

Global Systems Technologies, Inc. Company Overview

Global Systems Technologies, Inc. (GST) Is a Information Technology firm with a 18 year history of providing exceptional services to government and commercial customers. GST has rapidly matured into a stable, highly competitive, and responsible firm with strong management and financial resources. Headquartered in Yardley, PA, (GST) has demonstrated outstanding capabilities in several disciplines, providing program management and technical support services to government agencies and commercial customers. Customer list includes Transportation Security Administration (TSA), Federal Aviation Administration (FAA), US Navy, Department of Energy (DoE), Food and Drug Administration (FDA), the City of Philadelphia, State of Wisconsin, Merrill Lynch, Allied Signal, Lockheed Martin, CCI, Bear Sterns, Sun Microsystems, Adelphia Business Solutions, KLA Tencor, AEGON, New Market International Inc., Dow Jones and Kestrel Solutions.

Our core competencies include Program Management, Information Technology Services, Aviation Security, Systems Integration, and Test and Evaluation services. We directly support these missions either through 5 or 7-year delivery order type contracts or GSA Schedules. We currently hold contracts under GSA schedules 70 and 871.

With a staff of over 90 professionals, we maintain four field activities or local offices in New Jersey, Virginia, California, and Pennsylvania in close proximity to our customers. The facilities, capable of supporting all personnel and administrative requirements, are well equipped with modern client/server network supporting applications that are also deployed in support of our customers. Our facilities have continuous phone communications, high speed access to internet, electronic mail capability compatible with the customer's electronic mail system including the capability to receive and retrieve attachments, facsimile machines, and reproduction capability of well over 1000 sheets per day. Our New Jersey facility has Secret clearance and has the capability of storing classified materials and has been used for generation of classified technical reports for the FAA/TSA. All GST employees working at the New Jersey office have Secret clearance. Additionally, we have an international presence in Kolkata, India which offers specialized training in technology and management to corporate customers and to the public.

The following pages provide you with our capabilities in areas, which would be of service to you and your organization.



TEST AND EVALUATION

Global Systems Technologies, Inc. (GST), an ISO 9001-2000 company and a member of the National Safe Skies Alliance provides state of the art engineering services and information technology support services to commercial customers and government agencies through operating facilities nationwide. Current R&D projects at GST include biometric based information systems for law enforcement and aviation security.

Transportation Security Agency (TSA)

- ❖ Performs test and evaluation of bulk and trace explosive detection systems
- ❖ Contributed to significant technological improvements in the development of Quality Control articles and in the preparation of test articles
- ❖ Developed Test Protocols for Passenger Screening Devices, Bottle Screening Devices, and X-Ray based explosive detection systems
- ❖ Developed various tools to improve effectiveness and efficiency of the testing process, customized bar code reader programs, and automated data reduction and analysis software
- ❖ Developed and manufactured simulated explosives for testing of security systems and training of operators
- ❖ Performed numerous analyses of objects and materials of interest using x-ray imaging, automated explosives detection, dielectric analyses and metal detection in order to evaluate various possible threat scenarios proposed by the TSA

Federal Aviation Administration (FAA)

ATC Automation Systems

- ❖ Performed engineering mockups, demos, dry runs, regression tests and formal test procedures at lab level and at sites on ETMS, ACD, and STARS
- ❖ Supported design, development, validation and certification of software data reduction tools for ETMS to EARTS/micro EARTS interface and performance testing and STARS test tools for DT&E
- ❖ Performed test procedures for “Human Factors” and “Computer-Human Interface (CHI)” at lab and key sites for ETMS and STARS and Computer Based Instruction (CBI) at WJTC and Operational System training for ETMS field staff

ATC Communications Systems

- ❖ Provided enhancements to communication infrastructure enabling the necessary improvements to the VHF communication into the Gulf of Mexico from an off shore control area
- ❖ Rectified known shortfalls in the VHF communications coverage and enabled the expansion of the navigation, automation and surveillance services
- ❖ Provided an in-depth technical critique of the GOM Test Plans required for SAT and OT&E for testing at the WJTC Technical Center and operational sites
- ❖ Performed research of various technologies for use in air traffic control communication systems



INFORMATION TECHNOLOGY

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US Navy (DOD)

