

Appendix C

Complete Results of the Optimal Solution(s) for each Experimental Design

The following tables show the final (optimal) result for each experimental design by replication.

Result for Pure Local Search with 150 Inner and Outer Loops

Replication #	Optimal Total Cost	# of FA	# of TA	# of FC	# of TC	Optimal Detection System	Iteration #
1	150374.84	19231	100	0	80669	CTX5000AU, Hotel	3903
2	154620.84	23477	100	0	76423	CTX5000AU, India	12560
3	151226.24	14486	100	0	85414	India, Hotel	12182
4	150374.84	19231	100	0	80669	CTX5000AU, Hotel	14648
5	151226.24	14486	100	0	85414	India, Hotel	4620
6	150374.84	19231	100	0	80669	CTX5000AU, Hotel	6363
7	150374.84	19231	100	0	80669	CTX5000AU, Hotel	2602
8	150374.84	19231	100	0	80669	CTX5000AU, Hotel	9340
9	150374.84	19231	100	0	80669	CTX5000AU, Hotel	9292
10	151226.24	14486	100	0	85414	India, Hotel	9515
11	150374.84	19231	100	0	80669	CTX5000AU, Hotel	7894
12	151226.24	14486	100	0	85414	India, Hotel	12449
13	151226.24	14486	100	0	85414	India, Hotel	8779
14	151226.24	14486	100	0	85414	India, Hotel	1937
15	151226.24	14486	100	0	85414	India, Hotel	20586
16	150076.64	9740	100	0	90160	Hotel	5899
17	154822.64	14486	100	0	85414	Hotel, India	9349
18	151226.24	14486	100	0	85414	India, Hotel	3782
19	150374.84	19231	100	0	80669	CTX5000AU, Hotel	8392
20	151226.24	14486	100	0	85414	India, Hotel	2152
21	151226.24	14486	100	0	85414	India, Hotel	14773
22	151226.24	14486	100	0	85414	India, Hotel	16261
23	150374.84	19231	100	0	80669	CTX5000AU, Hotel	10564
24	151226.24	14486	100	0	85414	India, Hotel	10369
25	150374.84	19231	100	0	80669	CTX5000AU, Hotel	1521
26	150374.84	19231	100	0	80669	CTX5000AU, Hotel	3771
27	151226.24	14486	100	0	85414	India, Hotel	16712
28	151226.24	14486	100	0	85414	India, Hotel	8717
29	155371.96	19231	100	0	80669	Hand Search, Hotel	3816
30	150374.84	19231	100	0	80669	CTX5000AU, Hotel	3883

Result for Pure Local Search with 100 Inner Loops and 225 Outer Loops

Replication #	Optimal Total Cost	# of FA	# of TA	# of FC	# of TC	Optimal Detection System	Iteration #
1	150374.84	19231	100	0	80669	CTX5000AU, Hotel	16786
2	150374.84	19231	100	0	80669	CTX5000AU, Hotel	2914
3	154620.84	23477	100	0	76423	CTX5000AU, India	2339
4	150374.84	19231	100	0	80669	CTX5000AU, Hotel	1552
5	150076.64	9740	100	0	90160	Hotel	7943
6	151226.24	14486	100	0	85414	India, Hotel	4351
7	150076.64	9740	100	0	90160	Hotel	6230
8	150374.84	19231	100	0	80669	CTX5000AU, Hotel	9775
9	154620.84	23477	100	0	76423	CTX5000AU, India	6995
10	150374.84	19231	100	0	80669	CTX5000AU, Hotel	3005
11	151226.24	14486	100	0	85414	India, Hotel	15604
12	150374.84	19231	100	0	80669	CTX5000AU, Hotel	8562
13	150374.84	19231	100	0	80669	CTX5000AU, Hotel	1918
14	150374.84	19231	100	0	80669	CTX5000AU, Hotel	16200
15	150374.84	19231	100	0	80669	CTX5000AU, Hotel	6369
16	154620.84	23477	100	0	76423	CTX5000AU, India	13529
17	150374.84	19231	100	0	80669	CTX5000AU, Hotel	3805
18	150374.84	19231	100	0	80669	CTX5000AU, Hotel	5379
19	150374.84	19231	100	0	80669	CTX5000AU, Hotel	5002
20	150374.84	19231	100	0	80669	CTX5000AU, Hotel	13556
21	150374.84	19231	100	0	80669	CTX5000AU, Hotel	8199
22	151226.24	14486	100	0	85414	India, Hotel	4360
23	150374.84	19231	100	0	80669	CTX5000AU, Hotel	8173
24	150076.64	9740	100	0	90160	Hotel	20959
25	150374.84	19231	100	0	80669	CTX5000AU, Hotel	2016
26	150374.84	19231	100	0	80669	CTX5000AU, Hotel	1454
27	154822.64	14486	100	0	85414	Hotel, India	10417
28	150374.84	19231	100	0	80669	CTX5000AU, Hotel	2671
29	151226.24	14486	100	0	85414	India, Hotel	15074
30	150374.84	19231	100	0	80669	CTX5000AU, Hotel	12042

