167	5050.50	-	-	-	0.636
1168	5050.41	-	-	-	0.636
1169	5050.32	-	-	-	0.637
1170	5050.23	-	-	-	0.637
1171	5050.14	-	-	-	0.638
1172	5050.05	-	-	-	0.639
1173	5049.97	-	-	-	0.638
1174	5049.88	-	-	-	0.639
1175	5049.79	-	-	-	0.640
1176	5049.70	-	-	-	0.641
1177	5049.61	-	-	-	0.641
1178	5049.52	-	-	-	0.641

Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
1179	5049.44	-	-	-	0.642
1180	5049.35	-	-	-	0.643
1181	5049.26	-	-	-	0.644
1182	5049.17	-	-	-	0.644
1183	5049.09	-	-	-	0.644
1184	5049.00	-	-	-	0.645
1185	5048.91	-	-	-	0.645
1186	5048.83	-	-	-	0.627
1187	5048.74	-	-	-	0.627
1188	5048.66	-	-	-	0.613
1189	5048.57	-	-	-	0.612
1190	5048.48	-	-	-	0.595
1191	5048.40	-	-	-	0.595
1192	5048.31	-	-	-	0.579
1193	5048.23	-	-	-	0.579
1194	5048.14	-	-	-	0.579
1195	5048.06	-	-	-	0.578
1196	5047.97	-	-	-	0.563
1197	5047.89	-	-	-	0.563
1198	5047.81	-	-	-	0.545
1199	5047.72	-	-	-	0.546
1200	5047.64	-	-	-	0.545
1201	5047.55	-	-	-	0.546
1202	5047.47	-	-	-	0.531
1203	5047.39	-	-	-	0.531
1204	5047.30	-	-	-	0.531
1205	5047.22	-	-	-	0.532
1206	5047.14	-	-	-	0.532
1207	5047.06	-	-	-	0.532
1208	5046.98	-	-	-	0.517
1209	5046.90	-	-	-	0.518
1210	5046.82	-	-	-	0.518
1211	5046.74	-	-	-	0.517
1212	5046.66	-	-	-	0.518
1213	5046.58	-	-	-	0.518
1214	5046.49	-	-	-	0.504
1215	5046.42	-	-	-	0.504
1216	5046.34	-	-	-	0.491
1217	5046.26	-	-	-	0.491
1218	5046.18	-	-	-	0.492
1219	5046.10	-	-	-	0.491
1220	5046.02	-	-	-	0.478
1221	5045.94	-	-	-	0.472
1222	5045.87	-	-	-	0.471
1223	5045.79	-	-	-	0.472
1224	5045.71	-	-	-	0.472
1225	5045.63	-	-	-	0.472
1226	5045.56	-	-	-	0.473
1227	5045.48	-	-	-	0.473
1228	5045.40	-	-	-	0.472
1229	5045.32	-	-	-	0.473
1230	5045.25	-	-	-	0.473

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Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	Time (sec)			
		ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
1231	5045.17	-	-	-	0.474
1232	5045.09	-	-	-	0.476
1233	5045.02	-	-	-	0.474
1234	5044.94	-	-	-	0.461
1235	5044.87	-	-	-	0.461
1236	5044.79	-	-	-	0.448
1237	5044.71	-	-	-	0.449
1238	5044.64	-	-	-	0.435
1239	5044.56	-	-	-	0.434
1240	5044.49	-	-	-	0.422
1241	5044.41	-	-	-	0.422
1242	5044.34	-	-	-	0.405
1243	5044.26	-	-	-	0.406
1244	5044.19	-	-	-	0.406
1245	5044.11	-	-	-	0.407
1246	5044.04	-	-	-	0.406
1247	5043.96	-	-	-	0.407
1248	5043.89	-	-	-	0.407
1249	5043.81	-	-	-	0.408
1250	5043.74	-	-	-	0.408
1251	5043.66	-	-	-	0.408
1252	5043.59	-	-	-	0.408
1253	5043.52	-	-	-	0.408
1254	5043.44	-	-	-	0.409
1255	5043.37	-	-	-	0.409
1256	5043.30	-	-	-	0.409
1257	5043.22	-	-	-	0.410
1258	5043.15	-	-	-	0.410
1259	5043.08	-	-	-	0.410
1260	5043.00	-	-	-	0.411
1261	5042.93	-	-	-	0.411
1262	5042.86	-	-	-	0.411
1263	5042.79	-	-	-	0.411
1264	5042.72	-	-	-	0.411
1265	5042.64	-	-	-	0.398
1266	5042.57	-	-	-	0.397
1267	5042.50	-	-	-	0.387
1268	5042.43	-	-	-	0.385
1269	5042.36	-	-	-	0.371
1270	5042.29	-	-	-	0.371
1271	5042.22	-	-	-	0.371
1272	5042.15	-	-	-	0.371
1273	5042.08	-	-	-	0.357
1274	5042.01	-	-	-	0.357
1275	5041.94	-	-	-	0.342
1276	5041.87	-	-	-	0.343
1277	5041.80	-	-	-	0.343
1278	5041.73	-	-	-	0.342
1279	5041.66	-	-	-	0.330
1280	5041.59	-	-	-	0.330
1281	5041.52	-	-	-	0.318
1282	5041.45	-	-	-	0.318

Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
1283	5041.38	-	-	-	0.307
1284	5041.31	-	-	-	0.306
1285	5041.24	-	-	-	0.296
1286	5041.18	-	-	-	0.295
1287	5041.11	-	-	-	0.285
1288	5041.04	-	-	-	0.285
1289	5040.98	-	-	-	0.274
1290	5040.91	-	-	-	0.275
1291	5040.84	-	-	-	0.274
1292	5040.78	-	-	-	0.275
1293	5040.71	-	-	-	0.275
1294	5040.64	-	-	-	0.275
1295	5040.58	-	-	-	0.275
1296	5040.51	-	-	-	0.275
1297	5040.45	-	-	-	0.275
1298	5040.38	-	-	-	0.275
1299	5040.31	-	-	-	0.276
1300	5040.25	-	-	-	0.276
1301	5040.18	-	-	-	0.277
1302	5040.12	-	-	-	0.277
1303	5040.05	-	-	-	0.277
1304	5039.99	-	-	-	0.277
1305	5039.92	-	-	-	0.277
1306	5039.86	-	-	-	0.277
1307	5039.79	-	-	-	0.278
1308	5039.73	-	-	-	0.278
1309	5039.66	-	-	-	0.278
1310	5039.60	-	-	-	0.278
1311	5039.54	-	-	-	0.278
1312	5039.47	-	-	-	0.278
1313	5039.41	-	-	-	0.279
1314	5039.34	-	-	-	0.279
1315	5039.28	-	-	-	0.279
1316	5039.21	-	-	-	0.285
1317	5039.15	-	-	-	0.284
1318	5039.09	-	-	-	0.284
1319	5039.02	-	-	-	0.284
1320	5038.96	-	-	-	0.285
1321	5038.90	-	-	-	0.285
1322	5038.83	-	-	-	0.285
1323	5038.77	-	-	-	0.285
1324	5038.71	-	-	-	0.285
1325	5038.65	-	-	-	0.285
1326	5038.58	-	-	-	0.286
1327	5038.52	-	-	-	0.286
1328	5038.46	-	-	-	0.286
1329	5038.40	-	-	-	0.286
1330	5038.34	-	-	-	0.286
1331	5038.28	-	-	-	0.287
1332	5038.22	-	-	-	0.287
1333	5038.16	-	-	-	0.286
1334	5038.10	-	-	-	0.287
				Continued on next page	

Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
1335	5038.04	-	-	-	0.287
1336	5037.98	-	-	-	0.287
1337	5037.92	-	-	-	0.288
1338	5037.86	-	-	-	0.288
1339	5037.80	-	-	-	0.288
1340	5037.74	-	-	-	0.288
1341	5037.68	-	-	-	0.288
1342	5037.62	-	-	-	0.288
1343	5037.56	-	-	-	0.288
1344	5037.50	-	-	-	0.289
1345	5037.45	-	-	-	0.289
1346	5037.39	-	-	-	0.289
1347	5037.33	-	-	-	0.289
1348	5037.27	-	-	-	0.290
1349	5037.21	-	-	-	0.290
1350	5037.16	-	-	-	0.289
1351	5037.10	-	-	-	0.270
1352	5037.04	-	-	-	0.270
1353	5036.98	-	-	-	0.256
1354	5036.93	-	-	-	0.256
1355	5036.87	-	-	-	0.256
1356	5036.81	-	-	-	0.256
1357	5036.75	-	-	-	0.256
1358	5036.70	-	-	-	0.257
1359	5036.64	-	-	-	0.257
1360	5036.58	-	-	-	0.257
1361	5036.53	-	-	-	0.245
1362	5036.47	-	-	-	0.245
1363	5036.41	-	-	-	0.245
1364	5036.36	-	-	-	0.246
1365	5036.30	-	-	-	0.246
1366	5036.25	-	-	-	0.246
1367	5036.19	-	-	-	0.246
1368	5036.14	-	-	-	0.245
1369	5036.08	-	-	-	0.235
1370	5036.03	-	-	-	0.235
1371	5035.97	-	-	-	0.235
1372	5035.92	-	-	-	0.235
1373	5035.86	-	-	-	0.235
1374	5035.81	-	-	-	0.235
1375	5035.76	-	-	-	0.226
1376	5035.70	-	-	-	0.226
1377	5035.65	-	-	-	0.213
1378	5035.59	-	-	-	0.214
1379	5035.54	-	-	-	0.214
1380	5035.49	-	-	-	0.214
1381	5035.43	-	-	-	0.214
1382	5035.38	-	-	-	0.214
1383	5035.33	-	-	-	0.202
1384	5035.27	-	-	-	0.202
1385	5035.22	-	-	-	0.191
1386	5035.17	-	-	-	0.191

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Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
1387	5035.12	-	-	-	0.191
1388	5035.06	-	-	-	0.191
1389	5035.01	-	-	-	0.191
1390	5034.96	-	-	-	0.191
1391	5034.91	-	-	-	0.191
1392	5034.85	-	-	-	0.191
1393	5034.80	-	-	-	0.181
1394	5034.75	-	-	-	0.180
1395	5034.70	-	-	-	0.171
1396	5034.65	-	-	-	0.171
1397	5034.60	-	-	-	0.171
1398	5034.54	-	-	-	0.171
1399	5034.49	-	-	-	0.171
1400	5034.44	-	-	-	0.171
1401	5034.39	-	-	-	0.161
1402	5034.34	-	-	-	0.160
1403	5034.29	-	-	-	0.153
1404	5034.24	-	-	-	0.153
1405	5034.19	-	-	-	0.144
1406	5034.14	-	-	-	0.144
1407	5034.09	-	-	-	0.144
1408	5034.04	-	-	-	0.144
1409	5033.99	-	-	-	0.145
1410	5033.94	-	-	-	0.144
1411	5033.89	-	-	-	0.137
1412	5033.84	-	-	-	0.136
1413	5033.79	-	-	-	0.129
1414	5033.74	-	-	-	0.129
1415	5033.69	-	-	-	0.121
1416	5033.64	-	-	-	0.122
1417	5033.59	-	-	-	0.122
1418	5033.55	-	-	-	0.121
1419	5033.50	-	-	-	0.114
1420	5033.45	-	-	-	0.114
1421	5033.40	-	-	-	0.108
1422	5033.35	-	-	-	0.107
1423	5033.30	-	-	-	0.100
1424	5033.26	-	-	-	0.100
1425	5033.21	-	-	-	0.093
1426	5033.16	-	-	-	0.093
1427	5033.11	-	-	-	0.093
1428	5033.06	-	-	-	0.093
1429	5033.02	-	-	-	0.093
1430	5032.97	-	-	-	0.093
1431	5032.92	-	-	-	0.093
1432	5032.87	-	-	-	0.093
1433	5032.83	-	-	-	0.093
1434	5032.78	-	-	-	0.094
1435	5032.73	-	-	-	0.094
1436	5032.68	-	-	-	0.094
1437	5032.64	-	-	-	0.094
1438	5032.59	-	-	-	0.094
				Continued on next page	

Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
1439	5032.54	-	-	-	0.094
1440	5032.50	-	-	-	0.094
1441	5032.45	-	-	-	0.094
1442	5032.40	-	-	-	0.094
1443	5032.36	-	-	-	0.094
1444	5032.31	-	-	-	0.094
1445	5032.26	-	-	-	0.094
1446	5032.22	-	-	-	0.094
1447	5032.17	-	-	-	0.094
1448	5032.12	-	-	-	0.094
1449	5032.08	-	-	-	0.094
1450	5032.03	-	-	-	0.094
1451	5031.99	-	-	-	0.094
1452	5031.94	-	-	-	0.094
1453	5031.89	-	-	-	0.095
1454	5031.85	-	-	-	0.094
1455	5031.80	-	-	-	0.094
1456	5031.76	-	-	-	0.095
1457	5031.71	-	-	-	0.095
1458	5031.67	-	-	-	0.095
1459	5031.62	-	-	-	0.095
1460	5031.58	-	-	-	0.095
1461	5031.53	-	-	-	0.095
1462	5031.49	-	-	-	0.095
1463	5031.44	-	-	-	0.095
1464	5031.40	-	-	-	0.095
1465	5031.36	-	-	-	0.095
1466	5031.31	-	-	-	0.096
1467	5031.27	-	-	-	0.095
1468	5031.22	-	-	-	0.095
1469	5031.18	-	-	-	0.096
1470	5031.13	-	-	-	0.095
1471	5031.09	-	-	-	0.095
1472	5031.05	-	-	-	0.096
1473	5031.00	-	-	-	0.096
1474	5030.96	-	-	-	0.096
1475	5030.91	-	-	-	0.096
1476	5030.87	-	-	-	0.096
1477	5030.83	-	-	-	0.096
1478	5030.78	-	-	-	0.096
1479	5030.74	-	-	-	0.096
1480	5030.69	-	-	-	0.096
1481	5030.65	-	-	-	0.096
1482	5030.61	-	-	-	0.096
1483	5030.56	-	-	-	0.096
1484	5030.52	-	-	-	0.096
1485	5030.48	-	-	-	0.096
1486	5030.43	-	-	-	0.096
1487	5030.39	-	-	-	0.096
1488	5030.35	-	-	-	0.097
1489	5030.31	-	-	-	0.097
1490	5030.26	-	-	-	0.097

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		Time (sec)			
m	best ENS	**ILP-GALIAS**	**MILP-IFLOWS**	**DP-TS**	**DP-N2M2**
1491	5030.22	-	-	-	0.097
1492	5030.18	-	-	-	0.097
1493	5030.14	-	-	-	0.097
1494	5030.09	-	-	-	0.097
1495	5030.05	-	-	-	0.097
1496	5030.01	-	-	-	0.097
1497	5029.97	-	-	-	0.097
1498	5029.93	-	-	-	0.097
1499	5029.88	-	-	-	0.097
1500	5029.84	-	-	-	0.097
1501	5029.80	-	-	-	0.097
1502	5029.76	-	-	-	0.097
1503	5029.72	-	-	-	0.097
1504	5029.68	-	-	-	0.097
1505	5029.63	-	-	-	0.097
1506	5029.59	-	-	-	0.097
1507	5029.55	-	-	-	0.097
1508	5029.51	-	-	-	0.097
1509	5029.47	-	-	-	0.098
1510	5029.43	-	-	-	0.098
1511	5029.39	-	-	-	0.098
1512	5029.35	-	-	-	0.098
1513	5029.31	-	-	-	0.098
1514	5029.26	-	-	-	0.098
1515	5029.22	-	-	-	0.098
1516	5029.18	-	-	-	0.098
1517	5029.14	-	-	-	0.098
1518	5029.10	-	-	-	0.098
1519	5029.06	-	-	-	0.098
1520	5029.02	-	-	-	0.098
1521	5028.98	-	-	-	0.098
1522	5028.94	-	-	-	0.098
1523	5028.90	-	-	-	0.098
1524	5028.86	-	-	-	0.098
1525	5028.82	-	-	-	0.098
1526	5028.78	-	-	-	0.099
1527	5028.74	-	-	-	0.099
1528	5028.71	-	-	-	0.099
1529	5028.67	-	-	-	0.099
1530	5028.63	-	-	-	0.099
1531	5028.59	-	-	-	0.099
1532	5028.55	-	-	-	0.099
1533	5028.51	-	-	-	0.099
1534	5028.47	-	-	-	0.099
1535	5028.43	-	-	-	0.099
1536	5028.39	-	-	-	0.099
1537	5028.36	-	-	-	0.099
1538	5028.32	-	-	-	0.099
1539	5028.28	-	-	-	0.099
1540	5028.24	-	-	-	0.099
1541	5028.20	-	-	-	0.099
1542	5028.17	-	-	-	0.100

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m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
1543	5028.13	-	-	-	0.099
1544	5028.09	-	-	-	0.100
1545	5028.05	-	-	-	0.100
1546	5028.02	-	-	-	0.100
1547	5027.98	-	-	-	0.100
1548	5027.94	-	-	-	0.100
1549	5027.90	-	-	-	0.100
1550	5027.87	-	-	-	0.100
1551	5027.83	-	-	-	0.100
1552	5027.79	-	-	-	0.100
1553	5027.76	-	-	-	0.099
1554	5027.72	-	-	-	0.099
1555	5027.68	-	-	-	0.099
1556	5027.65	-	-	-	0.099
1557	5027.61	-	-	-	0.099
1558	5027.57	-	-	-	0.099
1559	5027.54	-	-	-	0.099
1560	5027.50	-	-	-	0.099
1561	5027.47	-	-	-	0.099
1562	5027.43	-	-	-	0.099
1563	5027.39	-	-	-	0.099
1564	5027.36	-	-	-	0.099
1565	5027.32	-	-	-	0.099
1566	5027.29	-	-	-	0.099
1567	5027.25	-	-	-	0.099
1568	5027.22	-	-	-	0.099
1569	5027.18	-	-	-	0.099
1570	5027.15	-	-	-	0.099
1571	5027.11	-	-	-	0.099
1572	5027.08	-	-	-	0.099
1573	5027.04	-	-	-	0.100
1574	5027.01	-	-	-	0.100
1575	5026.97	-	-	-	0.099
1576	5026.94	-	-	-	0.100
1577	5026.90	-	-	-	0.100
1578	5026.87	-	-	-	0.100
1579	5026.83	-	-	-	0.100
1580	5026.80	-	-	-	0.100
1581	5026.76	-	-	-	0.100
1582	5026.73	-	-	-	0.100
1583	5026.69	-	-	-	0.100
1584	5026.66	-	-	-	0.100
1585	5026.62	-	-	-	0.100
1586	5026.59	-	-	-	0.100
1587	5026.55	-	-	-	0.101
1588	5026.52	-	-	-	0.101
1589	5026.49	-	-	-	0.101
1590	5026.45	-	-	-	0.101
1591	5026.42	-	-	-	0.101
1592	5026.38	-	-	-	0.101
1593	5026.35	-	-	-	0.101
1594	5026.32	-	-	-	0.101

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Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
1595	5026.28	-	-	-	0.101
1596	5026.25	-	-	-	0.103
1597	5026.21	-	-	-	0.103
1598	5026.18	-	-	-	0.103
1599	5026.15	-	-	-	0.103
1600	5026.11	-	-	-	0.103
1601	5026.08	-	-	-	0.103
1602	5026.04	-	-	-	0.103
1603	5026.01	-	-	-	0.103
1604	5025.98	-	-	-	0.103
1605	5025.94	-	-	-	0.103
1606	5025.91	-	-	-	0.103
1607	5025.88	-	-	-	0.103
1608	5025.85	-	-	-	0.103
1609	5025.81	-	-	-	0.103
1610	5025.78	-	-	-	0.103
1611	5025.75	-	-	-	0.104
1612	5025.71	-	-	-	0.104
1613	5025.68	-	-	-	0.104
1614	5025.65	-	-	-	0.103
1615	5025.62	-	-	-	0.104
1616	5025.59	-	-	-	0.104
1617	5025.55	-	-	-	0.104
1618	5025.52	-	-	-	0.104
1619	5025.49	-	-	-	0.104
1620	5025.46	-	-	-	0.104
1621	5025.43	-	-	-	0.104
1622	5025.40	-	-	-	0.104
1623	5025.36	-	-	-	0.104
1624	5025.33	-	-	-	0.104
1625	5025.30	-	-	-	0.104
1626	5025.27	-	-	-	0.104
1627	5025.24	-	-	-	0.104
1628	5025.21	-	-	-	0.104
1629	5025.18	-	-	-	0.105
1630	5025.15	-	-	-	0.104
1631	5025.12	-	-	-	0.104
1632	5025.08	-	-	-	0.104
1633	5025.05	-	-	-	0.105
1634	5025.02	-	-	-	0.104
1635	5024.99	-	-	-	0.104
1636	5024.96	-	-	-	0.105
1637	5024.93	-	-	-	0.104
1638	5024.90	-	-	-	0.103
1639	5024.87	-	-	-	0.103
1640	5024.84	-	-	-	0.103
1641	5024.81	-	-	-	0.103
1642	5024.78	-	-	-	0.103
1643	5024.75	-	-	-	0.103
1644	5024.72	-	-	-	0.103
1645	5024.69	-	-	-	0.104
1646	5024.66	-	-	-	0.104

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Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
1647	5024.63	-	-	-	0.104
1648	5024.60	-	-	-	0.104
1649	5024.57	-	-	-	0.104
1650	5024.54	-	-	-	0.104
1651	5024.51	-	-	-	0.104
1652	5024.48	-	-	-	0.104
1653	5024.45	-	-	-	0.104
1654	5024.42	-	-	-	0.104
1655	5024.39	-	-	-	0.104
1656	5024.36	-	-	-	0.104
1657	5024.33	-	-	-	0.104
1658	5024.30	-	-	-	0.104
1659	5024.27	-	-	-	0.104
1660	5024.24	-	-	-	0.104
1661	5024.21	-	-	-	0.104
1662	5024.18	-	-	-	0.104
1663	5024.15	-	-	-	0.105
1664	5024.12	-	-	-	0.104
1665	5024.09	-	-	-	0.105
1666	5024.06	-	-	-	0.105
1667	5024.04	-	-	-	0.105
1668	5024.01	-	-	-	0.105
1669	5023.98	-	-	-	0.105
1670	5023.95	-	-	-	0.105
1671	5023.92	-	-	-	0.105
1672	5023.89	-	-	-	0.105
1673	5023.86	-	-	-	0.105
1674	5023.83	-	-	-	0.105
1675	5023.80	-	-	-	0.105
1676	5023.78	-	-	-	0.105
1677	5023.75	-	-	-	0.105
1678	5023.72	-	-	-	0.106
1679	5023.69	-	-	-	0.106
1680	5023.66	-	-	-	0.105
1681	5023.63	-	-	-	0.106
1682	5023.61	-	-	-	0.105
1683	5023.58	-	-	-	0.106
1684	5023.55	-	-	-	0.106
1685	5023.52	-	-	-	0.106
1686	5023.49	-	-	-	0.106
1687	5023.46	-	-	-	0.106
1688	5023.44	-	-	-	0.106
1689	5023.41	-	-	-	0.106
1690	5023.38	-	-	-	0.106
1691	5023.35	-	-	-	0.106
1692	5023.33	-	-	-	0.106
1693	5023.30	-	-	-	0.106
1694	5023.27	-	-	-	0.106
1695	5023.24	-	-	-	0.106
1696	5023.22	-	-	-	0.106
1697	5023.19	-	-	-	0.106
1698	5023.16	-	-	-	0.106

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		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
1699	5023.13	-	-	-	0.106
1700	5023.11	-	-	-	0.106
1701	5023.08	-	-	-	0.107
1702	5023.05	-	-	-	0.107
1703	5023.03	-	-	-	0.107
1704	5023.00	-	-	-	0.106
1705	5022.97	-	-	-	0.107
1706	5022.94	-	-	-	0.107
1707	5022.92	-	-	-	0.107
1708	5022.89	-	-	-	0.107
1709	5022.86	-	-	-	0.107
1710	5022.84	-	-	-	0.107
1711	5022.81	-	-	-	0.107
1712	5022.78	-	-	-	0.107
1713	5022.76	-	-	-	0.107
1714	5022.73	-	-	-	0.107
1715	5022.70	-	-	-	0.107
1716	5022.68	-	-	-	0.107
1717	5022.65	-	-	-	0.107
1718	5022.62	-	-	-	0.108
1719	5022.60	-	-	-	0.108
1720	5022.57	-	-	-	0.108
1721	5022.55	-	-	-	0.108
1722	5022.52	-	-	-	0.108
1723	5022.49	-	-	-	0.108
1724	5022.47	-	-	-	0.108
1725	5022.44	-	-	-	0.107
1726	5022.42	-	-	-	0.108
1727	5022.39	-	-	-	0.108
1728	5022.36	-	-	-	0.108
1729	5022.34	-	-	-	0.108
1730	5022.31	-	-	-	0.108
1731	5022.29	-	-	-	0.108
1732	5022.26	-	-	-	0.108
1733	5022.24	-	-	-	0.108
1734	5022.21	-	-	-	0.108
1735	5022.18	-	-	-	0.108
1736	5022.16	-	-	-	0.108
1737	5022.13	-	-	-	0.108
1738	5022.11	-	-	-	0.108
1739	5022.08	-	-	-	0.109
1740	5022.06	-	-	-	0.108
1741	5022.03	-	-	-	0.108
1742	5022.01	-	-	-	0.109
1743	5021.98	-	-	-	0.109
1744	5021.96	-	-	-	0.109
1745	5021.93	-	-	-	0.109
1746	5021.91	-	-	-	0.109
1747	5021.88	-	-	-	0.109
1748	5021.86	-	-	-	0.109
1749	5021.83	-	-	-	0.109
1750	5021.81	-	-	-	0.109
				Continued on next page	

Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
1751	5021.78	-	-	-	0.109
1752	5021.76	-	-	-	0.109
1753	5021.74	-	-	-	0.109
1754	5021.71	-	-	-	0.109
1755	5021.69	-	-	-	0.109
1756	5021.66	-	-	-	0.109
1757	5021.64	-	-	-	0.109
1758	5021.62	-	-	-	0.109
1759	5021.59	-	-	-	0.110
1760	5021.57	-	-	-	0.109
1761	5021.54	-	-	-	0.110
1762	5021.52	-	-	-	0.110
1763	5021.50	-	-	-	0.110
1764	5021.47	-	-	-	0.110
1765	5021.45	-	-	-	0.110
1766	5021.42	-	-	-	0.110
1767	5021.40	-	-	-	0.110
1768	5021.38	-	-	-	0.110
1769	5021.35	-	-	-	0.110
1770	5021.33	-	-	-	0.110
1771	5021.31	-	-	-	0.110
1772	5021.28	-	-	-	0.110
1773	5021.26	-	-	-	0.110
1774	5021.24	-	-	-	0.110
1775	5021.21	-	-	-	0.110
1776	5021.19	-	-	-	0.110
1777	5021.17	-	-	-	0.110
1778	5021.14	-	-	-	0.110
1779	5021.12	-	-	-	0.110
1780	5021.10	-	-	-	0.111
1781	5021.07	-	-	-	0.111
1782	5021.05	-	-	-	0.111
1783	5021.03	-	-	-	0.111
1784	5021.00	-	-	-	0.111
1785	5020.98	-	-	-	0.111
1786	5020.96	-	-	-	0.111
1787	5020.94	-	-	-	0.111
1788	5020.91	-	-	-	0.111
1789	5020.89	-	-	-	0.111
1790	5020.87	-	-	-	0.111
1791	5020.85	-	-	-	0.111
1792	5020.82	-	-	-	0.111
1793	5020.80	-	-	-	0.111
1794	5020.78	-	-	-	0.111
1795	5020.76	-	-	-	0.111
1796	5020.73	-	-	-	0.111
1797	5020.71	-	-	-	0.112
1798	5020.69	-	-	-	0.111
1799	5020.67	-	-	-	0.111
1800	5020.64	-	-	-	0.112
1801	5020.62	-	-	-	0.112
1802	5020.60	-	-	-	0.112

Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
1803	5020.58	-	-	-	0.112
1804	5020.56	-	-	-	0.112
1805	5020.53	-	-	-	0.112
1806	5020.51	-	-	-	0.112
1807	5020.49	-	-	-	0.112
1808	5020.47	-	-	-	0.112
1809	5020.45	-	-	-	0.112
1810	5020.42	-	-	-	0.112
1811	5020.40	-	-	-	0.112
1812	5020.38	-	-	-	0.112
1813	5020.36	-	-	-	0.112
1814	5020.34	-	-	-	0.113
1815	5020.32	-	-	-	0.112
1816	5020.30	-	-	-	0.113
1817	5020.27	-	-	-	0.113
1818	5020.25	-	-	-	0.113
1819	5020.23	-	-	-	0.113
1820	5020.21	-	-	-	0.113
1821	5020.19	-	-	-	0.113
1822	5020.17	-	-	-	0.113
1823	5020.15	-	-	-	0.113
1824	5020.13	-	-	-	0.113
1825	5020.11	-	-	-	0.113
1826	5020.09	-	-	-	0.113
1827	5020.07	-	-	-	0.113
1828	5020.05	-	-	-	0.113
1829	5020.03	-	-	-	0.113
1830	5020.01	-	-	-	0.113
1831	5019.99	-	-	-	0.114
1832	5019.97	-	-	-	0.113
1833	5019.95	-	-	-	0.113
1834	5019.93	-	-	-	0.114
1835	5019.91	-	-	-	0.113
1836	5019.89	-	-	-	0.114
1837	5019.87	-	-	-	0.114
1838	5019.85	-	-	-	0.114
1839	5019.83	-	-	-	0.114
1840	5019.81	-	-	-	0.114
1841	5019.79	-	-	-	0.114
1842	5019.77	-	-	-	0.114
1843	5019.75	-	-	-	0.114
1844	5019.73	-	-	-	0.114
1845	5019.71	-	-	-	0.114
1846	5019.69	-	-	-	0.114
1847	5019.67	-	-	-	0.114
1848	5019.65	-	-	-	0.114
1849	5019.63	-	-	-	0.114
1850	5019.61	-	-	-	0.114
1851	5019.59	-	-	-	0.115
1852	5019.58	-	-	-	0.114
1853	5019.56	-	-	-	0.115
1854	5019.54	-	-	-	0.114

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Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
		Time (sec)			
1855	5019.52	-	-	-	0.114
1856	5019.50	-	-	-	0.115
1857	5019.48	-	-	-	0.115
1858	5019.46	-	-	-	0.114
1859	5019.44	-	-	-	0.115
1860	5019.42	-	-	-	0.115
1861	5019.41	-	-	-	0.115
1862	5019.39	-	-	-	0.115
1863	5019.37	-	-	-	0.115
1864	5019.35	-	-	-	0.115
1865	5019.33	-	-	-	0.115
1866	5019.31	-	-	-	0.116
1867	5019.29	-	-	-	0.115
1868	5019.28	-	-	-	0.115
1869	5019.26	-	-	-	0.115
1870	5019.24	-	-	-	0.115
1871	5019.22	-	-	-	0.116
1872	5019.21	-	-	-	0.116
1873	5019.19	-	-	-	0.116
1874	5019.17	-	-	-	0.116
1875	5019.15	-	-	-	0.116
1876	5019.14	-	-	-	0.116
1877	5019.12	-	-	-	0.116
1878	5019.10	-	-	-	0.116
1879	5019.08	-	-	-	0.116
1880	5019.07	-	-	-	0.116
1881	5019.05	-	-	-	0.116
1882	5019.03	-	-	-	0.116
1883	5019.01	-	-	-	0.116
1884	5019.00	-	-	-	0.116
1885	5018.98	-	-	-	0.116
1886	5018.96	-	-	-	0.116
1887	5018.95	-	-	-	0.116
1888	5018.93	-	-	-	0.116
1889	5018.91	-	-	-	0.116
1890	5018.90	-	-	-	0.116
1891	5018.88	-	-	-	0.116
1892	5018.86	-	-	-	0.116
1893	5018.85	-	-	-	0.117
1894	5018.83	-	-	-	0.117
1895	5018.81	-	-	-	0.117
1896	5018.80	-	-	-	0.117
1897	5018.78	-	-	-	0.117
1898	5018.76	-	-	-	0.117
1899	5018.75	-	-	-	0.117
1900	5018.73	-	-	-	0.117
1901	5018.71	-	-	-	0.117
1902	5018.70	-	-	-	0.117
1903	5018.68	-	-	-	0.117
1904	5018.67	-	-	-	0.117
1905	5018.65	-	-	-	0.117
1906	5018.63	-	-	-	0.117

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m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
		Time (sec)			
1907	5018.62	-	-	-	0.117
1908	5018.60	-	-	-	0.118
1909	5018.59	-	-	-	0.118
1910	5018.57	-	-	-	0.118
1911	5018.56	-	-	-	0.118
1912	5018.54	-	-	-	0.118
1913	5018.52	-	-	-	0.118
1914	5018.51	-	-	-	0.118
1915	5018.49	-	-	-	0.118
1916	5018.48	-	-	-	0.118
1917	5018.46	-	-	-	0.118
1918	5018.45	-	-	-	0.118
1919	5018.43	-	-	-	0.118
1920	5018.42	-	-	-	0.118
1921	5018.40	-	-	-	0.118
1922	5018.39	-	-	-	0.118
1923	5018.37	-	-	-	0.118
1924	5018.35	-	-	-	0.118
1925	5018.34	-	-	-	0.118
1926	5018.32	-	-	-	0.119
1927	5018.31	-	-	-	0.119
1928	5018.29	-	-	-	0.118
1929	5018.28	-	-	-	0.119
1930	5018.26	-	-	-	0.118
1931	5018.25	-	-	-	0.119
1932	5018.23	-	-	-	0.119
1933	5018.22	-	-	-	0.119
1934	5018.20	-	-	-	0.119
1935	5018.19	-	-	-	0.119
1936	5018.17	-	-	-	0.119
1937	5018.16	-	-	-	0.119
1938	5018.14	-	-	-	0.119
1939	5018.13	-	-	-	0.119
1940	5018.11	-	-	-	0.119
1941	5018.10	-	-	-	0.120
1942	5018.08	-	-	-	0.119
1943	5018.07	-	-	-	0.119
1944	5018.05	-	-	-	0.120
1945	5018.04	-	-	-	0.120
1946	5018.02	-	-	-	0.122
1947	5018.01	-	-	-	0.122
1948	5018.00	-	-	-	0.122
1949	5017.98	-	-	-	0.119
1950	5017.97	-	-	-	0.120
1951	5017.95	-	-	-	0.120
1952	5017.94	-	-	-	0.120
1953	5017.92	-	-	-	0.120
1954	5017.91	-	-	-	0.120
1955	5017.90	-	-	-	0.120
1956	5017.88	-	-	-	0.120
1957	5017.87	-	-	-	0.120
1958	5017.85	-	-	-	0.120

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m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
1959	5017.84	-	-	-	0.120
1960	5017.83	-	-	-	0.120
1961	5017.81	-	-	-	0.120
1962	5017.80	-	-	-	0.121
1963	5017.78	-	-	-	0.121
1964	5017.77	-	-	-	0.120
1965	5017.76	-	-	-	0.121
1966	5017.74	-	-	-	0.121
1967	5017.73	-	-	-	0.121
1968	5017.72	-	-	-	0.121
1969	5017.70	-	-	-	0.121
1970	5017.69	-	-	-	0.121
1971	5017.68	-	-	-	0.121
1972	5017.66	-	-	-	0.121
1973	5017.65	-	-	-	0.121
1974	5017.63	-	-	-	0.121
1975	5017.62	-	-	-	0.121
1976	5017.61	-	-	-	0.121
1977	5017.59	-	-	-	0.121
1978	5017.58	-	-	-	0.122
1979	5017.57	-	-	-	0.121
1980	5017.55	-	-	-	0.121
1981	5017.54	-	-	-	0.121
1982	5017.53	-	-	-	0.121
1983	5017.51	-	-	-	0.121
1984	5017.50	-	-	-	0.122
1985	5017.49	-	-	-	0.122
1986	5017.48	-	-	-	0.122
1987	5017.46	-	-	-	0.122
1988	5017.45	-	-	-	0.122
1989	5017.44	-	-	-	0.122
1990	5017.42	-	-	-	0.122
1991	5017.41	-	-	-	0.122
1992	5017.40	-	-	-	0.122
1993	5017.39	-	-	-	0.122
1994	5017.37	-	-	-	0.122
1995	5017.36	-	-	-	0.122
1996	5017.35	-	-	-	0.122
1997	5017.34	-	-	-	0.122
1998	5017.32	-	-	-	0.123
1999	5017.31	-	-	-	0.122
2000	5017.30	-	-	-	0.123
2001	5017.29	-	-	-	0.123
2002	5017.28	-	-	-	0.123
2003	5017.26	-	-	-	0.123
2004	5017.25	-	-	-	0.123
2005	5017.24	-	-	-	0.123
2006	5017.23	-	-	-	0.123
2007	5017.22	-	-	-	0.123
2008	5017.20	-	-	-	0.123
2009	5017.19	-	-	-	0.123
2010	5017.18	-	-	-	0.123

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m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
2011	5017.17	-	-	-	0.123
2012	5017.16	-	-	-	0.123
2013	5017.15	-	-	-	0.126
2014	5017.13	-	-	-	0.125
2015	5017.12	-	-	-	0.125
2016	5017.11	-	-	-	0.126
2017	5017.10	-	-	-	0.125
2018	5017.09	-	-	-	0.125
2019	5017.08	-	-	-	0.125
2020	5017.07	-	-	-	0.125
2021	5017.06	-	-	-	0.125
2022	5017.05	-	-	-	0.125
2023	5017.03	-	-	-	0.126
2024	5017.02	-	-	-	0.126
2025	5017.01	-	-	-	0.126
2026	5017.00	-	-	-	0.126
2027	5016.99	-	-	-	0.126
2028	5016.98	-	-	-	0.126
2029	5016.97	-	-	-	0.126
2030	5016.96	-	-	-	0.126
2031	5016.95	-	-	-	0.126
2032	5016.94	-	-	-	0.126
2033	5016.93	-	-	-	0.126
2034	5016.92	-	-	-	0.126
2035	5016.91	-	-	-	0.126
2036	5016.90	-	-	-	0.126
2037	5016.89	-	-	-	0.126
2038	5016.88	-	-	-	0.126
2039	5016.87	-	-	-	0.126
2040	5016.86	-	-	-	0.127
2041	5016.85	-	-	-	0.127
2042	5016.84	-	-	-	0.126
2043	5016.83	-	-	-	0.126
2044	5016.82	-	-	-	0.127
2045	5016.81	-	-	-	0.127
2046	5016.80	-	-	-	0.127
2047	5016.79	-	-	-	0.126
2048	5016.78	-	-	-	0.125
2049	5016.77	-	-	-	0.125
2050	5016.76	-	-	-	0.125
2051	5016.75	-	-	-	0.125
2052	5016.74	-	-	-	0.125
2053	5016.73	-	-	-	0.125
2054	5016.72	-	-	-	0.125
2055	5016.71	-	-	-	0.125
2056	5016.70	-	-	-	0.125
2057	5016.69	-	-	-	0.125
2058	5016.68	-	-	-	0.125
2059	5016.67	-	-	-	0.126
2060	5016.66	-	-	-	0.125
2061	5016.65	-	-	-	0.126
2062	5016.64	-	-	-	0.125

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		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
2063	5016.64	-	-	-	0.126
2064	5016.63	-	-	-	0.126
2065	5016.62	-	-	-	0.126
2066	5016.61	-	-	-	0.126
2067	5016.60	-	-	-	0.126
2068	5016.59	-	-	-	0.126
2069	5016.58	-	-	-	0.126
2070	5016.57	-	-	-	0.126
2071	5016.57	-	-	-	0.126
2072	5016.56	-	-	-	0.126
2073	5016.55	-	-	-	0.126
2074	5016.54	-	-	-	0.126
2075	5016.53	-	-	-	0.126
2076	5016.52	-	-	-	0.126
2077	5016.52	-	-	-	0.126
2078	5016.51	-	-	-	0.126
2079	5016.50	-	-	-	0.126
2080	5016.49	-	-	-	0.126
2081	5016.48	-	-	-	0.127
2082	5016.48	-	-	-	0.127
2083	5016.47	-	-	-	0.126
2084	5016.46	-	-	-	0.126
2085	5016.45	-	-	-	0.126
2086	5016.45	-	-	-	0.127
2087	5016.44	-	-	-	0.127
2088	5016.43	-	-	-	0.127
2089	5016.42	-	-	-	0.127
2090	5016.42	-	-	-	0.127
2091	5016.41	-	-	-	0.127
2092	5016.40	-	-	-	0.127
2093	5016.39	-	-	-	0.127
2094	5016.38	-	-	-	0.127
2095	5016.38	-	-	-	0.127
2096	5016.37	-	-	-	0.127
2097	5016.36	-	-	-	0.124
2098	5016.35	-	-	-	0.101
2099	5016.35	-	-	-	0.101
2100	5016.34	-	-	-	0.094
2101	5016.33	-	-	-	0.094
2102	5016.32	-	-	-	0.094
2103	5016.31	-	-	-	0.093
2104	5016.31	-	-	-	0.094
2105	5016.30	-	-	-	0.093
2106	5016.29	-	-	-	0.085
2107	5016.28	-	-	-	0.084
2108	5016.28	-	-	-	0.077
2109	5016.27	-	-	-	0.076
2110	5016.26	-	-	-	0.068
2111	5016.25	-	-	-	0.067
2112	5016.25	-	-	-	0.060
2113	5016.24	-	-	-	0.059
2114	5016.23	-	-	-	0.053

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		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
2115	5016.22	-	-	-	0.052
2116	5016.22	-	-	-	0.045
2117	5016.21	-	-	-	0.045
2118	5016.20	-	-	-	0.045
2119	5016.19	-	-	-	0.045
2120	5016.19	-	-	-	0.045
2121	5016.18	-	-	-	0.045
2122	5016.17	-	-	-	0.045
2123	5016.17	-	-	-	0.045
2124	5016.16	-	-	-	0.045
2125	5016.15	-	-	-	0.045
2126	5016.15	-	-	-	0.045
2127	5016.14	-	-	-	0.044
2128	5016.13	-	-	-	0.038
2129	5016.12	-	-	-	0.037
2130	5016.12	-	-	-	0.033
2131	5016.11	-	-	-	0.032
2132	5016.10	-	-	-	0.028
2133	5016.10	-	-	-	0.028
2134	5016.09	-	-	-	0.027
2135	5016.08	-	-	-	0.028
2136	5016.08	-	-	-	0.028
2137	5016.07	-	-	-	0.027
2138	5016.06	-	-	-	0.028
2139	5016.06	-	-	-	0.027
2140	5016.05	-	-	-	0.028
2141	5016.04	-	-	-	0.028
2142	5016.04	-	-	-	0.028
2143	5016.03	-	-	-	0.027
2144	5016.02	-	-	-	0.022
2145	5016.02	-	-	-	0.022
2146	5016.01	-	-	-	0.022
2147	5016.00	-	-	-	0.022
2148	5016.00	-	-	-	0.022
2149	5015.99	-	-	-	0.022
2150	5015.98	-	-	-	0.022
2151	5015.98	-	-	-	0.022
2152	5015.97	-	-	-	0.022
2153	5015.97	-	-	-	0.022
2154	5015.96	-	-	-	0.022
2155	5015.95	-	-	-	0.022
2156	5015.95	-	-	-	0.022
2157	5015.94	-	-	-	0.022
2158	5015.94	-	-	-	0.022
2159	5015.93	-	-	-	0.022
2160	5015.93	-	-	-	0.022
2161	5015.92	-	-	-	0.022
2162	5015.92	-	-	-	0.022
2163	5015.91	-	-	-	0.022
2164	5015.91	-	-	-	0.022
2165	5015.90	-	-	-	0.022
2166	5015.90	-	-	-	0.022
				Continued on next page	

Table 13 – continued from previous page - IEEE8500 - n2250

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
2167	5015.90	-	-	-	0.023
2168	5015.89	-	-	-	0.022
2169	5015.89	-	-	-	0.022
2170	5015.88	-	-	-	0.023
2171	5015.88	-	-	-	0.022
2172	5015.87	-	-	-	0.023
2173	5015.87	-	-	-	0.022
2174	5015.86	-	-	-	0.018
2175	5015.86	-	-	-	0.017
2176	5015.85	-	-	-	0.014
2177	5015.85	-	-	-	0.013
2178	5015.84	-	-	-	0.011
2179	5015.84	-	-	-	0.010
2180	5015.83	-	-	-	0.008
2181	5015.83	-	-	-	0.008
2182	5015.83	-	-	-	0.008
2183	5015.82	-	-	-	0.008
2184	5015.82	-	-	-	0.008
2185	5015.81	-	-	-	0.008
2186	5015.81	-	-	-	0.008
2187	5015.80	-	-	-	0.007
2188	5015.80	-	-	-	0.005
2189	5015.79	-	-	-	0.005
2190	5015.79	-	-	-	0.005
2191	5015.78	-	-	-	0.005
2192	5015.78	-	-	-	0.005
2193	5015.78	-	-	-	0.005
2194	5015.77	-	-	-	0.005
2195	5015.77	-	-	-	0.005
2196	5015.76	-	-	-	0.005
2197	5015.76	-	-	-	0.005
2198	5015.75	-	-	-	0.005
2199	5015.75	-	-	-	0.005
2200	5015.74	-	-	-	0.005
2201	5015.74	-	-	-	0.005
2202	5015.74	-	-	-	0.005
2203	5015.73	-	-	-	0.005
2204	5015.73	-	-	-	0.005
2205	5015.72	-	-	-	0.005
2206	5015.72	-	-	-	0.005
2207	5015.72	-	-	-	0.005
2208	5015.71	-	-	-	0.005
2209	5015.71	-	-	-	0.005
2210	5015.70	-	-	-	0.005
2211	5015.70	-	-	-	0.005
2212	5015.70	-	-	-	0.005
2213	5015.69	-	-	-	0.005
2214	5015.69	-	-	-	0.005
2215	5015.68	-	-	-	0.005
2216	5015.68	-	-	-	0.005
2217	5015.68	-	-	-	0.005
2218	5015.68	-	-	-	0.005

Table 13 – continued from previous page - IEEE8500 - n2250

m	best ENS	Time (sec)			
		ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
2219	5015.67	-	-	-	0.005
2220	5015.67	-	-	-	0.005
2221	5015.67	-	-	-	0.005
2222	5015.66	-	-	-	0.005
2223	5015.66	-	-	-	0.005
2224	5015.66	-	-	-	0.005
2225	5015.65	-	-	-	0.005
2226	5015.65	-	-	-	0.005
2227	5015.65	-	-	-	0.005
2228	5015.65	-	-	-	0.005
2229	5015.65	-	-	-	0.005
2230	5015.64	-	-	-	0.005
2231	5015.64	-	-	-	0.005
2232	5015.64	-	-	-	0.005
2233	5015.64	-	-	-	0.005
2234	5015.64	-	-	-	0.005
2235	5015.64	-	-	-	0.005
2236	5015.64	-	-	-	0.005
2237	5015.64	-	-	-	0.005
2238	5015.63	-	-	-	0.005
2239	5015.63	-	-	-	0.005
2240	5015.63	-	-	-	0.005
2241	5015.63	-	-	-	0.005
2242	5015.63	-	-	-	0.005
2243	5015.63	-	-	-	0.005
2244	5015.63	-	-	-	0.005
2245	5015.63	-	-	-	0.004
2246	5015.63	-	-	-	0.003
2247	5015.63	-	-	-	0.002
2248	5015.63	-	-	-	0.001
2249	5015.63	-	-	-	0.000
Total		**7204.84**	**8030.86**	**7216.01**	**847.67**

Table 14: ENS optimization - IEEE8500 - n3637.

m	best ENS	Time (sec)			
		ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
0	98575.26	66.624	0.008	0.050	0.000
1	73457.10	617.247	0.255	0.110	0.000
2	51488.30	-	0.154	0.170	0.290
3	42512.25	-	1.170	0.300	0.390
4	36868.90	-	265.239	0.490	0.300
5	33277.31	-	1463.800	0.680	0.400
6	30418.69	-	2965.205	0.920	0.310
7	27921.05	-	-	1.140	0.530
8	26029.92	-	-	1.420	0.370
9	24436.45	-	-	1.770	0.390
10	22985.62	-	-	2.150	0.620
				Continued on next page	

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
11	21774.45	-	-	2.540	0.390
12	20593.68	-	-	2.950	0.410
13	19888.90	-	-	3.380	0.450
14	19205.22	-	-	3.670	0.460
15	18541.18	-	-	4.380	0.480
16	17941.78	-	-	4.750	0.510
17	17366.60	-	-	5.090	0.930
18	16835.76	-	-	5.580	0.540
19	16353.16	-	-	6.130	0.560
20	15941.69	-	-	6.520	0.580
21	15590.82	-	-	6.910	0.600
22	15251.69	-	-	7.390	0.620
23	14928.04	-	-	8.020	0.640
24	14648.64	-	-	8.180	1.100
25	14370.89	-	-	8.610	0.610
26	14106.08	-	-	8.870	0.630
27	13861.71	-	-	9.490	0.650
28	13646.95	-	-	9.740	0.660
29	13440.21	-	-	9.840	0.680
30	13240.02	-	-	9.980	0.690
31	13041.31	-	-	10.300	0.710
32	12847.21	-	-	10.830	0.730
33	12654.12	-	-	11.480	0.740
34	12470.74	-	-	11.780	0.760
35	12310.52	-	-	12.590	0.770
36	12154.57	-	-	13.440	0.790
37	12004.94	-	-	13.510	0.800
38	11858.67	-	-	14.040	0.820
39	11715.22	-	-	14.400	0.830
40	11576.29	-	-	14.400	0.850
41	11437.90	-	-	14.850	0.850
42	11302.62	-	-	15.350	0.860
43	11169.14	-	-	15.840	1.760
44	11035.85	-	-	16.060	0.840
45	10905.70	-	-	16.490	0.850
46	10784.99	-	-	16.950	0.870
47	10672.28	-	-	17.410	0.870
48	10559.89	-	-	17.700	0.890
49	10447.18	-	-	18.180	0.890
50	10335.38	-	-	18.570	0.900
51	10223.88	-	-	18.960	0.910
52	10119.65	-	-	19.550	0.920
53	10018.45	-	-	20.020	0.920
54	9921.11	-	-	20.490	0.930
55	9824.96	-	-	21.070	0.940
56	9728.91	-	-	21.390	0.950
57	9637.52	-	-	21.710	0.960
58	9548.44	-	-	22.360	0.960
59	9463.20	-	-	22.950	0.960
60	9380.78	-	-	23.540	0.980
61	9298.49	-	-	24.080	0.980
62	9225.09	-	-	24.470	0.990
				Continued on next page	

