

These are the outputs generated by using the tools lps2pbcs and then pbcs2bool. By using the first tool, the state formula and the LPS is converting to PBES. The second tool is used for computing a BES from the PBES and then for solving it. The result is represented by the solution for the initial variable of the PBES. The minimize results can be seen in a table in the verification section of the report.

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[16:06:25.504 verbose] reading LPS from file '/home/alex/Desktop/System
Validation/FINAL2/latest_working_today.mcr122lps00.lps'...
[16:06:25.525 verbose] reading input from file '/home/alex/Desktop/System
Validation/FINAL2/modal_uca1c.mcf'...
[16:06:25.561 verbose] type checking state formula...
[16:06:25.566 verbose] converting state formula and LPS to a PBES...
[16:06:25.926 verbose] writing PBES to file '/home/alex/Desktop/System
Validation/FINAL2/latest_working_today.mcr122lps00.lps2pbcs00.pbcs'...
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REQUIREMENT 1

```
[16:07:15.958 verbose] pbcs2bool parameters:
[16:07:15.958 verbose] input file: /home/alex/Desktop/System
Validation/FINAL2/latest_working_today.mcr122lps00.lps2pbcs00.pbcs
[16:07:15.958 verbose] data rewriter: jitty
[16:07:15.958 verbose] pbcs rewriter: 0
[16:07:16.309 verbose] Retrieving pbcs_equations from equation system...
[16:07:16.319 verbose] Computing a BES from the PBES....
[16:07:16.597 verbose] Processed 1000 and generated 1084 boolean variables
[16:07:16.870 verbose] Processed 2000 and generated 2128 boolean variables
[16:07:17.151 verbose] Processed 3000 and generated 3141 boolean variables
[16:07:17.435 verbose] Processed 4000 and generated 4164 boolean variables
[16:07:17.710 verbose] Processed 5000 and generated 5200 boolean variables
[16:07:17.993 verbose] Processed 6000 and generated 6160 boolean variables
[16:07:18.268 verbose] Processed 7000 and generated 7228 boolean variables
[16:07:18.537 verbose] Processed 8000 and generated 8113 boolean variables
[16:07:18.839 verbose] Processed 9000 and generated 9065 boolean variables
[16:07:19.120 verbose] Processed 10000 and generated 10073 boolean variables

[16:07:19.250 verbose] Solving a BES with 10498 equations.
[16:07:19.258 verbose] Solve equations of rank 8.
[16:07:19.264 verbose] Solve equations of rank 7.
[16:07:19.270 verbose] Solve equations of rank 6.
[16:07:19.274 verbose] Solve equations of rank 5.
[16:07:19.279 verbose] Solve equations of rank 4.
[16:07:19.282 verbose] Solve equations of rank 3.
[16:07:19.286 verbose] Solve equations of rank 2.
[16:07:19.287 verbose] Solve equations of rank 1.
[16:07:19.290 info] The solution for the initial variable of the pbcs is true
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REQUIREMENT 2

[16:46:01.165 verbose] pbes2bool parameters:
[16:46:01.165 verbose] input file: /home/alex/Desktop/System
Validation/FINAL2/latest_working_today.mcr122lps00.lps2pbes14.pbes
[16:46:01.165 verbose] data rewriter: jitty
[16:46:01.165 verbose] pbes rewriter: 0
[16:46:01.208 verbose] Retrieving pbes_equations from equation system...
[16:46:01.232 verbose] Computing a BES from the PBES....
[16:46:01.507 verbose] Processed 1000 and generated 1079 boolean variables
[16:46:01.796 verbose] Processed 2000 and generated 2174 boolean variables
[16:46:02.072 verbose] Processed 3000 and generated 3190 boolean variables
[16:46:02.361 verbose] Processed 4000 and generated 4176 boolean variables
[16:46:02.666 verbose] Processed 5000 and generated 5260 boolean variables
[16:46:02.950 verbose] Processed 6000 and generated 6313 boolean variables
[16:46:03.241 verbose] Processed 7000 and generated 7278 boolean variables
[16:46:03.538 verbose] Processed 8000 and generated 8353 boolean variables
[16:46:03.831 verbose] Processed 9000 and generated 9352 boolean variables
[16:46:04.116 verbose] Processed 10000 and generated 10312 boolean variables
[16:46:04.408 verbose] Processed 11000 and generated 11360 boolean variables
[16:46:04.694 verbose] Processed 12000 and generated 12442 boolean variables
[16:46:04.971 verbose] Processed 13000 and generated 13392 boolean variables
[16:46:05.243 verbose] Processed 14000 and generated 14236 boolean variables
[16:46:05.529 verbose] Processed 15000 and generated 15194 boolean variables
[16:46:05.820 verbose] Processed 16000 and generated 16124 boolean variables
[16:46:06.104 verbose] Processed 17000 and generated 17204 boolean variables
[16:46:06.370 verbose] Processed 18000 and generated 18115 boolean variables

[16:46:06.630 verbose] Processed 19000 and generated 19122 boolean variables
[16:46:06.705 verbose] Solving a BES with 19294 equations.
[16:46:06.719 verbose] Solve equations of rank 1.
