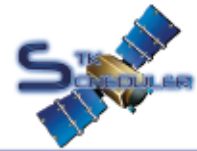


STK Scheduler™



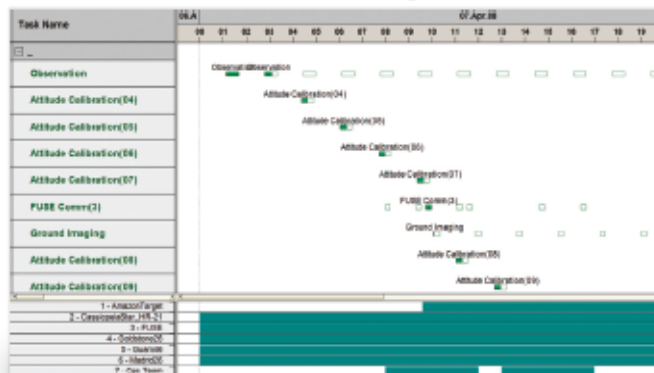
The **STK/Scheduler™** COTS software product from Orbit Logic is the most widely-applied, flight-proven COTS scheduling software in the space industry today. Over 120 licenses have been deployed since the initial product release in 2002, making STK/Scheduler the industry-standard. STK/Scheduler™ is a sophisticated planning and scheduling system that allows aerospace professionals to model their systems and perform operational scheduling and analysis – right out of the box. 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 within a matter of minutes and solved in a matter of seconds using this software.

Orbit Logic partnered with AGI and Optwise Corporation to develop STK/Scheduler. AGI contributed the core flight dynamics analysis software and the visualization environment. Customized algorithms from Optwise Corporation power STK/Scheduler and include a neural-inspired algorithms for faster solutions to complex scheduling challenges.

Flexible Task and Resource Definition

Tasks may be defined as recurring or non-recurring with specific scheduling windows and fixed or variable durations and requiring any logical combination of defined resources and related STK-report-driven time constraints. Resources are defined with global availability (or blackout) times including periodic options or by STK report-driven times. In addition, tasks can deplete or replenish resource capacity by a fixed amount or at a user-defined rate. Resources can be associated with STK objects for the automatic application of appropriate access constraints to tasks using those resources. There is no limit to the number of resources or tasks that can be supported by STK/Scheduler.

STK/Scheduler's Gantt View Scheduling GUI:



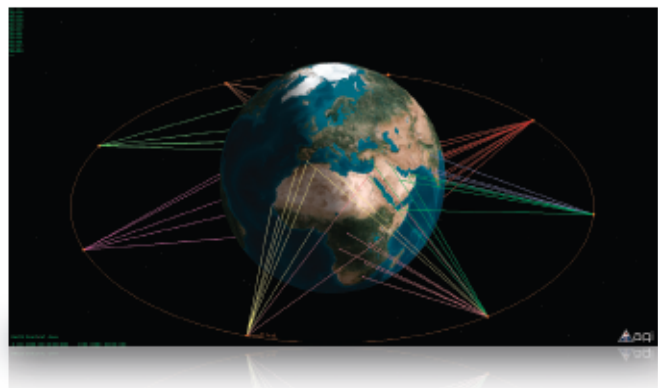
Schedule Solution Optimization

Don't just find any solution, find an optimized solution. Most heuristic engines stop when they find the first working solution. STK/Scheduler™ users may select from multiple scheduling algorithms or plug in their own algorithms using the API. STK/Scheduler algorithm options include a neural network-based algorithm that finds better solutions to large highly constrained problems in a shorter amount of time than traditional heuristic algorithms. The STK/Scheduler algorithms generate conflict-free and optimized schedule solutions, allowing system planners to maximize the value of limited resources. The user can even modify the constants in the figure of merit (FOM) to tailor the solution scoring mechanism for a user-specific definition of "optimum".

