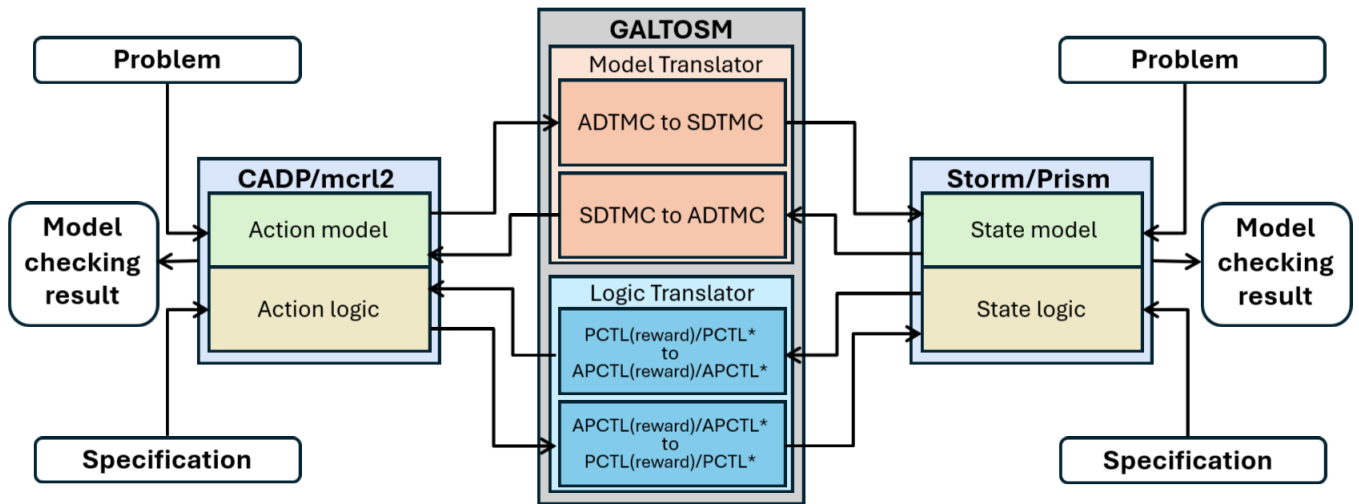


Tables and Graphs

1 Tool Overview



2 Tables of the case studies

Table 1: Ant on a Grid Detailed Results that the ant LIVES

Grid-Size $n \times n$	Initial Position	Value	CADP	GALTOSM	STORM	ADTMC	SDTMC
8	(5,3)	0.5862068966	2.13+0.07+1.11	0.024	0.02	41,152	169,280
16	(10,6)	0.5387077619	2.15+0.07+1.12	0.025	0.02	201,792	937,1528
32	(20,12)	0.5182645729	2.15+0.08+1.13	0.03	0.38	905,3608	4393,7096
64	(40,24)	0.5088586874	2.1+0.09+1.3	0.07	0.11	3849,15384	18985,30520
128	(80,48)	0.5043602633	2.05+0.14+2.45	0.11	0.82	15881,63512	78889,126520
256	(160,96)	0.5021618906	2.33+0.34+31.39	0.37	11.76	64521,258072	321577,515128
512	(320,192)	0.5010743008	3.84+1.14+512.09	1.58	142.87	260105,1040408	1295473,2078776
1024	(640,384)	0.5005328541	7.99+3.53+5985.18	6.85	2443.94	1044489,4177944	5218345,8351800
2048	(1280,768)	0.5002614901	28.5+12.81+47519.43	26.15	27342.68	4186121,16744472	20922409,33480760