Metrology Automated System For Uniform Recall And Reporting (MEASURE)

- ❖ Provides data processing and information management support services to both **NAVAIR** and **NAVSEA**. **Manages the MEASURE Operational Control Centers (MOCCs) at Norfolk, VA, San Diego, CA and supports the Headquarters (Patuxent River, MD)**
- ❖ Provides on-line support, archival back-up, database maintenance, configuration control, batch data processing, data transmission and legacy data migration
- ❖ Performs software test/analysis, modifies MEASURE operational software and recommends software improvements that enhances program activities
- ❖ Provides software operational documentation including user instructions and technical documents associated with software development
- ❖ Provides hardware and software support for microcomputer systems and ancillary peripheral equipment located at remote operations sites
- ❖ Provides data management analysis support including program monitoring, updating database entry processes, and maintaining necessary files and ledgers on the database for secured remote access

Integrated Launch and Recovery Television Surveillance (ILARTS)

- ❖ Performed systems integration on the Navy's ILARTS project
- ❖ Inserted a new personal computer system between real-time sensors on an aircraft carrier flight deck and on-board video display/recording system
- ❖ Redesigned the cabling and interfaces as well as established the requisite software specifications
- ❖ Developed custom application software for the video display/recording system using C++

Transportation Security Agency (TSA)

- ❖ Develops and maintains the databases and IT related services for the Information Control Center (ICC)
- ❖ Coordinated, planned and implemented an information technology strategy which centralizes files and applications at the ICC
- ❖ Provides hardware /software and web development / maintenance support

Department of Energy (DOE)

- ❖ Provided information technology support services to the DOE Philadelphia Regional support Center
- ❖ Designed and maintained the DOE Philadelphia Regional Support Center web site
- ❖ Generated query reports from the WinSAGA SQL database
- ❖ Designed and developed a grants and financial tracking and sorting system in MS Access to sort and filter over a thousand documents per day



AVIATION SECURITY

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Transportation Security Agency (TSA)

Transportation Security Laboratory Support

- ❖ Performs as an integral player in the Laboratory development and operations supporting the test and evaluation of bulk and trace explosive detection systems
- ❖ Contributed to significant technological improvements in the development of Quality Control articles and in the preparation of test articles
- ❖ Developed Test Protocols for Passenger Screening Devices, Bottle Screening Devices, and X-Ray based explosive detection systems
- ❖ Developed various tools to improve effectiveness and efficiency of the testing process, customized bar code reader programs, and automated data reduction and analysis software
- ❖ Performed numerous analyses of objects and materials of interest using x-ray imaging, automated explosives detection, dielectric analyses and metal detection in order to evaluate various possible threat scenarios proposed by the TSA
- ❖ Develops and manufactures kits using simulated explosives and mock weapons for testing of security systems and training of operators

Security Needs Analysis

- ❖ Performed requirement analysis including the modeling and simulations to assess the operational impact and cost impact to the domestic air transportation system
- ❖ Developed and reviewed project plans, threat and vulnerability analysis, risk assessment, threat and countermeasure determination
- ❖ Performed an in-depth analysis and developed a conceptual design for demonstrating techniques for enhancing security through positive baggage matching of aircraft passengers for implementation at commercial airports
- ❖ Conducted airport testing which analyzes security equipment in airports
- ❖ Identified and coordinated site specific problems on Security Equipment Integration (SEI) and evaluated site preparation plans
- ❖ Monitored and coordinated security equipment delivery scheduling and equipment staging and installation planning

Human Factors

- ❖ Supported the definition and preparation of overall plans by which existing or new aviation security concepts may be evaluated in the laboratory or in the field
- ❖ Performed vulnerability assessment and risk analysis
- ❖ Performed man-machine interface studies of explosive/weapon detection systems
- ❖ Developed end-user and customer questionnaires, conducted surveys, and transposed data collected into databases
- ❖ Performed analyses to identify operational and suitability issues and provided recommendations to manufacturers for enhancements to security systems and devices



TRAINING

Global Systems Technologies, Inc. (GST), an ISO 9001-2000 company provides state of the art training in Information Technology, Aviation Security, and Occupational Safety and Health to meet the growing needs for skilled professionals in government, industry and academia. GST's skilled instructors apply emerging technologies to develop unique and customized training solutions.

