

ISR Planner

Post-Optimization Tools

Insert Missed • Swap Closer • Crossing Remove

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Executive Summary

This document describes three post-optimization tools developed for the ISR (Intelligence, Surveillance, and Reconnaissance) Planner system. These tools enhance multi-drone mission planning by refining initial route solutions through target insertion, trajectory-aware reassignment, and route smoothing techniques.

Tool	Purpose	Performance Impact
Insert Missed	Add unvisited high-priority targets	Increases coverage
Swap Closer	Reassign targets to closer drones	Reduces distance by ~18%
Crossing Remove	Remove route crossings (2-opt)	Smooths routes