Result for Pure Local Search with 225 Inner Loops and 100 Outer Loops

Replication #	Optimal Total Cost	# of FA	# of TA	# of FC	# of TC	Optimal Detection System	Iteration #
1	150374.84	19231	100	0	80669	CTX5000AU, Hotel	4394
2	150374.84	19231	100	0	80669	CTX5000AU, Hotel	13151
3	150374.84	19231	100	0	80669	CTX5000AU, Hotel	9684
4	151226.24	14486	100	0	85414	India, Hotel	15544
5	150374.84	19231	100	0	80669	CTX5000AU, Hotel	16341
6	150374.84	19231	100	0	80669	CTX5000AU, Hotel	18122
7	151226.24	14486	100	0	85414	India, Hotel	4607
8	150374.84	19231	100	0	80669	CTX5000AU, Hotel	5423
9	150374.84	19231	100	0	80669	CTX5000AU, Hotel	20610
10	152293.20	14486	100	0	85414	Foxtrot, India, Hotel	22133
11	150374.84	19231	100	0	80669	CTX5000AU, Hotel	8423
12	154620.84	23477	100	0	76423	CTX5000AU, India	3687
13	151226.24	14486	100	0	85414	India, Hotel	16787
14	150374.84	19231	100	0	80669	CTX5000AU, Hotel	1284
15	150374.84	19231	100	0	80669	CTX5000AU, Hotel	14062
16	151226.24	14486	100	0	85414	India, Hotel	8368
17	150076.64	9740	100	0	90160	Hotel	6843
18	150076.64	9740	100	0	90160	Hotel	8543
19	150374.84	19231	100	0	80669	CTX5000AU, Hotel	3198
20	150374.84	19231	100	0	80669	CTX5000AU, Hotel	5595
21	150374.84	19231	100	0	80669	CTX5000AU, Hotel	2948
22	150374.84	19231	100	0	80669	CTX5000AU, Hotel	9999
23	150374.84	19231	100	0	80669	CTX5000AU, Hotel	8894
24	151226.24	14486	100	0	85414	India, Hotel	2132
25	150374.84	19231	100	0	80669	CTX5000AU, Hotel	17604
26	154822.64	14486	100	0	85414	Hotel, India	9444
27	150374.84	19231	100	0	80669	CTX5000AU, Hotel	15482
28	154620.84	23477	100	0	76423	CTX5000AU, India	5770
29	155371.96	19231	100	0	80669	Hand Search, Hotel	17830
30	150374.84	19231	100	0	80669	CTX5000AU, Hotel	10062

Result for Threshold Acceptance with 150 Inner and Outer Loops

Replication #	Optimal Total Cost	# of FA	# of TA	# of FC	# of TC	Optimal Detection System	Iteration #
1	151226.24	14486	100	0	85414	India, Hotel	1025
2	150374.84	19231	100	0	80669	CTX5000AU, Hotel	5567
3	150374.84	19231	100	0	80669	CTX5000AU, Hotel	15203
4	150374.84	19231	100	0	80669	CTX5000AU, Hotel	12337
5	150374.84	19231	100	0	80669	CTX5000AU, Hotel	6445
6	150374.84	19231	100	0	80669	CTX5000AU, Hotel	10013
7	150374.84	19231	100	0	80669	CTX5000AU, Hotel	14430
8	150374.84	19231	100	0	80669	CTX5000AU, Hotel	15941
9	150374.84	19231	100	0	80669	CTX5000AU, Hotel	9727
10	150374.84	19231	100	0	80669	CTX5000AU, Hotel	2364
11	150374.84	19231	100	0	80669	CTX5000AU, Hotel	5769
12	150374.84	19231	100	0	80669	CTX5000AU, Hotel	13927
13	151226.24	14486	100	0	85414	India, Hotel	2768
14	150374.84	19231	100	0	80669	CTX5000AU, Hotel	13598
15	154620.84	23477	100	0	76423	CTX5000AU, India	9302
16	154620.84	23477	100	0	76423	CTX5000AU, India	4654
17	154822.64	14486	100	0	85414	Hotel, India	43
18	150374.84	19231	100	0	80669	CTX5000AU, Hotel	14788
19	151226.24	14486	100	0	85414	India, Hotel	1869
20	150374.84	19231	100	0	80669	CTX5000AU, Hotel	7682
21	150374.84	19231	100	0	80669	CTX5000AU, Hotel	2183
22	150374.84	19231	100	0	80669	CTX5000AU, Hotel	345
23	150374.84	19231	100	0	80669	CTX5000AU, Hotel	11239
24	151226.24	14486	100	0	85414	India, Hotel	15266
25	150374.84	19231	100	0	80669	CTX5000AU, Hotel	9226
26	154620.84	23477	100	0	76423	CTX5000AU, India	13565
27	150374.84	19231	100	0	80669	CTX5000AU, Hotel	17579
28	150076.64	9740	100	0	90160	Hotel	3446
29	150374.84	19231	100	0	80669	CTX5000AU, Hotel	4458
30	150374.84	19231	100	0	80669	CTX5000AU, Hotel	13279

