Predictive Airspace Monitoring System

Drilliant Ltd. presents a unique solution for aviation professionals to monitor and predict airspace activity with high precision

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GS **by Guy Soffer**

System Overview

User-Defined Monitoring

Configure custom airspace regions for targeted missions, surveillance and analysis

Triple Mode Operation

Real-time tracking, 30-minute predictions, and historical data analysis in one system

Comprehensive Outputs

Load metrics, dynamic radar maps, detailed flight tables, and free time slot identification

System Inputs

User-Defined Air Space

Text file import of coordinate boundaries + manual editing

Air-Traffic Maps

Integration with DOD/Jeppesen resources for comprehensive coverage. Can be edited manually for "Directs"

Configuration Parameters

Set extension ranges, look-ahead, and look-back timeframes

Real-Time Data

Periodic B2B EuroControl queries for flight plans and waypoints

System Flow Architecture

EuroControl B2B

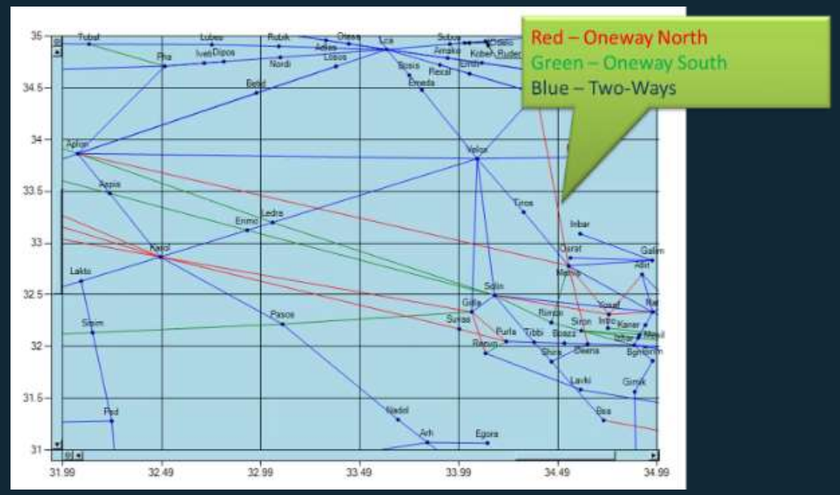
External data source providing real-time flight plans and airspace information

PAMS Processing

Agent-based modeling system analyzes traffic within regions of interest

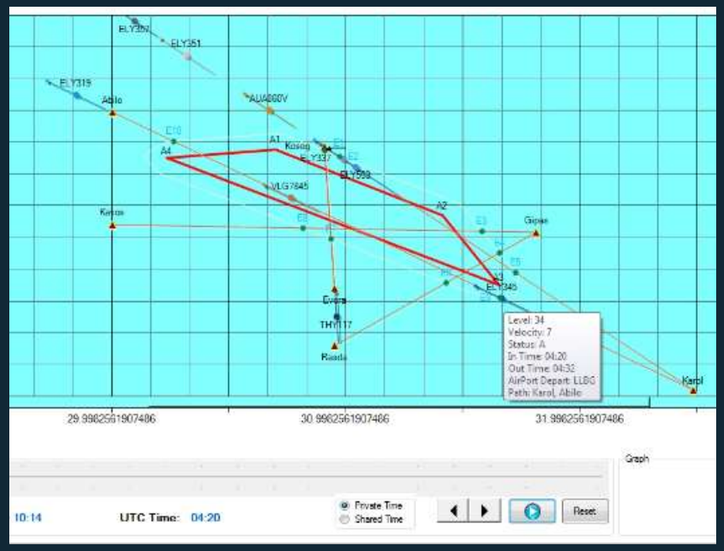
Information Output

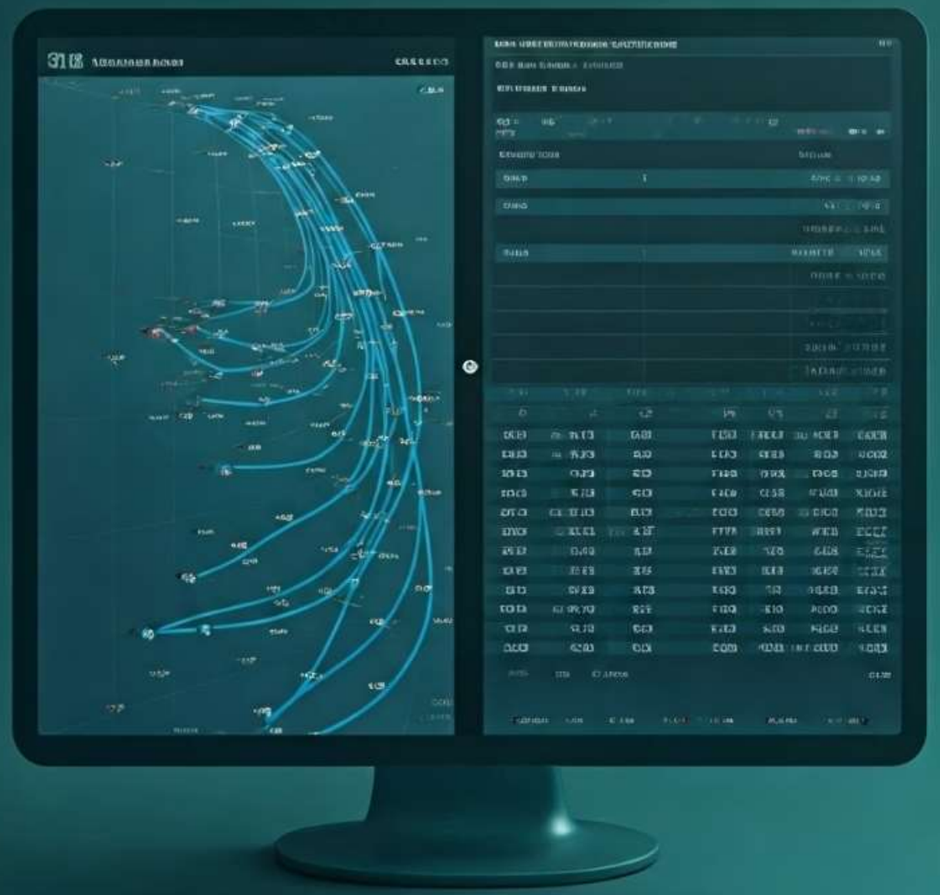
Crossing flight tables, free time slots, and visual radar displays