Apply STK Access Calculations and Reports

Fully integrated with STK, STK/Scheduler™ facilitates the application of STK report time constraints to any task and/or resource discrete window definition throughout the schedule definition process. Non-STK time window text files can also be applied if you have additional or alternative sources of access or event data. Report-driven constraints are defined as the schedule is built to show the user related task windows and resource availability times. In addition, a full set of task and resource reports, graphs, conflict analysis tools, and manual change validity check tools are included with the STK/Scheduler™ module.

Constellation Management:

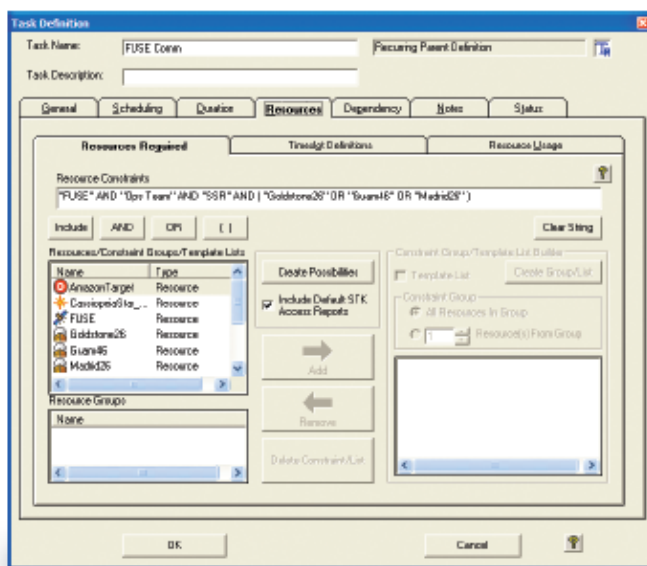


Integrated Graphical Interface

A single customizable window provides task and resource attribute data, task Gantt charting and resource histograms. Filter, sort, group and resize Gantt and table views to get the window arrangement that best supports your planning needs.

Resource and task editing GUIs are just a right-click away from any object in the window. The user is also provided with many shortcuts to help speed the schedule definition process for simple problems, and powerful flexibility to define even the most complex scheduling scenarios. Form-specific HTML help is provided for STK/Scheduler; simply click on the "?" on any form to access information about the active form and any associated fields. Multiple schedules can be displayed at the same time, objects may be cut and pasted between schedules, and two schedule files can even be merged into a single combined schedule.

Task Definition GUI:



Application Programming Interface

STK/Scheduler™ comes with a comprehensive API that allows the software to be fully automated and integrated with 3rd party software products, including user-provided scheduling algorithms. The API was designed to allow any GUI function to be performed through the API, such as: Define and redefine tasks and resources and scheduling options, request task and resource attributes, generate a new schedule solution, or request a schedule report. STK/Scheduler™ API commands have been designed to follow the standard STK/Connect command format, and can be sent to STK/Scheduler through the STK/Connect socket interface, or directly to the STK/Scheduler™ application through a COM interface. STK/Scheduler™ can even import and execute a text file of valid API commands. Using this API, customers can integrate and automate STK/Scheduler planning, and even run the application as a service in the background with no GUI.

Schedule Animation

Once you have defined your problem and generated a schedule solution, STK/Scheduler™ generates an STK scenario within STK's visualization environment, providing unparalleled situational awareness to planners and operators.

Investing in the Orbit Logic STK/Scheduler Solution provides the following benefits:

- Proven Off-the-shelf scheduling solution
- Get up and running immediately
- At least an order of magnitude cheaper than in-house developed custom solutions
- Highly flexible through user-definition of complex tasks and resource usage: Recurring tasks, Consumable resources, Setup times, Predecessors
- Fully integrated with STK
- Millisecond scheduling fidelity
- Option to run STK/Scheduler as a Windows Service
- Apply any STK computation as a scheduling constraint
- 3D animation of schedule solutions
- User-friendly GUIs with extensive form-specific HTML Help
- Multiple scheduling algorithms to choose from
- User-configurable Figure-Of-Merit for solution scoring/selection

Additional information about STK/Scheduler™ is located at www.orbitlogic.com/products.

