CYBER ASSASSIN

SPA — SYSTEMS PLANNING & ANALYSIS

END-TO-END MISSION MODELING

VISUALIZE AND ANALYZE SPECIFIC KILL CHAINS

CYBER-FOCUSED

Incorporates cyber at the foundation of system design, ensuring cyber is not an afterthought or check box for the broader system design community.

- AWACS FID
- AWACS NETWORK

LINKS DIGITAL TO PHYSICAL

Models physical behaviors (e.g., flight paths), basic orbital mechanics, networks, and the cyber domain into a single, integrated environment for combined analytical insights.

- Kill Chain Analysis
- Joint All-domain Analysis
- Force Networks & Achitecture
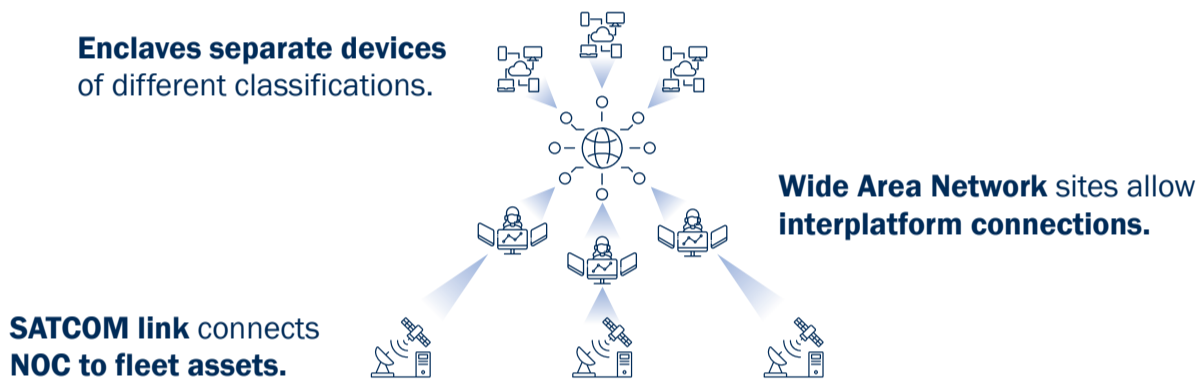- Situational Awareness

EFFICIENT

Readily expands in both breadth and depth based on the analytical question at hand. Streamlines the SoSE process, reducing error and cost.

- Legacy Data
- Data Models
- Views

INTEROPERABLE

ENGINEERING, SYSTEMS, AND NETWORK SOURCES → MISSION AND OPERATIONS → SIMULATION DATA → CYBER VULNERABILITY, THREAT, SECURITY and CONTROLS

CYBER ASSASSIN EXPLICITLY MODELS THE ENTIRE NETWORK FOR FULL CYBER-THREAT IMPACT

Enclaves separate devices of different classifications.

Wide Area Network sites allow **interplatform connections.**

SATCOM link connects **NOC to fleet assets.**

TOOL DESCRIPTION

Cyber Assassin (CA) enables analysts to visualize and analyze specific kill chains, facilitating in-depth study of vulnerability exploitation and mission impacts for Blue or Red alliances. CA contains representations of key Navy and Air Force sensors, communications, weapons, processing, exploitation, data fusion, command and control, and battle management systems. CA also models platform architectures down to the Functional Interface Diagram level.

USE CASE

As a discrete event simulation tool, CA uses Artificial Intelligence-based techniques to analyze real-world military operations. With CA's ability to represent intricate ship, aircraft, and land sites down to the system/hardware level, analysts can identify the equipment in a naval fleet that provides differentiation when completing a traditional warfare or cyber mission.

CA provides end-to-end mission modeling to quantify real-life and pertinent military scenarios.