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
63	9142.79	-	-	24.890	0.990
64	9070.27	-	-	25.550	1.000
65	9001.69	-	-	26.040	1.020
66	8934.71	-	-	26.530	1.960
67	8868.52	-	-	27.220	0.950
68	8805.61	-	-	27.700	0.950
69	8746.15	-	-	28.050	0.950
70	8690.20	-	-	28.680	0.950
71	8635.62	-	-	30.370	0.950
72	8581.79	-	-	30.960	0.960
73	8528.27	-	-	31.850	0.950
74	8476.02	-	-	32.240	0.960
75	8424.01	-	-	32.820	0.970
76	8374.03	-	-	33.320	0.970
77	8325.57	-	-	33.770	0.980
78	8278.52	-	-	32.650	0.980
79	8234.04	-	-	33.150	0.990
80	8191.02	-	-	33.580	0.990
81	8148.43	-	-	34.070	0.990
82	8105.97	-	-	34.720	1.000
83	8064.48	-	-	35.190	1.010
84	8023.34	-	-	34.830	1.020
85	7982.48	-	-	35.520	1.030
86	7941.99	-	-	35.830	1.030
87	7901.85	-	-	36.290	1.040
88	7861.74	-	-	36.570	1.050
89	7822.67	-	-	37.070	1.070
90	7784.21	-	-	37.650	1.080
91	7746.42	-	-	38.300	1.080
92	7710.10	-	-	38.680	1.100
93	7674.47	-	-	39.140	1.110
94	7639.58	-	-	39.620	1.110
95	7605.03	-	-	40.060	1.130
96	7570.54	-	-	40.590	1.130
97	7538.13	-	-	40.920	1.150
98	7507.10	-	-	41.150	1.160
99	7478.41	-	-	41.640	1.160
100	7450.47	-	-	41.780	1.180
101	7422.87	-	-	41.830	1.190
102	7395.70	-	-	42.240	1.180
103	7368.61	-	-	42.470	1.200
104	7341.69	-	-	43.440	1.210
105	7315.12	-	-	44.120	1.230
106	7288.75	-	-	44.040	1.240
107	7263.41	-	-	44.160	1.240
108	7238.86	-	-	44.170	1.260
109	7215.88	-	-	44.590	1.270
110	7193.06	-	-	44.770	1.280
111	7170.39	-	-	44.970	1.290
112	7148.10	-	-	45.340	1.310
113	7126.56	-	-	45.770	1.320
114	7105.03	-	-	45.630	1.330

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
115	7083.54	-	-	45.930	1.340
116	7062.07	-	-	46.240	1.350
117	7040.66	-	-	46.720	1.360
118	7019.55	-	-	47.390	1.370
119	6998.79	-	-	47.250	1.380
120	6978.11	-	-	47.240	1.390
121	6957.59	-	-	47.620	1.400
122	6937.50	-	-	47.720	1.410
123	6917.78	-	-	48.420	1.420
124	6898.39	-	-	48.860	1.410
125	6880.91	-	-	49.390	1.420
126	6863.54	-	-	49.630	1.430
127	6846.21	-	-	49.840	1.440
128	6828.89	-	-	49.950	1.450
129	6811.70	-	-	50.390	1.470
130	6795.51	-	-	50.900	1.480
131	6779.34	-	-	51.460	1.490
132	6763.60	-	-	52.120	1.500
133	6747.95	-	-	52.270	1.510
134	6732.82	-	-	53.130	3.450
135	6718.05	-	-	53.670	1.480
136	6703.92	-	-	54.580	1.480
137	6689.84	-	-	55.010	1.490
138	6675.82	-	-	55.660	1.500
139	6661.98	-	-	56.350	1.500
140	6648.41	-	-	56.980	1.510
141	6634.86	-	-	57.100	1.520
142	6621.57	-	-	57.340	1.530
143	6608.33	-	-	57.370	1.540
144	6595.12	-	-	57.470	1.550
145	6582.07	-	-	57.280	1.560
146	6569.08	-	-	58.030	1.570
147	6556.18	-	-	58.020	1.580
148	6543.31	-	-	58.380	1.580
149	6530.54	-	-	58.900	1.590
150	6518.15	-	-	58.990	1.600
151	6506.31	-	-	59.030	1.610
152	6494.57	-	-	59.230	1.620
153	6482.89	-	-	59.110	1.620
154	6471.43	-	-	59.950	1.630
155	6459.98	-	-	59.860	1.640
156	6448.59	-	-	60.200	1.650
157	6437.66	-	-	60.890	1.660
158	6426.77	-	-	61.050	1.680
159	6415.97	-	-	61.350	1.690
160	6405.22	-	-	61.520	1.700
161	6394.66	-	-	61.850	1.710
162	6384.29	-	-	62.350	1.710
163	6374.00	-	-	62.640	1.710
164	6363.76	-	-	63.030	1.720
165	6353.70	-	-	63.930	1.730
166	6343.91	-	-	64.580	1.740

Continued on next page

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-N2M2
			Time (sec)		
167	6334.14	-	-	64.470	1.740
168	6324.58	-	-	64.830	1.740
169	6315.07	-	-	65.230	1.730
170	6305.64	-	-	65.730	1.730
171	6296.22	-	-	65.630	1.720
172	6286.81	-	-	66.170	1.730
173	6277.55	-	-	66.450	1.720
174	6268.31	-	-	67.050	1.720
175	6259.43	-	-	67.290	1.730
176	6250.69	-	-	67.830	1.740
177	6241.98	-	-	68.460	1.740
178	6233.75	-	-	68.950	1.750
179	6225.55	-	-	69.410	1.760
180	6217.34	-	-	69.750	1.760
181	6209.14	-	-	70.580	1.760
182	6200.95	-	-	70.420	1.770
183	6192.87	-	-	70.900	1.780
184	6184.87	-	-	70.480	1.790
185	6176.86	-	-	70.780	1.800
186	6168.92	-	-	71.770	1.810
187	6160.99	-	-	71.660	1.810
188	6153.33	-	-	71.950	1.820
189	6145.68	-	-	72.630	1.820
190	6138.03	-	-	72.300	1.830
191	6130.38	-	-	-	1.840
192	6122.73	-	-	-	1.850
193	6115.09	-	-	-	1.850
194	6107.60	-	-	-	1.860
195	6100.16	-	-	-	1.850
196	6092.87	-	-	-	1.850
197	6085.68	-	-	-	1.860
198	6078.55	-	-	-	1.850
199	6071.42	-	-	-	1.850
200	6064.32	-	-	-	1.860
201	6057.50	-	-	-	1.850
202	6050.70	-	-	-	1.860
203	6043.93	-	-	-	1.850
204	6037.23	-	-	-	1.820
205	6030.60	-	-	-	1.820
206	6023.99	-	-	-	1.830
207	6017.41	-	-	-	1.830
208	6010.89	-	-	-	1.940
209	6004.42	-	-	-	1.840
210	5998.31	-	-	-	1.820
211	5992.26	-	-	-	1.820
212	5986.39	-	-	-	1.830
213	5980.61	-	-	-	1.820
214	5974.83	-	-	-	1.820
215	5969.11	-	-	-	3.920
216	5963.46	-	-	-	1.730
217	5957.82	-	-	-	1.740
218	5952.19	-	-	-	1.730
				Continued on next page	

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
219	5946.56	-	-	-	1.730
220	5940.97	-	-	-	1.720
221	5935.41	-	-	-	1.720
222	5929.85	-	-	-	1.730
223	5924.32	-	-	-	1.740
224	5918.80	-	-	-	1.730
225	5913.33	-	-	-	1.730
226	5908.01	-	-	-	1.740
227	5902.72	-	-	-	1.730
228	5897.44	-	-	-	1.740
229	5892.16	-	-	-	1.750
230	5886.94	-	-	-	1.740
231	5881.72	-	-	-	1.750
232	5876.52	-	-	-	1.750
233	5871.31	-	-	-	1.740
234	5866.10	-	-	-	1.750
235	5860.95	-	-	-	1.760
236	5855.87	-	-	-	1.750
237	5850.78	-	-	-	1.740
238	5845.89	-	-	-	1.740
239	5841.00	-	-	-	1.750
240	5836.16	-	-	-	1.760
241	5831.33	-	-	-	1.750
242	5826.52	-	-	-	1.740
243	5821.74	-	-	-	1.740
244	5817.02	-	-	-	1.730
245	5812.34	-	-	-	1.740
246	5807.70	-	-	-	1.730
247	5803.09	-	-	-	1.730
248	5798.53	-	-	-	1.730
249	5793.92	-	-	-	1.730
250	5789.35	-	-	-	1.730
251	5784.80	-	-	-	1.730
252	5780.25	-	-	-	1.730
253	5775.71	-	-	-	1.730
254	5771.17	-	-	-	1.740
255	5766.63	-	-	-	1.750
256	5762.09	-	-	-	1.740
257	5757.56	-	-	-	1.740
258	5753.02	-	-	-	1.730
259	5748.49	-	-	-	1.740
260	5743.98	-	-	-	1.730
261	5739.44	-	-	-	1.730
262	5734.91	-	-	-	1.720
263	5730.41	-	-	-	1.720
264	5725.99	-	-	-	1.710
265	5721.65	-	-	-	1.710
266	5717.38	-	-	-	1.680
267	5713.11	-	-	-	1.680
268	5708.84	-	-	-	1.670
269	5704.57	-	-	-	1.670
270	5700.34	-	-	-	1.670

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
271	5696.16	-	-	-	1.680
272	5692.03	-	-	-	1.680
273	5687.91	-	-	-	1.680
274	5683.84	-	-	-	1.680
275	5679.90	-	-	-	1.690
276	5675.98	-	-	-	1.680
277	5672.07	-	-	-	1.670
278	5668.17	-	-	-	1.670
279	5664.35	-	-	-	1.680
280	5660.54	-	-	-	1.670
281	5656.74	-	-	-	1.660
282	5653.02	-	-	-	1.670
283	5649.51	-	-	-	1.680
284	5645.87	-	-	-	1.670
285	5642.36	-	-	-	1.670
286	5638.88	-	-	-	1.680
287	5635.41	-	-	-	1.680
288	5631.97	-	-	-	1.670
289	5628.61	-	-	-	1.670
290	5625.28	-	-	-	1.670
291	5621.96	-	-	-	1.670
292	5618.63	-	-	-	1.650
293	5615.32	-	-	-	1.660
294	5611.99	-	-	-	1.640
295	5608.75	-	-	-	1.650
296	5605.56	-	-	-	1.640
297	5602.37	-	-	-	1.650
298	5599.20	-	-	-	1.640
299	5596.06	-	-	-	1.650
300	5592.92	-	-	-	1.660
301	5589.81	-	-	-	1.650
302	5586.75	-	-	-	1.640
303	5583.72	-	-	-	1.640
304	5580.72	-	-	-	1.650
305	5577.77	-	-	-	1.640
306	5574.82	-	-	-	1.640
307	5571.90	-	-	-	1.650
308	5569.07	-	-	-	1.660
309	5566.27	-	-	-	1.670
310	5563.50	-	-	-	1.670
311	5560.74	-	-	-	1.660
312	5557.98	-	-	-	1.670
313	5555.25	-	-	-	1.680
314	5552.54	-	-	-	1.680
315	5549.84	-	-	-	1.690
316	5547.16	-	-	-	1.690
317	5544.59	-	-	-	1.700
318	5542.06	-	-	-	1.700
319	5539.61	-	-	-	1.710
320	5537.18	-	-	-	1.720
321	5534.75	-	-	-	1.720
322	5532.41	-	-	-	1.730

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
323	5530.07	-	-	-	1.730
324	5527.74	-	-	-	1.740
325	5525.42	-	-	-	1.750
326	5523.11	-	-	-	1.750
327	5520.81	-	-	-	1.760
328	5518.54	-	-	-	1.760
329	5516.27	-	-	-	1.770
330	5514.01	-	-	-	1.760
331	5511.76	-	-	-	1.760
332	5509.52	-	-	-	1.770
333	5507.31	-	-	-	1.770
334	5505.10	-	-	-	1.780
335	5502.92	-	-	-	1.770
336	5500.73	-	-	-	1.780
337	5498.55	-	-	-	1.780
338	5496.37	-	-	-	1.790
339	5494.19	-	-	-	1.790
340	5492.01	-	-	-	1.800
341	5489.85	-	-	-	1.800
342	5487.69	-	-	-	1.810
343	5485.56	-	-	-	1.820
344	5483.47	-	-	-	1.820
345	5481.42	-	-	-	1.810
346	5479.37	-	-	-	1.820
347	5477.34	-	-	-	1.800
348	5475.30	-	-	-	1.810
349	5473.28	-	-	-	1.810
350	5471.25	-	-	-	1.820
351	5469.22	-	-	-	1.820
352	5467.20	-	-	-	1.830
353	5465.17	-	-	-	1.840
354	5463.17	-	-	-	1.840
355	5461.18	-	-	-	1.850
356	5459.19	-	-	-	1.850
357	5457.21	-	-	-	1.830
358	5455.23	-	-	-	1.830
359	5453.27	-	-	-	1.820
360	5451.32	-	-	-	1.830
361	5449.39	-	-	-	1.830
362	5447.46	-	-	-	1.830
363	5445.54	-	-	-	1.820
364	5443.63	-	-	-	1.830
365	5441.71	-	-	-	1.840
366	5439.80	-	-	-	1.840
367	5437.89	-	-	-	1.850
368	5435.98	-	-	-	1.850
369	5434.10	-	-	-	1.860
370	5432.23	-	-	-	1.860
371	5430.36	-	-	-	1.870
372	5428.50	-	-	-	1.870
373	5426.64	-	-	-	1.880
374	5424.79	-	-	-	1.890

Continued on next page

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
375	5422.94	-	-	-	1.890
376	5421.10	-	-	-	1.900
377	5419.26	-	-	-	1.900
378	5417.42	-	-	-	1.910
379	5415.58	-	-	-	1.910
380	5413.77	-	-	-	1.920
381	5411.97	-	-	-	1.920
382	5410.19	-	-	-	1.930
383	5408.43	-	-	-	1.940
384	5406.68	-	-	-	1.940
385	5404.94	-	-	-	1.950
386	5403.21	-	-	-	1.950
387	5401.52	-	-	-	1.960
388	5399.83	-	-	-	1.940
389	5398.15	-	-	-	1.940
390	5396.48	-	-	-	1.950
391	5394.83	-	-	-	1.950
392	5393.17	-	-	-	1.960
393	5391.53	-	-	-	1.950
394	5389.92	-	-	-	1.960
395	5388.32	-	-	-	1.950
396	5386.74	-	-	-	1.940
397	5385.16	-	-	-	1.930
398	5383.59	-	-	-	1.920
399	5382.03	-	-	-	1.920
400	5380.48	-	-	-	1.890
401	5378.94	-	-	-	1.890
402	5377.41	-	-	-	1.870
403	5375.87	-	-	-	1.860
404	5374.34	-	-	-	1.840
405	5372.81	-	-	-	1.850
406	5371.27	-	-	-	1.860
407	5369.74	-	-	-	1.820
408	5368.21	-	-	-	1.800
409	5366.69	-	-	-	1.800
410	5365.17	-	-	-	1.810
411	5363.65	-	-	-	1.810
412	5362.16	-	-	-	1.810
413	5360.68	-	-	-	1.810
414	5359.20	-	-	-	1.800
415	5357.72	-	-	-	1.810
416	5356.26	-	-	-	1.800
417	5354.81	-	-	-	1.800
418	5353.38	-	-	-	1.800
419	5351.95	-	-	-	1.800
420	5350.53	-	-	-	1.800
421	5349.11	-	-	-	1.810
422	5347.70	-	-	-	1.810
423	5346.30	-	-	-	1.820
424	5344.91	-	-	-	1.800
425	5343.52	-	-	-	1.810
426	5342.14	-	-	-	1.780
				Continued on next page	

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-N2m2
		Time (sec)			
427	5340.79	-	-	-	1.790
428	5339.45	-	-	-	1.800
429	5338.12	-	-	-	1.800
430	5336.81	-	-	-	1.800
431	5335.51	-	-	-	1.810
432	5334.22	-	-	-	1.810
433	5332.94	-	-	-	1.820
434	5331.67	-	-	-	1.790
435	5330.39	-	-	-	1.800
436	5329.13	-	-	-	1.800
437	5327.88	-	-	-	1.810
438	5326.64	-	-	-	1.810
439	5325.40	-	-	-	1.790
440	5324.16	-	-	-	1.800
441	5322.93	-	-	-	1.800
442	5321.69	-	-	-	1.800
443	5320.46	-	-	-	1.810
444	5319.23	-	-	-	1.810
445	5318.01	-	-	-	1.820
446	5316.79	-	-	-	1.820
447	5315.57	-	-	-	1.820
448	5314.35	-	-	-	1.830
449	5313.15	-	-	-	1.830
450	5311.96	-	-	-	1.840
451	5310.78	-	-	-	1.840
452	5309.61	-	-	-	1.850
453	5308.46	-	-	-	1.850
454	5307.30	-	-	-	1.850
455	5306.15	-	-	-	1.860
456	5305.00	-	-	-	1.860
457	5303.85	-	-	-	1.840
458	5302.73	-	-	-	1.850
459	5301.63	-	-	-	1.850
460	5300.54	-	-	-	1.850
461	5299.45	-	-	-	1.860
462	5298.36	-	-	-	1.860
463	5297.28	-	-	-	1.850
464	5296.20	-	-	-	1.860
465	5295.12	-	-	-	1.860
466	5294.05	-	-	-	1.870
467	5292.99	-	-	-	1.850
468	5291.93	-	-	-	1.860
469	5290.88	-	-	-	1.860
470	5289.82	-	-	-	1.870
471	5288.76	-	-	-	1.870
472	5287.71	-	-	-	1.880
473	5286.66	-	-	-	1.880
474	5285.62	-	-	-	1.890
475	5284.58	-	-	-	1.890
476	5283.54	-	-	-	1.890
477	5282.51	-	-	-	1.900
478	5281.48	-	-	-	1.900

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
479	5280.47	-	-	-	1.910
480	5279.45	-	-	-	1.910
481	5278.44	-	-	-	1.920
482	5277.43	-	-	-	1.920
483	5276.43	-	-	-	1.920
484	5275.44	-	-	-	1.930
485	5274.45	-	-	-	1.930
486	5273.46	-	-	-	1.940
487	5272.48	-	-	-	1.940
488	5271.50	-	-	-	1.940
489	5270.52	-	-	-	1.950
490	5269.54	-	-	-	1.950
491	5268.57	-	-	-	1.930
492	5267.59	-	-	-	1.940
493	5266.62	-	-	-	1.920
494	5265.66	-	-	-	1.920
495	5264.71	-	-	-	1.920
496	5263.77	-	-	-	1.900
497	5262.82	-	-	-	1.910
498	5261.89	-	-	-	1.910
499	5260.97	-	-	-	1.920
500	5260.05	-	-	-	1.920
501	5259.13	-	-	-	1.920
502	5258.23	-	-	-	1.930
503	5257.32	-	-	-	1.930
504	5256.41	-	-	-	1.940
505	5255.51	-	-	-	1.940
506	5254.61	-	-	-	1.940
507	5253.71	-	-	-	1.950
508	5252.81	-	-	-	1.950
509	5251.91	-	-	-	1.960
510	5251.01	-	-	-	1.960
511	5250.12	-	-	-	1.970
512	5249.24	-	-	-	1.970
513	5248.35	-	-	-	1.970
514	5247.47	-	-	-	1.980
515	5246.60	-	-	-	1.980
516	5245.72	-	-	-	1.990
517	5244.85	-	-	-	1.990
518	5243.98	-	-	-	1.990
519	5243.11	-	-	-	2.000
520	5242.24	-	-	-	2.000
521	5241.38	-	-	-	2.010
522	5240.52	-	-	-	2.010
523	5239.66	-	-	-	2.020
524	5238.80	-	-	-	2.020
525	5237.96	-	-	-	2.030
526	5237.13	-	-	-	6.390
527	5236.30	-	-	-	1.990
528	5235.48	-	-	-	1.990
529	5234.66	-	-	-	2.000
530	5233.86	-	-	-	2.000

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-N2M2
		Time (sec)			
531	5233.06	-	-	-	2.000
532	5232.27	-	-	-	2.010
533	5231.49	-	-	-	2.010
534	5230.71	-	-	-	2.020
535	5229.93	-	-	-	2.020
536	5229.15	-	-	-	2.020
537	5228.39	-	-	-	2.030
538	5227.62	-	-	-	2.030
539	5226.85	-	-	-	2.040
540	5226.09	-	-	-	2.040
541	5225.33	-	-	-	2.040
542	5224.57	-	-	-	2.050
543	5223.80	-	-	-	2.050
544	5223.05	-	-	-	2.050
545	5222.29	-	-	-	2.060
546	5221.54	-	-	-	2.080
547	5220.79	-	-	-	2.060
548	5220.04	-	-	-	2.040
549	5219.30	-	-	-	2.040
550	5218.56	-	-	-	2.050
551	5217.83	-	-	-	2.050
552	5217.09	-	-	-	2.060
553	5216.37	-	-	-	2.030
554	5215.65	-	-	-	2.030
555	5214.94	-	-	-	2.040
556	5214.24	-	-	-	2.040
557	5213.54	-	-	-	2.040
558	5212.85	-	-	-	2.050
559	5212.15	-	-	-	2.050
560	5211.46	-	-	-	2.060
561	5210.77	-	-	-	2.060
562	5210.08	-	-	-	2.060
563	5209.40	-	-	-	2.070
564	5208.71	-	-	-	2.070
565	5208.03	-	-	-	2.080
566	5207.36	-	-	-	2.080
567	5206.69	-	-	-	2.080
568	5206.03	-	-	-	2.090
569	5205.39	-	-	-	2.090
570	5204.74	-	-	-	2.100
571	5204.10	-	-	-	2.100
572	5203.46	-	-	-	2.100
573	5202.82	-	-	-	2.110
574	5202.18	-	-	-	2.110
575	5201.54	-	-	-	2.090
576	5200.91	-	-	-	2.090
577	5200.27	-	-	-	2.070
578	5199.64	-	-	-	2.070
579	5199.02	-	-	-	2.040
580	5198.39	-	-	-	2.050
581	5197.76	-	-	-	2.050
582	5197.14	-	-	-	2.050

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
583	5196.52	-	-	-	2.060
584	5195.89	-	-	-	2.060
585	5195.27	-	-	-	2.060
586	5194.65	-	-	-	2.070
587	5194.04	-	-	-	2.070
588	5193.42	-	-	-	2.080
589	5192.81	-	-	-	2.080
590	5192.21	-	-	-	2.050
591	5191.60	-	-	-	2.050
592	5191.00	-	-	-	2.060
593	5190.40	-	-	-	2.060
594	5189.80	-	-	-	2.060
595	5189.21	-	-	-	2.070
596	5188.62	-	-	-	2.070
597	5188.03	-	-	-	2.040
598	5187.45	-	-	-	2.050
599	5186.87	-	-	-	2.050
600	5186.28	-	-	-	2.040
601	5185.71	-	-	-	2.040
602	5185.13	-	-	-	2.050
603	5184.55	-	-	-	2.050
604	5183.98	-	-	-	2.050
605	5183.40	-	-	-	2.030
606	5182.83	-	-	-	2.030
607	5182.25	-	-	-	2.040
608	5181.68	-	-	-	2.040
609	5181.11	-	-	-	2.010
610	5180.54	-	-	-	2.020
611	5179.98	-	-	-	2.020
612	5179.42	-	-	-	2.020
613	5178.86	-	-	-	2.030
614	5178.31	-	-	-	2.000
615	5177.76	-	-	-	2.010
616	5177.21	-	-	-	2.010
617	5176.65	-	-	-	1.980
618	5176.10	-	-	-	1.990
619	5175.56	-	-	-	1.990
620	5175.01	-	-	-	1.990
621	5174.47	-	-	-	2.000
622	5173.93	-	-	-	2.000
623	5173.39	-	-	-	2.000
624	5172.85	-	-	-	2.010
625	5172.31	-	-	-	2.010
626	5171.77	-	-	-	1.980
627	5171.24	-	-	-	1.980
628	5170.71	-	-	-	1.990
629	5170.19	-	-	-	1.990
630	5169.67	-	-	-	1.990
631	5169.16	-	-	-	2.000
632	5168.64	-	-	-	2.000
633	5168.13	-	-	-	2.000
634	5167.61	-	-	-	2.010

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	Time (sec)			
		ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
635	5167.10	-	-	-	2.010
636	5166.60	-	-	-	2.010
637	5166.10	-	-	-	2.020
638	5165.61	-	-	-	2.020
639	5165.12	-	-	-	2.020
640	5164.64	-	-	-	2.020
641	5164.16	-	-	-	2.030
642	5163.68	-	-	-	2.030
643	5163.20	-	-	-	2.040
644	5162.73	-	-	-	2.040
645	5162.26	-	-	-	2.040
646	5161.79	-	-	-	2.050
647	5161.32	-	-	-	2.050
648	5160.85	-	-	-	2.050
649	5160.38	-	-	-	2.060
650	5159.91	-	-	-	2.060
651	5159.45	-	-	-	2.060
652	5158.99	-	-	-	2.070
653	5158.53	-	-	-	2.050
654	5158.07	-	-	-	2.050
655	5157.62	-	-	-	2.060
656	5157.16	-	-	-	2.060
657	5156.71	-	-	-	2.060
658	5156.26	-	-	-	2.060
659	5155.82	-	-	-	2.070
660	5155.37	-	-	-	2.050
661	5154.93	-	-	-	2.060
662	5154.48	-	-	-	2.060
663	5154.04	-	-	-	2.050
664	5153.60	-	-	-	2.050
665	5153.16	-	-	-	2.040
666	5152.72	-	-	-	2.040
667	5152.28	-	-	-	2.050
668	5151.85	-	-	-	2.050
669	5151.41	-	-	-	2.050
670	5150.98	-	-	-	2.050
671	5150.55	-	-	-	2.060
672	5150.12	-	-	-	2.060
673	5149.69	-	-	-	2.040
674	5149.27	-	-	-	2.050
675	5148.84	-	-	-	2.050
676	5148.42	-	-	-	2.060
677	5148.00	-	-	-	2.060
678	5147.59	-	-	-	2.060
679	5147.18	-	-	-	2.020
680	5146.77	-	-	-	2.020
681	5146.35	-	-	-	2.030
682	5145.94	-	-	-	2.030
683	5145.53	-	-	-	2.030
684	5145.13	-	-	-	2.040
685	5144.72	-	-	-	2.040
686	5144.31	-	-	-	2.040

