

Change of Basis \* Position Transform

$$\begin{bmatrix} S_x & S_y & S_z & 0 \\ U_x & U_y & U_z & 0 \\ F_x & F_y & F_z & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix} * \begin{bmatrix} 1 & 0 & 0 & -P_x \\ 0 & 1 & 0 & -P_y \\ 0 & 0 & 1 & -P_z \\ 0 & 0 & 0 & 1 \end{bmatrix}$$