Result for Threshold Acceptance with 100 Inner Loops and 225 Outer Loops

Replication #	Optimal Total Cost	# of FA	# of TA	# of FC	# of TC	Optimal Detection System	Iteration #
1	151226.24	14486	100	0	85414	India, Hotel	21127
2	150374.84	19231	100	0	80669	CTX5000AU, Hotel	78
3	150374.84	19231	100	0	80669	CTX5000AU, Hotel	3408
4	150374.84	19231	100	0	80669	CTX5000AU, Hotel	18
5	150076.64	9740	100	0	90160	Hotel	16506
6	150374.84	19231	100	0	80669	CTX5000AU, Hotel	4947
7	150374.84	19231	100	0	80669	CTX5000AU, Hotel	5436
8	150374.84	19231	100	0	80669	CTX5000AU, Hotel	10437
9	150374.84	19231	100	0	80669	CTX5000AU, Hotel	20309
10	150374.84	19231	100	0	80669	CTX5000AU, Hotel	5388
11	150076.64	9740	100	0	90160	Hotel	18735
12	150374.84	19231	100	0	80669	CTX5000AU, Hotel	19396
13	151226.24	14486	100	0	85414	India, Hotel	11605
14	150374.84	19231	100	0	80669	CTX5000AU, Hotel	413
15	150374.84	19231	100	0	80669	CTX5000AU, Hotel	7742
16	151226.24	14486	100	0	85414	India, Hotel	3374
17	150374.84	19231	100	0	80669	CTX5000AU, Hotel	11956
18	150374.84	19231	100	0	80669	CTX5000AU, Hotel	14605
19	150374.84	19231	100	0	80669	CTX5000AU, Hotel	4148
20	150076.64	9740	100	0	90160	Hotel	4897
21	151226.24	14486	100	0	85414	India, Hotel	2676
22	150374.84	19231	100	0	80669	CTX5000AU, Hotel	1895
23	150374.84	19231	100	0	80669	CTX5000AU, Hotel	9374
24	150374.84	19231	100	0	80669	CTX5000AU, Hotel	5889
25	151226.24	14486	100	0	85414	India, Hotel	18525
26	151226.24	14486	100	0	85414	India, Hotel	6863
27	151226.24	14486	100	0	85414	India, Hotel	2441
28	150374.84	19231	100	0	80669	CTX5000AU, Hotel	4069
29	150374.84	19231	100	0	80669	CTX5000AU, Hotel	5937
30	150374.84	19231	100	0	80669	CTX5000AU, Hotel	5346

