

TACTICAL DATA GROUND SYSTEMS

End-to-End Data Processing Solutions

A cohesive ground data processing system is imperative for effective data flow between the air and ground. The Space Dynamics Laboratory (SDL) develops and supports robust ground data processing systems, solving technical challenges early on through comprehensive design, testing, and integration.

SDL has decades of experience developing and integrating solutions for near real-time data ingest, exploitation, and distribution for all branches of the US military. With SDL's hardware systems, users can receive, synchronize, route, and simulate data from various sensor sources, while data exploitation software systems enable rapid data processing, screening, and distribution through an easy-to-use interface. These highly modular systems are scalable for multiple platforms and algorithms to meet the customer's unique needs.

SDL's ground data processing team is experienced in compatibility testing and integration across ground networks. The team also assists with system accreditation and administration—including security, maintenance, and worldwide mission support—offering customers complete system implementation from a single expert partner.

FEATURES

End-to-End Capabilities

- Full system development: from creative design and expert fielding to around-the-clock operations support

Data Receiver Hardware Systems

- Multiple sensor interfaces
- Customized links to multiple platforms
- Simulation functionality for training exercises
- Easy maintenance and troubleshooting

Data Processing Software Systems

- Near real-time ingest from multi-INT data sources
- Scalable framework
- Superior data conditioning
- Third-party algorithm integration, including machine learning
- Near real-time generation of analyst-ready products

Data Distribution

- Information distribution to multiple agencies
- Rapid data transfer across wide-area, high-latency networks



WHY CHOOSE SDL?

As a nonprofit University Affiliated Research Center (UARC) designated by the US Department of Defense, SDL is in a unique position—free from real or perceived conflicts of interest—to provide independent assessment and innovative solutions. SDL has assisted the US and its allies in solving technical challenges for over 60 years.

GROUND SYSTEM DEVELOPMENT LIFECYCLE

Identify the Capability Gap

Pinpoint customer needs and determine potential solutions.



Design & Develop Hardware/Software Solutions

Use established processes to produce hardware and software solutions that meet or exceed capability requirements.



Conduct Integration Testing

Perform weekly capability testing, concluding with a formal factory acceptance test.



Receive Accreditation

Ensure compliance with the latest DoD security standards.



Conduct Fielding & Integration

Travel to CONUS and OCONUS customer sites to field, integrate, and test the capability.



Provide Post-Fielding Support

Furnish worldwide, around-the-clock operational and maintenance support.

