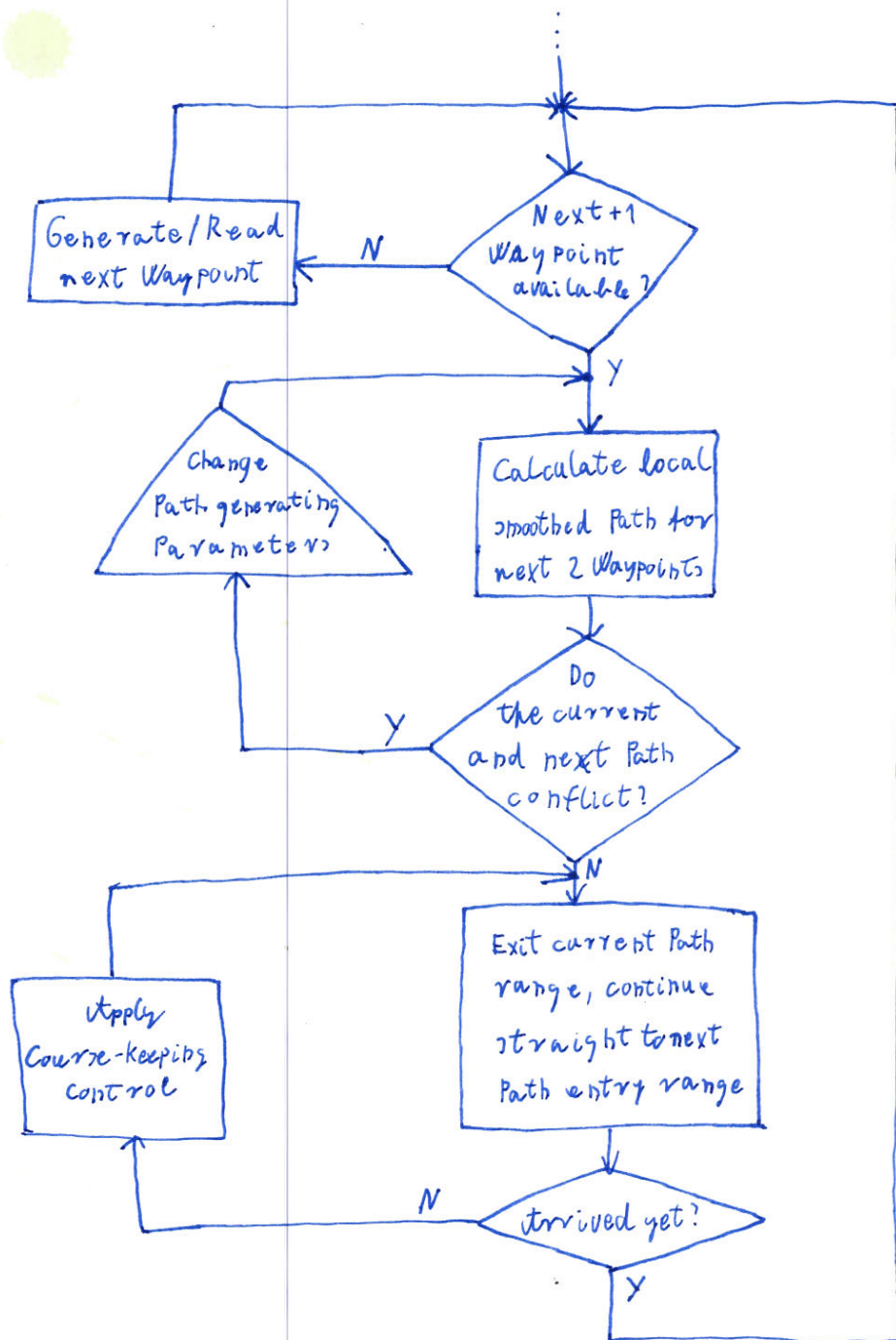
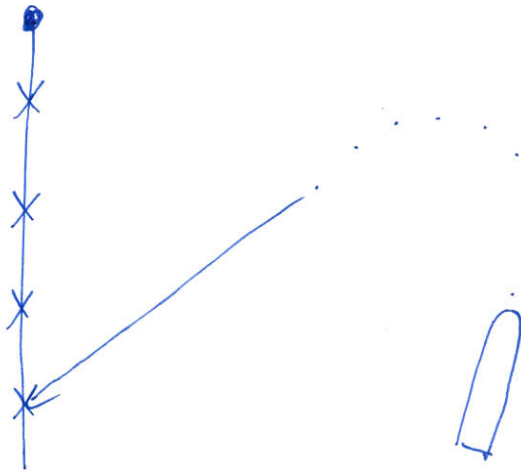
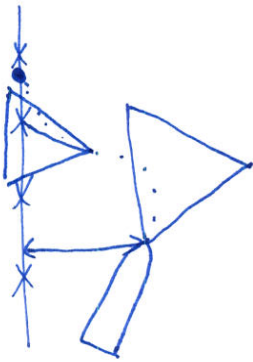
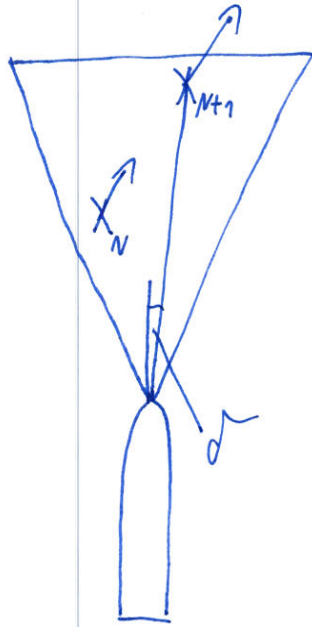
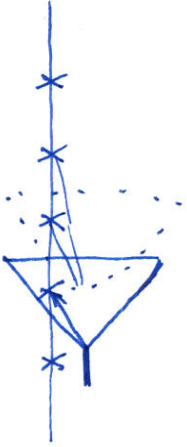


