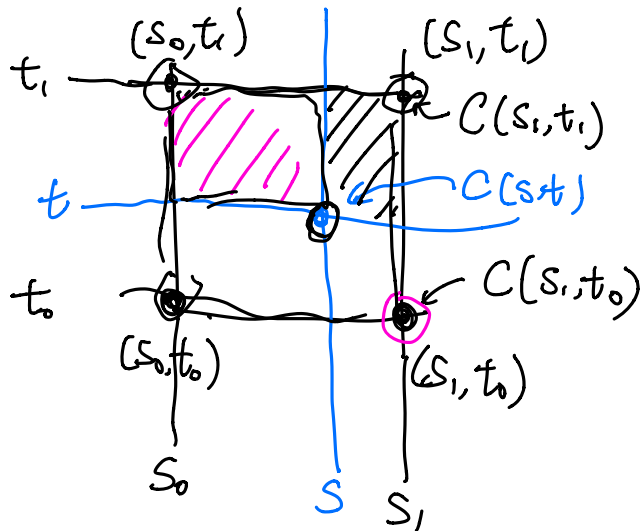
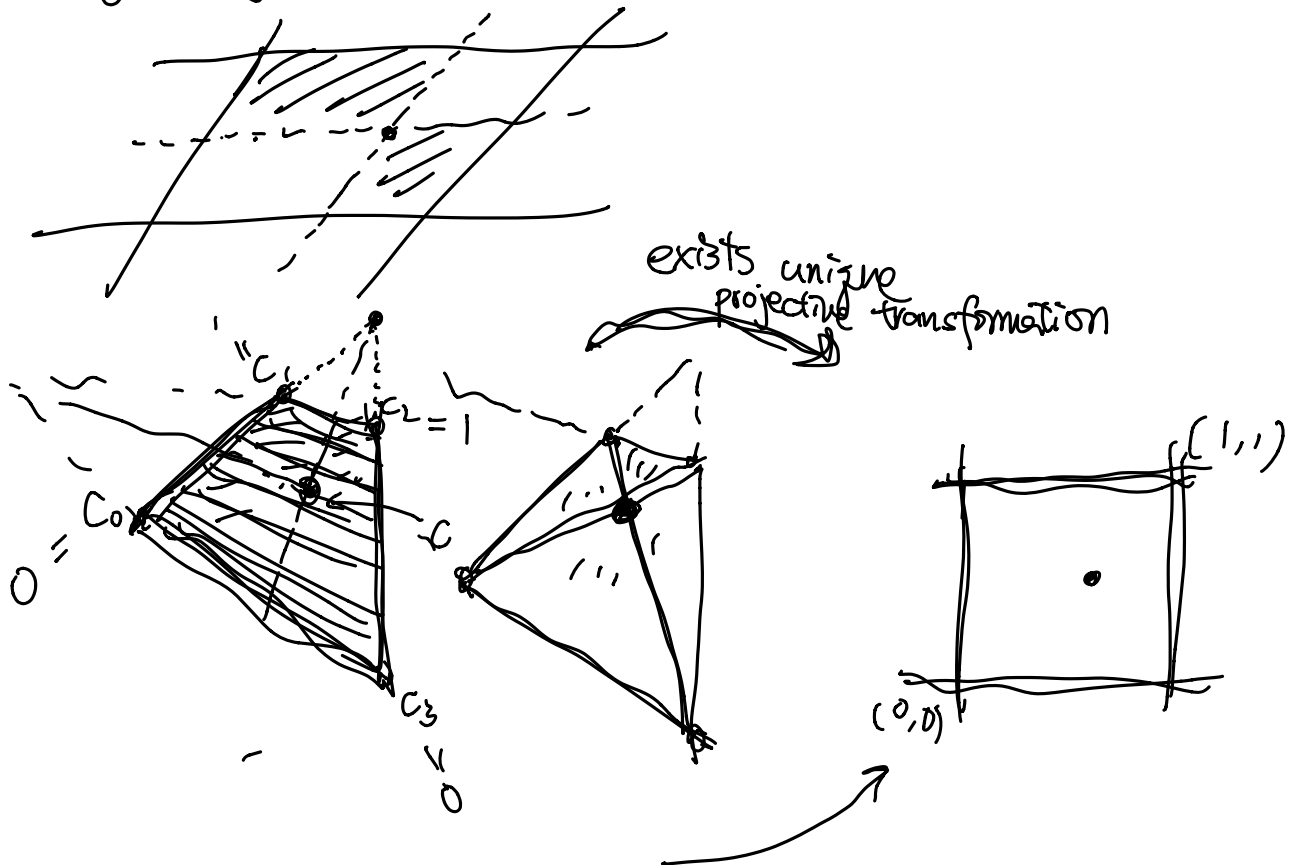


