

Reachability Graph Statistics

This report has been generated by helena.

General information

Model analyzed	hanoi
Model language	Helena
Model parameters	N = 3 M = 3
Analysis date	November, 30, 2017 at 09:36:57
File path	/home/sami/git/helena/examples/hanoi.lna

Size information

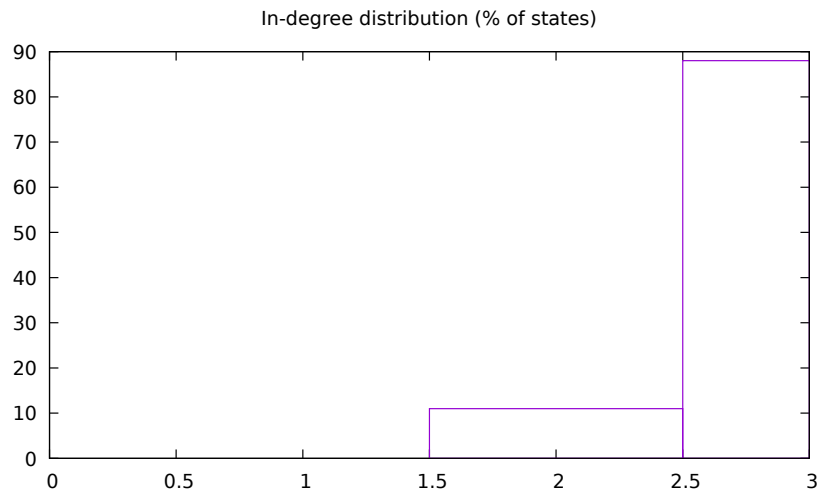
States	27
Edges	78

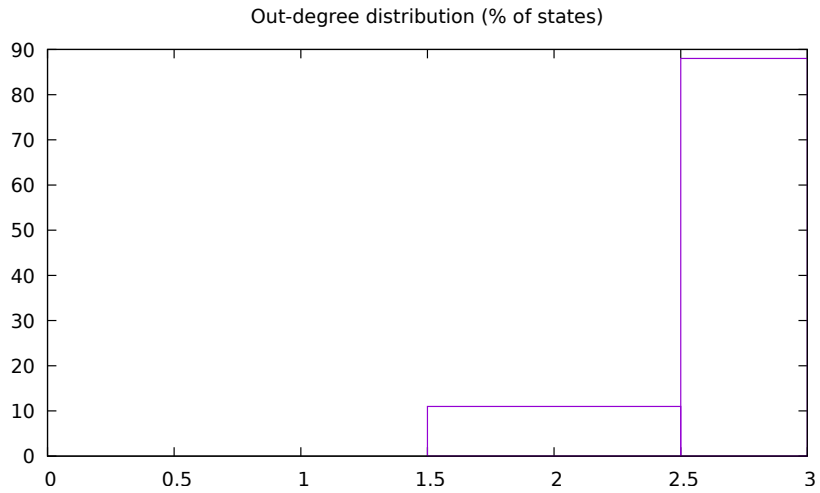
Strongly connected components (SCC) information

Number of components	1
Number of trivial components	0
Number of terminal components	1
Size of the largest component	27

Degrees information

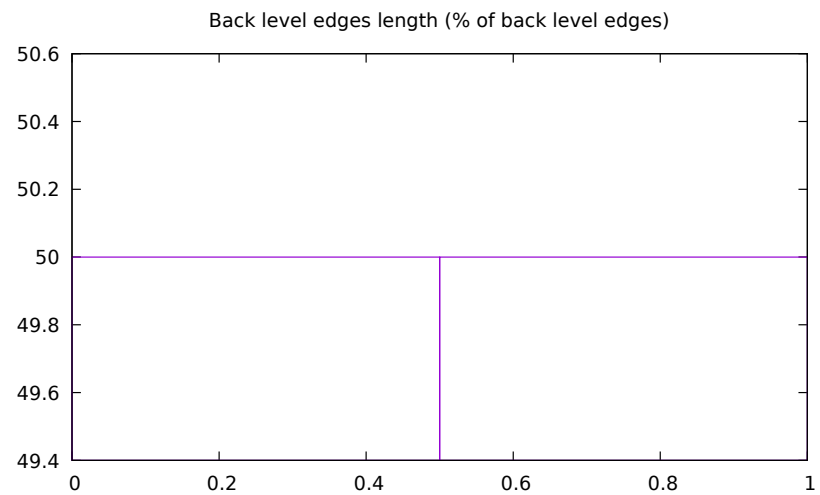
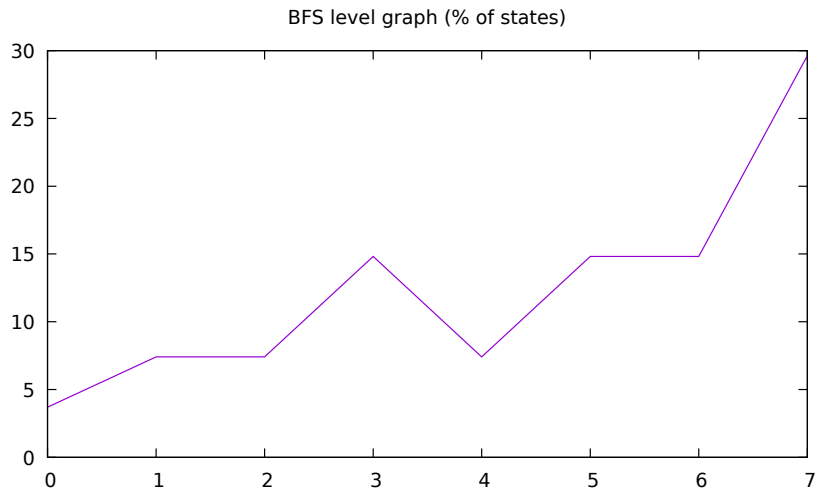
Average degree	2.8889
Maximal in-degree	3
Maximal out-degree	3