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
		Time (sec)			
687	5143.90	-	-	-	2.020
688	5143.49	-	-	-	2.020
689	5143.09	-	-	-	2.020
690	5142.68	-	-	-	2.020
691	5142.27	-	-	-	2.000
692	5141.87	-	-	-	2.000
693	5141.47	-	-	-	2.000
694	5141.06	-	-	-	2.000
695	5140.66	-	-	-	2.010
696	5140.26	-	-	-	2.010
697	5139.86	-	-	-	2.010
698	5139.47	-	-	-	2.020
699	5139.07	-	-	-	2.020
700	5138.68	-	-	-	2.020
701	5138.28	-	-	-	1.980
702	5137.89	-	-	-	1.980
703	5137.50	-	-	-	1.970
704	5137.11	-	-	-	1.970
705	5136.73	-	-	-	1.980
706	5136.35	-	-	-	1.980
707	5135.97	-	-	-	1.970
708	5135.59	-	-	-	1.970
709	5135.21	-	-	-	1.960
710	5134.84	-	-	-	1.960
711	5134.46	-	-	-	1.960
712	5134.09	-	-	-	1.950
713	5133.72	-	-	-	1.950
714	5133.35	-	-	-	1.940
715	5132.98	-	-	-	1.940
716	5132.62	-	-	-	1.930
717	5132.25	-	-	-	1.940
718	5131.89	-	-	-	1.940
719	5131.52	-	-	-	1.930
720	5131.16	-	-	-	1.930
721	5130.80	-	-	-	1.930
722	5130.44	-	-	-	1.940
723	5130.08	-	-	-	1.940
724	5129.72	-	-	-	1.940
725	5129.36	-	-	-	1.940
726	5129.01	-	-	-	1.950
727	5128.65	-	-	-	1.950
728	5128.30	-	-	-	1.950
729	5127.95	-	-	-	1.990
730	5127.61	-	-	-	1.990
731	5127.26	-	-	-	1.990
732	5126.92	-	-	-	1.990
733	5126.57	-	-	-	2.000
734	5126.23	-	-	-	2.000
735	5125.90	-	-	-	2.000
736	5125.56	-	-	-	2.000
737	5125.23	-	-	-	2.010
738	5124.89	-	-	-	1.980

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	Time (sec)			
		ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
739	5124.56	-	-	-	1.980
740	5124.24	-	-	-	1.970
741	5123.91	-	-	-	1.970
742	5123.58	-	-	-	1.970
743	5123.25	-	-	-	1.960
744	5122.93	-	-	-	1.960
745	5122.60	-	-	-	1.970
746	5122.28	-	-	-	1.970
747	5121.95	-	-	-	1.970
748	5121.63	-	-	-	1.970
749	5121.31	-	-	-	1.980
750	5120.98	-	-	-	1.980
751	5120.66	-	-	-	1.980
752	5120.34	-	-	-	1.990
753	5120.02	-	-	-	1.990
754	5119.70	-	-	-	1.990
755	5119.38	-	-	-	1.990
756	5119.06	-	-	-	2.000
757	5118.75	-	-	-	2.000
758	5118.43	-	-	-	2.000
759	5118.12	-	-	-	2.000
760	5117.81	-	-	-	2.010
761	5117.50	-	-	-	2.010
762	5117.19	-	-	-	2.010
763	5116.88	-	-	-	2.020
764	5116.58	-	-	-	2.020
765	5116.27	-	-	-	2.020
766	5115.97	-	-	-	2.020
767	5115.67	-	-	-	2.030
768	5115.37	-	-	-	2.030
769	5115.07	-	-	-	2.030
770	5114.78	-	-	-	2.030
771	5114.48	-	-	-	2.040
772	5114.18	-	-	-	2.040
773	5113.89	-	-	-	2.040
774	5113.60	-	-	-	2.050
775	5113.31	-	-	-	2.050
776	5113.02	-	-	-	2.050
777	5112.73	-	-	-	2.050
778	5112.44	-	-	-	2.060
779	5112.16	-	-	-	2.060
780	5111.87	-	-	-	2.060
781	5111.59	-	-	-	2.060
782	5111.30	-	-	-	2.070
783	5111.02	-	-	-	2.070
784	5110.74	-	-	-	2.070
785	5110.46	-	-	-	2.080
786	5110.18	-	-	-	2.080
787	5109.90	-	-	-	2.080
788	5109.63	-	-	-	2.080
789	5109.36	-	-	-	2.090
790	5109.09	-	-	-	2.090

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
791	5108.82	-	-	-	2.090
792	5108.55	-	-	-	2.090
793	5108.29	-	-	-	2.100
794	5108.02	-	-	-	2.100
795	5107.76	-	-	-	2.100
796	5107.49	-	-	-	2.100
797	5107.23	-	-	-	2.110
798	5106.97	-	-	-	2.110
799	5106.71	-	-	-	2.110
800	5106.45	-	-	-	2.120
801	5106.19	-	-	-	2.120
802	5105.93	-	-	-	2.120
803	5105.68	-	-	-	2.120
804	5105.42	-	-	-	2.130
805	5105.16	-	-	-	2.130
806	5104.91	-	-	-	2.130
807	5104.65	-	-	-	2.130
808	5104.40	-	-	-	2.140
809	5104.15	-	-	-	2.140
810	5103.89	-	-	-	2.140
811	5103.64	-	-	-	2.150
812	5103.39	-	-	-	2.150
813	5103.14	-	-	-	2.150
814	5102.90	-	-	-	2.150
815	5102.65	-	-	-	2.160
816	5102.40	-	-	-	2.160
817	5102.16	-	-	-	2.160
818	5101.91	-	-	-	2.170
819	5101.67	-	-	-	2.170
820	5101.43	-	-	-	2.170
821	5101.19	-	-	-	2.170
822	5100.95	-	-	-	2.180
823	5100.71	-	-	-	2.180
824	5100.48	-	-	-	2.180
825	5100.24	-	-	-	2.190
826	5100.01	-	-	-	2.190
827	5099.77	-	-	-	2.190
828	5099.54	-	-	-	2.190
829	5099.30	-	-	-	2.200
830	5099.07	-	-	-	2.200
831	5098.84	-	-	-	2.200
832	5098.61	-	-	-	2.210
833	5098.38	-	-	-	2.210
834	5098.15	-	-	-	2.210
835	5097.92	-	-	-	2.210
836	5097.69	-	-	-	2.220
837	5097.46	-	-	-	2.220
838	5097.24	-	-	-	2.220
839	5097.01	-	-	-	2.230
840	5096.79	-	-	-	2.230
841	5096.56	-	-	-	2.230
842	5096.34	-	-	-	2.230

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
843	5096.12	-	-	-	2.230
844	5095.90	-	-	-	2.240
845	5095.68	-	-	-	2.240
846	5095.46	-	-	-	2.240
847	5095.25	-	-	-	2.250
848	5095.03	-	-	-	2.250
849	5094.81	-	-	-	2.250
850	5094.59	-	-	-	2.260
851	5094.38	-	-	-	2.260
852	5094.17	-	-	-	2.260
853	5093.96	-	-	-	2.260
854	5093.75	-	-	-	2.270
855	5093.55	-	-	-	2.270
856	5093.34	-	-	-	2.270
857	5093.13	-	-	-	2.270
858	5092.93	-	-	-	2.280
859	5092.72	-	-	-	2.280
860	5092.52	-	-	-	2.280
861	5092.31	-	-	-	2.290
862	5092.11	-	-	-	2.290
863	5091.90	-	-	-	2.290
864	5091.70	-	-	-	2.290
865	5091.50	-	-	-	2.300
866	5091.30	-	-	-	2.300
867	5091.10	-	-	-	2.300
868	5090.90	-	-	-	2.310
869	5090.70	-	-	-	2.310
870	5090.51	-	-	-	2.310
871	5090.31	-	-	-	2.310
872	5090.11	-	-	-	2.320
873	5089.92	-	-	-	2.320
874	5089.72	-	-	-	2.320
875	5089.53	-	-	-	2.330
876	5089.34	-	-	-	2.330
877	5089.15	-	-	-	2.330
878	5088.96	-	-	-	2.330
879	5088.77	-	-	-	2.340
880	5088.58	-	-	-	2.340
881	5088.39	-	-	-	2.340
882	5088.20	-	-	-	2.350
883	5088.01	-	-	-	2.350
884	5087.83	-	-	-	2.350
885	5087.64	-	-	-	2.350
886	5087.45	-	-	-	2.360
887	5087.27	-	-	-	2.360
888	5087.08	-	-	-	2.360
889	5086.89	-	-	-	2.370
890	5086.71	-	-	-	2.370
891	5086.52	-	-	-	2.370
892	5086.34	-	-	-	2.370
893	5086.15	-	-	-	2.340
894	5085.97	-	-	-	2.340

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
895	5085.79	-	-	-	2.320
896	5085.60	-	-	-	2.330
897	5085.42	-	-	-	2.330
898	5085.24	-	-	-	2.330
899	5085.05	-	-	-	2.340
900	5084.87	-	-	-	2.340
901	5084.69	-	-	-	2.350
902	5084.51	-	-	-	2.350
903	5084.33	-	-	-	2.350
904	5084.15	-	-	-	2.350
905	5083.97	-	-	-	2.340
906	5083.80	-	-	-	2.340
907	5083.62	-	-	-	2.340
908	5083.44	-	-	-	2.350
909	5083.27	-	-	-	2.330
910	5083.09	-	-	-	2.330
911	5082.92	-	-	-	2.320
912	5082.74	-	-	-	2.320
913	5082.57	-	-	-	2.330
914	5082.39	-	-	-	2.330
915	5082.22	-	-	-	2.330
916	5082.05	-	-	-	2.330
917	5081.88	-	-	-	2.340
918	5081.72	-	-	-	2.340
919	5081.55	-	-	-	2.340
920	5081.38	-	-	-	2.350
921	5081.21	-	-	-	2.350
922	5081.05	-	-	-	2.350
923	5080.88	-	-	-	2.350
924	5080.71	-	-	-	2.360
925	5080.55	-	-	-	2.360
926	5080.38	-	-	-	2.360
927	5080.22	-	-	-	2.370
928	5080.05	-	-	-	2.370
929	5079.89	-	-	-	2.370
930	5079.73	-	-	-	2.370
931	5079.56	-	-	-	2.380
932	5079.40	-	-	-	2.380
933	5079.24	-	-	-	2.380
934	5079.07	-	-	-	2.380
935	5078.91	-	-	-	2.390
936	5078.75	-	-	-	2.390
937	5078.59	-	-	-	2.390
938	5078.43	-	-	-	2.380
939	5078.27	-	-	-	2.320
940	5078.11	-	-	-	2.320
941	5077.95	-	-	-	2.280
942	5077.79	-	-	-	2.270
943	5077.63	-	-	-	2.270
944	5077.47	-	-	-	2.270
945	5077.31	-	-	-	2.230
946	5077.16	-	-	-	2.230

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-N2m2
		Time (sec)			
947	5077.00	-	-	-	2.240
948	5076.84	-	-	-	2.240
949	5076.68	-	-	-	2.240
950	5076.53	-	-	-	2.230
951	5076.37	-	-	-	2.230
952	5076.21	-	-	-	2.220
953	5076.06	-	-	-	2.220
954	5075.90	-	-	-	2.210
955	5075.75	-	-	-	2.210
956	5075.59	-	-	-	2.210
957	5075.44	-	-	-	2.200
958	5075.28	-	-	-	2.200
959	5075.13	-	-	-	2.190
960	5074.98	-	-	-	2.190
961	5074.82	-	-	-	2.190
962	5074.67	-	-	-	2.190
963	5074.52	-	-	-	2.200
964	5074.37	-	-	-	2.200
965	5074.22	-	-	-	2.200
966	5074.07	-	-	-	2.210
967	5073.92	-	-	-	2.210
968	5073.77	-	-	-	2.210
969	5073.62	-	-	-	2.210
970	5073.47	-	-	-	2.210
971	5073.32	-	-	-	2.220
972	5073.17	-	-	-	2.220
973	5073.02	-	-	-	2.220
974	5072.88	-	-	-	2.230
975	5072.73	-	-	-	2.230
976	5072.58	-	-	-	2.230
977	5072.43	-	-	-	2.230
978	5072.29	-	-	-	2.230
979	5072.14	-	-	-	2.240
980	5071.99	-	-	-	2.240
981	5071.85	-	-	-	2.240
982	5071.70	-	-	-	2.240
983	5071.56	-	-	-	2.250
984	5071.41	-	-	-	2.250
985	5071.27	-	-	-	2.250
986	5071.13	-	-	-	2.250
987	5070.98	-	-	-	2.260
988	5070.84	-	-	-	2.260
989	5070.70	-	-	-	2.260
990	5070.56	-	-	-	2.270
991	5070.42	-	-	-	2.270
992	5070.28	-	-	-	2.250
993	5070.14	-	-	-	2.250
994	5070.00	-	-	-	2.260
995	5069.86	-	-	-	2.260
996	5069.72	-	-	-	2.260
997	5069.58	-	-	-	2.260
998	5069.44	-	-	-	2.270

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
999	5069.31	-	-	-	2.270
1000	5069.17	-	-	-	2.270
1001	5069.04	-	-	-	2.270
1002	5068.90	-	-	-	2.280
1003	5068.77	-	-	-	2.280
1004	5068.63	-	-	-	2.280
1005	5068.50	-	-	-	2.250
1006	5068.36	-	-	-	2.250
1007	5068.23	-	-	-	2.240
1008	5068.10	-	-	-	2.240
1009	5067.96	-	-	-	2.250
1010	5067.83	-	-	-	2.230
1011	5067.70	-	-	-	2.230
1012	5067.57	-	-	-	2.220
1013	5067.43	-	-	-	2.230
1014	5067.30	-	-	-	2.230
1015	5067.17	-	-	-	2.220
1016	5067.04	-	-	-	2.220
1017	5066.91	-	-	-	2.220
1018	5066.78	-	-	-	2.220
1019	5066.65	-	-	-	2.230
1020	5066.52	-	-	-	2.230
1021	5066.39	-	-	-	2.230
1022	5066.26	-	-	-	2.230
1023	5066.13	-	-	-	2.230
1024	5066.00	-	-	-	2.240
1025	5065.87	-	-	-	2.240
1026	5065.74	-	-	-	2.240
1027	5065.62	-	-	-	2.250
1028	5065.49	-	-	-	2.250
1029	5065.36	-	-	-	2.250
1030	5065.24	-	-	-	2.240
1031	5065.11	-	-	-	2.240
1032	5064.99	-	-	-	2.240
1033	5064.86	-	-	-	2.230
1034	5064.73	-	-	-	2.230
1035	5064.61	-	-	-	2.240
1036	5064.49	-	-	-	2.240
1037	5064.36	-	-	-	2.230
1038	5064.24	-	-	-	2.230
1039	5064.12	-	-	-	2.230
1040	5063.99	-	-	-	2.230
1041	5063.87	-	-	-	2.230
1042	5063.75	-	-	-	2.240
1043	5063.63	-	-	-	2.240
1044	5063.50	-	-	-	2.240
1045	5063.38	-	-	-	2.240
1046	5063.26	-	-	-	2.250
1047	5063.14	-	-	-	2.250
1048	5063.02	-	-	-	2.250
1049	5062.90	-	-	-	2.250
1050	5062.77	-	-	-	2.250

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
1051	5062.65	-	-	-	2.260
1052	5062.53	-	-	-	2.260
1053	5062.41	-	-	-	2.260
1054	5062.29	-	-	-	2.270
1055	5062.17	-	-	-	2.270
1056	5062.06	-	-	-	2.270
1057	5061.94	-	-	-	2.270
1058	5061.82	-	-	-	2.270
1059	5061.70	-	-	-	2.280
1060	5061.58	-	-	-	2.280
1061	5061.46	-	-	-	2.280
1062	5061.34	-	-	-	2.280
1063	5061.23	-	-	-	2.290
1064	5061.11	-	-	-	2.290
1065	5060.99	-	-	-	2.290
1066	5060.87	-	-	-	2.300
1067	5060.76	-	-	-	2.300
1068	5060.64	-	-	-	2.300
1069	5060.52	-	-	-	2.300
1070	5060.41	-	-	-	2.300
1071	5060.29	-	-	-	2.310
1072	5060.18	-	-	-	2.310
1073	5060.06	-	-	-	2.310
1074	5059.95	-	-	-	2.310
1075	5059.83	-	-	-	2.310
1076	5059.72	-	-	-	2.320
1077	5059.60	-	-	-	2.320
1078	5059.49	-	-	-	2.320
1079	5059.37	-	-	-	2.330
1080	5059.26	-	-	-	2.330
1081	5059.15	-	-	-	2.330
1082	5059.03	-	-	-	2.330
1083	5058.92	-	-	-	2.330
1084	5058.81	-	-	-	2.330
1085	5058.70	-	-	-	2.340
1086	5058.58	-	-	-	2.340
1087	5058.47	-	-	-	2.340
1088	5058.36	-	-	-	2.350
1089	5058.25	-	-	-	2.350
1090	5058.14	-	-	-	2.350
1091	5058.03	-	-	-	2.350
1092	5057.92	-	-	-	2.350
1093	5057.81	-	-	-	2.360
1094	5057.70	-	-	-	2.360
1095	5057.59	-	-	-	2.370
1096	5057.48	-	-	-	2.370
1097	5057.37	-	-	-	2.370
1098	5057.26	-	-	-	2.370
1099	5057.15	-	-	-	2.370
1100	5057.04	-	-	-	2.380
1101	5056.94	-	-	-	2.380
1102	5056.83	-	-	-	2.380

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Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
1103	5056.72	-	-	-	2.380
1104	5056.62	-	-	-	2.380
1105	5056.51	-	-	-	2.390
1106	5056.41	-	-	-	2.390
1107	5056.30	-	-	-	2.390
1108	5056.20	-	-	-	2.400
1109	5056.09	-	-	-	2.400
1110	5055.99	-	-	-	2.400
1111	5055.89	-	-	-	2.400
1112	5055.78	-	-	-	2.400
1113	5055.68	-	-	-	2.400
1114	5055.58	-	-	-	2.410
1115	5055.48	-	-	-	2.410
1116	5055.37	-	-	-	2.410
1117	5055.27	-	-	-	2.420
1118	5055.17	-	-	-	2.420
1119	5055.07	-	-	-	2.420
1120	5054.97	-	-	-	2.420
1121	5054.86	-	-	-	2.420
1122	5054.76	-	-	-	2.430
1123	5054.66	-	-	-	2.430
1124	5054.56	-	-	-	2.430
1125	5054.46	-	-	-	2.440
1126	5054.36	-	-	-	2.440
1127	5054.26	-	-	-	2.440
1128	5054.17	-	-	-	2.440
1129	5054.07	-	-	-	2.450
1130	5053.97	-	-	-	2.450
1131	5053.87	-	-	-	2.450
1132	5053.77	-	-	-	2.460
1133	5053.67	-	-	-	2.460
1134	5053.57	-	-	-	2.460
1135	5053.48	-	-	-	2.460
1136	5053.38	-	-	-	2.460
1137	5053.28	-	-	-	2.470
1138	5053.19	-	-	-	2.470
1139	5053.09	-	-	-	2.470
1140	5052.99	-	-	-	2.480
1141	5052.90	-	-	-	2.480
1142	5052.80	-	-	-	2.480
1143	5052.70	-	-	-	2.480
1144	5052.61	-	-	-	2.480
1145	5052.51	-	-	-	2.490
1146	5052.42	-	-	-	2.460
1147	5052.32	-	-	-	2.460
1148	5052.23	-	-	-	2.460
1149	5052.13	-	-	-	2.460
1150	5052.04	-	-	-	2.460
1151	5051.95	-	-	-	2.470
1152	5051.85	-	-	-	2.470
1153	5051.76	-	-	-	2.470
1154	5051.67	-	-	-	2.470
					Continued on next page

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	Time (sec)			
		ILP-Galias	**MILP-Iflows**	**DP-TS**	**DP-n2m2**
1155	5051.57	-	-	-	2.480
1156	5051.48	-	-	-	2.480
1157	5051.39	-	-	-	2.480
1158	5051.29	-	-	-	2.480
1159	5051.20	-	-	-	2.490
1160	5051.11	-	-	-	2.490
1161	5051.02	-	-	-	2.490
1162	5050.93	-	-	-	2.490
1163	5050.84	-	-	-	2.500
1164	5050.75	-	-	-	2.500
1165	5050.66	-	-	-	2.500
1166	5050.57	-	-	-	2.500
1167	5050.48	-	-	-	2.510
1168	5050.39	-	-	-	2.510
1169	5050.30	-	-	-	2.510
1170	5050.21	-	-	-	2.510
1171	5050.12	-	-	-	2.510
1172	5050.03	-	-	-	2.520
1173	5049.94	-	-	-	2.520
1174	5049.85	-	-	-	2.520
1175	5049.76	-	-	-	2.520
1176	5049.68	-	-	-	2.530
1177	5049.59	-	-	-	2.570
1178	5049.50	-	-	-	2.570
1179	5049.41	-	-	-	2.540
1180	5049.32	-	-	-	2.540
1181	5049.24	-	-	-	2.540
1182	5049.15	-	-	-	2.540
1183	5049.06	-	-	-	2.580
1184	5048.98	-	-	-	2.580
1185	5048.89	-	-	-	2.590
1186	5048.80	-	-	-	2.590
1187	5048.72	-	-	-	2.590
1188	5048.63	-	-	-	2.590
1189	5048.55	-	-	-	2.600
1190	5048.46	-	-	-	2.600
1191	5048.38	-	-	-	2.600
1192	5048.29	-	-	-	2.600
1193	5048.20	-	-	-	2.610
1194	5048.12	-	-	-	2.610
1195	5048.03	-	-	-	2.610
1196	5047.95	-	-	-	2.610
1197	5047.87	-	-	-	2.620
1198	5047.78	-	-	-	2.620
1199	5047.70	-	-	-	2.620
1200	5047.61	-	-	-	2.620
1201	5047.53	-	-	-	2.630
1202	5047.45	-	-	-	2.630
1203	5047.36	-	-	-	2.600
1204	5047.28	-	-	-	2.600
1205	5047.20	-	-	-	2.600
1206	5047.12	-	-	-	2.600
				Continued on next page	

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
1207	5047.03	-	-	-	2.640
1208	5046.95	-	-	-	2.650
1209	5046.87	-	-	-	2.610
1210	5046.79	-	-	-	2.610
1211	5046.71	-	-	-	2.610
1212	5046.63	-	-	-	2.620
1213	5046.55	-	-	-	2.620
1214	5046.47	-	-	-	2.620
1215	5046.39	-	-	-	2.620
1216	5046.31	-	-	-	2.630
1217	5046.23	-	-	-	2.630
1218	5046.16	-	-	-	7.720
1219	5046.08	-	-	-	2.550
1220	5046.00	-	-	-	2.550
1221	5045.92	-	-	-	2.560
1222	5045.84	-	-	-	2.560
1223	5045.77	-	-	-	2.560
1224	5045.69	-	-	-	2.600
1225	5045.61	-	-	-	2.600
1226	5045.53	-	-	-	2.610
1227	5045.46	-	-	-	2.610
1228	5045.38	-	-	-	2.580
1229	5045.30	-	-	-	2.580
1230	5045.22	-	-	-	2.580
1231	5045.15	-	-	-	2.580
1232	5045.07	-	-	-	2.580
1233	5044.99	-	-	-	2.580
1234	5044.92	-	-	-	2.590
1235	5044.84	-	-	-	2.590
1236	5044.77	-	-	-	2.590
1237	5044.69	-	-	-	2.590
1238	5044.61	-	-	-	2.600
1239	5044.54	-	-	-	2.600
1240	5044.46	-	-	-	2.600
1241	5044.39	-	-	-	2.600
1242	5044.31	-	-	-	2.610
1243	5044.24	-	-	-	2.610
1244	5044.16	-	-	-	2.610
1245	5044.09	-	-	-	2.610
1246	5044.01	-	-	-	2.610
1247	5043.94	-	-	-	2.620
1248	5043.86	-	-	-	2.620
1249	5043.79	-	-	-	2.620
1250	5043.71	-	-	-	2.620
1251	5043.64	-	-	-	2.630
1252	5043.57	-	-	-	2.630
1253	5043.49	-	-	-	2.630
1254	5043.42	-	-	-	2.630
1255	5043.35	-	-	-	2.630
1256	5043.27	-	-	-	2.640
1257	5043.20	-	-	-	2.640
1258	5043.13	-	-	-	2.640

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-N2m2
1259	5043.05	-	-	-	2.640
1260	5042.98	-	-	-	2.650
1261	5042.91	-	-	-	2.650
1262	5042.84	-	-	-	2.650
1263	5042.76	-	-	-	2.650
1264	5042.69	-	-	-	2.660
1265	5042.62	-	-	-	2.660
1266	5042.55	-	-	-	2.660
1267	5042.48	-	-	-	2.660
1268	5042.41	-	-	-	2.710
1269	5042.33	-	-	-	2.710
1270	5042.26	-	-	-	2.710
1271	5042.19	-	-	-	2.710
1272	5042.12	-	-	-	2.720
1273	5042.05	-	-	-	2.710
1274	5041.98	-	-	-	2.720
1275	5041.91	-	-	-	2.720
1276	5041.84	-	-	-	2.690
1277	5041.77	-	-	-	2.690
1278	5041.70	-	-	-	2.690
1279	5041.63	-	-	-	2.690
1280	5041.56	-	-	-	2.690
1281	5041.50	-	-	-	2.690
1282	5041.43	-	-	-	2.700
1283	5041.36	-	-	-	2.700
1284	5041.29	-	-	-	2.700
1285	5041.22	-	-	-	2.700
1286	5041.15	-	-	-	2.710
1287	5041.09	-	-	-	2.710
1288	5041.02	-	-	-	2.710
1289	5040.95	-	-	-	2.710
1290	5040.89	-	-	-	2.720
1291	5040.82	-	-	-	2.720
1292	5040.75	-	-	-	2.720
1293	5040.69	-	-	-	2.720
1294	5040.62	-	-	-	2.770
1295	5040.55	-	-	-	2.770
1296	5040.49	-	-	-	2.770
1297	5040.42	-	-	-	2.770
1298	5040.36	-	-	-	2.770
1299	5040.29	-	-	-	2.780
1300	5040.22	-	-	-	2.780
1301	5040.16	-	-	-	2.780
1302	5040.09	-	-	-	2.790
1303	5040.03	-	-	-	2.790
1304	5039.96	-	-	-	2.790
1305	5039.90	-	-	-	2.790
1306	5039.83	-	-	-	2.790
1307	5039.77	-	-	-	2.800
1308	5039.70	-	-	-	2.760
1309	5039.64	-	-	-	2.760
1310	5039.58	-	-	-	2.760

