

Temasek Defence Systems Institute

Study of a Terrain-Based Motion Estimation Model to Predict The Position of a Moving Target to Enhance Weapon Probability of Kill

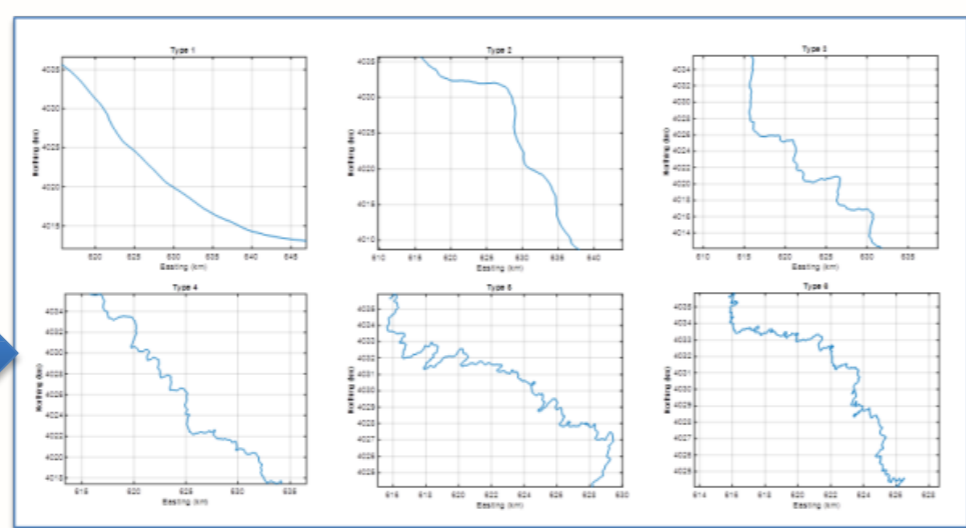
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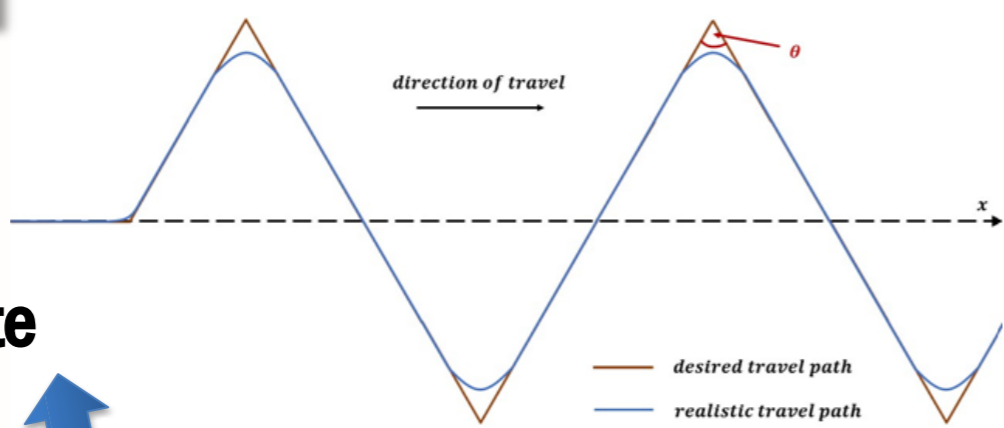
Land Route

Road type	Mean heading	Sigma heading	Sigma change in heading	Mean sigma change in heading
1	135	25	$0 < \Delta \theta \leq 1$	0.5
2	135	29	$1 < \Delta \theta \leq 4.5$	2.5
3	135	41	$4.5 < \Delta \theta \leq 9.5$	7
4	135	53	$9.5 < \Delta \theta \leq 14.5$	12
5	135	66	$14.5 < \Delta \theta \leq 19.5$	17
6	135	73	$19.5 < \Delta \theta \leq 30.5$	25