Dynamic Mapping

Integration with DOD/Jeppesen infrastructure for visual representation





Analysis Capabilities

Path Analysis

2-Waypoints path intersections with ROI are identified and processed

Waypoint Identification

System determines relevant waypoints for targeted B2B queries

Flight Information

Comprehensive data including ARCID, velocity, Depart/Dest. Airports, Flight-Level….

Visual Outputs

Dynamic traffic maps, Gantt charts, and

free time-slot analysis - integrating up to 4 User-Defined Regions

Key Features

Intuitive Interface

User-friendly design allows for quick setup and minimal training requirements

Precision Performance

High accuracy predictions ensure reliable airspace management

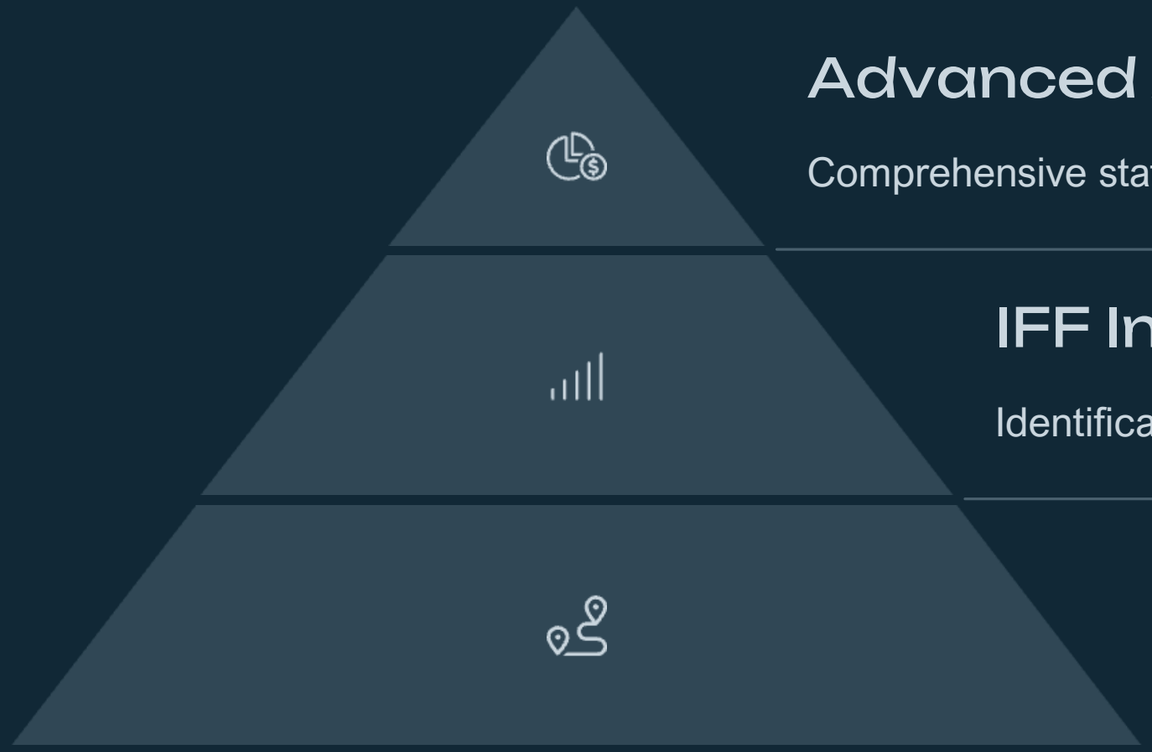
Rich Data Visualization

Multiple output formats including tables, timelines, and dynamic radar views

Temporal Flexibility

Seamlessly switch between predictive future and historical analysis modes

Future Development Roadmap



Advanced Analytics

Comprehensive statistical reporting by aircraft type and operator

IFF Integration

Identification Friend or Foe capabilities

“Direct” Path Analysis

Ad-hoc, Non-Official paths used in FP

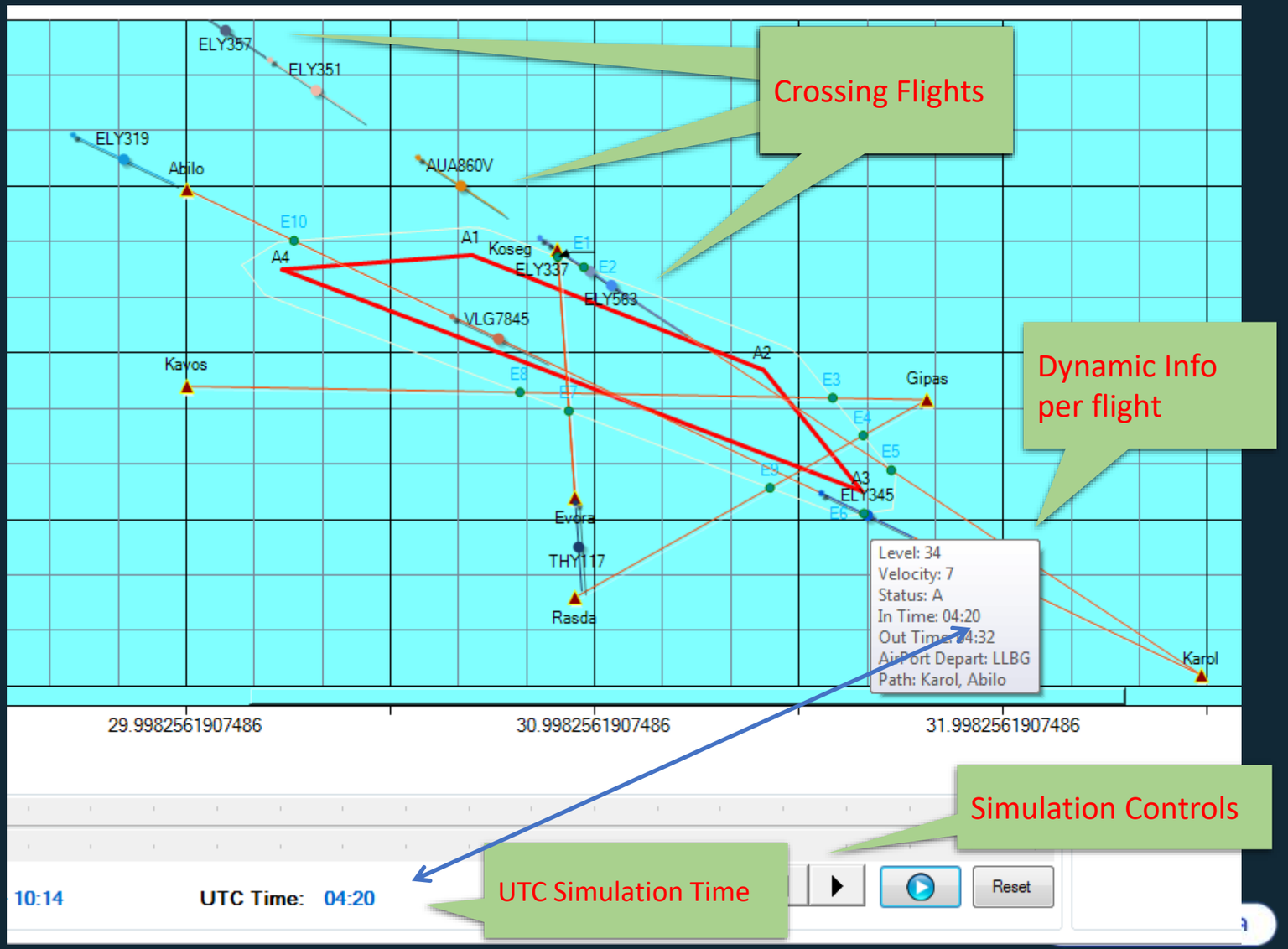
Our development pipeline focuses on expanding analytical capabilities while maintaining the system's core strengths in usability and accuracy

Screenshots

Dynamic View – “Radar”

Live Dynamic Map (Radar)

