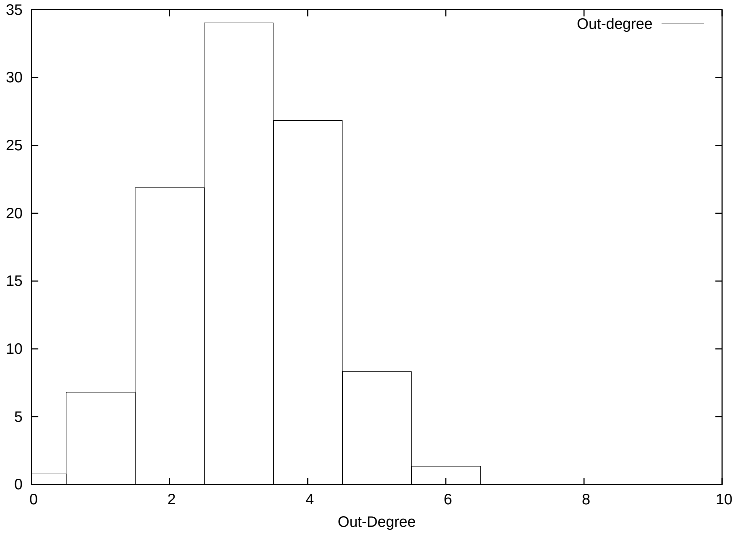
Graph: murphi/arbiter

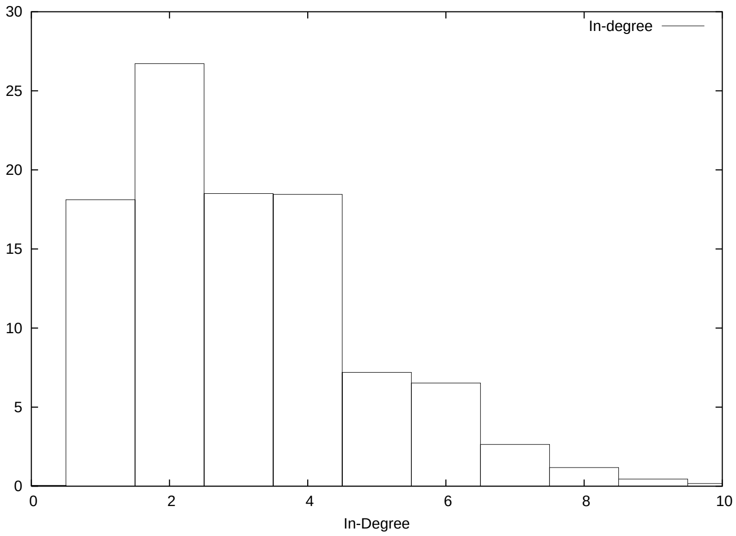
General Info

Example title	Hardware arbiter
Parameter	
Reduction	
Modification	
States	1,778
Edges	5,506
Average degree	3

Out-Degrees distribution:



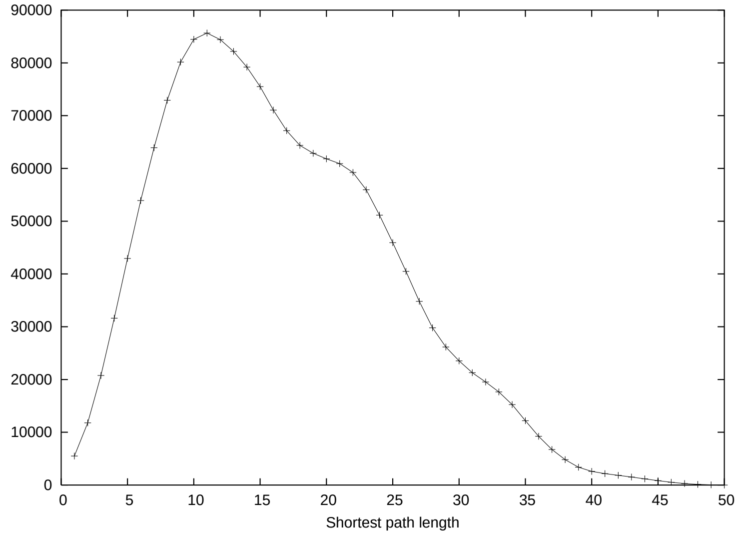
In-Degrees distribution:



Shortest Paths Info

Diameter: 50
Average shortest path length: 16.6735

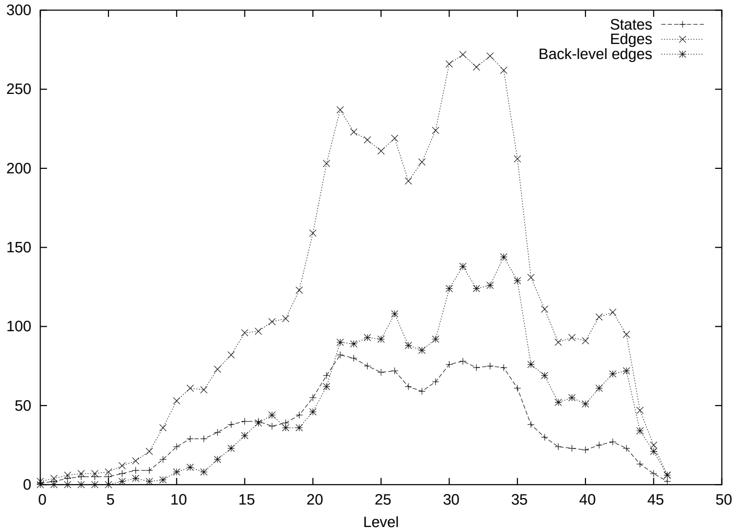
Shortest paths lengths frequencies:



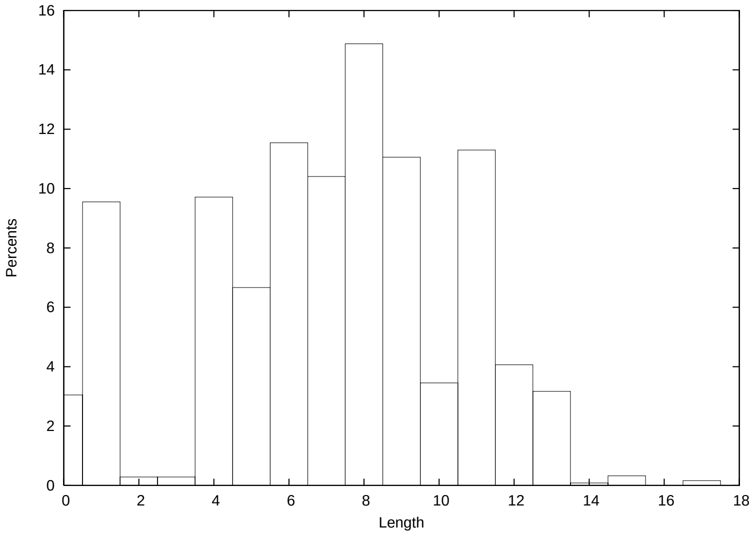
BFS Info

BFS height	46
BFS width	82 (4.6%)
Back level edges	2,460 (44.6%)

BFS level info:



Back level edges lengths:



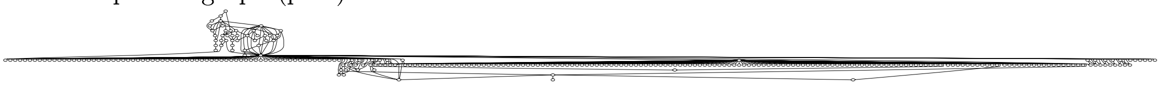
SCC Info

SCC components	478
SCC quetient height	31
SCC quetient nontrivial height	6
Number of terminal components	14
The largest component is	intermediate

Statistics according to **sizes**:

Size	Number of components	Number of states here
741	1	41.6%
547	1	30.7%
9	1	0.5%
7	1	0.3%
1	474	26.6%

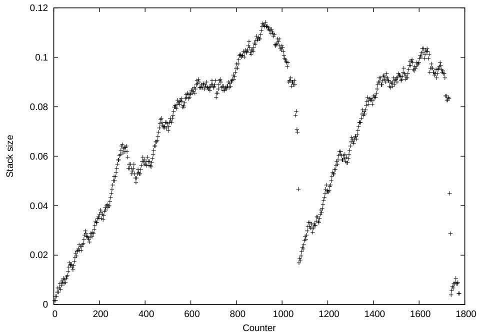
SCC component graph (part):



DFS Info

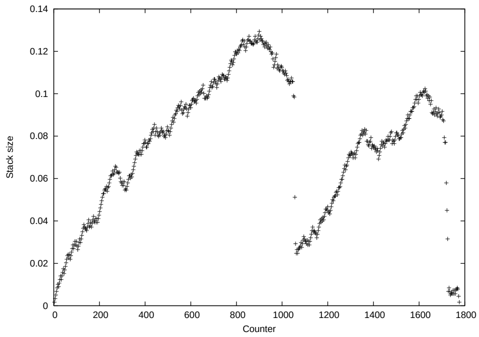
Run 0

front-edges : back-edges : cross-edges = 1,777 : 758 : 2,971 = 32.2%:13.7%:53.9%
Max. stack size: 203 (11.4%)
Shortest cycle detected: 5
Most often detected lengths of cycles: 12 (26), 57 (20), 43 (18), 72 (17), 35 (16)
Stack graph:



Run 1

front-edges : back-edges : cross-edges = 1,777 : 798 : 2,931 = 32.2%:14.4%:53.2%
Max. stack size: 230 (12.9%)
Shortest cycle detected: 5
Most often detected lengths of cycles: 12 (30), 32 (27), 39 (24), 40 (21), 95 (20)
Stack graph:



Local Structure

Short cycles(up to 6)

2	0	(0%)
3	0	(0%)
4	0	(0%)
5	130	(7.3%)
6	52	(2.9%)

Diamonds

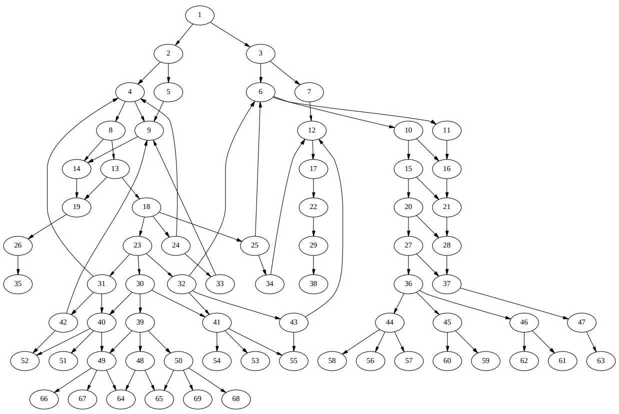
1,500 (84.3%)

Neighborhoods

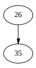
k	avg size	avg clustering
1	4	1
2	10.7	1.2
3	22.4	1.4
4	40.1	1.5

Visualization of some parts of the state state space:

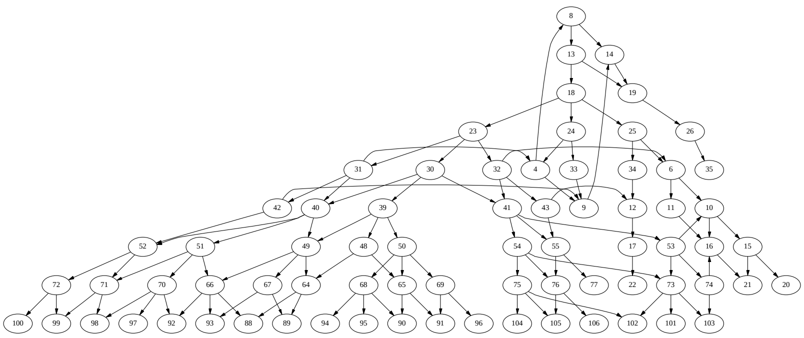
Initial walk length: 0



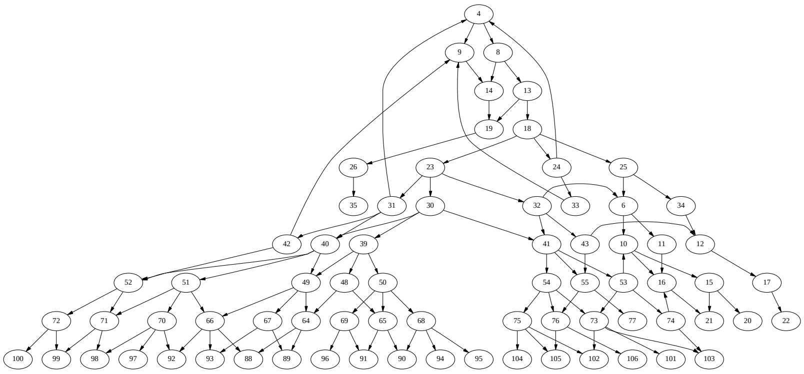
Initial walk length: 20



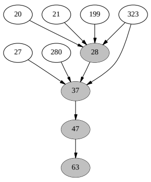
Initial walk length: 40



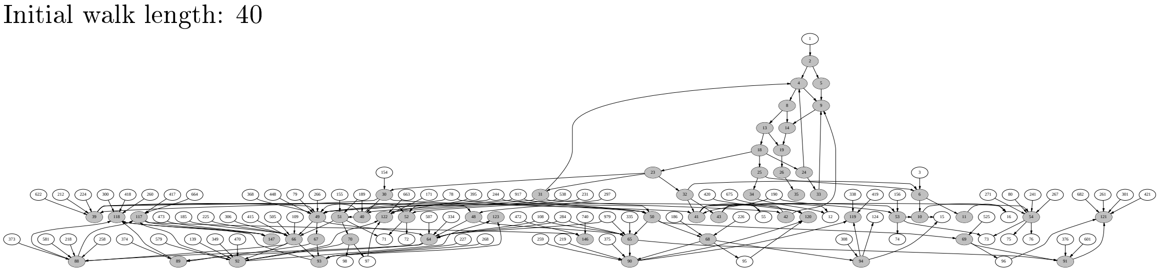
Initial walk length: 60



Initial walk length: 20



Initial walk length: 40



Initial walk length: 60