Software is an integral part of any satellite system. From ground operations software to terminal control and software-defined radio to on-orbit flight software, the Space Dynamics Laboratory (SDL) provides elegant and open solutions for the DoD, NASA, NSF, and other US Government customers.

Built on modern software technologies, SDL’s software is GMSEC-compliant and free for Government use. SDL’s software proficiencies include:

• web development
• modeling & simulation
• signal & data processing
• cloud computing environments

• machine learning & artificial intelligence
• algorithm development
• satellite flight software
• networking & dissemination software

SDL’s satellite command and control software includes a suite of operations tools and individual applications that run within a common web framework. The software includes a satellite planner, autonomous operations, data management and processing, alert system, and facility monitor. The extensible design enables users to use the software development kit to write custom plugins for mission-specific needs.

 SDL provides satellite mission operations in direct support of NASA, NSF, and the DoD. Operation functions include pre-launch integration, mission rehearsals, daily contact planning, real-time commanding, experiment plan execution, mission data processing, state-of-health monitoring, and data dissemination. SDL leverages our capabilities in designing and building systems to optimize mission operations.
SDL has been delivering products and services to enable smarter decisions through the collection and analysis of data for science and military applications for over six decades. Customers depend on our expertise, extensive experience, and end-to-end satellite software capabilities and services to achieve mission success. SDL's software for space segment, ground systems, and satellite operations is open and free for Government use.