

Intelligent Automation, Inc.

Cyber Security



Intelligent Automation, Inc. (IAI) provides solutions that leverage the latest cryptographic technologies and extensive hands-on experience to protect the network, the information, and the overall system.

Wireless Network Security

IAI develops solutions to protect a broad range wireless and mobile communication networks, including Airborne, Tactical Ad hoc, Space, Cognitive Radio, and Sensor networks. Our areas of expertise include secure content distribution, security mechanisms for admission control, network control, network access control, network access maintenance, and secure routing.

Cyber Attack Analysis and Mitigation

IAI leverages in-depth knowledge, advanced technology and extensive hands-on experience to provide cyber-attack analysis and mitigation strategies and solutions. IAI conducts research and development on techniques such as Moving Target Defense and

virtualization, to defend enterprise and cloud-based networks. IAI improves the performance of cyber defenders through enhanced situational awareness solutions. IAI also develops trust-based solutions to ensure the security of embedded systems.

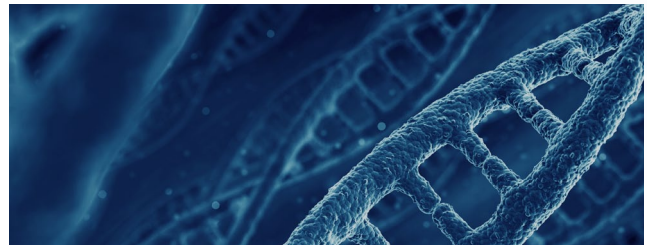
Cyber Security Testing and Training

IAI focuses on state-of-the-art cyber security testing and training to support cyber operations. IAI develops tools to record, assess, and visualize the performance of cyber security analysts and techniques. IAI maintains a large enterprise network testbed for cyber-attack emulation and defense strategy evaluation. This testbed can be used to reproduce a variety of scenarios for evaluating network protocols and security techniques.



NIRVANA

IAI's Network Intrusion Risk and Vulnerability Analysis or NIRVANA, is a network security management tool that provides comprehensive security analysis in enterprise networks. NIRVANA integrates attack graphs and application/mission dependency graphs to provide an integrated network security management tool.



Self-shielding Dynamic Network Architecture (SDNA)

SDNA, developed by IAI, dynamically alters network appearance and behavior to stop and contain cyber attacks while remaining transparent to the user. SDNA protects against successful network attacks including 0-day vulnerabilities. SDNA also limits spread if the initial attack succeeds. Finally, SDNA provides transparency to the user, application, and operating system.



Hidden Node multi-level Detection and Localization (HINDL) System

The HINDL system, developed by IAI, finds hidden nodes in Cognitive Radio networks (CRNs). CRNs are very flexible and reconfigure rapidly compared to traditional wireless networks, making it easier for a node to "hide" in the CRN. HINDL takes various RF characteristics as inputs and detects, identifies and localizes hidden nodes using both anomaly detection and signature-based methods.



HERMES

IAI's HERMES is an automated cyber security assessment and visualization toolkit. Key features include live test event collection, storage, and processing, live visualization, automated test setup, recording and replay of test events, and assisted test script generation.



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