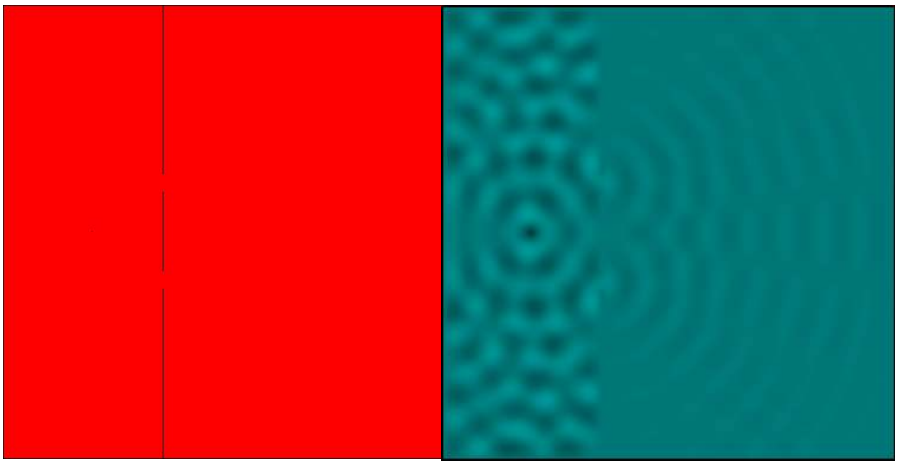
Wave Propagation



The image above shows a state in the wave propagation CA simulating Young's Double Slit Experiment. In the red channel shown on the left side, the exciters, the barrier and the walls are modelled. The right side shows a state of the CA with the current amplitude in green and blue.

For adequate precision, a floating-point buffer is needed (32-bit single per color). Unfortunately, this makes the simulation memory-intensive and slow. The automaton must treat the cells of different type accordingly. This is inefficient since the used shader model only supports conditional moves, but no flow control.