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
1311	5039.51	-	-	-	2.760
1312	5039.45	-	-	-	2.770
1313	5039.38	-	-	-	2.770
1314	5039.32	-	-	-	2.770
1315	5039.25	-	-	-	2.770
1316	5039.19	-	-	-	2.770
1317	5039.13	-	-	-	2.770
1318	5039.06	-	-	-	2.820
1319	5039.00	-	-	-	2.830
1320	5038.94	-	-	-	2.830
1321	5038.87	-	-	-	2.830
1322	5038.81	-	-	-	2.830
1323	5038.75	-	-	-	2.830
1324	5038.69	-	-	-	2.800
1325	5038.62	-	-	-	2.800
1326	5038.56	-	-	-	2.800
1327	5038.50	-	-	-	2.800
1328	5038.44	-	-	-	2.810
1329	5038.38	-	-	-	2.810
1330	5038.32	-	-	-	2.810
1331	5038.26	-	-	-	2.810
1332	5038.19	-	-	-	2.810
1333	5038.13	-	-	-	2.820
1334	5038.07	-	-	-	2.820
1335	5038.01	-	-	-	2.820
1336	5037.96	-	-	-	2.830
1337	5037.90	-	-	-	2.830
1338	5037.84	-	-	-	2.830
1339	5037.78	-	-	-	2.830
1340	5037.72	-	-	-	2.830
1341	5037.66	-	-	-	2.840
1342	5037.60	-	-	-	2.840
1343	5037.54	-	-	-	2.840
1344	5037.48	-	-	-	2.840
1345	5037.42	-	-	-	2.850
1346	5037.36	-	-	-	2.850
1347	5037.31	-	-	-	2.850
1348	5037.25	-	-	-	2.850
1349	5037.19	-	-	-	2.850
1350	5037.13	-	-	-	2.860
1351	5037.07	-	-	-	2.860
1352	5037.02	-	-	-	2.860
1353	5036.96	-	-	-	2.860
1354	5036.90	-	-	-	2.870
1355	5036.84	-	-	-	2.870
1356	5036.79	-	-	-	2.870
1357	5036.73	-	-	-	2.880
1358	5036.67	-	-	-	2.880
1359	5036.62	-	-	-	2.880
1360	5036.56	-	-	-	2.880
1361	5036.50	-	-	-	2.880
1362	5036.45	-	-	-	2.880

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Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	Time (sec)			
		ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
1363	5036.39	-	-	-	2.890
1364	5036.33	-	-	-	2.890
1365	5036.28	-	-	-	2.890
1366	5036.22	-	-	-	2.900
1367	5036.17	-	-	-	2.900
1368	5036.11	-	-	-	2.940
1369	5036.06	-	-	-	2.940
1370	5036.00	-	-	-	2.950
1371	5035.95	-	-	-	2.950
1372	5035.89	-	-	-	2.950
1373	5035.84	-	-	-	2.950
1374	5035.79	-	-	-	2.960
1375	5035.73	-	-	-	2.960
1376	5035.68	-	-	-	2.960
1377	5035.62	-	-	-	2.960
1378	5035.57	-	-	-	2.970
1379	5035.52	-	-	-	2.970
1380	5035.46	-	-	-	2.970
1381	5035.41	-	-	-	2.970
1382	5035.36	-	-	-	2.970
1383	5035.30	-	-	-	2.980
1384	5035.25	-	-	-	2.980
1385	5035.20	-	-	-	2.980
1386	5035.14	-	-	-	2.980
1387	5035.09	-	-	-	2.990
1388	5035.04	-	-	-	2.990
1389	5034.99	-	-	-	2.990
1390	5034.93	-	-	-	2.990
1391	5034.88	-	-	-	3.000
1392	5034.83	-	-	-	3.000
1393	5034.78	-	-	-	3.000
1394	5034.73	-	-	-	3.000
1395	5034.67	-	-	-	3.010
1396	5034.62	-	-	-	3.010
1397	5034.57	-	-	-	3.010
1398	5034.52	-	-	-	3.020
1399	5034.47	-	-	-	3.020
1400	5034.42	-	-	-	3.020
1401	5034.37	-	-	-	3.020
1402	5034.32	-	-	-	3.020
1403	5034.27	-	-	-	3.020
1404	5034.21	-	-	-	3.030
1405	5034.16	-	-	-	3.030
1406	5034.11	-	-	-	3.030
1407	5034.06	-	-	-	3.040
1408	5034.01	-	-	-	3.040
1409	5033.96	-	-	-	3.040
1410	5033.91	-	-	-	3.040
1411	5033.86	-	-	-	3.040
1412	5033.81	-	-	-	3.050
1413	5033.77	-	-	-	3.050
1414	5033.72	-	-	-	3.050
				Continued on next page	

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
1415	5033.67	-	-	-	3.050
1416	5033.62	-	-	-	3.060
1417	5033.57	-	-	-	3.060
1418	5033.52	-	-	-	3.060
1419	5033.47	-	-	-	3.060
1420	5033.43	-	-	-	3.070
1421	5033.38	-	-	-	3.070
1422	5033.33	-	-	-	3.070
1423	5033.28	-	-	-	3.080
1424	5033.23	-	-	-	3.080
1425	5033.18	-	-	-	3.080
1426	5033.14	-	-	-	3.080
1427	5033.09	-	-	-	3.080
1428	5033.04	-	-	-	3.080
1429	5032.99	-	-	-	3.090
1430	5032.95	-	-	-	3.090
1431	5032.90	-	-	-	3.090
1432	5032.85	-	-	-	3.090
1433	5032.80	-	-	-	3.100
1434	5032.76	-	-	-	3.100
1435	5032.71	-	-	-	3.100
1436	5032.66	-	-	-	3.100
1437	5032.61	-	-	-	3.110
1438	5032.57	-	-	-	3.110
1439	5032.52	-	-	-	3.110
1440	5032.47	-	-	-	3.110
1441	5032.42	-	-	-	3.110
1442	5032.38	-	-	-	3.120
1443	5032.33	-	-	-	3.120
1444	5032.29	-	-	-	3.120
1445	5032.24	-	-	-	3.130
1446	5032.19	-	-	-	3.130
1447	5032.15	-	-	-	3.130
1448	5032.10	-	-	-	3.130
1449	5032.05	-	-	-	3.140
1450	5032.01	-	-	-	3.140
1451	5031.96	-	-	-	3.140
1452	5031.92	-	-	-	3.150
1453	5031.87	-	-	-	3.150
1454	5031.83	-	-	-	3.150
1455	5031.78	-	-	-	3.150
1456	5031.73	-	-	-	3.150
1457	5031.69	-	-	-	3.150
1458	5031.64	-	-	-	3.160
1459	5031.60	-	-	-	3.160
1460	5031.55	-	-	-	3.160
1461	5031.51	-	-	-	3.170
1462	5031.46	-	-	-	3.170
1463	5031.42	-	-	-	3.170
1464	5031.38	-	-	-	3.170
1465	5031.33	-	-	-	3.170
1466	5031.29	-	-	-	3.180

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
1467	5031.24	-	-	-	3.180
1468	5031.20	-	-	-	3.180
1469	5031.15	-	-	-	3.180
1470	5031.11	-	-	-	3.190
1471	5031.07	-	-	-	3.190
1472	5031.02	-	-	-	3.190
1473	5030.98	-	-	-	3.190
1474	5030.93	-	-	-	3.200
1475	5030.89	-	-	-	3.200
1476	5030.85	-	-	-	3.200
1477	5030.80	-	-	-	3.210
1478	5030.76	-	-	-	3.210
1479	5030.71	-	-	-	3.210
1480	5030.67	-	-	-	3.210
1481	5030.63	-	-	-	3.210
1482	5030.58	-	-	-	3.210
1483	5030.54	-	-	-	3.220
1484	5030.50	-	-	-	3.220
1485	5030.45	-	-	-	3.220
1486	5030.41	-	-	-	3.230
1487	5030.37	-	-	-	3.230
1488	5030.32	-	-	-	3.230
1489	5030.28	-	-	-	3.230
1490	5030.24	-	-	-	3.240
1491	5030.20	-	-	-	3.240
1492	5030.15	-	-	-	3.240
1493	5030.11	-	-	-	3.240
1494	5030.07	-	-	-	3.250
1495	5030.03	-	-	-	3.250
1496	5029.99	-	-	-	3.250
1497	5029.94	-	-	-	3.250
1498	5029.90	-	-	-	3.250
1499	5029.86	-	-	-	3.260
1500	5029.82	-	-	-	3.260
1501	5029.78	-	-	-	3.260
1502	5029.73	-	-	-	3.260
1503	5029.69	-	-	-	3.270
1504	5029.65	-	-	-	3.270
1505	5029.61	-	-	-	3.270
1506	5029.57	-	-	-	3.270
1507	5029.53	-	-	-	3.280
1508	5029.49	-	-	-	3.280
1509	5029.44	-	-	-	3.280
1510	5029.40	-	-	-	3.290
1511	5029.36	-	-	-	3.290
1512	5029.32	-	-	-	3.290
1513	5029.28	-	-	-	3.290
1514	5029.24	-	-	-	3.300
1515	5029.20	-	-	-	3.300
1516	5029.16	-	-	-	3.300
1517	5029.12	-	-	-	3.300
1518	5029.08	-	-	-	3.310

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
1519	5029.04	-	-	-	3.310
1520	5029.00	-	-	-	3.310
1521	5028.96	-	-	-	3.310
1522	5028.92	-	-	-	3.310
1523	5028.88	-	-	-	3.320
1524	5028.84	-	-	-	3.320
1525	5028.80	-	-	-	3.390
1526	5028.76	-	-	-	3.360
1527	5028.72	-	-	-	3.500
1528	5028.68	-	-	-	3.690
1529	5028.64	-	-	-	3.650
1530	5028.60	-	-	-	3.610
1531	5028.56	-	-	-	3.570
1532	5028.53	-	-	-	3.600
1533	5028.49	-	-	-	3.540
1534	5028.45	-	-	-	3.420
1535	5028.41	-	-	-	3.480
1536	5028.37	-	-	-	3.490
1537	5028.33	-	-	-	3.320
1538	5028.29	-	-	-	3.310
1539	5028.26	-	-	-	3.310
1540	5028.22	-	-	-	3.310
1541	5028.18	-	-	-	3.310
1542	5028.14	-	-	-	3.310
1543	5028.10	-	-	-	3.320
1544	5028.07	-	-	-	3.320
1545	5028.03	-	-	-	3.320
1546	5027.99	-	-	-	3.330
1547	5027.95	-	-	-	3.330
1548	5027.92	-	-	-	3.330
1549	5027.88	-	-	-	3.330
1550	5027.84	-	-	-	3.340
1551	5027.81	-	-	-	3.330
1552	5027.77	-	-	-	3.340
1553	5027.73	-	-	-	3.340
1554	5027.69	-	-	-	3.340
1555	5027.66	-	-	-	3.350
1556	5027.62	-	-	-	3.350
1557	5027.59	-	-	-	3.350
1558	5027.55	-	-	-	3.350
1559	5027.51	-	-	-	3.360
1560	5027.48	-	-	-	3.360
1561	5027.44	-	-	-	3.360
1562	5027.41	-	-	-	3.360
1563	5027.37	-	-	-	3.370
1564	5027.33	-	-	-	3.370
1565	5027.30	-	-	-	3.370
1566	5027.26	-	-	-	3.370
1567	5027.23	-	-	-	3.380
1568	5027.19	-	-	-	3.380
1569	5027.16	-	-	-	3.380
1570	5027.12	-	-	-	3.380

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
		Time (sec)			
1571	5027.09	-	-	-	3.390
1572	5027.05	-	-	-	3.390
1573	5027.02	-	-	-	3.400
1574	5026.98	-	-	-	3.400
1575	5026.95	-	-	-	3.400
1576	5026.91	-	-	-	3.400
1577	5026.88	-	-	-	3.400
1578	5026.84	-	-	-	3.400
1579	5026.81	-	-	-	3.410
1580	5026.77	-	-	-	3.410
1581	5026.74	-	-	-	3.410
1582	5026.70	-	-	-	3.420
1583	5026.67	-	-	-	3.420
1584	5026.63	-	-	-	3.420
1585	5026.60	-	-	-	3.420
1586	5026.56	-	-	-	3.420
1587	5026.53	-	-	-	3.430
1588	5026.50	-	-	-	3.430
1589	5026.46	-	-	-	3.430
1590	5026.43	-	-	-	3.430
1591	5026.39	-	-	-	3.440
1592	5026.36	-	-	-	3.440
1593	5026.33	-	-	-	3.440
1594	5026.29	-	-	-	3.440
1595	5026.26	-	-	-	3.440
1596	5026.22	-	-	-	3.450
1597	5026.19	-	-	-	3.450
1598	5026.16	-	-	-	3.450
1599	5026.12	-	-	-	3.460
1600	5026.09	-	-	-	3.460
1601	5026.05	-	-	-	3.460
1602	5026.02	-	-	-	3.460
1603	5025.99	-	-	-	3.470
1604	5025.95	-	-	-	3.470
1605	5025.92	-	-	-	3.470
1606	5025.89	-	-	-	3.470
1607	5025.85	-	-	-	3.480
1608	5025.82	-	-	-	3.480
1609	5025.79	-	-	-	3.480
1610	5025.76	-	-	-	3.480
1611	5025.72	-	-	-	3.490
1612	5025.69	-	-	-	3.490
1613	5025.66	-	-	-	3.490
1614	5025.63	-	-	-	3.500
1615	5025.59	-	-	-	3.500
1616	5025.56	-	-	-	3.500
1617	5025.53	-	-	-	3.500
1618	5025.50	-	-	-	3.500
1619	5025.47	-	-	-	3.510
1620	5025.43	-	-	-	3.510
1621	5025.40	-	-	-	3.510
1622	5025.37	-	-	-	3.510

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
		Time (sec)			
1623	5025.34	-	-	-	3.520
1624	5025.31	-	-	-	3.520
1625	5025.28	-	-	-	3.520
1626	5025.25	-	-	-	3.520
1627	5025.22	-	-	-	3.520
1628	5025.18	-	-	-	3.530
1629	5025.15	-	-	-	3.530
1630	5025.12	-	-	-	3.540
1631	5025.09	-	-	-	3.540
1632	5025.06	-	-	-	3.540
1633	5025.03	-	-	-	3.540
1634	5025.00	-	-	-	3.540
1635	5024.97	-	-	-	3.550
1636	5024.94	-	-	-	3.550
1637	5024.91	-	-	-	3.550
1638	5024.88	-	-	-	3.550
1639	5024.85	-	-	-	3.560
1640	5024.82	-	-	-	3.560
1641	5024.79	-	-	-	3.560
1642	5024.76	-	-	-	3.560
1643	5024.73	-	-	-	3.570
1644	5024.70	-	-	-	3.570
1645	5024.67	-	-	-	3.570
1646	5024.63	-	-	-	3.350
1647	5024.60	-	-	-	3.350
1648	5024.57	-	-	-	3.350
1649	5024.54	-	-	-	3.350
1650	5024.51	-	-	-	3.280
1651	5024.48	-	-	-	3.290
1652	5024.45	-	-	-	3.290
1653	5024.42	-	-	-	3.290
1654	5024.39	-	-	-	3.290
1655	5024.36	-	-	-	3.290
1656	5024.34	-	-	-	3.290
1657	5024.31	-	-	-	3.300
1658	5024.28	-	-	-	3.300
1659	5024.25	-	-	-	3.300
1660	5024.22	-	-	-	3.170
1661	5024.19	-	-	-	3.170
1662	5024.16	-	-	-	3.170
1663	5024.13	-	-	-	3.170
1664	5024.10	-	-	-	3.170
1665	5024.07	-	-	-	3.180
1666	5024.04	-	-	-	3.180
1667	5024.01	-	-	-	3.180
1668	5023.98	-	-	-	3.030
1669	5023.95	-	-	-	3.040
1670	5023.92	-	-	-	3.040
1671	5023.90	-	-	-	3.040
1672	5023.87	-	-	-	3.040
1673	5023.84	-	-	-	3.040
1674	5023.81	-	-	-	3.050

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
1675	5023.78	-	-	-	2.960
1676	5023.75	-	-	-	2.960
1677	5023.72	-	-	-	2.960
1678	5023.69	-	-	-	2.960
1679	5023.67	-	-	-	2.960
1680	5023.64	-	-	-	2.960
1681	5023.61	-	-	-	2.900
1682	5023.58	-	-	-	2.900
1683	5023.55	-	-	-	2.900
1684	5023.52	-	-	-	2.900
1685	5023.50	-	-	-	2.910
1686	5023.47	-	-	-	2.910
1687	5023.44	-	-	-	2.910
1688	5023.41	-	-	-	2.960
1689	5023.39	-	-	-	2.960
1690	5023.36	-	-	-	2.960
1691	5023.33	-	-	-	2.960
1692	5023.30	-	-	-	2.960
1693	5023.27	-	-	-	2.880
1694	5023.25	-	-	-	2.890
1695	5023.22	-	-	-	2.890
1696	5023.19	-	-	-	2.810
1697	5023.16	-	-	-	2.820
1698	5023.14	-	-	-	2.740
1699	5023.11	-	-	-	2.740
1700	5023.08	-	-	-	2.700
1701	5023.06	-	-	-	2.700
1702	5023.03	-	-	-	2.700
1703	5023.00	-	-	-	2.710
1704	5022.97	-	-	-	2.710
1705	5022.95	-	-	-	2.710
1706	5022.92	-	-	-	2.710
1707	5022.89	-	-	-	2.710
1708	5022.87	-	-	-	2.720
1709	5022.84	-	-	-	2.720
1710	5022.81	-	-	-	2.720
1711	5022.79	-	-	-	2.720
1712	5022.76	-	-	-	2.720
1713	5022.73	-	-	-	2.720
1714	5022.71	-	-	-	2.730
1715	5022.68	-	-	-	2.730
1716	5022.65	-	-	-	2.730
1717	5022.63	-	-	-	2.730
1718	5022.60	-	-	-	2.730
1719	5022.57	-	-	-	2.730
1720	5022.55	-	-	-	2.740
1721	5022.52	-	-	-	2.740
1722	5022.50	-	-	-	2.780
1723	5022.47	-	-	-	2.780
1724	5022.44	-	-	-	2.750
1725	5022.42	-	-	-	2.750
1726	5022.39	-	-	-	2.740

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
1727	5022.37	-	-	-	2.750
1728	5022.34	-	-	-	2.750
1729	5022.31	-	-	-	2.750
1730	5022.29	-	-	-	2.680
1731	5022.26	-	-	-	2.680
1732	5022.24	-	-	-	2.690
1733	5022.21	-	-	-	2.690
1734	5022.19	-	-	-	2.690
1735	5022.16	-	-	-	2.690
1736	5022.14	-	-	-	2.690
1737	5022.11	-	-	-	2.690
1738	5022.08	-	-	-	2.690
1739	5022.06	-	-	-	2.620
1740	5022.03	-	-	-	2.620
1741	5022.01	-	-	-	2.620
1742	5021.98	-	-	-	2.630
1743	5021.96	-	-	-	2.630
1744	5021.93	-	-	-	2.540
1745	5021.91	-	-	-	2.540
1746	5021.88	-	-	-	2.550
1747	5021.86	-	-	-	2.550
1748	5021.83	-	-	-	2.550
1749	5021.81	-	-	-	2.550
1750	5021.78	-	-	-	2.550
1751	5021.76	-	-	-	2.550
1752	5021.74	-	-	-	2.560
1753	5021.71	-	-	-	2.560
1754	5021.69	-	-	-	2.600
1755	5021.66	-	-	-	2.600
1756	5021.64	-	-	-	2.600
1757	5021.62	-	-	-	2.600
1758	5021.59	-	-	-	2.600
1759	5021.57	-	-	-	2.600
1760	5021.54	-	-	-	2.600
1761	5021.52	-	-	-	2.610
1762	5021.50	-	-	-	2.610
1763	5021.47	-	-	-	2.610
1764	5021.45	-	-	-	2.610
1765	5021.42	-	-	-	2.610
1766	5021.40	-	-	-	2.610
1767	5021.38	-	-	-	2.620
1768	5021.35	-	-	-	2.620
1769	5021.33	-	-	-	2.620
1770	5021.31	-	-	-	2.620
1771	5021.28	-	-	-	2.630
1772	5021.26	-	-	-	2.620
1773	5021.24	-	-	-	2.630
1774	5021.21	-	-	-	2.630
1775	5021.19	-	-	-	2.630
1776	5021.17	-	-	-	2.630
1777	5021.14	-	-	-	2.630
1778	5021.12	-	-	-	2.630
				Continued on next page	

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m	best ENS	Time (sec)			
		ILP-Galias	**MILP-Iflows**	**DP-TS**	**DP-n2m2**
1779	5021.10	-	-	-	2.630
1780	5021.07	-	-	-	2.640
1781	5021.05	-	-	-	2.640
1782	5021.03	-	-	-	2.640
1783	5021.00	-	-	-	2.640
1784	5020.98	-	-	-	2.640
1785	5020.96	-	-	-	2.640
1786	5020.94	-	-	-	2.650
1787	5020.91	-	-	-	2.650
1788	5020.89	-	-	-	2.650
1789	5020.87	-	-	-	2.650
1790	5020.84	-	-	-	2.650
1791	5020.82	-	-	-	2.650
1792	5020.80	-	-	-	2.660
1793	5020.78	-	-	-	2.660
1794	5020.75	-	-	-	2.660
1795	5020.73	-	-	-	2.660
1796	5020.71	-	-	-	2.660
1797	5020.69	-	-	-	2.660
1798	5020.66	-	-	-	2.660
1799	5020.64	-	-	-	2.670
1800	5020.62	-	-	-	2.670
1801	5020.60	-	-	-	2.670
1802	5020.58	-	-	-	2.670
1803	5020.55	-	-	-	2.670
1804	5020.53	-	-	-	2.670
1805	5020.51	-	-	-	2.680
1806	5020.49	-	-	-	2.680
1807	5020.47	-	-	-	2.680
1808	5020.44	-	-	-	2.680
1809	5020.42	-	-	-	2.680
1810	5020.40	-	-	-	2.690
1811	5020.38	-	-	-	2.690
1812	5020.36	-	-	-	2.690
1813	5020.34	-	-	-	2.690
1814	5020.31	-	-	-	2.690
1815	5020.29	-	-	-	2.690
1816	5020.27	-	-	-	2.690
1817	5020.25	-	-	-	2.690
1818	5020.23	-	-	-	2.700
1819	5020.21	-	-	-	2.700
1820	5020.19	-	-	-	2.700
1821	5020.17	-	-	-	2.700
1822	5020.15	-	-	-	2.710
1823	5020.13	-	-	-	2.710
1824	5020.10	-	-	-	2.710
1825	5020.08	-	-	-	2.710
1826	5020.06	-	-	-	2.710
1827	5020.04	-	-	-	2.710
1828	5020.02	-	-	-	2.710
1829	5020.00	-	-	-	2.710
1830	5019.98	-	-	-	2.710

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
1831	5019.96	-	-	-	2.720
1832	5019.94	-	-	-	2.720
1833	5019.92	-	-	-	2.720
1834	5019.90	-	-	-	2.720
1835	5019.88	-	-	-	2.720
1836	5019.86	-	-	-	2.720
1837	5019.84	-	-	-	2.730
1838	5019.82	-	-	-	2.730
1839	5019.80	-	-	-	2.730
1840	5019.78	-	-	-	2.730
1841	5019.76	-	-	-	2.730
1842	5019.74	-	-	-	2.730
1843	5019.72	-	-	-	2.740
1844	5019.71	-	-	-	2.740
1845	5019.69	-	-	-	2.740
1846	5019.67	-	-	-	2.740
1847	5019.65	-	-	-	2.740
1848	5019.63	-	-	-	2.740
1849	5019.61	-	-	-	2.750
1850	5019.59	-	-	-	2.750
1851	5019.57	-	-	-	2.750
1852	5019.55	-	-	-	2.750
1853	5019.53	-	-	-	2.750
1854	5019.51	-	-	-	2.750
1855	5019.49	-	-	-	2.760
1856	5019.48	-	-	-	2.750
1857	5019.46	-	-	-	2.760
1858	5019.44	-	-	-	2.760
1859	5019.42	-	-	-	2.760
1860	5019.40	-	-	-	2.760
1861	5019.38	-	-	-	2.770
1862	5019.36	-	-	-	2.770
1863	5019.34	-	-	-	2.770
1864	5019.33	-	-	-	2.770
1865	5019.31	-	-	-	2.770
1866	5019.29	-	-	-	2.770
1867	5019.27	-	-	-	2.770
1868	5019.25	-	-	-	2.780
1869	5019.24	-	-	-	2.780
1870	5019.22	-	-	-	2.780
1871	5019.20	-	-	-	2.780
1872	5019.18	-	-	-	2.780
1873	5019.16	-	-	-	2.790
1874	5019.15	-	-	-	2.790
1875	5019.13	-	-	-	2.790
1876	5019.11	-	-	-	2.790
1877	5019.09	-	-	-	2.790
1878	5019.08	-	-	-	2.790
1879	5019.06	-	-	-	2.800
1880	5019.04	-	-	-	2.800
1881	5019.02	-	-	-	2.800
1882	5019.01	-	-	-	2.800

