

该数组是对于图形的变化数组，每个数字对应着图形的变化.图像有x轴与y轴，以及一个虚拟的z轴。如图：我们这样来处理图形

$$\begin{array}{ccc}
 \begin{bmatrix} x \\ y \\ z \\ 1 \end{bmatrix} & * & \begin{bmatrix} m11 & m12 & m13 & m14 \\ m21 & m22 & m23 & m24 \\ m31 & m32 & m33 & m34 \\ m41 & m42 & m43 & m44 \end{bmatrix} = \begin{bmatrix} x' \\ y' \\ z' \\ 1 \end{bmatrix} \\
 \text{coordinate} & & \text{transform} \qquad \qquad \text{transformed coordinate}
 \end{array}$$

其中的参数的含义分别为：

$$\begin{array}{c} \text{identity} \\ \left[\begin{array}{cccc} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array} \right] \end{array}$$

$$\begin{array}{c} \text{translate} \\ \left[\begin{array}{cccc} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ tx & ty & tz & 1 \end{array} \right] \end{array}$$

$$\begin{array}{c} \text{scale} \\ \left[\begin{array}{cccc} sx & 0 & 0 & 0 \\ 0 & sy & 0 & 0 \\ 0 & 0 & sz & 0 \\ 0 & 0 & 0 & 1 \end{array} \right] \end{array}$$

$$\begin{array}{c} \text{rotate around X axis} \\ \left[\begin{array}{cccc} 1 & 0 & 0 & 0 \\ 0 & \cos \theta & \sin \theta & 0 \\ 0 & -\sin \theta & \cos \theta & 0 \\ 0 & 0 & 0 & 1 \end{array} \right] \end{array}$$

$$\begin{array}{c} \text{rotate around Y axis} \\ \left[\begin{array}{cccc} \cos \theta & 0 & -\sin \theta & 0 \\ 0 & 1 & 0 & 0 \\ \sin \theta & 0 & \cos \theta & 0 \\ 0 & 0 & 0 & 1 \end{array} \right] \end{array}$$

$$\begin{array}{c} \text{rotate around Z axis} \\ \left[\begin{array}{cccc} \cos \theta & \sin \theta & 0 & 0 \\ -\sin \theta & \cos \theta & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{array} \right] \end{array}$$

其中的identity是图像的标准样式