International Space Domain Awareness Infrastructure Platform

MITRE provides platform-as-a-service (PaaS), infrastructure-as-a-service (IaaS), and software-as-a-service (SaaS) capabilities to enable research to address the exponentially growing data management challenge for international space domain awareness.
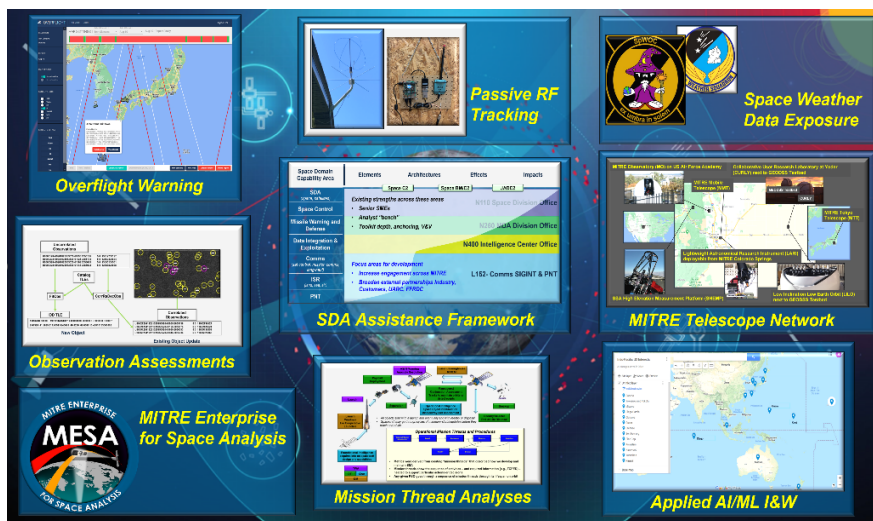
MITRE Enterprise for Space Analysis

MITRE supports international research and experimentation efforts across the breadth of space domain awareness (SDA) and space protection mission areas. The primary focus of MITRE's technical work is on data management and the integration of U.S. and international systems supporting the execution of a wide variety of space missions. MITRE has developed reusable capabilities to address SDA challenges, such as the MITRE Telescope Network, MITRE's Global Networked Experimentation, Research, and Virtualization Environment (NERVE), and MITRE's SDA Modeling and Simulation Consortium. We also explore applied artificial intelligence and machine learning to help navigate and analyze the vast amount of data being produced, with the goal of rapidly and accurately assessing and understanding all space events.

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SDAI Research and Execution Platform

MITRE has established a collaborative SDA infrastructure (SDAI) where users can share ideas, expose data, develop code, and explore concepts of mutual interest. MITRE's SDAI instantiation represents a classic PaaS implementation: a large-scale sandbox providing a PaaS and SaaS cooperative partnering environment.

MITRE has identified external sources to pull and store data within the PaaS environment. Services and applications execute using that data and produce analysis outputs representing the SaaS component.

MITRE's SDAI exploits a wide variety of experimental, academic, and operational sources. The technology resides within the MITRE Global NERVE, allowing users to execute quickly and easily in sponsor environments. SDAI provides a means to measure the success of international space collaboration, identify areas for improvement, and ensure partner space-related impactful outcomes. SDAI experimentation is geared toward open-source, shareable, unclassified information to maximize accessibility and user interaction.

As needs dictate and international partners' capabilities mature, MITRE helps integrate sovereign information sources necessary to provide the most robust and resilient SDA and space protection mission services available.
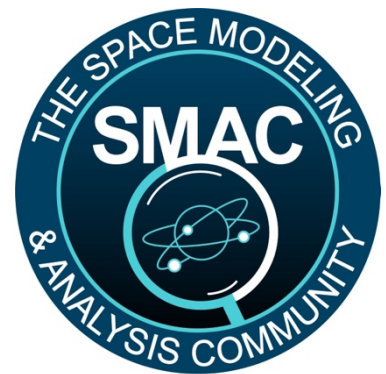
For information about MITRE's space domain awareness expertise and capabilities, contact isee@mitre.org. For more information about MITRE, visit www.mitre.org.

MITRE Telescope Network

MITRE Global NERVE

MITRE Enterprise for Space Analysis

MITRE is a not-for-profit organization working in the public interest. Our mission-driven teams are dedicated to solving problems for a safer world. Through our public-private partnerships and federally funded R&D centers, we work across government and in partnership with industry to tackle challenges to the safety, stability, and well-being of our nation.

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