Table 2: Ant on a Grid Detailed Results that the ant DIES

Grid-Size $n \times n$	Initial Position	Value	CADP	GALTOSM	STORM	ADTMC	SDTMC
8	(5,3)	0.4137931034	2.13+0.07+0.84	0.024	0.038	41,152	169,280
16	(10,6)	0.4612922381	2.15+0.07+0.8	0.025	0.027	201,792	937,1528
32	(20,12)	0.4817354271	2.15+0.08+0.83	0.03	0.4	905,3608	4393,7096
64	(40,24)	0.4911413126	2.1+0.09+0.93	0.07	0.15	3849,15384	18985,30520
128	(80,48)	0.4956397367	2.05+0.14+2.28	0.11	1.12	15881,63512	78889,126520
256	(160,96)	0.4978381094	2.33+0.34+33.25	0.37	14.75	64521,258072	321577,515128
512	(320,192)	0.4989256992	3.84+1.14+562.42	1.58	178.77	260105,1040408	1295473,2078776
1024	(640,384)	0.4994671459	7.99+3.53+6506.66	6.85	2469.76	1044489,4177944	5218345,8351800
2048	(1280,768)	0.4997385099	28.5+12.81+52475.61	26.15	30802.57	4186121,16744472	20922409,33480760

Table 3: Lost Boarding Pass Detailed Results

No. of passengers	Value	CADP	GALTOSM	STORM	ADTMC	SDTMC
10^2	0.4999995404	1.86+0.07+1.02	0.023	0.02	101,200	203,302
10^3	0.4997488966	1.71+0.27+0.99	0.025	0.03	1001,2000	2003,3002
10^4	0.4997488966	2.04+0.09+1.01	0.05	0.04	10001,20000	20003,21417
10^5	0.4997038695	4.35+0.28+1.48	0.35	0.19	100001,200000	200003,201417
10^6	0.4996993668	13.5+1.39+4.51	3.57	1.46	1000001,2000000	2000003,2001417
10^7	0.4996988665	58.94+14.77+164.34	38.05	14.77	10000001,20000000	20000003,20001416
10^8	0.4996988665	1262.55+145.53+2261.86	436.25	149.01	100000001,200000000	200000003,200001416

Table 4: Bounded Retransmission Protocol Detailed Results

No. of frames n	Value	CADP	GALTOSM	STORM	ADTMC	SDTMC
10^1	0.999735	1.86+0.06+0.97	0.025	0.02	232,452	574,794
10^2	0.997357	1.9+0.07+0.99	0.032	0.03	2302,4502	5704,7904
10^3	0.973883	1.94+0.11+1.01	0.11	0.07	23002,45002	57004,79004
10^4	0.7674826377	2.7+0.55+1.37	0.87	0.5	230002,450002	570004,790004
10^5	0.07090642587	12.03+5.02+5.28	8.74	5	2300002,4500002	5700004,7900004
10^6	3.212594766e-12	265.1+49.89+106.24	95.46	54.89	23000002,45000002	57000004,79000004
10^7	1.171006955e-115	3782.28+502.59+2173.77	970.66	517.29	230000002,450000002	570000004,790000004
$5 * 10^7$	2.772894031e-319	23839.33+2551.48+13750.2	5153.81	2694.53	1150000002,2250000002	2850000004,3950000004

Table 5: Gambling problem Detailed Results

Target amount	No. of games	CADP	GALTOSM	STORM	ADTMC	SDTMC
10^5	3	2.8+0.39+2.06	0.52	0.29	100018,300007	250032,450021
10^5	5	3.08+0.51+4.06	0.63	0.3	100032,400015	250060,550043
10^6	3	9.62+3.43+14.29	5.89	2.42	1000018,3000007	2500032,4500021
10^6	5	12.18+4.57+22.51	6.44	2.88	1000032,4000015	2500060,5500043
10^7	3	121.61+33.85+298.12	63.89	24.26	10000018,30000007	25000032,45000021
10^7	5	147.46+45.35+404.14	71.91	28.93	10000032,40000015	25000060,55000043
10^8	3	1770.57+343.24+4565.63	654.5	262.58	100000018,300000007	250000032,450000021
10^8	5	2106.16+459.04+5729.29	759.56	293.11	100000032,400000015	250000060,550000043

