STK SCHEDULER ™

Don't just find any solution, find an optimized solution. Replace manual planning with Orbit Logic's **STK Scheduler™** to create and update plans faster and with fewer resources. **STK Scheduler™** provides flexible resource modeling, configurable constraint implementation, and task definition for any type of space system scheduling challenge. Complex satellite system scheduling problems can be defined in minutes and solved in seconds using **STK Scheduler™**.

Orbit Logic partners with AGI and Optwise Corporation to present **STK Scheduler™**. AGI contributes the core flight dynamics analysis software and the visualization environment. Customized algorithms from Optwise Corporation Power **STK Scheduler™** for fast solutions to complex scheduling challenges.

Key Features

- Schedule optimization and deconfliction
- Manual and automated planning
- Seamless interface with STK
- Robust task specification and flexible resource definition
- Multi-satellite / constellation planning
- Web-based schedule dissemination

Orbit Logic's unique approach to task and resource definition along with the powerful algorithm implementation in **STK Scheduler™** finds better solutions faster with easier configuration than traditional rule-based planning systems.
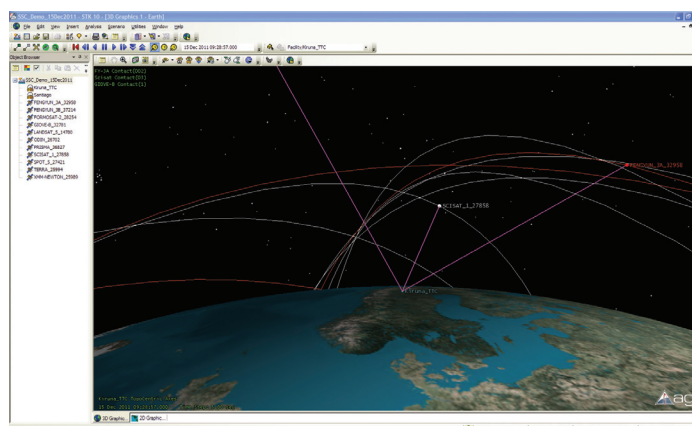
Gantt View
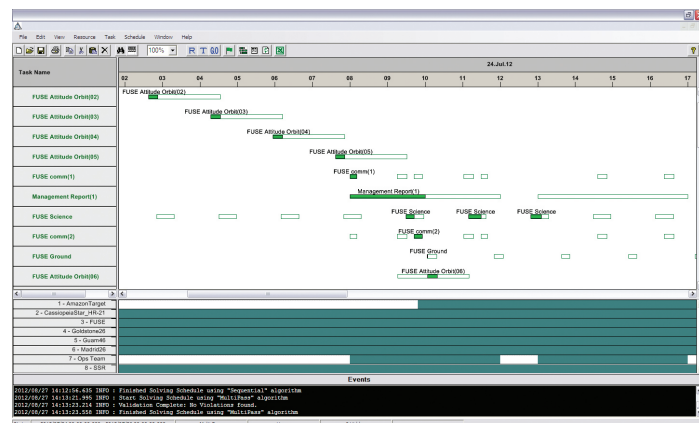
STK Scheduler™ Ops Concept Overview

- User defines resources and attributes
- User defines tasks to schedule and constraints
- Software finds de-conflicted schedule solutions
- Software provides validation of manual changes
- View schedule solution as Gantt or in STK

3D Visualization of STK Scheduler Plans

Schedule Optimization and Deconfliction

- Automated schedule deconfliction
- Select from multiple standard algorithms
- Plug-in custom algorithms
- Algorithm-builder tool supports any mission-specific scheduling rule-set
- Configurable figure of merit allows tuning of scheduling goals

Manual and Automated Planning

- Assign tasks manually or adjust algorithm-generated schedule solutions
- Influence algorithms with lock and defer controls
- Run with or without the GUI
- Command file import and execution
- Comprehensive API for integration with external ground system elements
- Drag-and-drop Gantt interface for manual schedule adjustments