FF / REW / PLAY/ PAUSE



Crossing Flights – Data Table

ARCID

Status

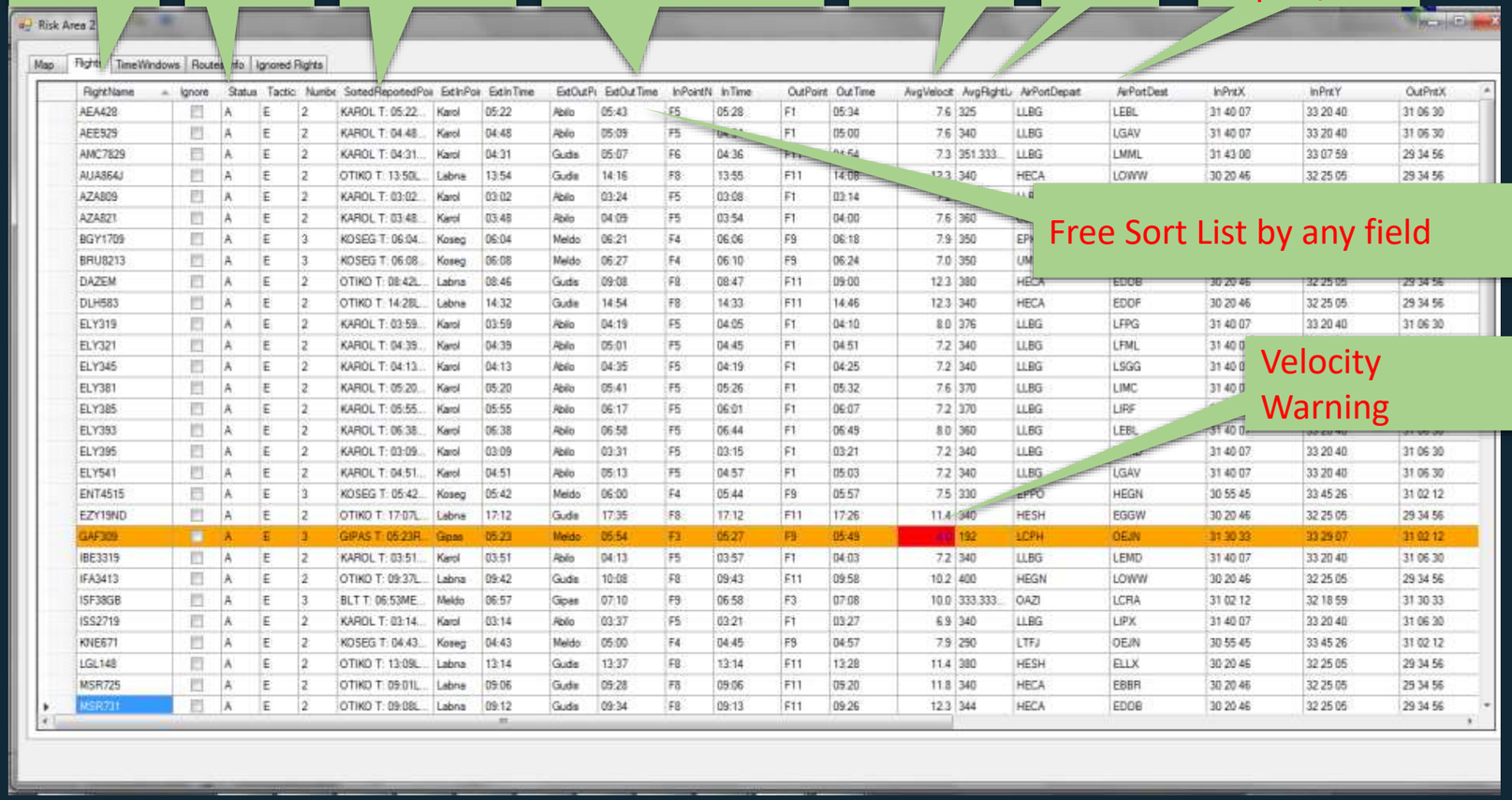
Relevant Call Point

Enter/Depart Point
Enter/Depart Time