Bilinear interpolation

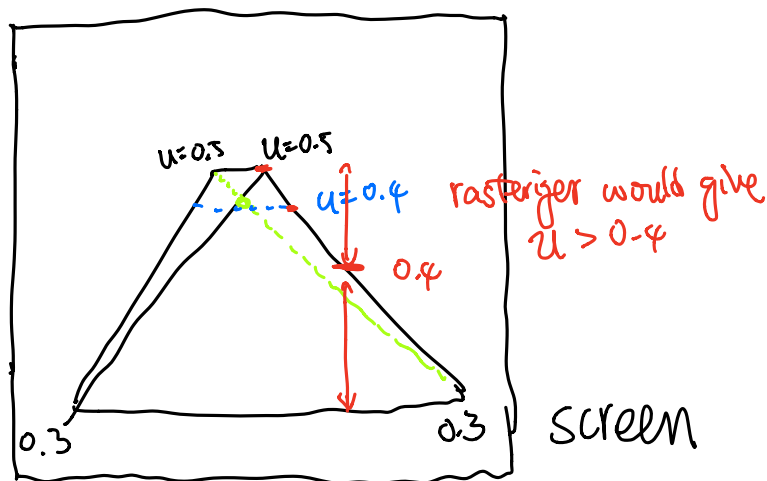
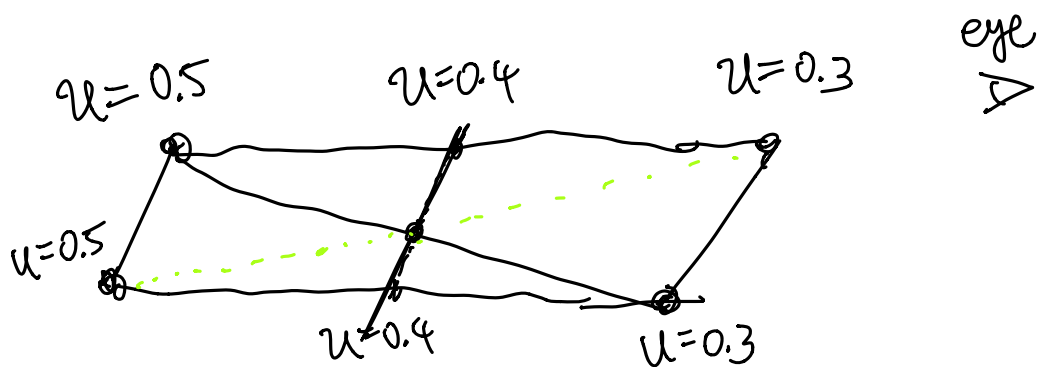


$$C(s, t) = \frac{(s_1 - s)(t_1 - t_0)}{(t_1 - t_0)(s_1 - s_0)} C(s_0, t_0) + \frac{(s - s_0)(t_1 - t)}{(t_1 - t_0)(s_1 - s_0)} C(s_1, t_0) + \dots$$