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Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
1883	5018.99	-	-	-	2.800
1884	5018.97	-	-	-	2.800
1885	5018.96	-	-	-	2.800
1886	5018.94	-	-	-	2.810
1887	5018.92	-	-	-	2.810
1888	5018.91	-	-	-	2.810
1889	5018.89	-	-	-	2.810
1890	5018.87	-	-	-	2.810
1891	5018.85	-	-	-	2.810
1892	5018.84	-	-	-	2.810
1893	5018.82	-	-	-	2.820
1894	5018.80	-	-	-	2.820
1895	5018.79	-	-	-	2.820
1896	5018.77	-	-	-	2.820
1897	5018.76	-	-	-	2.830
1898	5018.74	-	-	-	2.830
1899	5018.72	-	-	-	2.830
1900	5018.71	-	-	-	2.830
1901	5018.69	-	-	-	2.830
1902	5018.67	-	-	-	2.830
1903	5018.66	-	-	-	2.830
1904	5018.64	-	-	-	2.840
1905	5018.63	-	-	-	2.840
1906	5018.61	-	-	-	2.840
1907	5018.59	-	-	-	2.850
1908	5018.58	-	-	-	2.840
1909	5018.56	-	-	-	2.850
1910	5018.55	-	-	-	2.850
1911	5018.53	-	-	-	2.850
1912	5018.52	-	-	-	2.850
1913	5018.50	-	-	-	2.850
1914	5018.49	-	-	-	2.850
1915	5018.47	-	-	-	2.860
1916	5018.45	-	-	-	2.860
1917	5018.44	-	-	-	2.860
1918	5018.42	-	-	-	2.860
1919	5018.41	-	-	-	2.860
1920	5018.39	-	-	-	2.860
1921	5018.38	-	-	-	2.780
1922	5018.36	-	-	-	2.780
1923	5018.35	-	-	-	2.790
1924	5018.33	-	-	-	2.790
1925	5018.31	-	-	-	2.790
1926	5018.30	-	-	-	2.700
1927	5018.28	-	-	-	2.700
1928	5018.27	-	-	-	2.710
1929	5018.25	-	-	-	2.700
1930	5018.24	-	-	-	2.710
1931	5018.22	-	-	-	2.710
1932	5018.21	-	-	-	2.710
1933	5018.19	-	-	-	2.710
1934	5018.18	-	-	-	2.710
				Continued on next page	

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-N2m2
1935	5018.16	-	-	-	2.710
1936	5018.15	-	-	-	2.710
1937	5018.13	-	-	-	2.710
1938	5018.12	-	-	-	2.650
1939	5018.10	-	-	-	2.650
1940	5018.09	-	-	-	2.580
1941	5018.07	-	-	-	2.590
1942	5018.06	-	-	-	2.590
1943	5018.04	-	-	-	2.590
1944	5018.03	-	-	-	2.590
1945	5018.01	-	-	-	2.590
1946	5018.00	-	-	-	2.590
1947	5017.99	-	-	-	2.520
1948	5017.97	-	-	-	2.480
1949	5017.96	-	-	-	2.400
1950	5017.94	-	-	-	2.400
1951	5017.93	-	-	-	2.410
1952	5017.91	-	-	-	2.400
1953	5017.90	-	-	-	2.410
1954	5017.89	-	-	-	2.410
1955	5017.87	-	-	-	2.410
1956	5017.86	-	-	-	2.410
1957	5017.84	-	-	-	2.410
1958	5017.83	-	-	-	2.410
1959	5017.82	-	-	-	2.340
1960	5017.80	-	-	-	2.340
1961	5017.79	-	-	-	2.340
1962	5017.77	-	-	-	2.340
1963	5017.76	-	-	-	2.340
1964	5017.75	-	-	-	2.340
1965	5017.73	-	-	-	2.350
1966	5017.72	-	-	-	2.350
1967	5017.71	-	-	-	2.350
1968	5017.69	-	-	-	2.350
1969	5017.68	-	-	-	2.350
1970	5017.66	-	-	-	2.350
1971	5017.65	-	-	-	2.350
1972	5017.64	-	-	-	2.350
1973	5017.62	-	-	-	2.290
1974	5017.61	-	-	-	2.290
1975	5017.60	-	-	-	2.290
1976	5017.58	-	-	-	2.300
1977	5017.57	-	-	-	2.290
1978	5017.56	-	-	-	2.290
1979	5017.54	-	-	-	2.300
1980	5017.53	-	-	-	2.300
1981	5017.52	-	-	-	2.300
1982	5017.50	-	-	-	2.300
1983	5017.49	-	-	-	2.300
1984	5017.48	-	-	-	2.300
1985	5017.46	-	-	-	2.300
1986	5017.45	-	-	-	2.310
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Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
1987	5017.44	-	-	-	2.250
1988	5017.43	-	-	-	2.250
1989	5017.41	-	-	-	2.260
1990	5017.40	-	-	-	2.260
1991	5017.39	-	-	-	2.260
1992	5017.37	-	-	-	2.200
1993	5017.36	-	-	-	2.200
1994	5017.35	-	-	-	2.200
1995	5017.34	-	-	-	2.200
1996	5017.32	-	-	-	2.200
1997	5017.31	-	-	-	2.200
1998	5017.30	-	-	-	2.210
1999	5017.29	-	-	-	2.210
2000	5017.28	-	-	-	2.210
2001	5017.26	-	-	-	2.140
2002	5017.25	-	-	-	2.140
2003	5017.24	-	-	-	2.140
2004	5017.23	-	-	-	2.140
2005	5017.22	-	-	-	2.140
2006	5017.20	-	-	-	2.140
2007	5017.19	-	-	-	2.140
2008	5017.18	-	-	-	2.140
2009	5017.17	-	-	-	2.150
2010	5017.16	-	-	-	2.150
2011	5017.14	-	-	-	2.150
2012	5017.13	-	-	-	2.150
2013	5017.12	-	-	-	2.150
2014	5017.11	-	-	-	2.150
2015	5017.10	-	-	-	2.150
2016	5017.09	-	-	-	2.150
2017	5017.08	-	-	-	2.150
2018	5017.07	-	-	-	2.150
2019	5017.05	-	-	-	2.150
2020	5017.04	-	-	-	2.150
2021	5017.03	-	-	-	2.090
2022	5017.02	-	-	-	2.090
2023	5017.01	-	-	-	2.090
2024	5017.00	-	-	-	2.090
2025	5016.99	-	-	-	2.100
2026	5016.98	-	-	-	2.090
2027	5016.97	-	-	-	2.040
2028	5016.96	-	-	-	2.040
2029	5016.95	-	-	-	1.980
2030	5016.94	-	-	-	1.980
2031	5016.92	-	-	-	1.920
2032	5016.91	-	-	-	1.920
2033	5016.90	-	-	-	1.860
2034	5016.89	-	-	-	1.860
2035	5016.88	-	-	-	1.870
2036	5016.87	-	-	-	1.870
2037	5016.86	-	-	-	1.870
2038	5016.85	-	-	-	1.870

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		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
2039	5016.84	-	-	-	1.870
2040	5016.83	-	-	-	1.870
2041	5016.82	-	-	-	1.870
2042	5016.81	-	-	-	1.870
2043	5016.80	-	-	-	1.870
2044	5016.79	-	-	-	1.870
2045	5016.78	-	-	-	1.870
2046	5016.77	-	-	-	1.870
2047	5016.76	-	-	-	1.910
2048	5016.75	-	-	-	1.910
2049	5016.74	-	-	-	1.910
2050	5016.73	-	-	-	1.910
2051	5016.72	-	-	-	1.920
2052	5016.71	-	-	-	1.920
2053	5016.70	-	-	-	1.910
2054	5016.70	-	-	-	1.910
2055	5016.69	-	-	-	1.910
2056	5016.68	-	-	-	1.920
2057	5016.67	-	-	-	1.910
2058	5016.66	-	-	-	1.920
2059	5016.65	-	-	-	1.920
2060	5016.64	-	-	-	1.920
2061	5016.63	-	-	-	1.920
2062	5016.62	-	-	-	1.890
2063	5016.61	-	-	-	1.890
2064	5016.60	-	-	-	1.890
2065	5016.59	-	-	-	1.890
2066	5016.59	-	-	-	1.890
2067	5016.58	-	-	-	1.900
2068	5016.57	-	-	-	1.900
2069	5016.56	-	-	-	1.900
2070	5016.55	-	-	-	1.900
2071	5016.54	-	-	-	1.830
2072	5016.53	-	-	-	1.830
2073	5016.52	-	-	-	1.830
2074	5016.52	-	-	-	1.830
2075	5016.51	-	-	-	1.780
2076	5016.50	-	-	-	1.780
2077	5016.49	-	-	-	1.790
2078	5016.48	-	-	-	1.770
2079	5016.48	-	-	-	1.720
2080	5016.47	-	-	-	1.720
2081	5016.46	-	-	-	1.720
2082	5016.45	-	-	-	1.720
2083	5016.45	-	-	-	1.720
2084	5016.44	-	-	-	1.720
2085	5016.43	-	-	-	1.720
2086	5016.42	-	-	-	1.720
2087	5016.41	-	-	-	1.720
2088	5016.41	-	-	-	1.720
2089	5016.40	-	-	-	1.660
2090	5016.39	-	-	-	1.660

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m	best ENS	Time (sec)			
		ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
2091	5016.38	-	-	-	1.660
2092	5016.38	-	-	-	1.670
2093	5016.37	-	-	-	1.610
2094	5016.36	-	-	-	1.610
2095	5016.35	-	-	-	1.610
2096	5016.34	-	-	-	1.610
2097	5016.34	-	-	-	1.610
2098	5016.33	-	-	-	1.610
2099	5016.32	-	-	-	1.610
2100	5016.31	-	-	-	1.610
2101	5016.31	-	-	-	1.610
2102	5016.30	-	-	-	1.550
2103	5016.29	-	-	-	1.550
2104	5016.28	-	-	-	1.500
2105	5016.28	-	-	-	1.500
2106	5016.27	-	-	-	1.500
2107	5016.26	-	-	-	1.460
2108	5016.25	-	-	-	1.460
2109	5016.25	-	-	-	1.410
2110	5016.24	-	-	-	1.420
2111	5016.23	-	-	-	1.370
2112	5016.22	-	-	-	1.370
2113	5016.22	-	-	-	1.320
2114	5016.21	-	-	-	1.320
2115	5016.20	-	-	-	1.320
2116	5016.19	-	-	-	1.320
2117	5016.19	-	-	-	1.320
2118	5016.18	-	-	-	1.320
2119	5016.17	-	-	-	1.320
2120	5016.16	-	-	-	1.320
2121	5016.16	-	-	-	1.320
2122	5016.15	-	-	-	1.320
2123	5016.14	-	-	-	1.320
2124	5016.13	-	-	-	1.320
2125	5016.13	-	-	-	1.320
2126	5016.12	-	-	-	1.320
2127	5016.11	-	-	-	1.320
2128	5016.11	-	-	-	1.320
2129	5016.10	-	-	-	1.330
2130	5016.09	-	-	-	1.340
2131	5016.09	-	-	-	1.330
2132	5016.08	-	-	-	1.330
2133	5016.07	-	-	-	1.330
2134	5016.07	-	-	-	1.340
2135	5016.06	-	-	-	1.330
2136	5016.05	-	-	-	1.330
2137	5016.05	-	-	-	1.330
2138	5016.04	-	-	-	1.330
2139	5016.03	-	-	-	1.340
2140	5016.03	-	-	-	1.330
2141	5016.02	-	-	-	1.330
2142	5016.01	-	-	-	1.330

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
2143	5016.01	-	-	-	1.340
2144	5016.00	-	-	-	1.340
2145	5015.99	-	-	-	1.340
2146	5015.99	-	-	-	1.340
2147	5015.98	-	-	-	1.340
2148	5015.97	-	-	-	1.340
2149	5015.97	-	-	-	1.340
2150	5015.96	-	-	-	1.340
2151	5015.95	-	-	-	1.340
2152	5015.95	-	-	-	1.340
2153	5015.94	-	-	-	1.340
2154	5015.94	-	-	-	1.340
2155	5015.93	-	-	-	1.340
2156	5015.92	-	-	-	1.340
2157	5015.92	-	-	-	1.340
2158	5015.91	-	-	-	1.340
2159	5015.91	-	-	-	1.340
2160	5015.90	-	-	-	1.340
2161	5015.90	-	-	-	1.350
2162	5015.89	-	-	-	1.350
2163	5015.89	-	-	-	1.350
2164	5015.89	-	-	-	1.350
2165	5015.88	-	-	-	1.350
2166	5015.88	-	-	-	1.350
2167	5015.87	-	-	-	1.350
2168	5015.87	-	-	-	1.350
2169	5015.86	-	-	-	1.350
2170	5015.86	-	-	-	1.350
2171	5015.85	-	-	-	1.350
2172	5015.85	-	-	-	1.350
2173	5015.84	-	-	-	1.350
2174	5015.84	-	-	-	1.350
2175	5015.83	-	-	-	1.350
2176	5015.83	-	-	-	1.360
2177	5015.82	-	-	-	1.350
2178	5015.82	-	-	-	1.350
2179	5015.82	-	-	-	1.360
2180	5015.81	-	-	-	1.360
2181	5015.81	-	-	-	1.360
2182	5015.80	-	-	-	1.360
2183	5015.80	-	-	-	1.360
2184	5015.79	-	-	-	1.360
2185	5015.79	-	-	-	1.360
2186	5015.78	-	-	-	1.360
2187	5015.78	-	-	-	1.360
2188	5015.77	-	-	-	1.360
2189	5015.77	-	-	-	1.360
2190	5015.77	-	-	-	1.360
2191	5015.76	-	-	-	1.360
2192	5015.76	-	-	-	1.360
2193	5015.75	-	-	-	1.360
2194	5015.75	-	-	-	1.370
					Continued on next page

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m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
2195	5015.74	-	-	-	1.370
2196	5015.74	-	-	-	1.370
2197	5015.73	-	-	-	1.370
2198	5015.73	-	-	-	1.370
2199	5015.73	-	-	-	1.370
2200	5015.72	-	-	-	1.370
2201	5015.72	-	-	-	1.370
2202	5015.71	-	-	-	1.370
2203	5015.71	-	-	-	1.370
2204	5015.70	-	-	-	1.370
2205	5015.70	-	-	-	1.370
2206	5015.70	-	-	-	1.370
2207	5015.69	-	-	-	1.370
2208	5015.69	-	-	-	1.370
2209	5015.68	-	-	-	1.280
2210	5015.68	-	-	-	1.280
2211	5015.68	-	-	-	1.230
2212	5015.67	-	-	-	1.230
2213	5015.67	-	-	-	1.230
2214	5015.66	-	-	-	1.230
2215	5015.66	-	-	-	1.230
2216	5015.66	-	-	-	1.250
2217	5015.65	-	-	-	1.250
2218	5015.65	-	-	-	1.250
2219	5015.65	-	-	-	1.250
2220	5015.65	-	-	-	1.240
2221	5015.64	-	-	-	1.240
2222	5015.64	-	-	-	1.240
2223	5015.64	-	-	-	1.240
2224	5015.63	-	-	-	1.240
2225	5015.63	-	-	-	1.240
2226	5015.63	-	-	-	1.190
2227	5015.63	-	-	-	1.190
2228	5015.62	-	-	-	1.190
2229	5015.62	-	-	-	1.190
2230	5015.62	-	-	-	1.190
2231	5015.62	-	-	-	1.190
2232	5015.62	-	-	-	1.190
2233	5015.62	-	-	-	1.190
2234	5015.62	-	-	-	1.190
2235	5015.61	-	-	-	1.190
2236	5015.61	-	-	-	1.190
2237	5015.61	-	-	-	1.190
2238	5015.61	-	-	-	1.150
2239	5015.61	-	-	-	1.150
2240	5015.61	-	-	-	1.150
2241	5015.61	-	-	-	1.150
2242	5015.61	-	-	-	1.150
2243	5015.61	-	-	-	1.150
2244	5015.61	-	-	-	1.150
2245	5015.61	-	-	-	1.150
2246	5015.61	-	-	-	1.150
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m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
		Time (sec)			
2247	5015.60	-	-	-	1.150
2248	5015.60	-	-	-	1.110
2249	5015.60	-	-	-	1.110
2250	5015.60	-	-	-	1.070
2251	5015.60	-	-	-	1.070
2252	5015.60	-	-	-	1.070
2253	5015.60	-	-	-	1.070
2254	5015.60	-	-	-	1.070
2255	5015.60	-	-	-	1.070
2256	5015.60	-	-	-	1.070
2257	5015.60	-	-	-	1.070
2258	5015.60	-	-	-	1.070
2259	5015.60	-	-	-	1.070
2260	5015.60	-	-	-	1.020
2261	5015.60	-	-	-	1.020
2262	5015.60	-	-	-	1.020
2263	5015.60	-	-	-	1.020
2264	5015.60	-	-	-	0.970
2265	5015.60	-	-	-	0.970
2266	5015.60	-	-	-	0.970
2267	5015.60	-	-	-	0.970
2268	5015.60	-	-	-	0.970
2269	5015.60	-	-	-	0.970
2270	5015.60	-	-	-	0.970
2271	5015.60	-	-	-	0.970
2272	5015.60	-	-	-	0.970
2273	5015.60	-	-	-	0.970
2274	5015.60	-	-	-	0.990
2275	5015.60	-	-	-	0.980
2276	5015.60	-	-	-	0.990
2277	5015.60	-	-	-	0.990
2278	5015.60	-	-	-	0.940
2279	5015.60	-	-	-	0.940
2280	5015.60	-	-	-	0.930
2281	5015.60	-	-	-	0.890
2282	5015.60	-	-	-	0.890
2283	5015.60	-	-	-	0.890
2284	5015.60	-	-	-	0.890
2285	5015.60	-	-	-	0.890
2286	5015.60	-	-	-	0.890
2287	5015.60	-	-	-	0.890
2288	5015.60	-	-	-	0.890
2289	5015.60	-	-	-	0.890
2290	5015.60	-	-	-	0.890
2291	5015.60	-	-	-	0.850
2292	5015.60	-	-	-	0.840
2293	5015.60	-	-	-	0.810
2294	5015.60	-	-	-	0.810
2295	5015.60	-	-	-	0.810
2296	5015.60	-	-	-	0.810
2297	5015.60	-	-	-	0.810
2298	5015.60	-	-	-	0.760
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		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
2299	5015.60	-	-	-	0.760
2300	5015.60	-	-	-	0.760
2301	5015.60	-	-	-	0.760
2302	5015.60	-	-	-	0.760
2303	5015.60	-	-	-	0.760
2304	5015.60	-	-	-	0.760
2305	5015.60	-	-	-	0.760
2306	5015.60	-	-	-	0.760
2307	5015.60	-	-	-	0.760
2308	5015.60	-	-	-	0.760
2309	5015.60	-	-	-	0.720
2310	5015.60	-	-	-	0.720
2311	5015.60	-	-	-	0.720
2312	5015.60	-	-	-	0.720
2313	5015.60	-	-	-	0.680
2314	5015.60	-	-	-	0.680
2315	5015.60	-	-	-	0.680
2316	5015.60	-	-	-	0.680
2317	5015.60	-	-	-	0.680
2318	5015.60	-	-	-	0.680
2319	5015.60	-	-	-	0.680
2320	5015.60	-	-	-	0.650
2321	5015.60	-	-	-	0.650
2322	5015.60	-	-	-	0.650
2323	5015.60	-	-	-	0.650
2324	5015.60	-	-	-	0.650
2325	5015.60	-	-	-	0.650
2326	5015.60	-	-	-	0.650
2327	5015.60	-	-	-	0.610
2328	5015.60	-	-	-	0.610
2329	5015.60	-	-	-	0.610
2330	5015.60	-	-	-	0.610
2331	5015.60	-	-	-	0.610
2332	5015.60	-	-	-	0.580
2333	5015.60	-	-	-	0.580
2334	5015.60	-	-	-	0.540
2335	5015.60	-	-	-	0.540
2336	5015.60	-	-	-	0.540
2337	5015.60	-	-	-	0.540
2338	5015.60	-	-	-	0.540
2339	5015.60	-	-	-	0.540
2340	5015.60	-	-	-	0.510
2341	5015.60	-	-	-	0.510
2342	5015.60	-	-	-	0.510
2343	5015.60	-	-	-	0.500
2344	5015.60	-	-	-	0.500
2345	5015.60	-	-	-	0.500
2346	5015.60	-	-	-	0.500
2347	5015.60	-	-	-	0.500
2348	5015.60	-	-	-	0.500
2349	5015.60	-	-	-	0.500
2350	5015.60	-	-	-	0.500
				Continued on next page	

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
2351	5015.60	-	-	-	0.500
2352	5015.60	-	-	-	0.500
2353	5015.60	-	-	-	0.500
2354	5015.60	-	-	-	0.500
2355	5015.60	-	-	-	0.500
2356	5015.60	-	-	-	0.500
2357	5015.60	-	-	-	0.500
2358	5015.60	-	-	-	0.500
2359	5015.60	-	-	-	0.500
2360	5015.60	-	-	-	0.500
2361	5015.60	-	-	-	0.500
2362	5015.60	-	-	-	0.510
2363	5015.60	-	-	-	0.500
2364	5015.60	-	-	-	0.500
2365	5015.60	-	-	-	0.500
2366	5015.60	-	-	-	0.510
2367	5015.60	-	-	-	0.500
2368	5015.60	-	-	-	0.510
2369	5015.60	-	-	-	0.510
2370	5015.60	-	-	-	0.510
2371	5015.60	-	-	-	0.510
2372	5015.60	-	-	-	0.510
2373	5015.60	-	-	-	0.510
2374	5015.60	-	-	-	0.510
2375	5015.60	-	-	-	0.510
2376	5015.60	-	-	-	0.510
2377	5015.60	-	-	-	0.510
2378	5015.60	-	-	-	0.510
2379	5015.60	-	-	-	0.510
2380	5015.60	-	-	-	0.510
2381	5015.60	-	-	-	0.510
2382	5015.60	-	-	-	0.510
2383	5015.60	-	-	-	0.510
2384	5015.60	-	-	-	0.510
2385	5015.60	-	-	-	0.510
2386	5015.60	-	-	-	0.510
2387	5015.60	-	-	-	0.510
2388	5015.60	-	-	-	0.510
2389	5015.60	-	-	-	0.510
2390	5015.60	-	-	-	0.510
2391	5015.60	-	-	-	0.510
2392	5015.60	-	-	-	0.510
2393	5015.60	-	-	-	0.510
2394	5015.60	-	-	-	0.510
2395	5015.60	-	-	-	0.510
2396	5015.60	-	-	-	0.510
2397	5015.60	-	-	-	0.510
2398	5015.60	-	-	-	0.510
2399	5015.60	-	-	-	0.510
2400	5015.60	-	-	-	0.510
2401	5015.60	-	-	-	0.510
2402	5015.60	-	-	-	0.510

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
2403	5015.60	-	-	-	0.510
2404	5015.60	-	-	-	0.510
2405	5015.60	-	-	-	0.510
2406	5015.60	-	-	-	0.510
2407	5015.60	-	-	-	0.510
2408	5015.60	-	-	-	0.510
2409	5015.60	-	-	-	0.510
2410	5015.60	-	-	-	0.510
2411	5015.60	-	-	-	0.510
2412	5015.60	-	-	-	0.510
2413	5015.60	-	-	-	0.510
2414	5015.60	-	-	-	0.510
2415	5015.60	-	-	-	0.510
2416	5015.60	-	-	-	0.510
2417	5015.60	-	-	-	0.510
2418	5015.60	-	-	-	0.510
2419	5015.60	-	-	-	0.510
2420	5015.60	-	-	-	0.510
2421	5015.60	-	-	-	0.510
2422	5015.60	-	-	-	0.520
2423	5015.60	-	-	-	0.520
2424	5015.60	-	-	-	0.520
2425	5015.60	-	-	-	0.520
2426	5015.60	-	-	-	0.520
2427	5015.60	-	-	-	0.520
2428	5015.60	-	-	-	0.520
2429	5015.60	-	-	-	0.520
2430	5015.60	-	-	-	0.520
2431	5015.60	-	-	-	0.520
2432	5015.60	-	-	-	0.520
2433	5015.60	-	-	-	0.520
2434	5015.60	-	-	-	0.520
2435	5015.60	-	-	-	0.520
2436	5015.60	-	-	-	0.520
2437	5015.60	-	-	-	0.520
2438	5015.60	-	-	-	0.520
2439	5015.60	-	-	-	0.520
2440	5015.60	-	-	-	0.520
2441	5015.60	-	-	-	0.520
2442	5015.60	-	-	-	0.520
2443	5015.60	-	-	-	0.520
2444	5015.60	-	-	-	0.520
2445	5015.60	-	-	-	0.520
2446	5015.60	-	-	-	0.520
2447	5015.60	-	-	-	0.520
2448	5015.60	-	-	-	0.520
2449	5015.60	-	-	-	0.520
2450	5015.60	-	-	-	0.520
2451	5015.60	-	-	-	0.520
2452	5015.60	-	-	-	0.520
2453	5015.60	-	-	-	0.520
2454	5015.60	-	-	-	0.520