Velocity

Flight Level

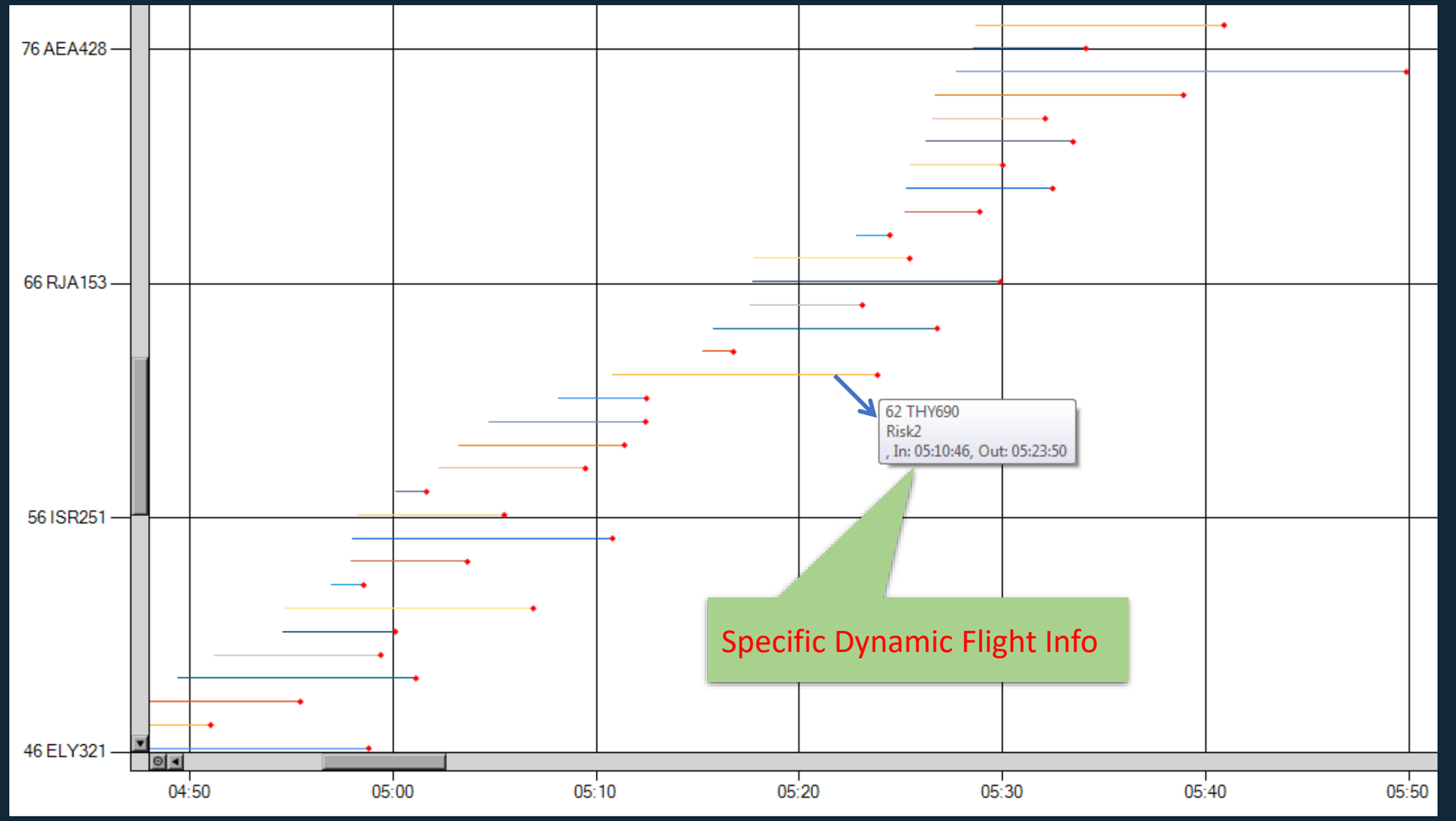
Airport Depart/Dest



Free Sort List by any field

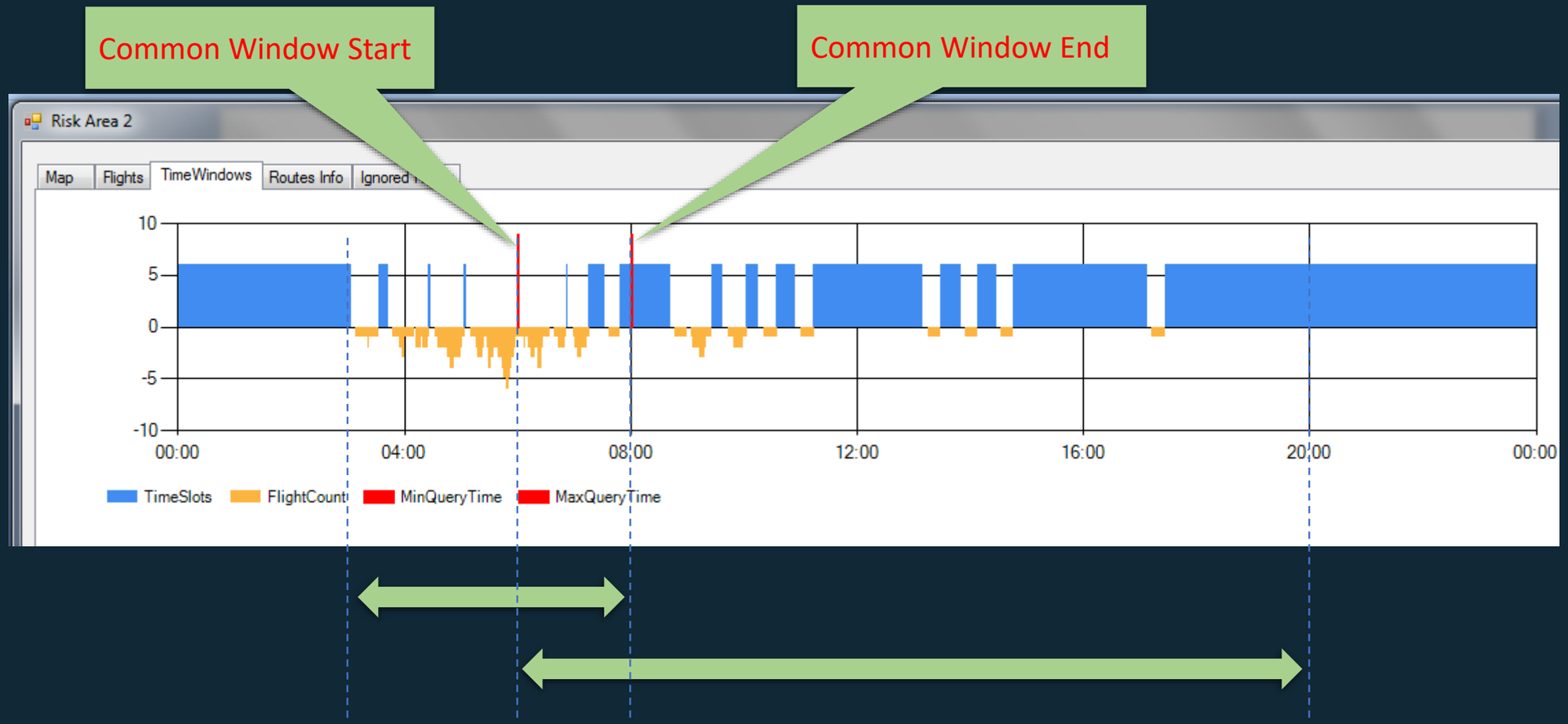