3 Graphs

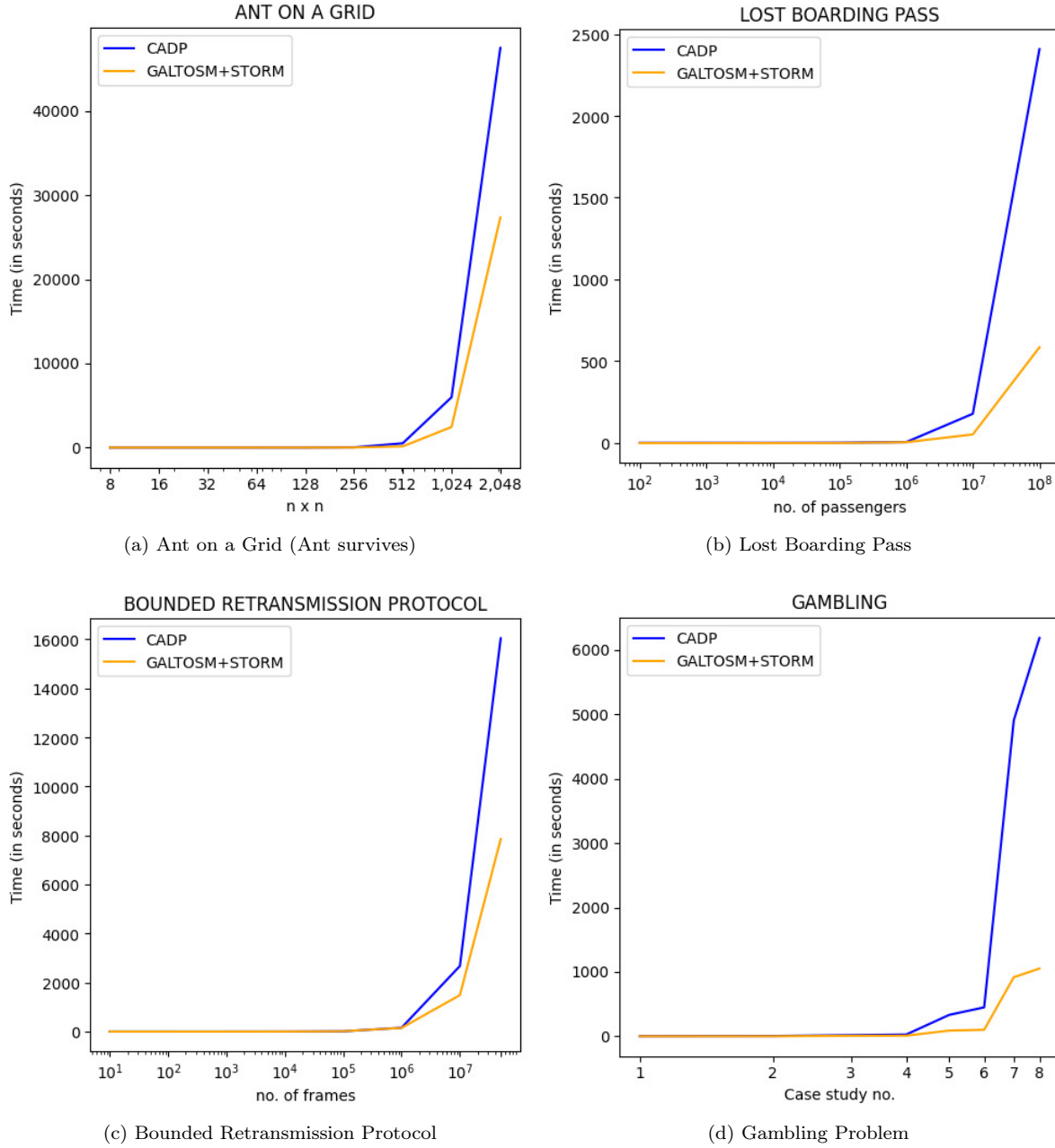


Figure 1: Comparison of the time required by CADP model checking vs GALTOSM+STORM