Seamless Interface with STK

- Resource associations with STK objects
- Apply any STK computation as a scheduling constraint for any task or resource
- Animate schedule solutions with STK 3D visualization

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Task Definition with Logical Resource Constraints
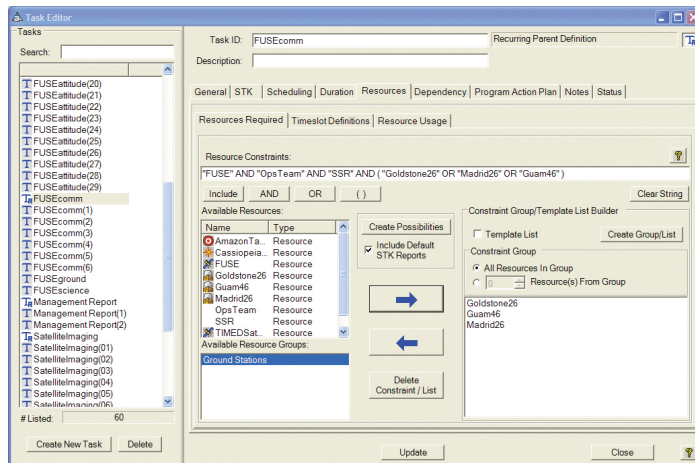
Task and resource attributes in **STK Scheduler™** allow **any** kind of task or resource to be defined at **any** level of detail to meet **any** planning requirements.

Robust task specification

- Recurring or single-instance tasks
- Fixed or variable task durations
- Configurable task priorities
- Predecessors and other task dependencies
- Task-specific resource requirements
- Configurable resource capacity usage per task
- No limit on the number or type of tasks

Flexible resource definition

- Setup and breakdown times
- Resource availability and blackout schedules
- Associate resources with STK objects
- Configurable resource capacity definitions
- No limit on the number or type of resources

## Automation and Integration

STK Scheduler™ has a comprehensive API for full automation and integration with 3rd party software

- STK Connect command format
- Direct COM and TCP/IP interfaces
- Programmatic option for all GUI functions
- File import and export
- Run **STK Scheduler™** in the background as a service

Web-based Schedule dissemination

- Authorized users view schedules via web
- Review task attributes and execution schedules
- Analyze resource allocations and assignments
- Generate task and resource reports

STK Scheduler Online
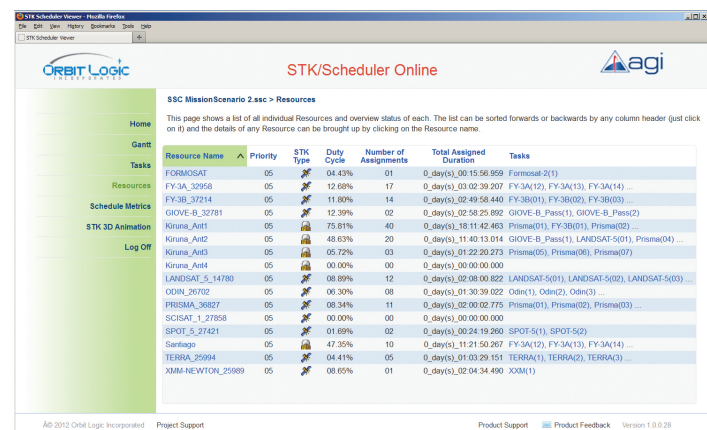
All Mission Types and Phases

- LEO, GEO, interplanetary, lunar, asteroids
- Satellites, ground stations, sensors, antennas, payloads, operators, equipment racks, etc.
- Spacecraft manufacturers, mission planners, satellite and network operators, long-range forecasters
- Feasibility, near real-time, mid-range, long-range
- Modeling and analysis, integration and test, pre-launch, launch and early-orbit, on-orbit operations