|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Layout** | **Num qubits** | **Group** | **Total qubits** | **Description** |
| Full | 10 | 2 | 20 |  |
| Full | 7 | 3 | 21 | Failed for 2 algorithms for circuit size = 15 |
| Line | 5 | 4 | 20 |  |
| Ring | 10 | 2 | 20 |  |
| Ring | 7 | 3 | 21 | Mostly failed for circuit size = 15 |
| Ring | 5 | 4 | 20 | Mostly failed for circuit size = 15 |
| Grid | 9 | 3 | 27 |  |
| Grid | 4 | 5 | 20 |  |
| T\_horizontal | 5 | 4 | 20 |  |
| T\_vertical | 5 | 4 | 20 |  |

NB: stopper at > 100 possible swap, for each circuit depth (dag-level) – reset after each level  
For failed circuit, stopper increased to > 1000, but the algorithm still fails

Stopper algorithm – stopper is used **to exit** during active\_list gate checking (if not infinity loop, because distance is not reduced):

<https://github.com/natashaval/qubit-mapping-distributed-qc/blob/a2d917c59fa471959753a2d1dd23bbbf740393fb/lib/debug_lookahead_routing.py#L160>

A diagram of a diagram

Description automatically generated

A diagram of a group graph

Description automatically generated

A graph with text on it

Description automatically generated

Benchmark Name by layout counts = not every benchmark can be run on certain layout; bar\_label = the total number of layout (in table above) that run these algorithms

DUMMY TABLE

A blue and green squares

Description automatically generated

Swap (%) changes **by layout** and depth (%) changes **by layout** for circuit\_size = 15

A graph of blue rectangles

Description automatically generated

Swap(%) changes group **by benchmark** for circuit\_size n = 15

A screenshot of a graph

Description automatically generated

Total operation gates on several algorithms, grouped **by layout**

TODO: need to check which 3 suitable algorithms to show this data

A screenshot of a graph

Description automatically generated

Total gate depth on several algorithms, group **by layout**  
TODO: need to check suitable algorithms

A screenshot of a graph

Description automatically generated

Total of additional SWAP, group **by layout**

TODO: better to show additional swap or size? I prefer to show size