

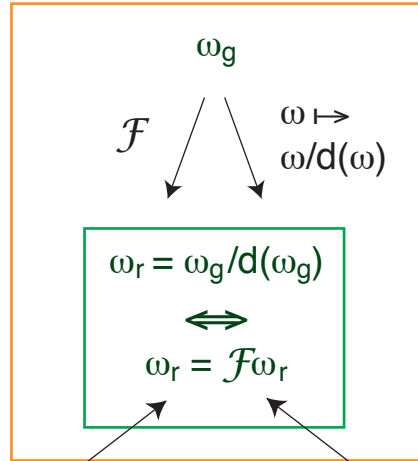
general:  
 $\mathfrak{P}\omega = \omega \geq 0$   
 $d(\omega) > 0$

fixed-point

central:

$$\mathfrak{P}\omega = \omega = \begin{bmatrix} \omega \\ \omega \\ \omega \end{bmatrix} \geq 0$$

$$\mathcal{F}\omega = \omega$$



representative:

$$\mathfrak{P}\omega = \omega = \begin{bmatrix} \omega \\ \omega \\ \omega \end{bmatrix} \geq 0$$

$$d(\omega) = 1$$

primal

(1:1)

dual

$$\max\{c^T \xi : \mathfrak{A}\xi \geq b, \mathcal{F}_p \xi = \xi\} \xrightarrow{\mathcal{D}} \max\{b^T \eta : \mathfrak{D}\eta \geq c, \mathcal{F}_d \eta = \eta\}$$

invariant

$$\begin{matrix} \xi_c = Ax_a - b \\ = \mathfrak{A}\xi_a - b \end{matrix} \xleftarrow{\mathcal{F}_p} \begin{matrix} \xi_a = \\ Ax_a - b + \mathfrak{D}q \end{matrix}$$

$$\begin{matrix} \eta_a = \\ -\mathfrak{D}y_a - c + \mathfrak{A}r \end{matrix} \xrightarrow{\mathcal{F}_d} \begin{matrix} \eta_c = -\mathfrak{D}y_a - c \\ = \mathfrak{D}\eta_a - c \end{matrix}$$

$\mathcal{D}^2$

original

$$\begin{matrix} x_a \\ A^+(\xi_c + b) \\ = A^+Ax_a \end{matrix}$$

$$\begin{matrix} c - \mathfrak{D}\eta_c = \\ c + \mathfrak{D}y_a \\ y_a \end{matrix}$$

$$\max\{c^T x : Ax \geq b\}$$

asymmetric  
classical dual

$$\min\{b^T y : A^T y = c, y \leq 0\}$$

arbitrary central