[16:46:06.736 info] The solution for the initial variable of the pbes is true

REQUIREMENT 3

[16:23:07.308 verbose] pbes2bool parameters:
[16:23:07.309 verbose] input file: /home/alex/Desktop/System
Validation/FINAL2/latest_working_today.mcr122lps00.lps2pbes06.pbes
[16:23:07.309 verbose] data rewriter: jitty
[16:23:07.309 verbose] pbes rewriter: 0
[16:23:07.335 verbose] Retrieving pbes_equations from equation system...
[16:23:07.350 verbose] Computing a BES from the PBES....
[16:23:07.640 verbose] Processed 1000 and generated 1091 boolean variables

[16:23:07.920 verbose] Processed 2000 and generated 2112 boolean variables
[16:23:08.207 verbose] Processed 3000 and generated 3165 boolean variables
[16:23:08.494 verbose] Processed 4000 and generated 4168 boolean variables
[16:23:08.778 verbose] Processed 5000 and generated 5192 boolean variables
[16:23:09.077 verbose] Processed 6000 and generated 6207 boolean variables
[16:23:09.364 verbose] Processed 7000 and generated 7212 boolean variables
[16:23:09.650 verbose] Processed 8000 and generated 8109 boolean variables
[16:23:09.945 verbose] Processed 9000 and generated 9122 boolean variables

[16:23:10.224 verbose] Processed 10000 and generated 10090 boolean variables
[16:23:10.385 verbose] Solving a BES with 10622 equations.
[16:23:10.393 verbose] Solve equations of rank 6.
[16:23:10.401 verbose] Solve equations of rank 5.
[16:23:10.407 verbose] Solve equations of rank 4.
[16:23:10.412 verbose] Solve equations of rank 3.
[16:23:10.416 verbose] Solve equations of rank 2.
[16:23:10.420 verbose] Solve equations of rank 1.
[16:23:10.423 info] The solution for the initial variable of the pbes is true

REQUIREMENT 4

[16:19:59.595 verbose] pbes2bool parameters:
[16:19:59.595 verbose] input file: /home/alex/Desktop/System
Validation/FINAL2/latest_working_today.mcr122lps00.lps2pbes05.pbes
[16:19:59.595 verbose] data rewriter: jitty
[16:19:59.595 verbose] pbes rewriter: 0
[16:19:59.619 verbose] Retrieving pbes_equations from equation system...
[16:19:59.629 verbose] Computing a BES from the PBES....
[16:19:59.910 verbose] Processed 1000 and generated 1068 boolean variables
[16:20:00.202 verbose] Processed 2000 and generated 2107 boolean variables
[16:20:00.489 verbose] Processed 3000 and generated 3117 boolean variables
[16:20:00.777 verbose] Processed 4000 and generated 4135 boolean variables
[16:20:01.060 verbose] Processed 5000 and generated 5060 boolean variables

[16:20:01.333 verbose] Processed 6000 and generated 6037 boolean variables
[16:20:01.357 verbose] Solving a BES with 6094 equations.
[16:20:01.361 verbose] Solve equations of rank 1.
[16:20:01.366 info] The solution for the initial variable of the pbes is true

REQUIREMENT 5

[16:18:54.113 verbose] pbes2bool parameters:
[16:18:54.113 verbose] input file: /home/alex/Desktop/System

Validation/FINAL2/latest_working_today.mcr122lps00.lps2pbes04.pbes

[16:18:54.113 verbose] data rewriter: jitty

[16:18:54.114 verbose] pbes rewriter: 0

[16:18:54.130 verbose] Retrieving pbes_equations from equation system...

[16:18:54.135 verbose] Computing a BES from the PBES....

[16:18:54.436 verbose] Processed 1000 and generated 1047 boolean variables

[16:18:54.726 verbose] Processed 2000 and generated 2102 boolean variables

[16:18:55.020 verbose] Processed 3000 and generated 3068 boolean variables

[16:18:55.305 verbose] Processed 4000 and generated 4039 boolean variables

[16:18:55.339 verbose] Solving a BES with 4125 equations.

[16:18:55.343 verbose] Solve equations of rank 1.

[16:18:55.347 info] The solution for the initial variable of the pbes is true

REQUIREMENT 7

[16:26:55.182 verbose] pbes2bool parameters:

[16:26:55.182 verbose] input file: /home/alex/Desktop/System

Validation/FINAL2/latest_working_today.mcr122lps00.lps2pbes07.pbes

[16:26:55.182 verbose] data rewriter: jitty

[16:26:55.182 verbose] pbes rewriter: 0

[16:26:55.216 verbose] Retrieving pbes_equations from equation system...

[16:26:55.224 verbose] Computing a BES from the PBES....

[16:26:55.498 verbose] Processed 1000 and generated 1050 boolean variables

[16:26:55.770 verbose] Processed 2000 and generated 2056 boolean variables

[16:26:56.002 verbose] Solving a BES with 2849 equations.

[16:26:56.004 verbose] Solve equations of rank 2.

[16:26:56.007 verbose] Solve equations of rank 1.

[16:26:56.009 info] The solution for the initial variable of the pbe