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
2455	5015.60	-	-	-	0.520
2456	5015.60	-	-	-	0.520
2457	5015.60	-	-	-	0.520
2458	5015.60	-	-	-	0.520
2459	5015.60	-	-	-	0.520
2460	5015.60	-	-	-	0.520
2461	5015.60	-	-	-	0.530
2462	5015.60	-	-	-	0.530
2463	5015.60	-	-	-	0.530
2464	5015.60	-	-	-	0.530
2465	5015.60	-	-	-	0.530
2466	5015.60	-	-	-	0.530
2467	5015.60	-	-	-	0.530
2468	5015.60	-	-	-	0.530
2469	5015.60	-	-	-	0.530
2470	5015.60	-	-	-	0.520
2471	5015.60	-	-	-	0.530
2472	5015.60	-	-	-	0.520
2473	5015.60	-	-	-	0.520
2474	5015.60	-	-	-	0.520
2475	5015.60	-	-	-	0.520
2476	5015.60	-	-	-	0.520
2477	5015.60	-	-	-	0.520
2478	5015.60	-	-	-	0.530
2479	5015.60	-	-	-	0.530
2480	5015.60	-	-	-	0.520
2481	5015.60	-	-	-	0.530
2482	5015.60	-	-	-	0.530
2483	5015.60	-	-	-	0.530
2484	5015.60	-	-	-	0.530
2485	5015.60	-	-	-	0.530
2486	5015.60	-	-	-	0.530
2487	5015.60	-	-	-	0.530
2488	5015.60	-	-	-	0.530
2489	5015.60	-	-	-	0.530
2490	5015.60	-	-	-	0.530
2491	5015.60	-	-	-	0.530
2492	5015.60	-	-	-	0.530
2493	5015.60	-	-	-	0.530
2494	5015.60	-	-	-	0.530
2495	5015.60	-	-	-	0.530
2496	5015.60	-	-	-	0.530
2497	5015.60	-	-	-	0.530
2498	5015.60	-	-	-	0.530
2499	5015.60	-	-	-	0.530
2500	5015.60	-	-	-	0.530
2501	5015.60	-	-	-	0.530
2502	5015.60	-	-	-	0.530
2503	5015.60	-	-	-	0.530
2504	5015.60	-	-	-	0.530
2505	5015.60	-	-	-	0.530
2506	5015.60	-	-	-	0.530

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-N2M2
2507	5015.60	-	-	-	0.530
2508	5015.60	-	-	-	0.530
2509	5015.60	-	-	-	0.530
2510	5015.60	-	-	-	0.530
2511	5015.60	-	-	-	0.530
2512	5015.60	-	-	-	0.530
2513	5015.60	-	-	-	0.530
2514	5015.60	-	-	-	0.530
2515	5015.60	-	-	-	0.530
2516	5015.60	-	-	-	0.530
2517	5015.60	-	-	-	0.530
2518	5015.60	-	-	-	0.530
2519	5015.60	-	-	-	0.530
2520	5015.60	-	-	-	0.530
2521	5015.60	-	-	-	0.530
2522	5015.60	-	-	-	0.530
2523	5015.60	-	-	-	0.530
2524	5015.60	-	-	-	0.530
2525	5015.60	-	-	-	0.530
2526	5015.60	-	-	-	0.530
2527	5015.60	-	-	-	0.530
2528	5015.60	-	-	-	0.530
2529	5015.60	-	-	-	0.530
2530	5015.60	-	-	-	0.530
2531	5015.60	-	-	-	0.530
2532	5015.60	-	-	-	0.530
2533	5015.60	-	-	-	0.530
2534	5015.60	-	-	-	0.530
2535	5015.60	-	-	-	0.530
2536	5015.60	-	-	-	0.530
2537	5015.60	-	-	-	0.530
2538	5015.60	-	-	-	0.540
2539	5015.60	-	-	-	0.540
2540	5015.60	-	-	-	0.540
2541	5015.60	-	-	-	0.540
2542	5015.60	-	-	-	0.540
2543	5015.60	-	-	-	0.540
2544	5015.60	-	-	-	0.540
2545	5015.60	-	-	-	0.540
2546	5015.60	-	-	-	0.540
2547	5015.60	-	-	-	0.540
2548	5015.60	-	-	-	0.540
2549	5015.60	-	-	-	0.540
2550	5015.60	-	-	-	0.540
2551	5015.60	-	-	-	0.550
2552	5015.60	-	-	-	0.550
2553	5015.60	-	-	-	0.550
2554	5015.60	-	-	-	0.550
2555	5015.60	-	-	-	0.550
2556	5015.60	-	-	-	0.550
2557	5015.60	-	-	-	0.550
2558	5015.60	-	-	-	0.550
				Continued on next page	

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
2559	5015.60	-	-	-	0.550
2560	5015.60	-	-	-	0.550
2561	5015.60	-	-	-	0.550
2562	5015.60	-	-	-	0.550
2563	5015.60	-	-	-	0.550
2564	5015.60	-	-	-	0.550
2565	5015.60	-	-	-	0.550
2566	5015.60	-	-	-	0.550
2567	5015.60	-	-	-	0.550
2568	5015.60	-	-	-	0.550
2569	5015.60	-	-	-	0.550
2570	5015.60	-	-	-	0.550
2571	5015.60	-	-	-	0.550
2572	5015.60	-	-	-	0.550
2573	5015.60	-	-	-	0.550
2574	5015.60	-	-	-	0.550
2575	5015.60	-	-	-	0.550
2576	5015.60	-	-	-	0.550
2577	5015.60	-	-	-	0.550
2578	5015.60	-	-	-	0.540
2579	5015.60	-	-	-	0.540
2580	5015.60	-	-	-	0.550
2581	5015.60	-	-	-	0.540
2582	5015.60	-	-	-	0.540
2583	5015.60	-	-	-	0.540
2584	5015.60	-	-	-	0.540
2585	5015.60	-	-	-	0.540
2586	5015.60	-	-	-	0.540
2587	5015.60	-	-	-	0.540
2588	5015.60	-	-	-	0.540
2589	5015.60	-	-	-	0.540
2590	5015.60	-	-	-	0.550
2591	5015.60	-	-	-	0.540
2592	5015.60	-	-	-	0.540
2593	5015.60	-	-	-	0.540
2594	5015.60	-	-	-	0.550
2595	5015.60	-	-	-	0.540
2596	5015.60	-	-	-	0.550
2597	5015.60	-	-	-	0.550
2598	5015.60	-	-	-	0.550
2599	5015.60	-	-	-	0.550
2600	5015.60	-	-	-	0.550
2601	5015.60	-	-	-	0.550
2602	5015.60	-	-	-	0.550
2603	5015.60	-	-	-	0.550
2604	5015.60	-	-	-	0.550
2605	5015.60	-	-	-	0.550
2606	5015.60	-	-	-	0.550
2607	5015.60	-	-	-	0.550
2608	5015.60	-	-	-	0.550
2609	5015.60	-	-	-	0.550
2610	5015.60	-	-	-	0.550

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
2611	5015.60	-	-	-	0.550
2612	5015.60	-	-	-	0.550
2613	5015.60	-	-	-	0.550
2614	5015.60	-	-	-	0.560
2615	5015.60	-	-	-	0.560
2616	5015.60	-	-	-	0.560
2617	5015.60	-	-	-	0.560
2618	5015.60	-	-	-	0.560
2619	5015.60	-	-	-	0.560
2620	5015.60	-	-	-	0.560
2621	5015.60	-	-	-	0.560
2622	5015.60	-	-	-	0.560
2623	5015.60	-	-	-	0.550
2624	5015.60	-	-	-	0.550
2625	5015.60	-	-	-	0.550
2626	5015.60	-	-	-	0.550
2627	5015.60	-	-	-	0.550
2628	5015.60	-	-	-	0.550
2629	5015.60	-	-	-	0.550
2630	5015.60	-	-	-	0.550
2631	5015.60	-	-	-	0.550
2632	5015.60	-	-	-	0.550
2633	5015.60	-	-	-	0.550
2634	5015.60	-	-	-	0.550
2635	5015.60	-	-	-	0.550
2636	5015.60	-	-	-	0.550
2637	5015.60	-	-	-	0.550
2638	5015.60	-	-	-	0.550
2639	5015.60	-	-	-	0.550
2640	5015.60	-	-	-	0.550
2641	5015.60	-	-	-	0.550
2642	5015.60	-	-	-	0.550
2643	5015.60	-	-	-	0.550
2644	5015.60	-	-	-	0.550
2645	5015.60	-	-	-	0.550
2646	5015.60	-	-	-	0.550
2647	5015.60	-	-	-	0.550
2648	5015.60	-	-	-	0.550
2649	5015.60	-	-	-	0.550
2650	5015.60	-	-	-	0.560
2651	5015.60	-	-	-	0.550
2652	5015.60	-	-	-	0.560
2653	5015.60	-	-	-	0.560
2654	5015.60	-	-	-	0.560
2655	5015.60	-	-	-	0.560
2656	5015.60	-	-	-	0.560
2657	5015.60	-	-	-	0.560
2658	5015.60	-	-	-	0.560
2659	5015.60	-	-	-	0.560
2660	5015.60	-	-	-	0.560
2661	5015.60	-	-	-	0.560
2662	5015.60	-	-	-	0.570

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	Time (sec)			
		ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
2663	5015.60	-	-	-	0.560
2664	5015.60	-	-	-	0.560
2665	5015.60	-	-	-	0.560
2666	5015.60	-	-	-	0.570
2667	5015.60	-	-	-	0.570
2668	5015.60	-	-	-	0.570
2669	5015.60	-	-	-	0.570
2670	5015.60	-	-	-	0.570
2671	5015.60	-	-	-	0.570
2672	5015.60	-	-	-	0.570
2673	5015.60	-	-	-	0.570
2674	5015.60	-	-	-	0.570
2675	5015.60	-	-	-	0.570
2676	5015.60	-	-	-	0.570
2677	5015.60	-	-	-	0.560
2678	5015.60	-	-	-	0.560
2679	5015.60	-	-	-	0.560
2680	5015.60	-	-	-	0.560
2681	5015.60	-	-	-	0.560
2682	5015.60	-	-	-	0.560
2683	5015.60	-	-	-	0.560
2684	5015.60	-	-	-	0.560
2685	5015.60	-	-	-	0.560
2686	5015.60	-	-	-	0.560
2687	5015.60	-	-	-	0.560
2688	5015.60	-	-	-	0.560
2689	5015.60	-	-	-	0.560
2690	5015.60	-	-	-	0.560
2691	5015.60	-	-	-	0.560
2692	5015.60	-	-	-	0.560
2693	5015.60	-	-	-	0.560
2694	5015.60	-	-	-	0.560
2695	5015.60	-	-	-	0.560
2696	5015.60	-	-	-	0.560
2697	5015.60	-	-	-	0.560
2698	5015.60	-	-	-	0.560
2699	5015.60	-	-	-	0.560
2700	5015.60	-	-	-	0.560
2701	5015.60	-	-	-	0.560
2702	5015.60	-	-	-	0.560
2703	5015.60	-	-	-	0.560
2704	5015.60	-	-	-	0.560
2705	5015.60	-	-	-	0.560
2706	5015.60	-	-	-	0.560
2707	5015.60	-	-	-	0.560
2708	5015.60	-	-	-	0.560
2709	5015.60	-	-	-	0.560
2710	5015.60	-	-	-	0.560
2711	5015.60	-	-	-	0.560
2712	5015.60	-	-	-	0.570
2713	5015.60	-	-	-	0.560
2714	5015.60	-	-	-	0.560

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
2715	5015.60	-	-	-	0.570
2716	5015.60	-	-	-	0.570
2717	5015.60	-	-	-	0.570
2718	5015.60	-	-	-	0.570
2719	5015.60	-	-	-	0.570
2720	5015.60	-	-	-	0.570
2721	5015.60	-	-	-	0.570
2722	5015.60	-	-	-	0.580
2723	5015.60	-	-	-	0.580
2724	5015.60	-	-	-	0.580
2725	5015.60	-	-	-	0.580
2726	5015.60	-	-	-	0.580
2727	5015.60	-	-	-	0.580
2728	5015.60	-	-	-	0.580
2729	5015.60	-	-	-	0.580
2730	5015.60	-	-	-	0.580
2731	5015.60	-	-	-	0.580
2732	5015.60	-	-	-	0.580
2733	5015.60	-	-	-	0.580
2734	5015.60	-	-	-	0.580
2735	5015.60	-	-	-	0.580
2736	5015.60	-	-	-	0.580
2737	5015.60	-	-	-	0.580
2738	5015.60	-	-	-	0.580
2739	5015.60	-	-	-	0.580
2740	5015.60	-	-	-	0.570
2741	5015.60	-	-	-	0.570
2742	5015.60	-	-	-	0.570
2743	5015.60	-	-	-	0.570
2744	5015.60	-	-	-	0.570
2745	5015.60	-	-	-	0.570
2746	5015.60	-	-	-	0.570
2747	5015.60	-	-	-	0.570
2748	5015.60	-	-	-	0.570
2749	5015.60	-	-	-	0.570
2750	5015.60	-	-	-	0.570
2751	5015.60	-	-	-	0.570
2752	5015.60	-	-	-	0.570
2753	5015.60	-	-	-	0.570
2754	5015.60	-	-	-	0.570
2755	5015.60	-	-	-	0.570
2756	5015.60	-	-	-	0.570
2757	5015.60	-	-	-	0.570
2758	5015.60	-	-	-	0.570
2759	5015.60	-	-	-	0.570
2760	5015.60	-	-	-	0.570
2761	5015.60	-	-	-	0.570
2762	5015.60	-	-	-	0.570
2763	5015.60	-	-	-	0.570
2764	5015.60	-	-	-	0.570
2765	5015.60	-	-	-	0.570
2766	5015.60	-	-	-	0.570

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
2767	5015.60	-	-	-	0.570
2768	5015.60	-	-	-	0.570
2769	5015.60	-	-	-	0.570
2770	5015.60	-	-	-	0.570
2771	5015.60	-	-	-	0.570
2772	5015.60	-	-	-	0.570
2773	5015.60	-	-	-	0.580
2774	5015.60	-	-	-	0.570
2775	5015.60	-	-	-	0.580
2776	5015.60	-	-	-	0.580
2777	5015.60	-	-	-	0.580
2778	5015.60	-	-	-	0.580
2779	5015.60	-	-	-	0.580
2780	5015.60	-	-	-	0.580
2781	5015.60	-	-	-	0.580
2782	5015.60	-	-	-	0.580
2783	5015.60	-	-	-	0.580
2784	5015.60	-	-	-	0.580
2785	5015.60	-	-	-	0.580
2786	5015.60	-	-	-	0.580
2787	5015.60	-	-	-	0.580
2788	5015.60	-	-	-	0.580
2789	5015.60	-	-	-	0.580
2790	5015.60	-	-	-	0.580
2791	5015.60	-	-	-	0.580
2792	5015.60	-	-	-	0.580
2793	5015.60	-	-	-	0.580
2794	5015.60	-	-	-	0.580
2795	5015.60	-	-	-	0.580
2796	5015.60	-	-	-	0.580
2797	5015.60	-	-	-	0.580
2798	5015.60	-	-	-	0.580
2799	5015.60	-	-	-	0.580
2800	5015.60	-	-	-	0.580
2801	5015.60	-	-	-	0.580
2802	5015.60	-	-	-	0.580
2803	5015.60	-	-	-	0.590
2804	5015.60	-	-	-	0.590
2805	5015.60	-	-	-	0.590
2806	5015.60	-	-	-	0.590
2807	5015.60	-	-	-	0.590
2808	5015.60	-	-	-	0.590
2809	5015.60	-	-	-	0.590
2810	5015.60	-	-	-	0.590
2811	5015.60	-	-	-	0.590
2812	5015.60	-	-	-	0.590
2813	5015.60	-	-	-	0.590
2814	5015.60	-	-	-	0.590
2815	5015.60	-	-	-	0.590
2816	5015.60	-	-	-	0.590
2817	5015.60	-	-	-	0.590
2818	5015.60	-	-	-	0.590

Continued on next page

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
2819	5015.60	-	-	-	0.590
2820	5015.60	-	-	-	0.590
2821	5015.60	-	-	-	0.590
2822	5015.60	-	-	-	0.590
2823	5015.60	-	-	-	0.590
2824	5015.60	-	-	-	0.590
2825	5015.60	-	-	-	0.590
2826	5015.60	-	-	-	0.590
2827	5015.60	-	-	-	0.590
2828	5015.60	-	-	-	0.590
2829	5015.60	-	-	-	0.590
2830	5015.60	-	-	-	0.590
2831	5015.60	-	-	-	0.590
2832	5015.60	-	-	-	0.590
2833	5015.60	-	-	-	0.590
2834	5015.60	-	-	-	0.590
2835	5015.60	-	-	-	0.590
2836	5015.60	-	-	-	0.600
2837	5015.60	-	-	-	0.600
2838	5015.60	-	-	-	0.600
2839	5015.60	-	-	-	0.600
2840	5015.60	-	-	-	0.600
2841	5015.60	-	-	-	0.600
2842	5015.60	-	-	-	0.600
2843	5015.60	-	-	-	0.600
2844	5015.60	-	-	-	0.600
2845	5015.60	-	-	-	0.600
2846	5015.60	-	-	-	0.600
2847	5015.60	-	-	-	0.600
2848	5015.60	-	-	-	0.600
2849	5015.60	-	-	-	0.600
2850	5015.60	-	-	-	0.600
2851	5015.60	-	-	-	0.600
2852	5015.60	-	-	-	0.600
2853	5015.60	-	-	-	0.600
2854	5015.60	-	-	-	0.600
2855	5015.60	-	-	-	0.600
2856	5015.60	-	-	-	0.600
2857	5015.60	-	-	-	0.600
2858	5015.60	-	-	-	0.600
2859	5015.60	-	-	-	0.600
2860	5015.60	-	-	-	0.600
2861	5015.60	-	-	-	0.600
2862	5015.60	-	-	-	0.600
2863	5015.60	-	-	-	0.600
2864	5015.60	-	-	-	0.600
2865	5015.60	-	-	-	0.600
2866	5015.60	-	-	-	0.600
2867	5015.60	-	-	-	0.600
2868	5015.60	-	-	-	0.600
2869	5015.60	-	-	-	0.600
2870	5015.60	-	-	-	0.600

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
			Time (sec)		
2871	5015.60	-	-	-	0.600
2872	5015.60	-	-	-	0.600
2873	5015.60	-	-	-	0.600
2874	5015.60	-	-	-	0.600
2875	5015.60	-	-	-	0.590
2876	5015.60	-	-	-	0.590
2877	5015.60	-	-	-	0.590
2878	5015.60	-	-	-	0.590
2879	5015.60	-	-	-	0.590
2880	5015.60	-	-	-	0.590
2881	5015.60	-	-	-	0.590
2882	5015.60	-	-	-	0.590
2883	5015.60	-	-	-	0.590
2884	5015.60	-	-	-	0.590
2885	5015.60	-	-	-	0.600
2886	5015.60	-	-	-	0.600
2887	5015.60	-	-	-	0.600
2888	5015.60	-	-	-	0.600
2889	5015.60	-	-	-	0.600
2890	5015.60	-	-	-	0.600
2891	5015.60	-	-	-	0.600
2892	5015.60	-	-	-	0.600
2893	5015.60	-	-	-	0.600
2894	5015.60	-	-	-	0.600
2895	5015.60	-	-	-	0.600
2896	5015.60	-	-	-	0.600
2897	5015.60	-	-	-	0.600
2898	5015.60	-	-	-	0.600
2899	5015.60	-	-	-	0.610
2900	5015.60	-	-	-	0.610
2901	5015.60	-	-	-	0.610
2902	5015.60	-	-	-	0.610
2903	5015.60	-	-	-	0.610
2904	5015.60	-	-	-	0.610
2905	5015.60	-	-	-	0.610
2906	5015.60	-	-	-	0.610
2907	5015.60	-	-	-	0.610
2908	5015.60	-	-	-	0.610
2909	5015.60	-	-	-	0.610
2910	5015.60	-	-	-	0.610
2911	5015.60	-	-	-	0.610
2912	5015.60	-	-	-	0.610
2913	5015.60	-	-	-	0.610
2914	5015.60	-	-	-	0.610
2915	5015.60	-	-	-	0.610
2916	5015.60	-	-	-	0.610
2917	5015.60	-	-	-	0.610
2918	5015.60	-	-	-	0.610
2919	5015.60	-	-	-	0.610
2920	5015.60	-	-	-	0.610
2921	5015.60	-	-	-	0.610
2922	5015.60	-	-	-	0.610

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-N2m2
2923	5015.60	-	-	-	0.610
2924	5015.60	-	-	-	0.610
2925	5015.60	-	-	-	0.610
2926	5015.60	-	-	-	0.610
2927	5015.60	-	-	-	0.610
2928	5015.60	-	-	-	0.610
2929	5015.60	-	-	-	0.610
2930	5015.60	-	-	-	0.610
2931	5015.60	-	-	-	0.600
2932	5015.60	-	-	-	0.600
2933	5015.60	-	-	-	0.600
2934	5015.60	-	-	-	0.600
2935	5015.60	-	-	-	0.600
2936	5015.60	-	-	-	0.610
2937	5015.60	-	-	-	0.600
2938	5015.60	-	-	-	0.600
2939	5015.60	-	-	-	0.610
2940	5015.60	-	-	-	0.610
2941	5015.60	-	-	-	0.610
2942	5015.60	-	-	-	0.610
2943	5015.60	-	-	-	0.610
2944	5015.60	-	-	-	0.610
2945	5015.60	-	-	-	0.610
2946	5015.60	-	-	-	0.620
2947	5015.60	-	-	-	0.620
2948	5015.60	-	-	-	0.620
2949	5015.60	-	-	-	0.620
2950	5015.60	-	-	-	0.620
2951	5015.60	-	-	-	0.620
2952	5015.60	-	-	-	0.620
2953	5015.60	-	-	-	0.620
2954	5015.60	-	-	-	0.620
2955	5015.60	-	-	-	0.620
2956	5015.60	-	-	-	0.620
2957	5015.60	-	-	-	0.620
2958	5015.60	-	-	-	0.620
2959	5015.60	-	-	-	0.620
2960	5015.60	-	-	-	0.620
2961	5015.60	-	-	-	0.620
2962	5015.60	-	-	-	0.620
2963	5015.60	-	-	-	0.620
2964	5015.60	-	-	-	0.620
2965	5015.60	-	-	-	0.620
2966	5015.60	-	-	-	0.620
2967	5015.60	-	-	-	0.620
2968	5015.60	-	-	-	0.620
2969	5015.60	-	-	-	0.620
2970	5015.60	-	-	-	0.620
2971	5015.60	-	-	-	0.620
2972	5015.60	-	-	-	0.620
2973	5015.60	-	-	-	0.620
2974	5015.60	-	-	-	0.620

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Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
		Time (sec)			
2975	5015.60	-	-	-	0.620
2976	5015.60	-	-	-	0.620
2977	5015.60	-	-	-	0.620
2978	5015.60	-	-	-	0.620
2979	5015.60	-	-	-	0.620
2980	5015.60	-	-	-	0.620
2981	5015.60	-	-	-	0.620
2982	5015.60	-	-	-	0.620
2983	5015.60	-	-	-	0.620
2984	5015.60	-	-	-	0.620
2985	5015.60	-	-	-	0.620
2986	5015.60	-	-	-	0.620
2987	5015.60	-	-	-	0.620
2988	5015.60	-	-	-	0.620
2989	5015.60	-	-	-	0.620
2990	5015.60	-	-	-	0.620
2991	5015.60	-	-	-	0.620
2992	5015.60	-	-	-	0.620
2993	5015.60	-	-	-	0.620
2994	5015.60	-	-	-	0.620
2995	5015.60	-	-	-	0.620
2996	5015.60	-	-	-	0.620
2997	5015.60	-	-	-	0.620
2998	5015.60	-	-	-	0.620
2999	5015.60	-	-	-	0.620
3000	5015.60	-	-	-	0.620
3001	5015.60	-	-	-	0.630
3002	5015.60	-	-	-	0.630
3003	5015.60	-	-	-	0.630
3004	5015.60	-	-	-	0.630
3005	5015.60	-	-	-	0.630
3006	5015.60	-	-	-	0.630
3007	5015.60	-	-	-	0.630
3008	5015.60	-	-	-	0.630
3009	5015.60	-	-	-	0.630
3010	5015.60	-	-	-	0.630
3011	5015.60	-	-	-	0.630
3012	5015.60	-	-	-	0.630
3013	5015.60	-	-	-	0.630
3014	5015.60	-	-	-	0.630
3015	5015.60	-	-	-	0.630
3016	5015.60	-	-	-	0.630
3017	5015.60	-	-	-	0.630
3018	5015.60	-	-	-	0.630
3019	5015.60	-	-	-	0.630
3020	5015.60	-	-	-	0.630
3021	5015.60	-	-	-	0.630
3022	5015.60	-	-	-	0.630
3023	5015.60	-	-	-	0.630
3024	5015.60	-	-	-	0.630
3025	5015.60	-	-	-	0.630
3026	5015.60	-	-	-	0.630

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	Time (sec)			
		ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
3027	5015.60	-	-	-	0.630
3028	5015.60	-	-	-	0.630
3029	5015.60	-	-	-	0.630
3030	5015.60	-	-	-	0.630
3031	5015.60	-	-	-	0.630
3032	5015.60	-	-	-	0.630
3033	5015.60	-	-	-	0.630
3034	5015.60	-	-	-	0.630
3035	5015.60	-	-	-	0.630
3036	5015.60	-	-	-	0.630
3037	5015.60	-	-	-	0.630
3038	5015.60	-	-	-	0.630
3039	5015.60	-	-	-	0.630
3040	5015.60	-	-	-	0.630
3041	5015.60	-	-	-	0.630
3042	5015.60	-	-	-	0.630
3043	5015.60	-	-	-	0.630
3044	5015.60	-	-	-	0.630
3045	5015.60	-	-	-	0.630
3046	5015.60	-	-	-	0.640
3047	5015.60	-	-	-	0.630
3048	5015.60	-	-	-	0.630
3049	5015.60	-	-	-	0.640
3050	5015.60	-	-	-	0.640
3051	5015.60	-	-	-	0.630
3052	5015.60	-	-	-	0.640
3053	5015.60	-	-	-	0.640
3054	5015.60	-	-	-	0.630
3055	5015.60	-	-	-	0.640
3056	5015.60	-	-	-	0.640
3057	5015.60	-	-	-	0.640
3058	5015.60	-	-	-	0.640
3059	5015.60	-	-	-	0.640
3060	5015.60	-	-	-	0.640
3061	5015.60	-	-	-	0.640
3062	5015.60	-	-	-	0.640
3063	5015.60	-	-	-	0.640
3064	5015.60	-	-	-	0.640
3065	5015.60	-	-	-	0.640
3066	5015.60	-	-	-	0.640
3067	5015.60	-	-	-	0.640
3068	5015.60	-	-	-	0.640
3069	5015.60	-	-	-	0.640
3070	5015.60	-	-	-	0.640
3071	5015.60	-	-	-	0.640
3072	5015.60	-	-	-	0.640
3073	5015.60	-	-	-	0.640
3074	5015.60	-	-	-	0.640
3075	5015.60	-	-	-	0.640
3076	5015.60	-	-	-	0.640
3077	5015.60	-	-	-	0.640
3078	5015.60	-	-	-	0.640

