

# UAV PLANNER™



**UAV Planner™** is an advanced planning and scheduling application that provides automated route planning and sensor tasking for unmanned aerial vehicles.

**UAV Planner™** allows operators, designers, and engineers to model their UAV systems and perform operational scheduling and analysis using COTS software.

**UAV Planner™** is based on proven satellite collection planning software from Orbit Logic.

- Automated flight/route planning
- Restricted areas and terrain constraints
- Configurable aircraft and sensors
- Multi-vehicle collaboration
- Image collection planning
- Interactive 3D map visualization and animation
- Order management and fulfillment tracking
- In-flight re-tasking

## UAV Planner™ Ops Concept Overview

- Configure aircraft, sensors, and airstrips
- Define imaging orders
- Define sorties
- Plan sorties using algorithms or manual planning
- Transmit sortie plans for execution
- Replan sortie during flight as needed

## Key Features

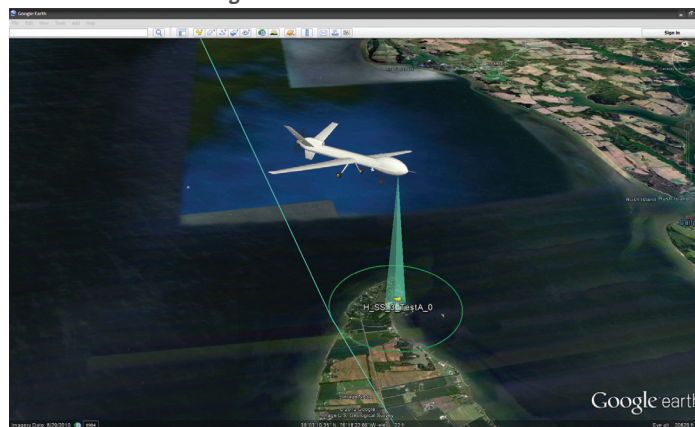
### Configurable aircraft and sensors

- Add and modify aircraft and flight models
- Define new sensor types
- Specify sensor packages on each aircraft

### Multi-vehicle collaboration

- Integrated order database
- Inter-sortie collaborative order fulfillment tracking
- Fleet view – multi-aircraft / multi-sortie animation

### 3-D animation in Google Earth



### 3-D route plan view in STK





## Automated Planning

- **UAV Planner™** will automatically plan the flight path and collection schedule for an aircraft sortie within aircraft capabilities to maximize the value of collected imagery
- Multiple algorithms compete to optimize each sortie plan

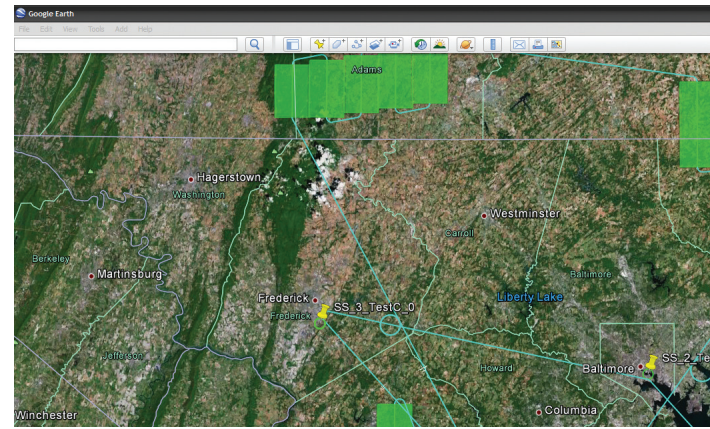
## Manual Planning and Analysis

- Prioritize or defer targets to influence algorithm solutions
- Manually create or edit plans
- Default parameters provided for each image
- Constraint models notify the operator when a system or mission constraint has been violated
- Automatic plan adjustments fix violations

## Sortie Flight and Scan Segments

Sortie Information		Sortie ID		Sortie ID		Sortie Start		Sortie End	
Altitude	LRARM_PlanBRTAG	Sortie ID	LRARM_PlanBRTAG	Sortie Start	2012-08-19T08:00:00.000Z	Sortie End	2012-08-19T14:00:00.000Z		
Build Name	Version	Complete	Scans	7					
Setup Scans									
Path/Folder: Transact 4750551									
Index	ID	Y	X	Y	X	Y	X	Y	X
1	PS_0	2012-08-19T08:00:00.000Z	202204.345	10000	0	0	0	0	0
2	PS_1	2012-08-19T08:00:00.000Z	202204.345	10000	0	0	0	0	0
3	PS_1	2012-08-19T08:00:00.000Z	202204.345	10000	0	0	0	0	0
4	PS_2	2012-08-19T08:00:00.000Z	202204.345	10000	0	0	0	0	0
5	PS_2	2012-08-19T08:00:00.000Z	202204.345	10000	0	0	0	0	0
6	PS_2	2012-08-19T08:00:00.000Z	202204.345	10000	0	0	0	0	0
7	PS_2	2012-08-19T08:00:00.000Z	202204.345	10000	0	0	0	0	0
8	PS_2	2012-08-19T08:00:00.000Z	202204.345	10000	0	0	0	0	0
9	PS_2	2012-08-19T08:00:00.000Z	202204.345	10000	0	0	0	0	0
10	PS_2	2012-08-19T08:00:00.000Z	202204.345	10000	0	0	0	0	0
11	PS_2	2012-08-19T08:00:00.000Z	202204.345	10000	0	0	0	0	0
12	PS_2	2012-08-19T08:00:00.000Z	202204.345	10000	0	0	0	0	0
13	PS_2	2012-08-19T08:00:00.000Z	202204.345	10000	0	0	0	0	0
14	PS_2	2012-08-19T08:00:00.000Z	202204.345	10000	0	0	0	0	0

## Fleet View in Google Earth



## Plug-in Aircraft Models

- Auto-defined flight path during imaging events based on sortie and order constraints
- Auto-generate flight segments
- Configurable aircraft performance parameters

## In-Flight Re-Tasking

- Re-plan starts from current aircraft position
- Algorithms optimize plan using the dynamically changing order database and restricted areas
- Maps display new and original plans

Replace manual planning with Orbit Logic's **UAV Planner™** to create and update route plans faster and with fewer resources. Improve collaboration with optimized multi-vehicle flight plans.