Result for Threshold Acceptance with 225 Inner Loops and 100 Outer Loops

Replication #	Optimal Total Cost	# of FA	# of TA	# of FC	# of TC	Optimal Detection System	Iteration #
1	151226.24	14486	100	0	85414	India, Hotel	7715
2	154620.84	23477	100	0	76423	CTX5000AU, India	9725
3	154620.84	23477	100	0	76423	CTX5000AU, India	8275
4	150374.84	19231	100	0	80669	CTX5000AU, Hotel	1986
5	150374.84	19231	100	0	80669	CTX5000AU, Hotel	1235
6	154620.84	23477	100	0	76423	CTX5000AU, India	3317
7	150374.84	19231	100	0	80669	CTX5000AU, Hotel	7458
8	154620.84	23477	100	0	76423	CTX5000AU, India	18721
9	151226.24	14486	100	0	85414	India, Hotel	2971
10	150374.84	19231	100	0	80669	CTX5000AU, Hotel	1489
11	150374.84	19231	100	0	80669	CTX5000AU, Hotel	2594
12	154620.84	23477	100	0	76423	CTX5000AU, India	3051
13	155371.96	19231	100	0	80669	Hand Search, Hotel	4394
14	151226.24	14486	100	0	85414	India, Hotel	14972
15	150374.84	19231	100	0	80669	CTX5000AU, Hotel	16403
16	151226.24	14486	100	0	85414	India, Hotel	2637
17	151226.24	14486	100	0	85414	India, Hotel	5105
18	150374.84	19231	100	0	80669	CTX5000AU, Hotel	4254
19	150374.84	19231	100	0	80669	CTX5000AU, Hotel	15380
20	150374.84	19231	100	0	80669	CTX5000AU, Hotel	1171
21	150374.84	19231	100	0	80669	CTX5000AU, Hotel	19013
22	150076.64	9740	100	0	90160	Hotel	11450
23	156916.25	31968	100	0	67932	CTX5000AM, Hand Search	19563
24	155889.60	14486	100	0	85414	Golf, Hotel, India	8207
25	155371.96	19231	100	0	80669	Hand Search, Hotel	10046
26	150374.84	19231	100	0	80669	CTX5000AU, Hotel	5315
27	150076.64	9740	100	0	90160	Hotel	15267
28	150374.84	19231	100	0	80669	CTX5000AU, Hotel	697
29	150076.64	9740	100	0	90160	Hotel	326
30	154620.84	23477	100	0	76423	CTX5000AU, India	5502

Result for Simulated Annealing with 150 Inner and Outer Loops

Replication #	Optimal Total Cost	# of FA	# of TA	# of FC	# of TC	Optimal Detection System	Iteration #
1	151226.24	14486	100	0	85414	India, Hotel	7023
2	150374.84	19231	100	0	80669	CTX5000AU, Hotel	12498
3	151226.24	14486	100	0	85414	India, Hotel	5859
4	150374.84	19231	100	0	80669	CTX5000AU, Hotel	14335
5	150374.84	19231	100	0	80669	CTX5000AU, Hotel	1975
6	151226.24	14486	100	0	85414	India, Hotel	1794
7	150374.84	19231	100	0	80669	CTX5000AU, Hotel	4577
8	150374.84	19231	100	0	80669	CTX5000AU, Hotel	2860
9	150374.84	19231	100	0	80669	CTX5000AU, Hotel	8891
10	150374.84	19231	100	0	80669	CTX5000AU, Hotel	7228
11	150374.84	19231	100	0	80669	CTX5000AU, Hotel	9175
12	150374.84	19231	100	0	80669	CTX5000AU, Hotel	5384
13	150374.84	19231	100	0	80669	CTX5000AU, Hotel	6590
14	151226.24	14486	100	0	85414	India, Hotel	1308
15	150374.84	19231	100	0	80669	CTX5000AU, Hotel	16717
16	150076.64	9740	100	0	90160	Hotel	14504
17	150076.64	9740	100	0	90160	Hotel	17870
18	150374.84	19231	100	0	80669	CTX5000AU, Hotel	14683
19	150374.84	19231	100	0	80669	CTX5000AU, Hotel	4916
20	150374.84	19231	100	0	80669	CTX5000AU, Hotel	407
21	150374.84	19231	100	0	80669	CTX5000AU, Hotel	20195
22	150374.84	19231	100	0	80669	CTX5000AU, Hotel	14507
23	150374.84	19231	100	0	80669	CTX5000AU, Hotel	9877
24	150374.84	19231	100	0	80669	CTX5000AU, Hotel	13697
25	150374.84	19231	100	0	80669	CTX5000AU, Hotel	8567
26	151226.24	14486	100	0	85414	India, Hotel	18481
27	150374.84	19231	100	0	80669	CTX5000AU, Hotel	1148
28	150374.84	19231	100	0	80669	CTX5000AU, Hotel	1148
29	150374.84	19231	100	0	80669	CTX5000AU, Hotel	21438
30	150374.84	19231	100	0	80669	CTX5000AU, Hotel	9815