Velocity Warning

Crossing Flights – Gantt



Free Time-Slots

Integration of up to 4 User-Defined Air-Regions

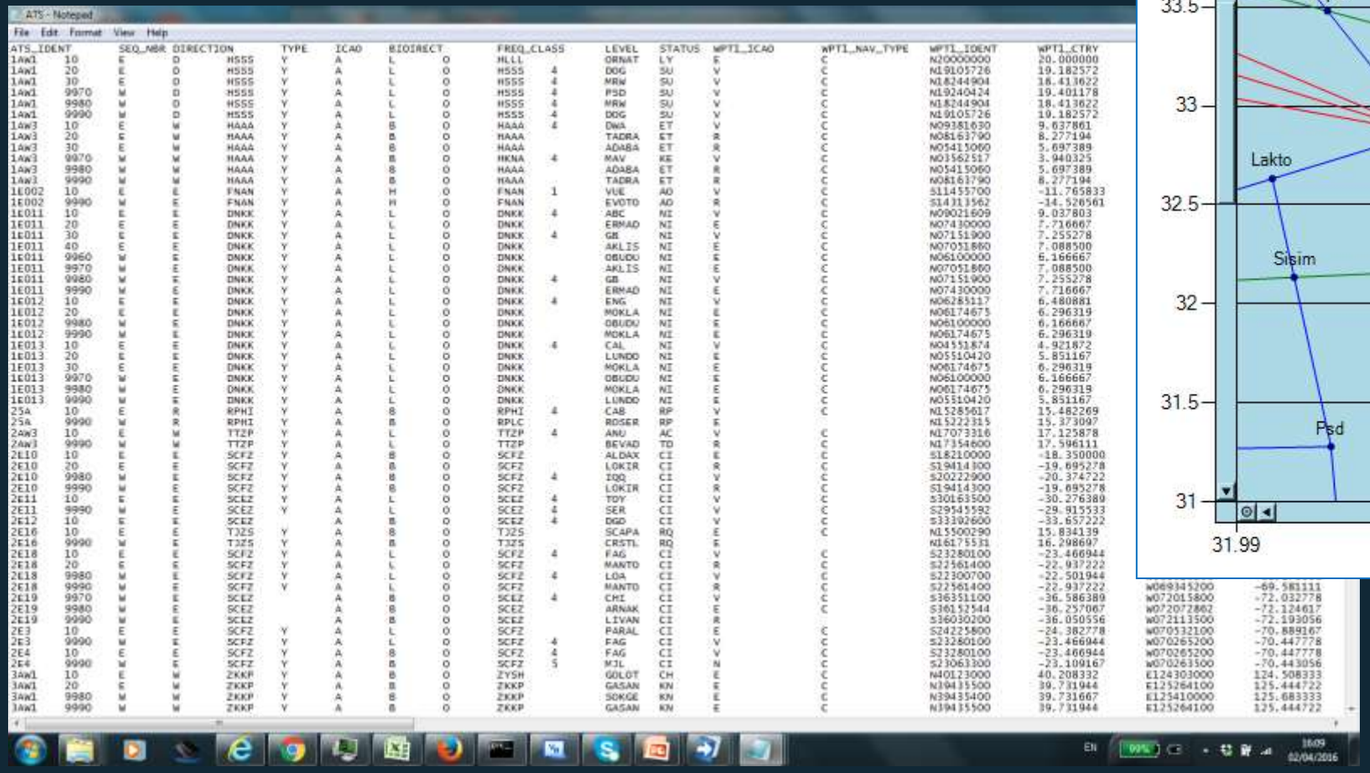


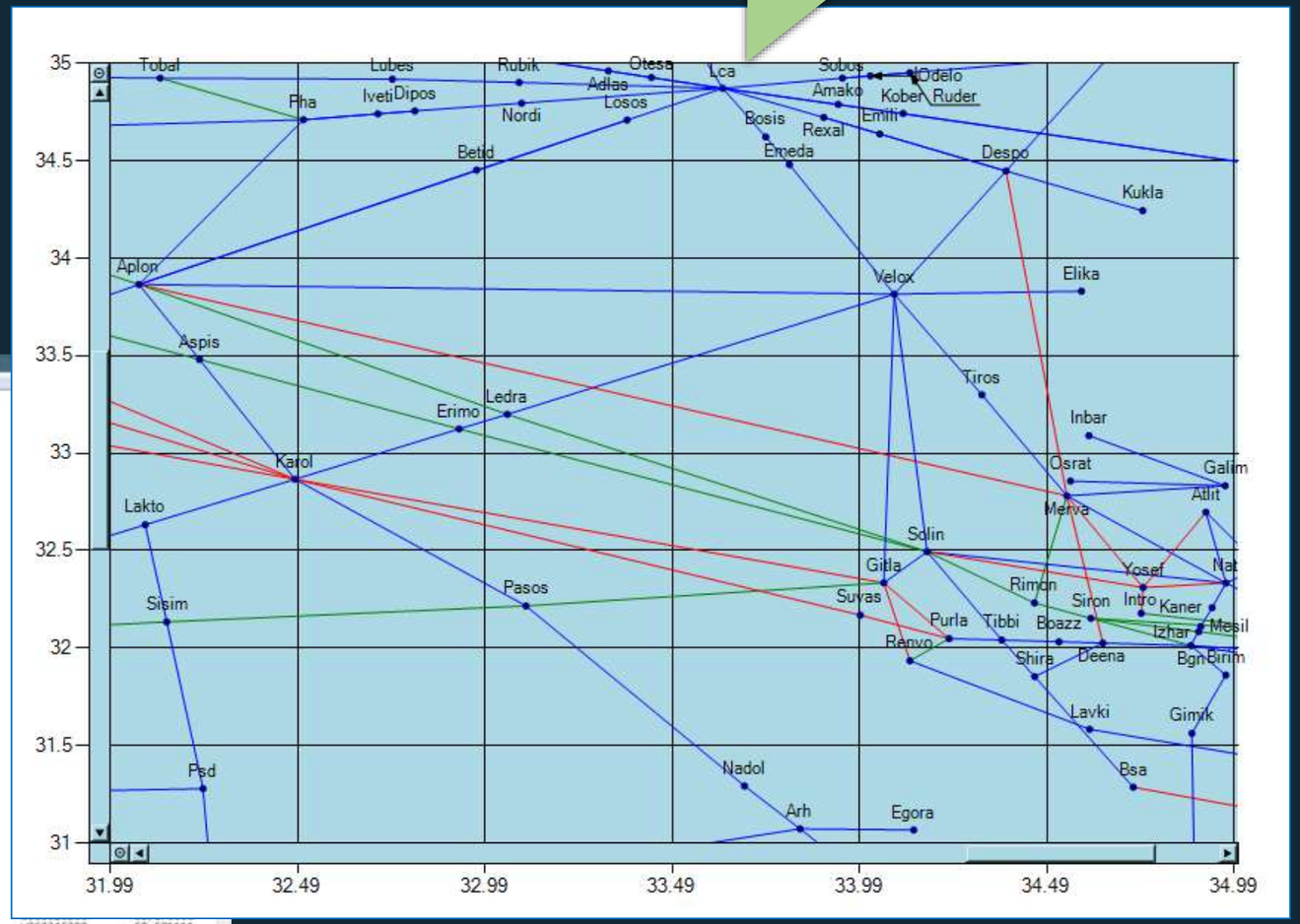
