

Optimization method

Encoding scheme

- Uses 2,2,3,3 encoding scheme to further reduce area when filling the pathmap, since 2 is 2'b10 and 3 is 2'b11 in binary, thus I only needs to use the MSB of the path map to determine whether this slot is path or not.

Line Buffers

- Uses line buffers to reduce area and critical path of input buffers.

One-hot encoding scheme

- Increase the speed of the circuit.