NAVIGATION



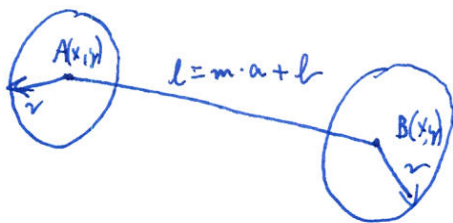
~~OUTDATED~~

Navigating along Path:

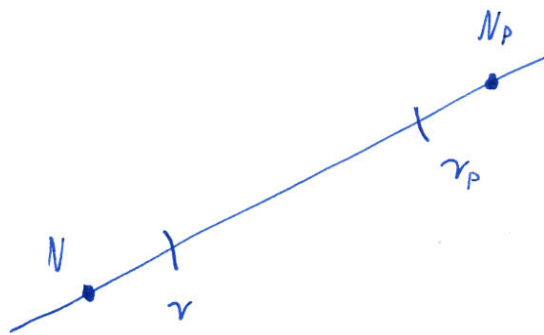


OUTDATED

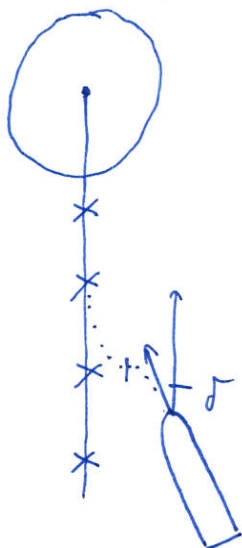
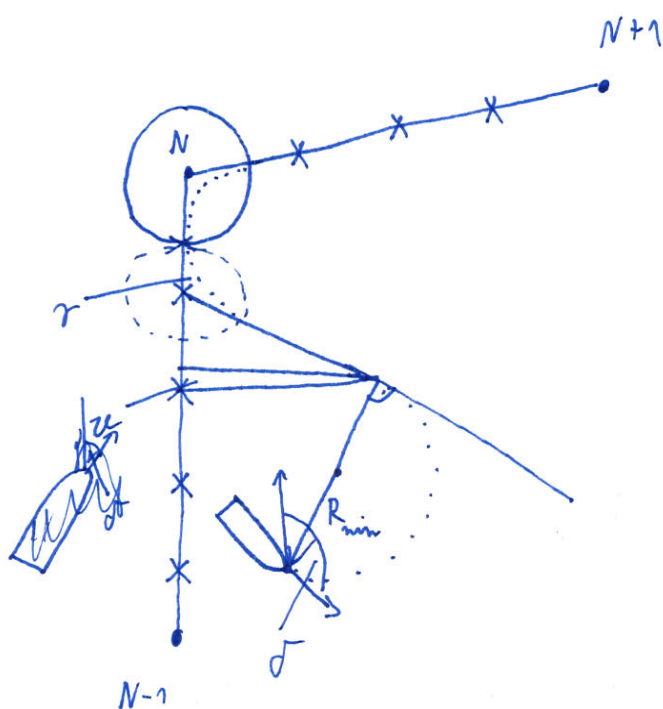
#3: Route between 2 Way points:



Sub-WayPoints:



#4: Deviation from Path ($\gamma < \frac{\pi}{2}$)



-1: Circular Path towards Next WP(N)

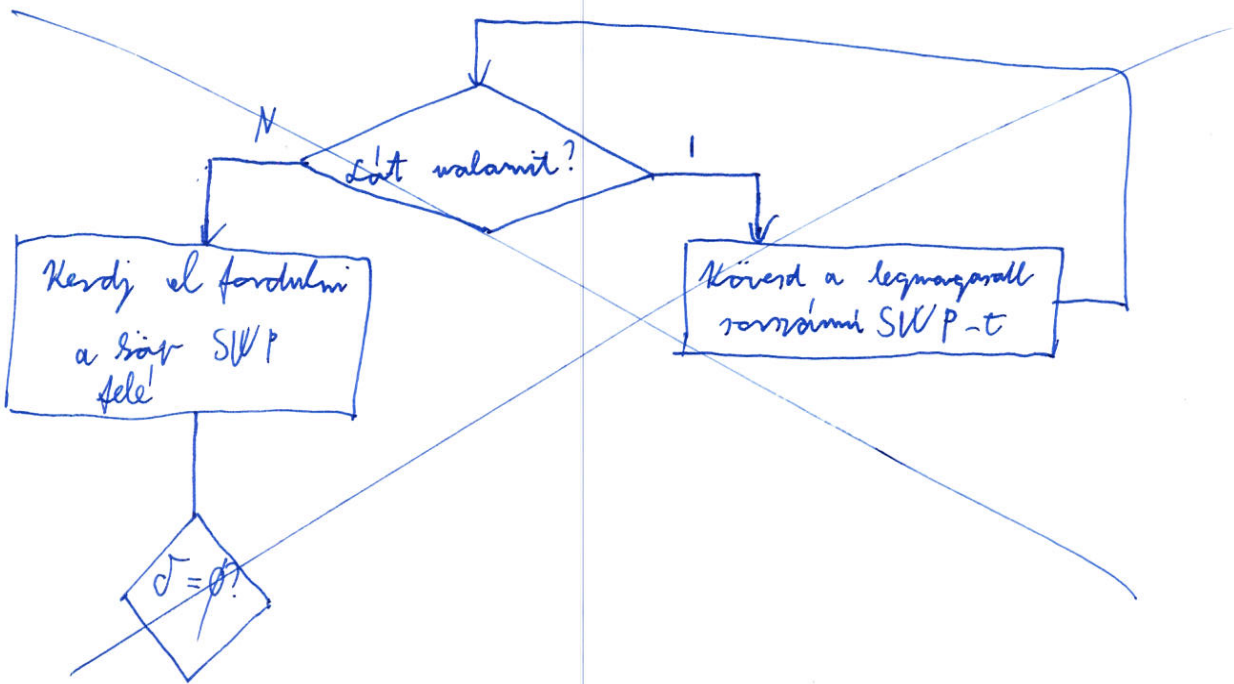
-2: When the ship forces the last sub-coordinate that is toward the next WP ($\gamma \geq \frac{\pi}{2}$ and $\gamma < \frac{\pi}{2}$) the circular path continues straight

-3: The selected sub-WP is treated as a regular WP. The WP+1 that belongs to the Path is one of the following:

- SubWP($n+1$)
- N (if SubWP(n) was the last SubWP)
- SubWP+1(1) if the range of the return-path and the range of the normal Path conflicts

-4: Continue on toward either N or $N+1$ depending on the solution of (-3)

Navigation



Proportionality of the Euler - period:

$$\sigma = \frac{p_{\max}}{v_{\max}^2}$$

Describing equations:

$$\text{if } v_{\max} t = \frac{\kappa}{\sigma} \downarrow$$

$$x(t) = \sqrt{\frac{\pi}{\sigma}} C_F \left(\sqrt{\frac{\sigma}{\pi}} v_{\max} t \right) = \sqrt{\frac{\pi}{\sigma}} C_F \left(\frac{\kappa}{\sqrt{\pi \sigma}} \right)$$

$$y(t) = \sqrt{\frac{\pi}{\sigma}} S_F \left(\sqrt{\frac{\sigma}{\pi}} v_{\max} t \right) = \sqrt{\frac{\pi}{\sigma}} S_F \left(\frac{\kappa}{\sqrt{\pi \sigma}} \right)$$

$$\psi(t) = \frac{1}{2} v_{\max}^2 t^2$$

$$V(t) = \frac{\kappa^2}{2\sigma}$$

$$\kappa(t) = \sigma v_{\max} t$$

