

The World of Interoperability

Company Profile



INTEROPERABILITY SYSTEMS INTERNATIONAL HELLAS S.A.



Table of Contents

INTRODUCTION	1
IDENTITY OF ISI HELLAS	1
ISI HELLAS DEVELOPMENT EXPERIENCE	2
STANDARD PRODUCTS	5
ISI HELLAS' COMPETITIVENESS	6
A PARTNER OF CHOICE	6
HUMAN RESOURCES	6
THE FUTURE OF ISI HELLAS	7

INTRODUCTION

Interoperability Systems International Hellas S.A. (ISI Hellas), a company registered and incorporated in Greece since 1991, is located at 25 Tichis Street, in the Athens suburb of Hellinikon. The company provides analysis, definition, design, development, integration, testing and installation of real-time Tactical Command, Control and Communication Systems, Data Link Systems, and Simulator/Trainers. The company has a broad range of experience in US and NATO Standard Data Links, Non-NATO Data Links and Interoperability Solutions. Since its founding the company has been engaged exclusively in the defense sector and provides high quality systems to both the domestic and international markets.

IDENTITY OF ISI HELLAS



ISI Hellas operates out of a 2000m² facility, with offices and conference facilities occupying 1200m², while the production, test laboratory, and secure equipment storage areas occupy 800m². The Greek Ministry of Defense has inspected the company's facilities and certified them to the "National Secret" and "NATO Secret" levels.

The company operates along two main lines of activity. The first is concentrated in the development of software and systems that provide interoperability with other systems that collect, classify and interpret data. Within this framework ISI Hellas engages in five major efforts:

- Specification of the system requirements with mutual agreement of the Customer
- Preparation of hardware specifications for the system and production of the hardware using off-the-shelf components wherever possible.
- Specification, design and development of the system software, or provision of existing software products that meet the system requirements. All system software is developed using either the ADA or the C++ high-level programming languages.
- Integration and test of the system to ensure that it fully meets all of its performance requirements.
- Provision of Operator and Maintenance Training Courses.

ISI Hellas' second main line of activity is the development and the provisioning of real time simulators and trainers for tactical data systems. The simulators and trainers incorporate time synchronized, scenario driven

simulated interfaces of the external inputs to a tactical system, such as radars, data links, external command and control systems, and ESM systems. The accuracy and detail of the simulations provide excellent test platforms and realistic training for operators.

The company completes its system deliveries by providing a complete range of training for system operators and maintainers, follow-on logistics support, maintenance and other after-sales support.

ISI Hellas develops and integrates system hardware and software in accordance with internal development and configuration management procedures that conform to an adapted version of MIL-STD-498. The Company's Development Process and Quality Assurance Program have been certified as compliant with ISO 9001-2000.

ISI HELLAS DEVELOPMENT EXPERIENCE

From its founding until the present day, ISI Hellas has performed system development and R&D programs that have led to the competence it has in the defense market. Systems and products developed include:

- **Central Tactical System (CTaS):** As the Mission System Integrator, ISI Hellas delivered four real time Tactical Command and Control (C²) systems for that Navy's Maritime Patrol Aircraft (MPA) of the Southeast Asian Nation plus development and support facilities. Operational since 1995, the CTaS integrates both Link 11 and a country specific data link, performing forwarding, data fusion and correlation for those links, and all on-board sensors and weapons systems. The CTaS delivery included a simulation-based system development capability and debriefing facility that replays recorded mission information.
- **Mission System Trainer (MST):** a real-time simulation-based Trainer for the Mission Systems of the Maritime Patrol Aircraft. The Simulator/Trainer features:
 - Accurate replication of all Mission Systems (Command and Control, ESM, Radar, IRDS, Data Links, Weapons, etc.).
 - Emulation of the MPA radar that includes various models of detection that take into consideration the effects of terrain and environmental conditions.
 - Realistic scenario generation using defined platforms (Air, Surface, Sub-Surface, etc.), with the inclusion of different data links, sensors, weapons, maneuver paths, desired threats, weather and environmental conditions, engagements, etc.

