Simulation Results steps

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1 First Step

| | Table 1: | <u>Benchmai</u> | rk used |
|--------------|----------|-----------------|---------------------|
| Benchmark | # qubits | # gates | two-qubit gates (%) |
| $4gt11_{82}$ | 5 | 27 | 0.67 |

Table 2: Step 1 results

| Mapper | Init. place | t1 | t2 | meas. err. | P. success | f | V_Q |
|------------------------------|-------------|------|------|------------|------------|---|-------|
| minextendre | No | 3000 | 3000 | 0.03 | | | 1582 |
| $\operatorname{minextendrc}$ | Yes | 3000 | 3000 | 0.03 | | | 1038 |
| minextend | No | 3000 | 3000 | 0.03 | | | 1264 |
| $\min extend$ | Yes | 3000 | 3000 | 0.03 | | | 834 |
| No | No | 3000 | 3000 | 0.03 | | | 390 |

Table 3: Other mapper statistics

| Table 3. Still mapper backbook | | | | | | | |
|--------------------------------|-------------|--------------------------|------------------------|---------|--|--|--|
| Mapper | Init. place | # qubits (after mapping) | depth | # SWAPS | | | |
| minextendrc | No | 7 | 237 | 17 | | | |
| $\operatorname{minextendrc}$ | Yes | 6 | 174 | 10 | | | |
| minextend | No | 8 | 228 | 16 | | | |
| $\min extend$ | Yes | 6 | 165 | 9 | | | |
| No | No | 5 | 84 | 0 | | | |