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		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
3079	5015.60	-	-	-	0.640
3080	5015.60	-	-	-	0.640
3081	5015.60	-	-	-	0.640
3082	5015.60	-	-	-	0.640
3083	5015.60	-	-	-	0.640
3084	5015.60	-	-	-	0.640
3085	5015.60	-	-	-	0.640
3086	5015.60	-	-	-	0.640
3087	5015.60	-	-	-	0.640
3088	5015.60	-	-	-	0.640
3089	5015.60	-	-	-	0.640
3090	5015.60	-	-	-	0.640
3091	5015.60	-	-	-	0.640
3092	5015.60	-	-	-	0.640
3093	5015.60	-	-	-	0.640
3094	5015.60	-	-	-	0.640
3095	5015.60	-	-	-	0.640
3096	5015.60	-	-	-	0.640
3097	5015.60	-	-	-	0.640
3098	5015.60	-	-	-	0.640
3099	5015.60	-	-	-	0.640
3100	5015.60	-	-	-	0.640
3101	5015.60	-	-	-	0.640
3102	5015.60	-	-	-	0.640
3103	5015.60	-	-	-	0.640
3104	5015.60	-	-	-	0.640
3105	5015.60	-	-	-	0.640
3106	5015.60	-	-	-	0.650
3107	5015.60	-	-	-	0.650
3108	5015.60	-	-	-	0.640
3109	5015.60	-	-	-	0.650
3110	5015.60	-	-	-	0.650
3111	5015.60	-	-	-	0.650
3112	5015.60	-	-	-	0.650
3113	5015.60	-	-	-	0.650
3114	5015.60	-	-	-	0.650
3115	5015.60	-	-	-	0.650
3116	5015.60	-	-	-	0.650
3117	5015.60	-	-	-	0.650
3118	5015.60	-	-	-	0.650
3119	5015.60	-	-	-	0.650
3120	5015.60	-	-	-	0.650
3121	5015.60	-	-	-	0.650
3122	5015.60	-	-	-	0.650
3123	5015.60	-	-	-	0.650
3124	5015.60	-	-	-	0.650
3125	5015.60	-	-	-	0.650
3126	5015.60	-	-	-	0.650
3127	5015.60	-	-	-	0.650
3128	5015.60	-	-	-	0.650
3129	5015.60	-	-	-	0.650
3130	5015.60	-	-	-	0.650

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
		Time (sec)			
3131	5015.60	-	-	-	0.650
3132	5015.60	-	-	-	0.650
3133	5015.60	-	-	-	0.650
3134	5015.60	-	-	-	0.650
3135	5015.60	-	-	-	0.650
3136	5015.60	-	-	-	0.650
3137	5015.60	-	-	-	0.650
3138	5015.60	-	-	-	0.650
3139	5015.60	-	-	-	0.650
3140	5015.60	-	-	-	0.650
3141	5015.60	-	-	-	0.650
3142	5015.60	-	-	-	0.650
3143	5015.60	-	-	-	0.650
3144	5015.60	-	-	-	0.650
3145	5015.60	-	-	-	0.650
3146	5015.60	-	-	-	0.650
3147	5015.60	-	-	-	0.640
3148	5015.60	-	-	-	0.640
3149	5015.60	-	-	-	0.640
3150	5015.60	-	-	-	0.640
3151	5015.60	-	-	-	0.640
3152	5015.60	-	-	-	0.640
3153	5015.60	-	-	-	0.640
3154	5015.60	-	-	-	0.640
3155	5015.60	-	-	-	0.640
3156	5015.60	-	-	-	0.640
3157	5015.60	-	-	-	0.640
3158	5015.60	-	-	-	0.640
3159	5015.60	-	-	-	0.640
3160	5015.60	-	-	-	0.650
3161	5015.60	-	-	-	0.640
3162	5015.60	-	-	-	0.650
3163	5015.60	-	-	-	0.650
3164	5015.60	-	-	-	0.650
3165	5015.60	-	-	-	0.650
3166	5015.60	-	-	-	0.650
3167	5015.60	-	-	-	0.650
3168	5015.60	-	-	-	0.650
3169	5015.60	-	-	-	0.650
3170	5015.60	-	-	-	0.650
3171	5015.60	-	-	-	0.660
3172	5015.60	-	-	-	0.660
3173	5015.60	-	-	-	0.660
3174	5015.60	-	-	-	0.660
3175	5015.60	-	-	-	0.660
3176	5015.60	-	-	-	0.660
3177	5015.60	-	-	-	0.660
3178	5015.60	-	-	-	0.660
3179	5015.60	-	-	-	0.650
3180	5015.60	-	-	-	0.650
3181	5015.60	-	-	-	0.650
3182	5015.60	-	-	-	0.650

Continued on next page

Table 14 – continued from previous page - IEEE8500 - n3637

| m | best ENS | Time (sec) | | | |
		ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
3183	5015.60	-	-	-	0.650
3184	5015.60	-	-	-	0.650
3185	5015.60	-	-	-	0.650
3186	5015.60	-	-	-	0.650
3187	5015.60	-	-	-	0.650
3188	5015.60	-	-	-	0.650
3189	5015.60	-	-	-	0.650
3190	5015.60	-	-	-	0.650
3191	5015.60	-	-	-	0.650
3192	5015.60	-	-	-	0.650
3193	5015.60	-	-	-	0.650
3194	5015.60	-	-	-	0.650
3195	5015.60	-	-	-	0.660
3196	5015.60	-	-	-	0.660
3197	5015.60	-	-	-	0.660
3198	5015.60	-	-	-	0.660
3199	5015.60	-	-	-	0.660
3200	5015.60	-	-	-	0.660
3201	5015.60	-	-	-	0.660
3202	5015.60	-	-	-	0.660
3203	5015.60	-	-	-	0.660
3204	5015.60	-	-	-	0.660
3205	5015.60	-	-	-	0.660
3206	5015.60	-	-	-	0.660
3207	5015.60	-	-	-	0.660
3208	5015.60	-	-	-	0.660
3209	5015.60	-	-	-	0.660
3210	5015.60	-	-	-	0.660
3211	5015.60	-	-	-	0.660
3212	5015.60	-	-	-	0.660
3213	5015.60	-	-	-	0.660
3214	5015.60	-	-	-	0.660
3215	5015.60	-	-	-	0.660
3216	5015.60	-	-	-	0.660
3217	5015.60	-	-	-	0.660
3218	5015.60	-	-	-	0.660
3219	5015.60	-	-	-	0.670
3220	5015.60	-	-	-	0.670
3221	5015.60	-	-	-	0.670
3222	5015.60	-	-	-	0.670
3223	5015.60	-	-	-	0.670
3224	5015.60	-	-	-	0.670
3225	5015.60	-	-	-	0.670
3226	5015.60	-	-	-	0.670
3227	5015.60	-	-	-	0.670
3228	5015.60	-	-	-	0.670
3229	5015.60	-	-	-	0.670
3230	5015.60	-	-	-	0.670
3231	5015.60	-	-	-	0.670
3232	5015.60	-	-	-	0.670
3233	5015.60	-	-	-	0.670
3234	5015.60	-	-	-	0.670

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
3235	5015.60	-	-	-	0.670
3236	5015.60	-	-	-	0.670
3237	5015.60	-	-	-	0.670
3238	5015.60	-	-	-	0.670
3239	5015.60	-	-	-	0.670
3240	5015.60	-	-	-	0.670
3241	5015.60	-	-	-	0.670
3242	5015.60	-	-	-	0.670
3243	5015.60	-	-	-	0.670
3244	5015.60	-	-	-	0.670
3245	5015.60	-	-	-	0.670
3246	5015.60	-	-	-	0.670
3247	5015.60	-	-	-	0.670
3248	5015.60	-	-	-	0.670
3249	5015.60	-	-	-	0.670
3250	5015.60	-	-	-	0.670
3251	5015.60	-	-	-	0.670
3252	5015.60	-	-	-	0.670
3253	5015.60	-	-	-	0.670
3254	5015.60	-	-	-	0.670
3255	5015.60	-	-	-	0.670
3256	5015.60	-	-	-	0.670
3257	5015.60	-	-	-	0.670
3258	5015.60	-	-	-	0.670
3259	5015.60	-	-	-	0.660
3260	5015.60	-	-	-	0.660
3261	5015.60	-	-	-	0.660
3262	5015.60	-	-	-	0.660
3263	5015.60	-	-	-	0.660
3264	5015.60	-	-	-	0.660
3265	5015.60	-	-	-	0.660
3266	5015.60	-	-	-	0.660
3267	5015.60	-	-	-	0.680
3268	5015.60	-	-	-	0.670
3269	5015.60	-	-	-	0.670
3270	5015.60	-	-	-	0.680
3271	5015.60	-	-	-	0.670
3272	5015.60	-	-	-	0.670
3273	5015.60	-	-	-	0.680
3274	5015.60	-	-	-	0.680
3275	5015.60	-	-	-	0.680
3276	5015.60	-	-	-	0.680
3277	5015.60	-	-	-	0.680
3278	5015.60	-	-	-	0.680
3279	5015.60	-	-	-	0.680
3280	5015.60	-	-	-	0.680
3281	5015.60	-	-	-	0.680
3282	5015.60	-	-	-	0.680
3283	5015.60	-	-	-	0.680
3284	5015.60	-	-	-	0.680
3285	5015.60	-	-	-	0.680
3286	5015.60	-	-	-	0.680

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-N2M2
		Time (sec)			
3287	5015.60	-	-	-	0.680
3288	5015.60	-	-	-	0.680
3289	5015.60	-	-	-	0.680
3290	5015.60	-	-	-	0.680
3291	5015.60	-	-	-	0.680
3292	5015.60	-	-	-	0.680
3293	5015.60	-	-	-	0.680
3294	5015.60	-	-	-	0.680
3295	5015.60	-	-	-	0.680
3296	5015.60	-	-	-	0.680
3297	5015.60	-	-	-	0.680
3298	5015.60	-	-	-	0.680
3299	5015.60	-	-	-	0.680
3300	5015.60	-	-	-	0.680
3301	5015.60	-	-	-	0.680
3302	5015.60	-	-	-	0.680
3303	5015.60	-	-	-	0.680
3304	5015.60	-	-	-	0.680
3305	5015.60	-	-	-	0.680
3306	5015.60	-	-	-	0.680
3307	5015.60	-	-	-	0.680
3308	5015.60	-	-	-	0.680
3309	5015.60	-	-	-	0.680
3310	5015.60	-	-	-	0.680
3311	5015.60	-	-	-	0.680
3312	5015.60	-	-	-	0.680
3313	5015.60	-	-	-	0.680
3314	5015.60	-	-	-	0.680
3315	5015.60	-	-	-	0.680
3316	5015.60	-	-	-	0.680
3317	5015.60	-	-	-	0.680
3318	5015.60	-	-	-	0.680
3319	5015.60	-	-	-	0.680
3320	5015.60	-	-	-	0.680
3321	5015.60	-	-	-	0.680
3322	5015.60	-	-	-	0.680
3323	5015.60	-	-	-	0.690
3324	5015.60	-	-	-	0.680
3325	5015.60	-	-	-	0.680
3326	5015.60	-	-	-	0.680
3327	5015.60	-	-	-	0.680
3328	5015.60	-	-	-	0.690
3329	5015.60	-	-	-	0.690
3330	5015.60	-	-	-	0.690
3331	5015.60	-	-	-	0.690
3332	5015.60	-	-	-	0.690
3333	5015.60	-	-	-	0.690
3334	5015.60	-	-	-	0.690
3335	5015.60	-	-	-	0.690
3336	5015.60	-	-	-	0.690
3337	5015.60	-	-	-	0.690
3338	5015.60	-	-	-	0.690

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
3339	5015.60	-	-	-	0.690
3340	5015.60	-	-	-	0.690
3341	5015.60	-	-	-	0.690
3342	5015.60	-	-	-	0.690
3343	5015.60	-	-	-	0.690
3344	5015.60	-	-	-	0.690
3345	5015.60	-	-	-	0.690
3346	5015.60	-	-	-	0.690
3347	5015.60	-	-	-	0.690
3348	5015.60	-	-	-	0.690
3349	5015.60	-	-	-	0.690
3350	5015.60	-	-	-	0.690
3351	5015.60	-	-	-	0.690
3352	5015.60	-	-	-	0.690
3353	5015.60	-	-	-	0.690
3354	5015.60	-	-	-	0.690
3355	5015.60	-	-	-	0.690
3356	5015.60	-	-	-	0.690
3357	5015.60	-	-	-	0.690
3358	5015.60	-	-	-	0.690
3359	5015.60	-	-	-	0.690
3360	5015.60	-	-	-	0.690
3361	5015.60	-	-	-	0.690
3362	5015.60	-	-	-	0.690
3363	5015.60	-	-	-	0.690
3364	5015.60	-	-	-	0.690
3365	5015.60	-	-	-	0.690
3366	5015.60	-	-	-	0.690
3367	5015.60	-	-	-	0.690
3368	5015.60	-	-	-	0.690
3369	5015.60	-	-	-	0.690
3370	5015.60	-	-	-	0.690
3371	5015.60	-	-	-	0.690
3372	5015.60	-	-	-	0.690
3373	5015.60	-	-	-	0.690
3374	5015.60	-	-	-	0.690
3375	5015.60	-	-	-	0.690
3376	5015.60	-	-	-	0.690
3377	5015.60	-	-	-	0.690
3378	5015.60	-	-	-	0.690
3379	5015.60	-	-	-	0.690
3380	5015.60	-	-	-	0.690
3381	5015.60	-	-	-	0.690
3382	5015.60	-	-	-	0.690
3383	5015.60	-	-	-	0.690
3384	5015.60	-	-	-	0.550
3385	5015.60	-	-	-	0.550
3386	5015.60	-	-	-	0.500
3387	5015.60	-	-	-	0.500
3388	5015.60	-	-	-	0.500
3389	5015.60	-	-	-	0.500
3390	5015.60	-	-	-	0.500

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
		Time (sec)			
3391	5015.60	-	-	-	0.500
3392	5015.60	-	-	-	0.500
3393	5015.60	-	-	-	0.500
3394	5015.60	-	-	-	0.500
3395	5015.60	-	-	-	0.500
3396	5015.60	-	-	-	0.500
3397	5015.60	-	-	-	0.500
3398	5015.60	-	-	-	0.500
3399	5015.60	-	-	-	0.460
3400	5015.60	-	-	-	0.460
3401	5015.60	-	-	-	0.460
3402	5015.60	-	-	-	0.460
3403	5015.60	-	-	-	0.430
3404	5015.60	-	-	-	0.420
3405	5015.60	-	-	-	0.390
3406	5015.60	-	-	-	0.390
3407	5015.60	-	-	-	0.390
3408	5015.60	-	-	-	0.390
3409	5015.60	-	-	-	0.390
3410	5015.60	-	-	-	0.380
3411	5015.60	-	-	-	0.350
3412	5015.60	-	-	-	0.350
3413	5015.60	-	-	-	0.350
3414	5015.60	-	-	-	0.350
3415	5015.60	-	-	-	0.320
3416	5015.60	-	-	-	0.320
3417	5015.60	-	-	-	0.280
3418	5015.60	-	-	-	0.280
3419	5015.60	-	-	-	0.280
3420	5015.60	-	-	-	0.280
3421	5015.60	-	-	-	0.280
3422	5015.60	-	-	-	0.290
3423	5015.60	-	-	-	0.280
3424	5015.60	-	-	-	0.280
3425	5015.60	-	-	-	0.280
3426	5015.60	-	-	-	0.280
3427	5015.60	-	-	-	0.280
3428	5015.60	-	-	-	0.280
3429	5015.60	-	-	-	0.280
3430	5015.60	-	-	-	0.280
3431	5015.60	-	-	-	0.280
3432	5015.60	-	-	-	0.280
3433	5015.60	-	-	-	0.280
3434	5015.60	-	-	-	0.280
3435	5015.60	-	-	-	0.280
3436	5015.60	-	-	-	0.280
3437	5015.60	-	-	-	0.260
3438	5015.60	-	-	-	0.250
3439	5015.60	-	-	-	0.220
3440	5015.60	-	-	-	0.220
3441	5015.60	-	-	-	0.220
3442	5015.60	-	-	-	0.180

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Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
			Time (sec)		
3443	5015.60	-	-	-	0.180
3444	5015.60	-	-	-	0.180
3445	5015.60	-	-	-	0.180
3446	5015.60	-	-	-	0.180
3447	5015.60	-	-	-	0.180
3448	5015.60	-	-	-	0.180
3449	5015.60	-	-	-	0.180
3450	5015.60	-	-	-	0.180
3451	5015.60	-	-	-	0.180
3452	5015.60	-	-	-	0.180
3453	5015.60	-	-	-	0.180
3454	5015.60	-	-	-	0.180
3455	5015.60	-	-	-	0.180
3456	5015.60	-	-	-	0.190
3457	5015.60	-	-	-	0.190
3458	5015.60	-	-	-	0.190
3459	5015.60	-	-	-	0.190
3460	5015.60	-	-	-	0.180
3461	5015.60	-	-	-	0.150
3462	5015.60	-	-	-	0.150
3463	5015.60	-	-	-	0.150
3464	5015.60	-	-	-	0.150
3465	5015.60	-	-	-	0.150
3466	5015.60	-	-	-	0.150
3467	5015.60	-	-	-	0.150
3468	5015.60	-	-	-	0.150
3469	5015.60	-	-	-	0.150
3470	5015.60	-	-	-	0.150
3471	5015.60	-	-	-	0.150
3472	5015.60	-	-	-	0.150
3473	5015.60	-	-	-	0.150
3474	5015.60	-	-	-	0.150
3475	5015.60	-	-	-	0.150
3476	5015.60	-	-	-	0.150
3477	5015.60	-	-	-	0.150
3478	5015.60	-	-	-	0.150
3479	5015.60	-	-	-	0.150
3480	5015.60	-	-	-	0.150
3481	5015.60	-	-	-	0.150
3482	5015.60	-	-	-	0.150
3483	5015.60	-	-	-	0.150
3484	5015.60	-	-	-	0.150
3485	5015.60	-	-	-	0.150
3486	5015.60	-	-	-	0.150
3487	5015.60	-	-	-	0.150
3488	5015.60	-	-	-	0.150
3489	5015.60	-	-	-	0.150
3490	5015.60	-	-	-	0.150
3491	5015.60	-	-	-	0.150
3492	5015.60	-	-	-	0.150
3493	5015.60	-	-	-	0.160
3494	5015.60	-	-	-	0.150

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
3495	5015.60	-	-	-	0.150
3496	5015.60	-	-	-	0.160
3497	5015.60	-	-	-	0.160
3498	5015.60	-	-	-	0.160
3499	5015.60	-	-	-	0.160
3500	5015.60	-	-	-	0.160
3501	5015.60	-	-	-	0.160
3502	5015.60	-	-	-	0.160
3503	5015.60	-	-	-	0.160
3504	5015.60	-	-	-	0.160
3505	5015.60	-	-	-	0.160
3506	5015.60	-	-	-	0.160
3507	5015.60	-	-	-	0.160
3508	5015.60	-	-	-	0.160
3509	5015.60	-	-	-	0.160
3510	5015.60	-	-	-	0.160
3511	5015.60	-	-	-	0.160
3512	5015.60	-	-	-	0.160
3513	5015.60	-	-	-	0.150
3514	5015.60	-	-	-	0.130
3515	5015.60	-	-	-	0.130
3516	5015.60	-	-	-	0.130
3517	5015.60	-	-	-	0.130
3518	5015.60	-	-	-	0.110
3519	5015.60	-	-	-	0.100
3520	5015.60	-	-	-	0.080
3521	5015.60	-	-	-	0.080
3522	5015.60	-	-	-	0.080
3523	5015.60	-	-	-	0.080
3524	5015.60	-	-	-	0.080
3525	5015.60	-	-	-	0.060
3526	5015.60	-	-	-	0.060
3527	5015.60	-	-	-	0.060
3528	5015.60	-	-	-	0.060
3529	5015.60	-	-	-	0.060
3530	5015.60	-	-	-	0.060
3531	5015.60	-	-	-	0.060
3532	5015.60	-	-	-	0.060
3533	5015.60	-	-	-	0.060
3534	5015.60	-	-	-	0.060
3535	5015.60	-	-	-	0.060
3536	5015.60	-	-	-	0.060
3537	5015.60	-	-	-	0.060
3538	5015.60	-	-	-	0.040
3539	5015.60	-	-	-	0.040
3540	5015.60	-	-	-	0.040
3541	5015.60	-	-	-	0.040
3542	5015.60	-	-	-	0.040
3543	5015.60	-	-	-	0.040
3544	5015.60	-	-	-	0.040
3545	5015.60	-	-	-	0.040
3546	5015.60	-	-	-	0.040
					Continued on next page

Table 14 – continued from previous page - IEEE8500 - n3637

m	best ENS	ILP-Galias	MILP-Iflows	DP-TS	DP-n2m2
		Time (sec)			
3547	5015.60	-	-	-	0.040
3548	5015.60	-	-	-	0.040
3549	5015.60	-	-	-	0.040
3550	5015.60	-	-	-	0.040
3551	5015.60	-	-	-	0.040
3552	5015.60	-	-	-	0.040
3553	5015.60	-	-	-	0.040
3554	5015.60	-	-	-	0.040
3555	5015.60	-	-	-	0.040
3556	5015.60	-	-	-	0.040
3557	5015.60	-	-	-	0.040
3558	5015.60	-	-	-	0.040
3559	5015.60	-	-	-	0.040
3560	5015.60	-	-	-	0.040
3561	5015.60	-	-	-	0.040
3562	5015.60	-	-	-	0.040
3563	5015.60	-	-	-	0.040
3564	5015.60	-	-	-	0.040
3565	5015.60	-	-	-	0.040
3566	5015.60	-	-	-	0.040
3567	5015.60	-	-	-	0.040
3568	5015.60	-	-	-	0.040
3569	5015.60	-	-	-	0.040
3570	5015.60	-	-	-	0.040
3571	5015.60	-	-	-	0.040
3572	5015.60	-	-	-	0.040
3573	5015.60	-	-	-	0.040
3574	5015.60	-	-	-	0.040
3575	5015.60	-	-	-	0.040
3576	5015.60	-	-	-	0.040
3577	5015.60	-	-	-	0.040
3578	5015.60	-	-	-	0.040
3579	5015.60	-	-	-	0.040
3580	5015.60	-	-	-	0.040
3581	5015.60	-	-	-	0.040
3582	5015.60	-	-	-	0.040
3583	5015.60	-	-	-	0.040
3584	5015.60	-	-	-	0.040
3585	5015.60	-	-	-	0.040
3586	5015.60	-	-	-	0.040
3587	5015.60	-	-	-	0.040
3588	5015.60	-	-	-	0.040
3589	5015.60	-	-	-	0.040
3590	5015.60	-	-	-	0.040
3591	5015.60	-	-	-	0.040
3592	5015.60	-	-	-	0.040
3593	5015.60	-	-	-	0.040
3594	5015.60	-	-	-	0.040
3595	5015.60	-	-	-	0.040
3596	5015.60	-	-	-	0.040
3597	5015.60	-	-	-	0.040
3598	5015.60	-	-	-	0.040

Table 14 – continued from previous page - IEEE8500 - n3637

		Time (sec)			
m	best ENS	ILP-GALIAS	MILP-IFLOWS	DP-TS	DP-N2M2
3599	5015.60	-	-	-	0.040
3600	5015.60	-	-	-	0.040
3601	5015.60	-	-	-	0.040
3602	5015.60	-	-	-	0.040
3603	5015.60	-	-	-	0.040
3604	5015.60	-	-	-	0.040
3605	5015.60	-	-	-	0.040
3606	5015.60	-	-	-	0.040
3607	5015.60	-	-	-	0.040
3608	5015.60	-	-	-	0.040
3609	5015.60	-	-	-	0.040
3610	5015.60	-	-	-	0.040
3611	5015.60	-	-	-	0.040
3612	5015.60	-	-	-	0.040
3613	5015.60	-	-	-	0.040
3614	5015.60	-	-	-	0.040
3615	5015.60	-	-	-	0.040
3616	5015.60	-	-	-	0.040
3617	5015.60	-	-	-	0.040
3618	5015.60	-	-	-	0.040
3619	5015.60	-	-	-	0.040
3620	5015.60	-	-	-	0.020
3621	5015.60	-	-	-	0.020
3622	5015.60	-	-	-	0.020
3623	5015.60	-	-	-	0.020
3624	5015.60	-	-	-	0.020
3625	5015.60	-	-	-	0.020
3626	5015.60	-	-	-	0.010
3627	5015.60	-	-	-	0.010
3628	5015.60	-	-	-	0.010
3629	5015.60	-	-	-	0.010
3630	5015.60	-	-	-	0.010
3631	5015.60	-	-	-	0.010
3632	5015.60	-	-	-	0.000
3633	5015.60	-	-	-	0.000
3634	5015.60	-	-	-	0.000
3635	5015.60	-	-	-	0.000
3636	5015.60	-	-	-	0.000
Total		**7886.00**	**7518.44**	**7211.02**	**5857.92**