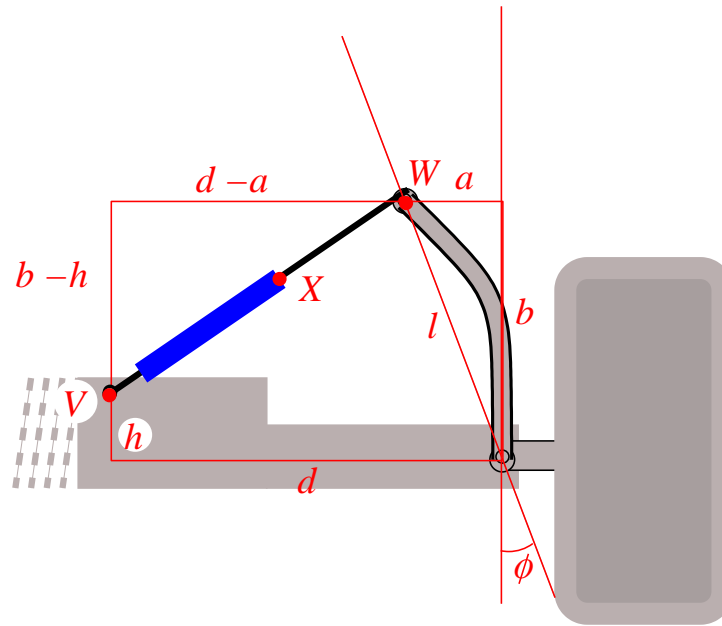


Steering

Steering conversion



$$|VW| = \sqrt{(b-h)^2 + (d-a)^2}$$

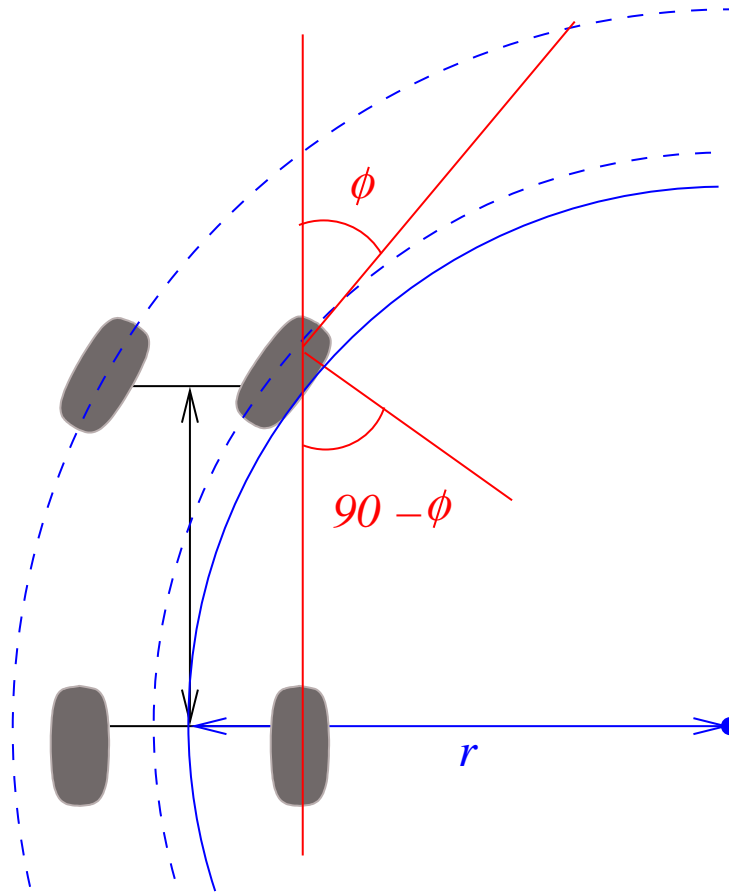
$$\sin \phi = \frac{a}{l}$$

$$a = \sin \phi \cdot l$$

$$\cos \phi = \frac{b}{l}$$

$$x = f(\phi) \triangleq \sqrt{l(\cos \phi - h)^2 + (d - l \sin \phi)^2}$$

Simple steering model



$$\tan \phi = \frac{\ell}{r} \Leftrightarrow r = \frac{\ell}{\tan \phi}$$

“Combine to get x values, $d \rightarrow \rho$ ”.

NOTES:

1. Something wrong here??
2. *Ackerman* steering compensates for the difference in outer and inner wheel turning angles.