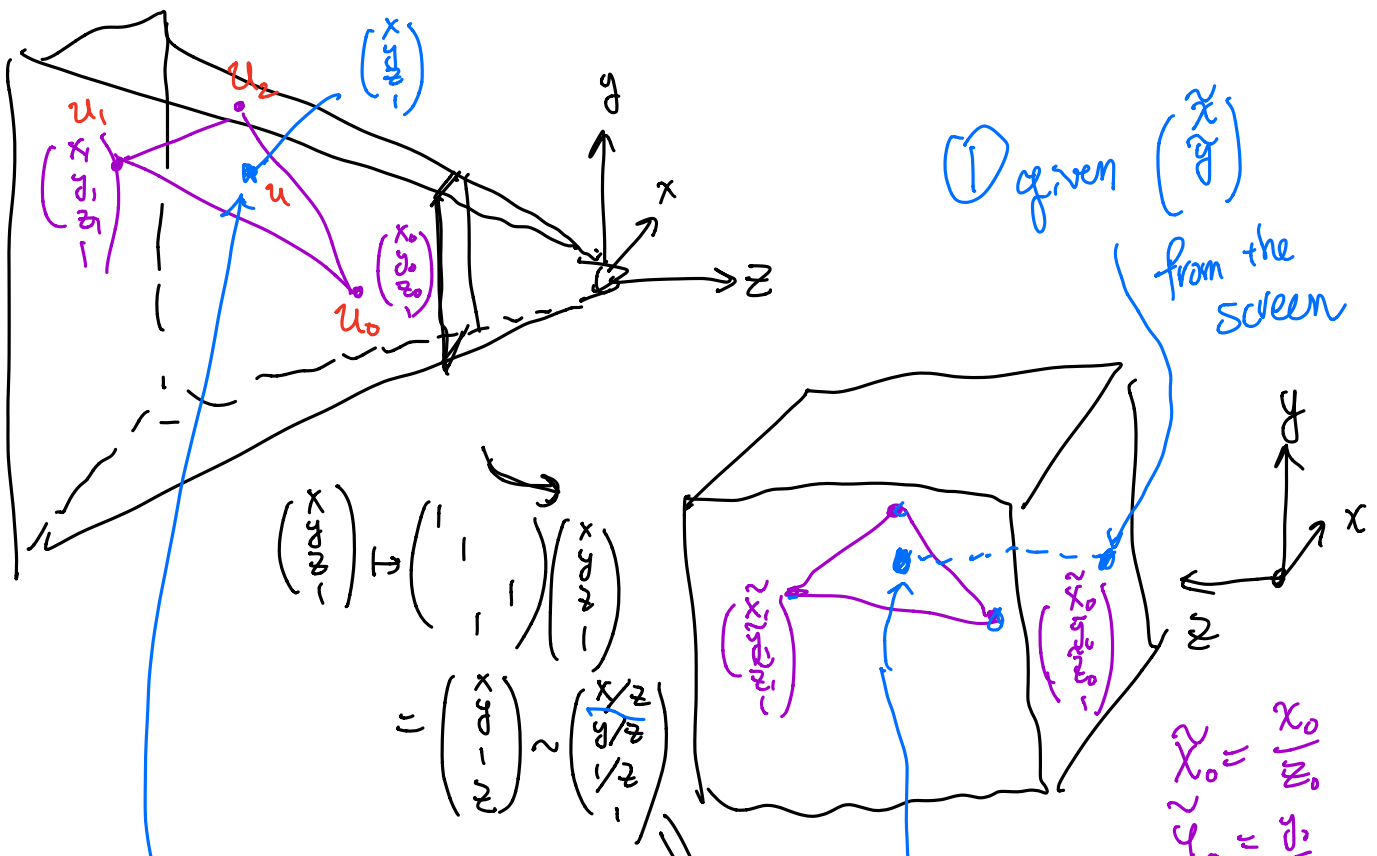
Generalization



Perspective interpolation



In camera coordinate



③

$$z = \frac{1}{N} \sum_{i=1}^N z_i$$

$$x = \frac{1}{N} \sum_{i=1}^N x_i$$

$$y = \frac{1}{N} \sum_{i=1}^N y_i$$

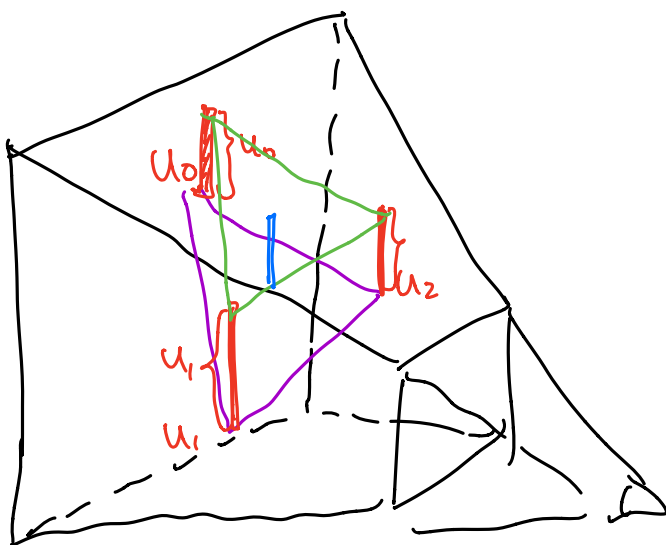
$$\begin{pmatrix} x \\ y \\ z \end{pmatrix}$$

② $\begin{pmatrix} \tilde{x} \\ \tilde{y} \\ \tilde{z} \end{pmatrix}$

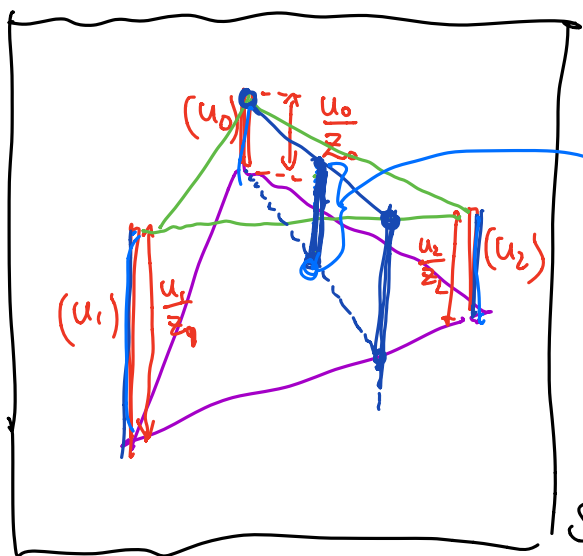
where $\tilde{z} = \sum_i \lambda_i \tilde{z}_i$

where $\begin{pmatrix} \tilde{x}_0 & \tilde{x}_1 & \tilde{x}_2 \\ \tilde{y}_0 & \tilde{y}_1 & \tilde{y}_2 \\ \tilde{z}_0 & \tilde{z}_1 & \tilde{z}_2 \end{pmatrix} \begin{pmatrix} \lambda_0 \\ \lambda_1 \\ \lambda_2 \end{pmatrix} = \begin{pmatrix} \tilde{x} \\ \tilde{y} \\ \tilde{z} \end{pmatrix}$

$$\tilde{z}_0 = \frac{1}{N}$$



$$u = \frac{\sum_i \lambda_i \frac{u_i}{z_i}}{\sum_i \lambda_i}$$



$$\sum_i \lambda_i \frac{u_i}{z_i}$$

Screen