Air-Traffic Infrastructure

Red – Oneway North
Green – Oneway South
Blue – Two-Ways

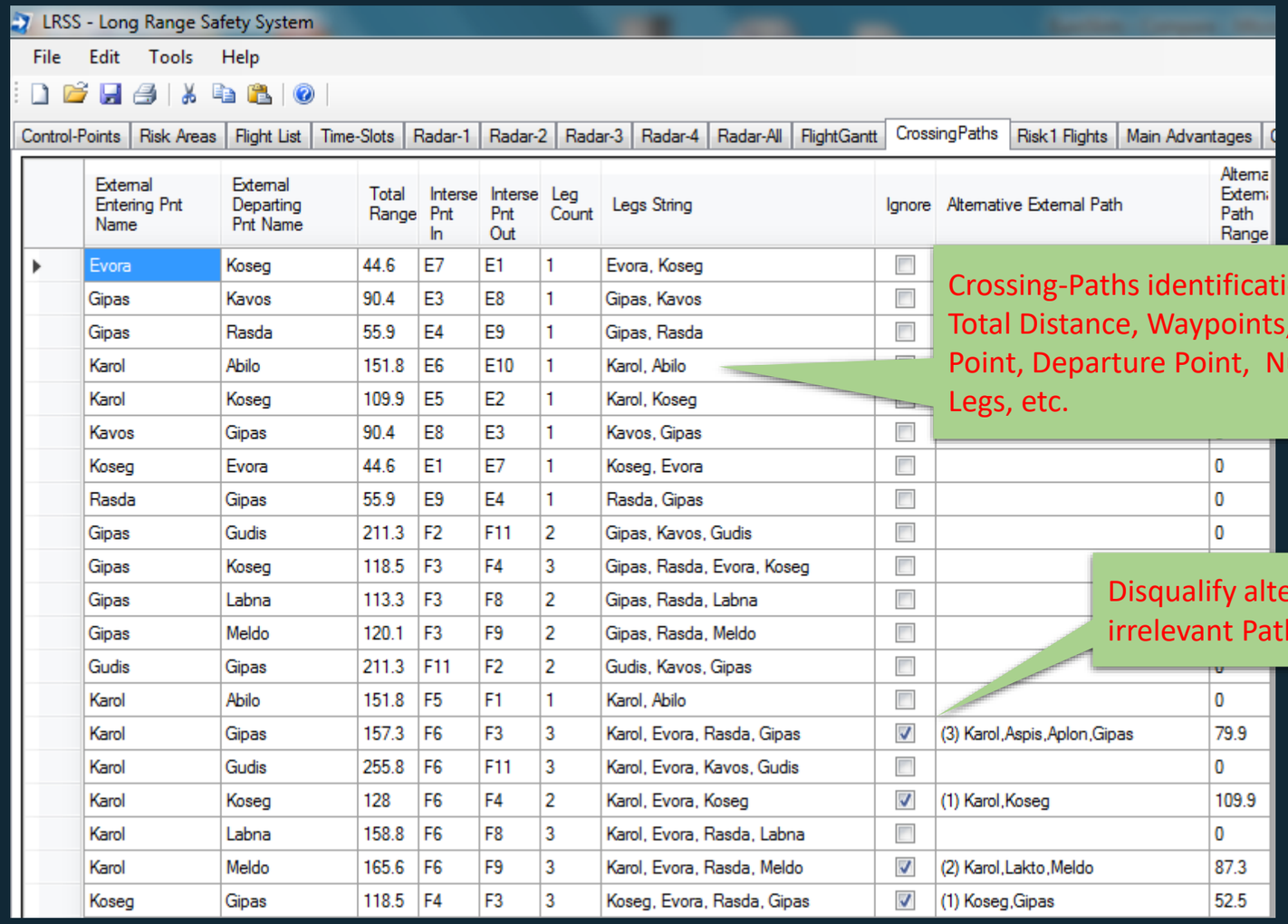
Visual Map
Two Modes:

- Load DOD / Jeppesen File
- Internal Editor: Edit Manually





Crossing Paths – Data Table



External Entering Pnt Name	External Departing Pnt Name	Total Range	Interse Pnt In	Interse Pnt Out	Leg Count	Legs String	Ignore	Alternative External Path	Alterna Extern Path Range
Evora	Koseg	44.6	E7	E1	1	Evora, Koseg	☐		
Gipas	Kavos	90.4	E3	E8	1	Gipas, Kavos	☐		
Gipas	Rasda	55.9	E4	E9	1	Gipas, Rasda	☐		
Karol	Abilo	151.8	E6	E10	1	Karol, Abilo	☐		
Karol	Koseg	109.9	E5	E2	1	Karol, Koseg	☐		
Kavos	Gipas	90.4	E8	E3	1	Kavos, Gipas	☐		
Koseg	Evora	44.6	E1	E7	1	Koseg, Evora	☐		0
Rasda	Gipas	55.9	E9	E4	1	Rasda, Gipas	☐		0
Gipas	Gudis	211.3	F2	F11	2	Gipas, Kavos, Gudis	☐		0
Gipas	Koseg	118.5	F3	F4	3	Gipas, Rasda, Evora, Koseg	☐		
Gipas	Labna	113.3	F3	F8	2	Gipas, Rasda, Labna	☐		
Gipas	Meldo	120.1	F3	F9	2	Gipas, Rasda, Meldo	☐		
Gudis	Gipas	211.3	F11	F2	2	Gudis, Kavos, Gipas	☐		
Karol	Abilo	151.8	F5	F1	1	Karol, Abilo	☐		0
Karol	Gipas	157.3	F6	F3	3	Karol, Evora, Rasda, Gipas	☑	(3) Karol,Aspis,Aplon,Gipas	79.9
Karol	Gudis	255.8	F6	F11	3	Karol, Evora, Kavos, Gudis	☐		0
Karol	Koseg	128	F6	F4	2	Karol, Evora, Koseg	☑	(1) Karol,Koseg	109.9
Karol	Labna	158.8	F6	F8	3	Karol, Evora, Rasda, Labna	☐		0
Karol	Meldo	165.6	F6	F9	3	Karol, Evora, Rasda, Meldo	☑	(2) Karol,Lakto,Meldo	87.3
Koseg	Gipas	118.5	F4	F3	3	Koseg, Evora, Rasda, Gipas	☑	(1) Koseg,Gipas	52.5

Crossing-Paths identification : Total Distance, Waypoints, Entry Point, Departure Point, Number of Legs, etc.

Disqualify alternative irrelevant Paths

Intersection Points – Data Table

External Point	Second Point	Intersect Pnt Name	Range to Enter	Intersect North	Intersect East
Koseg	Evora	E1	1.3	34 07 17	30 54 28
Koseg	Karol	E2	4.5	34 05 26	30 58 17
Gipas	Kavos	E3	11.5	33 41 54	31 34 [illegible]
Gipas	Rasda	E4	10.1	33 35 08	31 39 18
Karol	Koseg	E5	53	33 28 53	31 43 26
Karol	Abilo	E6	50.7	33 21 05	31 39 24
Evora	Koseg	E7	15.5	33 39 33	30 56 05
Kavos	Gipas	E8	40.6	33 42 55	30 48 54
Rasda	Gipas	E9	31	33 25 43	31 25 37
Abilo	Karol	E10	15.9	34 10 11	30 15 43
Abilo	Karol	F1	67.5	33 40 23	31 06 30
Gipas	Kavos	F2	39	33 42 38	31 01 43
Gipas	Rasda	F3	19.5	33 29 07	31 30 33
Koseg	Evora	F4	23.1	33 45 26	30 55 45
Karol	Abilo	F5	49.9	33 20 40	31 40 07
Karol	Evora	F6	41.7	33 07 59	31 43 00
Labna	Kumbi	F7	9.4	32 26 53	30 08 32
Labna	Rasda	F8	6.4	32 25 05	30 20 46
Meldo	Rasda	F9	17	32 18 59	31 02 12
Kumbi	Labna	F10	42.9	33 11 12	29 19 47
Gudis	Kavos	F11	98.2	33 53 00	29 34 56
Kumbi	Labna	G1	103.2	32 26 53	30 08 32
Rasda	Labna	G2	51	32 25 05	30 20 46
Rasda	Meldo	G3	47.2	32 18 59	31 02 12
Meldo	Rasda	G4	12.3	32 14 16	31 02 44
Blt	Labna	G5	54.8	32 12 28	30 24 07
Otiko	Labna	G6	48.4	32 13 21	30 10 28

Calculate:

- Distances TO/FROM RoI,
- Coordinates (N/E) of Enter/Depart points,
- Code-Name each point

Contact Drilliant Ltd.

100%

Customization

Fully tailored solutions for your specific airspace needs

30min

Prediction Window

Industry-leading forecasting capability

24/7

Technical Support

Round-the-clock assistance for critical operations

Questions? Our aviation systems specialists are ready to demonstrate how PAMS can transform your airspace management capabilities