Result for Simulated Annealing with 100 Inner Loops and 225 Outer Loops

Replication #	Optimal Total Cost	# of FA	# of TA	# of FC	# of TC	Optimal Detection System	Iteration #
1	151226.24	14486	100	0	85414	India, Hotel	501
2	150374.84	19231	100	0	80669	CTX5000AU, Hotel	996
3	151226.24	14486	100	0	85414	India, Hotel	345
4	151226.24	14486	100	0	85414	India, Hotel	8469
5	150374.84	19231	100	0	80669	CTX5000AU, Hotel	270
6	150374.84	19231	100	0	80669	CTX5000AU, Hotel	15181
7	150076.64	9740	100	0	90160	Hotel	10693
8	151226.24	14486	100	0	85414	India, Hotel	2881
9	150374.84	19231	100	0	80669	CTX5000AU, Hotel	8154
10	150374.84	19231	100	0	80669	CTX5000AU, Hotel	21642
11	150374.84	19231	100	0	80669	CTX5000AU, Hotel	21388
12	150374.84	19231	100	0	80669	CTX5000AU, Hotel	22440
13	150374.84	19231	100	0	80669	CTX5000AU, Hotel	9561
14	150076.64	9740	100	0	90160	Hotel	15466
15	150374.84	19231	100	0	80669	CTX5000AU, Hotel	11086
16	156916.25	31968	100	0	67932	CTX5000AM, Hand Search	12409
17	150076.64	9740	100	0	90160	Hotel	14491
18	150374.84	19231	100	0	80669	CTX5000AU, Hotel	17228
19	150374.84	19231	100	0	80669	CTX5000AU, Hotel	12061
20	151226.24	14486	100	0	85414	India, Hotel	3618
21	150374.84	19231	100	0	80669	CTX5000AU, Hotel	11988
22	150374.84	19231	100	0	80669	CTX5000AU, Hotel	1447
23	150374.84	19231	100	0	80669	CTX5000AU, Hotel	9411
24	150374.84	19231	100	0	80669	CTX5000AU, Hotel	7292
25	150374.84	19231	100	0	80669	CTX5000AU, Hotel	13777
26	151226.24	14486	100	0	85414	India, Hotel	3331
27	150374.84	19231	100	0	80669	CTX5000AU, Hotel	14267
28	151226.24	14486	100	0	85414	India, Hotel	8559
29	150374.84	19231	100	0	80669	CTX5000AU, Hotel	6067
30	150374.84	19231	100	0	80669	CTX5000AU, Hotel	17611

Result for Simulated Annealing with 225 Inner Loops and 100 Outer Loops

Replication #	Optimal Total Cost	# of FA	# of TA	# of FC	# of TC	Optimal Detection System	Iteration #
1	150374.84	19231	100	0	80669	CTX5000AU, Hotel	22498
2	150374.84	19231	100	0	80669	CTX5000AU, Hotel	21770
3	150374.84	19231	100	0	80669	CTX5000AU, Hotel	178
4	150374.84	19231	100	0	80669	CTX5000AU, Hotel	8411
5	150374.84	19231	100	0	80669	CTX5000AU, Hotel	9884
6	150374.84	19231	100	0	80669	CTX5000AU, Hotel	268
7	150374.84	19231	100	0	80669	CTX5000AU, Hotel	3818
8	150374.84	19231	100	0	80669	CTX5000AU, Hotel	11134
9	150374.84	19231	100	0	80669	CTX5000AU, Hotel	9477
10	150374.84	19231	100	0	80669	CTX5000AU, Hotel	14762
11	150374.84	19231	100	0	80669	CTX5000AU, Hotel	2742
12	150374.84	19231	100	0	80669	CTX5000AU, Hotel	7992
13	150374.84	19231	100	0	80669	CTX5000AU, Hotel	8656
14	150374.84	19231	100	0	80669	CTX5000AU, Hotel	1017
15	150374.84	19231	100	0	80669	CTX5000AU, Hotel	5599
16	150374.84	19231	100	0	80669	CTX5000AU, Hotel	16691
17	154620.84	23477	100	0	76423	CTX5000AU, India	3112
18	150374.84	19231	100	0	80669	CTX5000AU, Hotel	7070
19	150374.84	19231	100	0	80669	CTX5000AU, Hotel	16458
20	150374.84	19231	100	0	80669	CTX5000AU, Hotel	19427
21	150374.84	19231	100	0	80669	CTX5000AU, Hotel	9481
22	154822.64	14486	100	0	85414	Hotel, India	8225
23	150374.84	19231	100	0	80669	CTX5000AU, Hotel	8819
24	150374.84	19231	100	0	80669	CTX5000AU, Hotel	13838
25	151226.24	14486	100	0	85414	India, Hotel	19853
26	151226.24	14486	100	0	85414	India, Hotel	14965
27	151226.24	14486	100	0	85414	India, Hotel	1998
28	150374.84	19231	100	0	80669	CTX5000AU, Hotel	4627
29	150374.84	19231	100	0	80669	CTX5000AU, Hotel	15355
30	156916.25	31968	100	0	67932	CTX5000AM, Hand Search	9750