

$$FWD = -\omega_{rev} R\cos(\theta)$$

STR =
$$\omega_{rev} R sin(\theta)$$

$$\omega_{rev} = -\dot{\theta}$$

Vehicle revolving clockwise around point O at a distance R, while maintaining a constant orientation (no rotation about its center of geometry*)

*like a Dosado maneuver:

http://en.wikipedia.org/wiki/Dosado