- **Combat Information Center Embedded Trainer (CICET):** A real-time simulation-based trainer installed in the Combat Information Center (CIC) of a war ship. This trainer enables the Combat Crew to train at their actual operator consoles and to face any scenario, threat, environment, or location that is created by the instructor. The system features emulation of the ship's radars using PPI presentation technology.
- **Data Link Buffer/Translator:** for a Middle Eastern nation to connect their Air Defense Network to a larger regional network.
- **CRC Interim Solution (CIS):** a ground entry station that provides two-way connectivity between the ERIEYE Airborne Early Warning and Control System (AEW&C) and the Hellenic Air Force's existing Air Defense Command Headquarters.
- **Mission Training System (MTS):** a real-time simulation-based trainer for the mission systems of the AEW&C. The system provides a realistic training environment for AEW&C Operators.
- **Software Support Center (SSC):** a simulation-based environment to modify software and test software changes for the AEW&C mission systems before installation in the aircraft.
- **Link Simulator (LinkSim):** a Data Link Simulator used to simulate and test all of the interfaces between the AEW&C Data Link processor (Link 11, Link 16, IJMS) and the Command and Control (C²) System.
- **Data Link Manager (DLM):** a specialized processor embedded within the ERIEYE AEW&C's C² system that provides the interface between the Combat System and the Data Link Processor.
- **55 Multi-Link Systems:** for the Republic of Korea's Navy that include the software for Link 11, Link 11B and forwarding between the two links.
- **Custom and Unique Data Link Standard and Implementation:** specified, designed, and implemented a country specific high speed digital information link for use with a medium range Surface to Air Missile system.

- **Firefinder Classroom Trainer (FCT):** a simulation based trainer that closely matches the operator console of the AN/TPQ-36/37 counter-battery radars. The FCT consists of one (1) Instructor Station (IS) and up to six (6) Trainee Stations (TS) interconnected on a Simulation LAN and is built with Commercial-Off-the-Shelf (COTS) components.
- **Military Message Handling System (MMHS):** a Greek Language HMI for a modern message handling and routing system (X400) for the entire Greek Armed Forces.
- **Ammunition Management Information System (AMIS):** a data base system that automates the Hellenic Army's ammunition inventory, control, ordering, and storage functions.
- **Universal Link System (ULS):** a sophisticated multi-link gateway that can provide simultaneous participation on Link 16, IJMS, Link 11, Link 11B, ATDL1, and Link 1. When multiple links are active, forwarding is performed between the links. The ULS accommodates sensor inputs and includes optional Tactical Display Workstations and C² functionality. The ULS provides the capability to distribute a common Recognized Tactical Picture to combat assets that are capable of operating on any of the above data links.
- **Enhanced Universal Link System (EULS):** an enhancement to the ULS that adds additional sensor inputs, a National Data Link and a Command Data Link.
- **Air Force Management Information System:** a database system that is used to automate the Repair Depots for the Hellenic Air Force.
- **Universal Test and Training System (UTTS):** a scaleable, comprehensive, time synchronized, simulation scenario based trainer for the operators of one or more Tactical Data Systems (TDS). The UTTS provides the capability to test a TDS through stimulation of any or all of that TDS's external interfaces in a scenario driven interactive environment. The UTTS testing capability provides "negative test" features that allow insertion of incorrect data or protocols to ensure that the system under test handles them correctly.

Scenarios are normally generated prior to the testing/training session. The Scenarios are executed during the testing/training session and can be adapted using on-line scenario modification features. The on-line-modified scenario can be saved as a new scenario. Off-line support functions such as data reduction and performance evaluation are

provided. The UTTS can operate within a network of TDS simulators for multi-site testing/training using the DIS or HLA protocols.