CLIENTS

Cyber Assassin is used in a wide range of DoD programs and C4ISR-focused naval warfighting analysis. An independent third-party has evaluated and rated CA as the #1 cyber analysis tool.
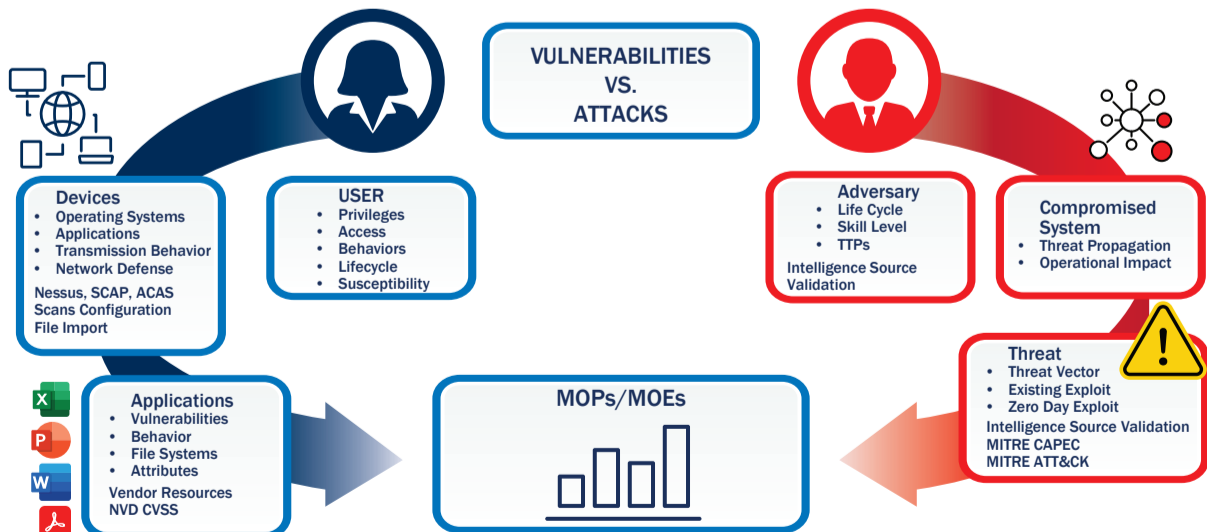
OWNERSHIP/IP PROTECTION

Cyber Assassin software is Export Controlled Data, restricted by U.S. Export Control Act (22U.S.C.2778). Systems Planning & Analysis proprietary and SBIR Data Rights Restrictions apply.

CLASSIFICATION

The software is unclassified, but overall classification depends on the input data sources.

Cyber Assassin models simultaneous efforts of users and attackers in the network to evaluate performance.

VULNERABILITIES VS. ATTACKS

Devices
- Operating Systems
- Applications
- Transmission Behavior
- Network Defense

Nessus, SCAP, ACAS Scans Configuration File Import

USER
- Privileges
- Access
- Behaviors
- Lifecycle
- Susceptibility

Adversary
- Life Cycle
- Skill Level
- TTPs

Intelligence Source Validation

Compromised System
- Threat Propagation
- Operational Impact

Applications
- Vulnerabilities
- Behavior
- File Systems
- Attributes

Vendor Resources NVD CVSS

MOPs/MOEs

Threat
- Threat Vector
- Existing Exploit
- Zero Day Exploit

Intelligence Source Validation MITRE CAPEC MITRE ATT&CK

DECISION SUPPORT FOR NATIONAL SECURITY

Systems Planning & Analysis, a leading global provider of advisory services supporting national security objectives, provides deep domain expertise, problem-solving capabilities, and a results-driven approach to program lifecycles, reaching a wide spectrum of market areas.

With over 50 years of experience, SPA successfully manages large, integrated professional service projects in engineering, analytics, modeling and simulation, and financial and scientific services for clients worldwide.

POC: Marconi (Coni) Ratonel at 619.727.4020, or *mratonel@spa.com*.

2001 N Beauregard Street, Alexandria, VA 22311
703.931.3500

To learn more about SPA, please visit spa.com and connect with us on **LinkedIn, YouTube,** and **Facebook.**

www.spa.com

OBJECTIVE | RESPONSIVE | TRUSTED