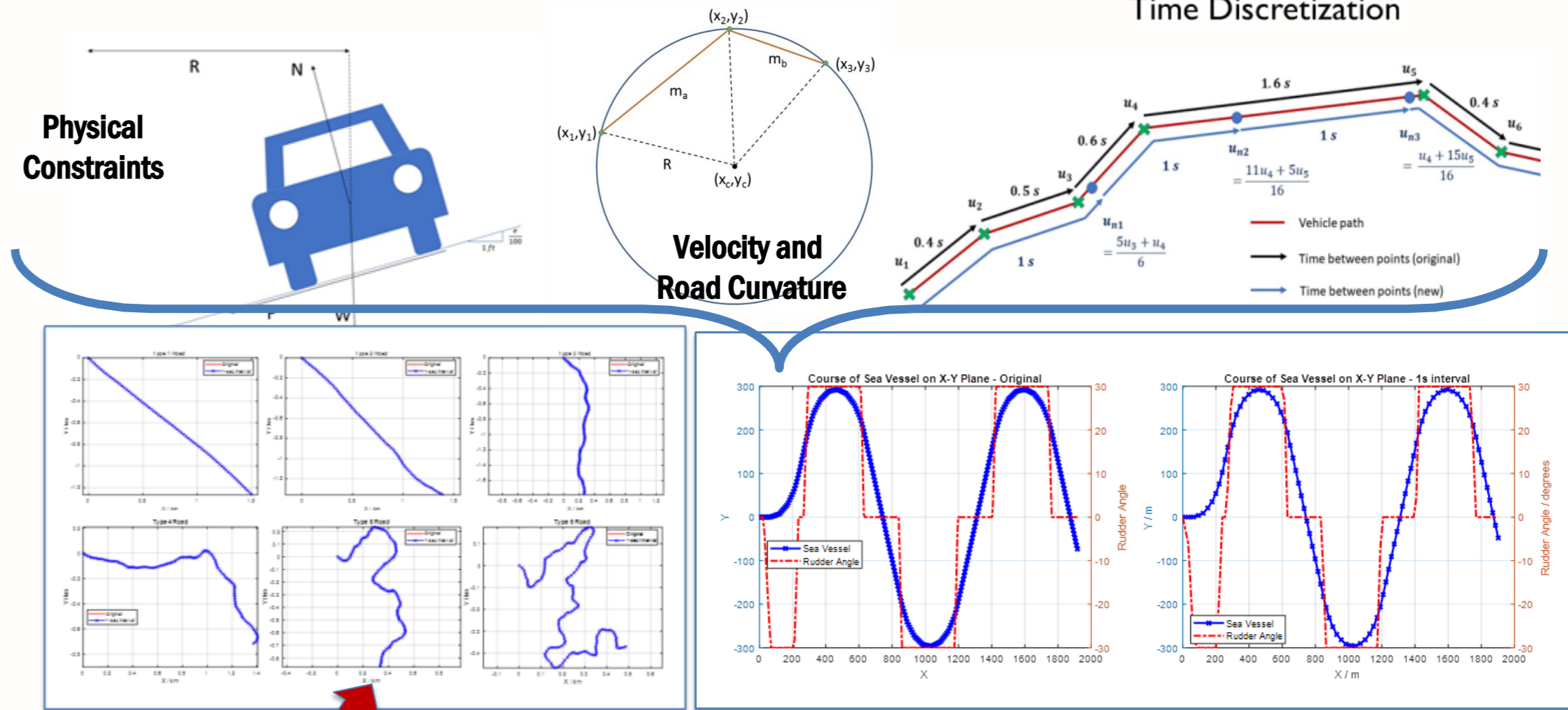


Producing Desired Routes for Analysis

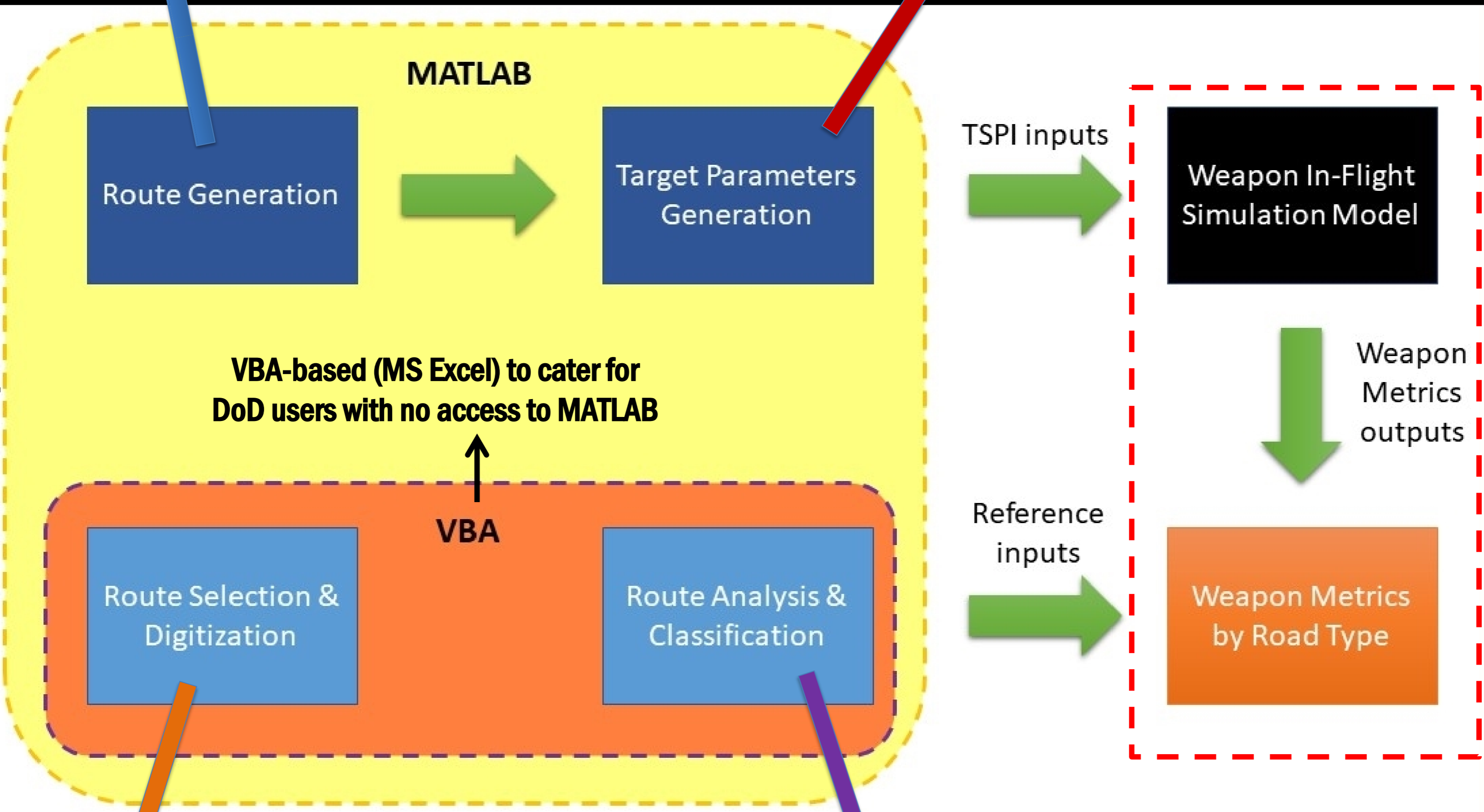
Sea Route



Generation of Time-Space-Position Information