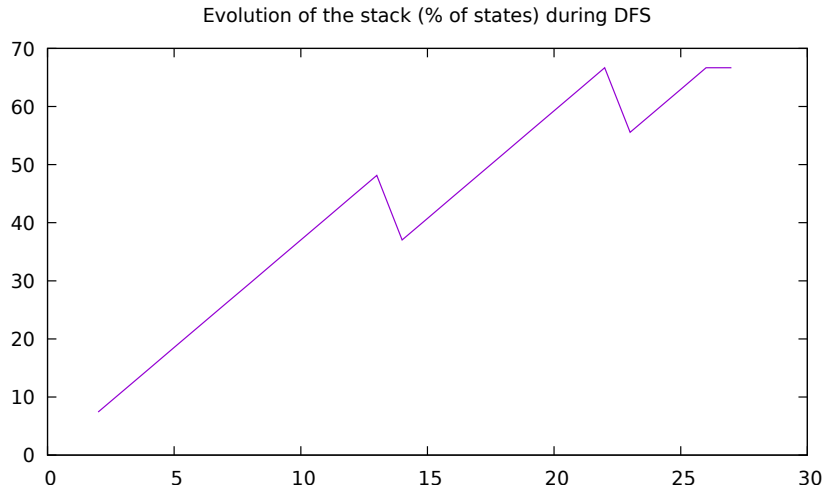
BFS information

Levels	8
Back level edges	52 (66.67%)
Width	8 (29.63%)
Max back level edge length	1
Average back level edge length	0.5



DFS information

Max stack size 18
Front edges 26
Back edges 39
Cross edges 13
Shortest cycle 2



Place bounds

	Min. cardinality	Max. cardinality	Min. multiplicity	Max. multiplicity
towers	3	3	3	3

Dead markings

Number of dead reachable marking(s): 0

Possible tokens

- 24 possible token(s) in place towers

$\langle (1, |) \rangle$
 $\langle (1, |1|) \rangle$
 $\langle (1, |2|) \rangle$
 $\langle (1, |3|) \rangle$
 $\langle (1, |2, 1|) \rangle$
 $\langle (1, |3, 1|) \rangle$
 $\langle (1, |3, 2|) \rangle$
 $\langle (1, |3, 2, 1|) \rangle$
 $\langle (2, |) \rangle$
 $\langle (2, |1|) \rangle$
 $\langle (2, |2|) \rangle$
 $\langle (2, |3|) \rangle$
 $\langle (2, |2, 1|) \rangle$
 $\langle (2, |3, 1|) \rangle$
 $\langle (2, |3, 2|) \rangle$

<(2, |3, 2, 1|)>
 <(3, ||)>
 <(3, |1|)>
 <(3, |2|)>
 <(3, |3|)>
 <(3, |2, 1|)>
 <(3, |3, 1|)>
 <(3, |3, 2|)>
 <(3, |3, 2, 1|)>

Liveness information

- Transition move_disk

78 live bindings

[src = 3, src_disks = |2, 1|, dest = 1, dest_disks = |3|]
 [src = 3, src_disks = |2, 1|, dest = 2, dest_disks = |3|]
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[ src = 2, src_disks = |2|, dest = 3, dest_disks = || ]
[ src = 2, src_disks = |3|, dest = 1, dest_disks = || ]
[ src = 2, src_disks = |3|, dest = 3, dest_disks = || ]

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0 quasi-live bindings