

GPU

Starting configuration

$$\begin{bmatrix} 0 & 1 & 0 \\ 0 & 1 & 1 \\ 1 & 0 & 0 \end{bmatrix} \begin{bmatrix} 1 & 0 & 1 \\ 0 & 1 & 1 \\ 0 & 0 & 0 \end{bmatrix} \begin{bmatrix} 1 & 1 & 0 \\ 1 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$$

Move each cell 1 in x direction, multiply by 2  
and add to original

$$\begin{bmatrix} 0 & 1 & 2 \\ 2 & 1 & 3 \\ 1 & 2 & 0 \end{bmatrix} \begin{bmatrix} 3 & 2 & 1 \\ 2 & 1 & 3 \\ 0 & 0 & 0 \end{bmatrix} \begin{bmatrix} 1 & 3 & 2 \\ 1 & 3 & 2 \\ 2 & 0 & 1 \end{bmatrix}$$

Move each cell 1 in the y direction, multiply  
by 4 and add

$$\begin{bmatrix} 4 & 9 & 2 \\ 2 & 5 & 11 \\ 9 & 6 & 12 \end{bmatrix} \begin{bmatrix} 3 & 2 & 1 \\ 14 & 9 & 7 \\ 8 & 4 & 12 \end{bmatrix} \begin{bmatrix} 9 & 3 & 6 \\ 5 & 15 & 10 \\ 6 & 12 & 9 \end{bmatrix}$$

Move by 1 in z, multiply by 8 and add

$$\begin{bmatrix} 76 & 33 & 50 \\ 42 & 125 & 91 \\ 57 & 102 & 84 \end{bmatrix} \begin{bmatrix} \dots \\ \dots \\ \dots \end{bmatrix} \begin{bmatrix} \dots \\ \dots \\ \dots \end{bmatrix}$$

Each cell's value is an encoding of the cell layout  
around its top left vertex.

D at each vertex found by a look-up table