Integrated Defense Solutions, Inc
Is Proud to present

ARIES

Automated
"State of the Art"
Mobile Calibration Capability

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ARIES, A Fully Automated "State of the Art" Calibration Capability

Background: Support and Test Equipment are essential to the maintenance and proper operation of complex systems. They are used to measure, align, and validate proper performance of the prime systems. These prime systems span the gamut of military systems, e.g. radar, missile systems, ground systems; to critical and essential non-military systems, e.g. power plants, satellite launch facilities, refineries, and Homeland Security. However, the support and test equipment itself must be verified and calibrated on a regular schedule; and must be repaired and then verified and calibrated post-repair. Without verified and calibrated support and test equipment, the critical prime systems can be, and often are, sidelined until qualified support and test equipment can be obtained.

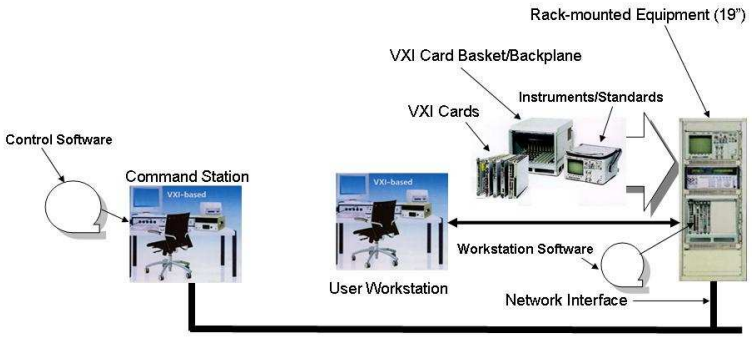
This process has traditionally relied on highly skilled calibration technicians to perform the precision maintenance and qualification of the support and test equipment. There are thousands of different types and models. The process has been labor intensive. Additionally, many support and test equipment are highly sensitive to shock and vibration and the cost to ship them to and from a facility- to preclude damage in transit, or loss of calibration on their return- can be a consequential budget item. Select companies have built niche capabilities for portions of the market, some are mobile and got to the customer site, but the range and depth of coverage is typically limited, and staffing with qualified technicians is a recurring problem.

ARIES: ARIES is a technological breakthrough in automated calibration and calibration workflow and data management. ARIES leverages the ability of software and networking to create a truly broad spectrum, technically robust, fully automated capability to perform the verification, fault isolation, and calibration of support and test equipment. The ARIES capability can: dramatically increase throughput; reduce both the skill requirements and manpower necessary perform these operations; enhance quality control through computer executed, infinitely repeatable processes and procedures; provide a fully automated record of all actions performed for future reference and reporting requirements.

The ARIES capability has been designed for installation in an environmentally controlled, mobile and transportable shelter. This allows the service to be delivered at the point of requirement. However, the ARIES capability can also be installed in centralized "brick and mortar" facilities, if that is the requirement, e.g. these functions are performed at a centralized facility. ARIES uses the very latest VXI technology and state-of-the-art calibration support equipment from industry leaders Agilent, National Instruments, Racal, and Hewlett-Packard. These are integrated to provide a seamless calibration processing capability.

The ARIES capability has been designed for maximum software reconfigurability and minimizes hardware differences to those specifically required to support unique customer requirements. The standards that populate the ARIES equipment rack are all interchangeable and define the specific customer configuration. Keep in mind that ***all*** ARIES hardware is commercially available, unmodified, of-the-shelf equipment.

Because the ARIES capability is modular, an ARIES installation can have any number of user Workstations. An ARIES installation can be configured with from one to five workstations, plus a control station. Five workstations- one of which supports fault isolation and repair- and a control station are the maximum configuration. A typical smaller scale ARIES (3 workstations) can support over 300 different pieces of test equipment from spectrum analyzers, to power meters; from digital multi-meters to storage oscilloscopes.



The ARIES capability can be designed to support a suite of general purpose support and test equipment; a suite of special purpose support and test equipment; a the support and test equipment for a specific target system, i.e. a radar system; a platform with multiple systems, e.g. a ship; or a capability, e.g. an air defence capability or surface missile system capability.

As a software-defined system, each application adds to the library of capability. Thus the ability to rapidly and at low cost, assemble new variants of ARIES to support new applications increases in lock step. It also allows reduced maintenance costs, since software modules can be maintained as a library of functions and the assembled and integrated to satisfy downstream customer demands. Additionally, the ability to distribute software updates via wired and wireless distribution networks provides a path for low cost renewal, update, and maintenance.

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The ARIES prototype, "proof-of-concept" system supports Eastern-Bloc equipments. This has validated the concept, infrastructure, software, integration, and range and depth of capability. This establishes a sound technical baseline that is now fully modifiable and expandable to any and all global support and test equipment requirements.

- Off-the-Shelf Configuration
  - Eastern Bloc Test Equipment
  - 34 Categories of General and Special Purpose Test Equipment
  - 315 Separate models
- Can support all or nearly all Eastern Bloc test equipment used by a typical former-Eastern Bloc nation

Procuring ARIES: The ARIES capability can be procured as: an equipment and software set; a full mobile facility; a partial facility; or a turnkey "brick and mortar" facility insert. The user is required to submit their requirements, in terms of equipments and calibration requirements. Based on the user requirements, the scope of any required development, the degree of difficulty, and the required suite of standards, IDS will provide an estimated cost. The software can be licensed; software maintenance is also available. This dynamic flexibility allows the ARIES capability- a tailored or general purpose, automated, mobile or fixed, support and test equipment calibration and repair capability- an unprecedented level of applicability

The cost of an ARIES suite in a mobile container is dependent on the nature and complexity of the customer's specific environmental requirements.

Summary: ARIES is a technological breakthrough in automated calibration and calibration workflow and data management. ARIES leverages the ability of software and networking to create a truly broad spectrum, technically robust, fully automated capability to perform the verification, fault isolation, and calibration of support and test equipment.

The ARIES capability can: dramatically increase throughput; reduce both the skill requirements and manpower necessary perform these operations; enhance quality control through computer executed, infinitely repeatable processes and procedures; provide a fully automated record of all actions performed for future reference and reporting requirements.

The ARIES capability can be designed to support a suite of general purpose support and test equipment; a suite of special purpose support and test equipment; a the support and test equipment for a specific target system, i.e. a radar system; a platform with multiple systems, e.g. a ship; or a capability, e.g. an air defence capability or surface missile system capability.

As previously stated, the current “proof-of-concept” producibility verification capability is tailored to Eastern-Bloc equipment. However, the system is easily adapted to Western requirements.