- **Multi-Tactical Data Link Planning System (MTPS):** a user friendly, operator intuitive system that supports collaborative planning and execution of multi-TDL networks to include: Link 11A, Link 11B, Link 16, JREAP, IJMS, Link 4A, ATDL-1, Link 1, with future upgrades of Link 22 and VMF planned. The MTPS automates the majority of the time consuming tasks required of the JICO and the TDL Planning Cell. The system can easily import NAVSEA Capabilities and Limitations data, ATO, ACO and OPTASKLINK message data for inclusion into the planning database. The System allows up to ten plans to be open simultaneously and the networking capability allows plans to be shared, collaboratively created and consolidated. The OPTASKLINK is automatically generated and ready for distribution. A color geographic display allows a convenient visualization of network and link connectivity that can be exported to create briefing materials.

STANDARD PRODUCTS

As a result of its significant development experience, ISI Hellas is able to provide, off-the-shelf, a set of standard data link and simulation related products. These can be provided and configured as stand-alone software applications, single or multiple data link applications on a card, or complete integrated systems with tactical displays suitable for land, sea or airborne platforms. These products allow a customer's systems to be customized, integrated and interoperable with other systems quickly, with minimal development time and cost. Generally product delivery times are driven by required hardware procurement lead-times. These include:

- **Universal Link System (ULS)**
- **Universal Test and Training System (UTTS).**
- **Multi-Tactical Data Link Planning System (MTPS)**
- **Radar Video Simulator Module (RVSM)**

ISI HELLAS' COMPETITIVENESS

The company's competitive advantage is based on four main factors:

- The accumulated experience and knowledge of the founders as well as of its leading personnel.
- The proven ability of the company to translate this know-how and experience into practical applications in the defense sector and to deliver those applications on schedule, in strict accordance with specifications, to customers world-wide.
- The use of high quality personnel, with graduate and post-graduate education, and with additional intensive in-house training in the development of tactical systems software.
- Rapid and comprehensive response to customer and potential customer inquiries and requests.

It is these factors that have enabled the company to successfully acquire and maintain a viable financial profile and to follow a path of sustained growth.

A PARTNER OF CHOICE

ISI Hellas is the partner of choice for a number of nationally local and multinational companies and organizations active in the defense sector, such as Lockheed Martin, Northrop Grumman, General Electric, Raytheon Systems, Raytheon Australia, ThalesRaytheon, SAAB Microwave (Formerly Ericsson), Skysoft Portugal, Tallmac, Sikorsky, Rheinmetall Defence Electronics GmbH, SPAWAR and AAR Mobility Systems (Formerly Brown International Corporation). These organizations look to ISI Hellas to help fulfill their specific requirements world-wide.

HUMAN RESOURCES

The future growth and success of ISI Hellas depends to a large extent on the quality of its human resources. The specific line of business in which ISI Hellas is engaged is labor intensive and requires an excellent education, an agile mind, and full dedication. The company is always interested in talent that fulfills these prerequisites and since 1999 the Company has shown continued growth. The majority of the staff are degreed Engineers in the disciplines of Systems, Software, Hardware, and Integration and Testing with over 60% hold Post-graduate Degrees at the Masters and Doctoral level.

All new employees spend 3 to 6 months in training for the specific kind of work carried out by the company. All employees are encouraged to participate in relevant external and in-house seminars in order to keep abreast of developments in their fields.



The Senior Management Team of ISI Hellas all have strong technical and operational backgrounds, and provide an excellent 'sounding board' for the innovative design ideas of the Engineering Staff.

THE FUTURE OF ISI HELLAS

ISI Hellas has firmly established itself in the international defense market and has acquired a reputation for originality in software development. The Company continues to expand its market on a global level and broaden its technology base by keeping up with the latest innovations in the industry.

With the rapid advances in communications technology and the increasing requirements of NATO Network Enabled Capability (NEEC) and Network-Centric Warfare (NCW), ISI Hellas is committed to meeting the challenge of providing the systems and software for NATO, Allied and Coalition forces to train, fight and succeed in their missions.