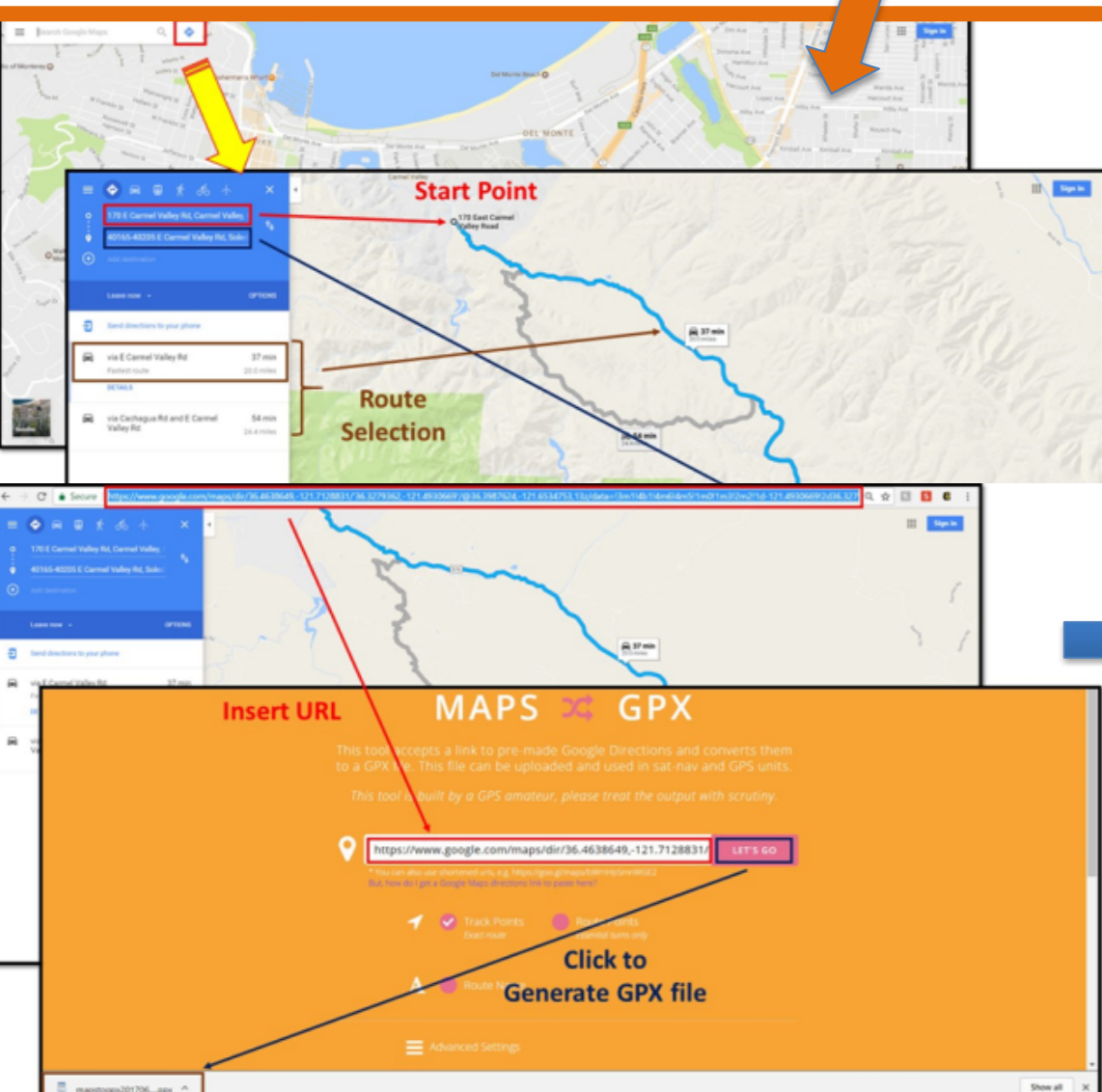


Weaponing Assessment Process Against Moving Target



Not covered in this thesis due to involvement of classified database

Converting route of interest into digitized form



Conversion, Analysis and Classification for quick comparison with Weapon Metrics in Look-up Table