Information Technology

Programming Courses

- ❖ C++
- ❖ PowerBuilder
- ❖ Oracle
- ❖ Java, JavaScript and HTML
- ❖ Visual Basic
- ❖ VJ++

Database Courses

- ❖ SQL
- ❖ MS Access
- ❖ Oracle
- ❖ Sybase

Web Technologies

- ❖ Dream weaver
- ❖ XML
- ❖ Multimedia Web Design
- ❖ Flash

Aviation Security

- ❖ Develops new training programs for operational use of airport security equipment and analyzes the effectiveness of current training programs
- ❖ Prepares updated Explosives Detection Training materials for air carrier use in post-deployment training
- ❖ Develops training plans, lesson plans, and curricula (including complete preparation of text, graphics, handout materials, visual aids, video, etc.) for the FAA
- ❖ Conducted training sessions for FAA Air Marshals, Special Agents and Security Counter Measures Supervisors. The training sessions contained a first hand demonstration on the calibration, operation and routine maintenance of several Explosive Trace Detection (ETD) systems
- ❖ Developed ETD training videos and assessed technical content of training guides for Computer Based Training (CBT)
- ❖ Supported the development of ETD Screener Prophecy testing. This testing was to evaluate the effectiveness of the training to teach the screener to find Improvised Explosive Devices (IED)

Occupational Safety and Health

- ❖ Developed safety guidance, planning material and safety training for all personnel working in the Aviation Security Lab, including FAA, on-site contractor personnel and visiting test teams
- ❖ Developed and prepared the Safety and Health Plan for Bulk Explosive Detection System Testing.



NETWORK ENGINEERING

Global Systems Technologies, Inc. (GST), an ISO 9001-2000 company and a member of the National Safe Skies Alliance provides state of the art engineering and information technology support services to commercial customers and government agencies through operating facilities nationwide.

Transportation Security Agency (TSA)

- ❖ Integrated Windows NT into a large scale Novell network environment at the ICC
- ❖ Created a network infrastructure which localizes information storage at the ICC allowing for hands on management of mission critical information
- ❖ Performs Local Area Network (LAN) administration

US Navy (DOD)

- ❖ Monitors the operation of NAVAIR/NAVSEA Local Area Networks (LAN) in San Diego, California and Norfolk, Virginia facilities
- ❖ Supports remote terminal activity including user's PC connected from off site to the MOCC networks
- ❖ Monitors the operation of the LAN as displayed on system terminals, responds to errors and alarms, conducts troubleshooting procedures

Department of Energy (DOE)

- ❖ Provided LAN administration and assessed technological requirements providing possible scenarios for new systems
- ❖ Reconfigured existing network components and combined them with commercial hardware, software and/or custom developed products
- ❖ Maintained records on the network physical layout, hardware and software configuration and user profile

Philadelphia International Airport

- ❖ Provided file server and workstation installation, configuration, trouble-shooting, maintenance and end-user Campus LAN training
- ❖ Performed functional enhancements including design, analysis, selection and implementation of shared modems, faxes and expanded e-mail services as well as migration of the network operating system from Novell 3.12 to 4.1 and subsequent NT migration

Merrill Lynch

- ❖ Provided network administration, hardware installation, software installation, troubleshooting, problem resolution, and designing of network topologies. Expanded and upgraded the existing system, and relocated the network to another office building.



SYSTEMS ENGINEERING

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Federal Aviation Administration (FAA)

- ❖ Performs systems engineering and T&E support for the FAA Technical Center Aviation Security Laboratory and at airports where advanced security systems and concepts are installed and evaluated
- ❖ Provides mission requirements analysis to systems architecture design, development and testing to ensure interoperability among subsystems
- ❖ Performed system and subsystem level testing of each new generation of FAA Air Traffic Control (ATC) automation, communication systems and tower display. Tested systems include:
 - Advanced Automation System
 - Voice Switching & Control System
 - Oceanic System Development AOAS
 - Display System Replacement/DSSC
 - Recovery Communications HF/SSB
 - VSCS Ground/Air/Ground Comm. and a wide variety of Air Traffic Control Sustaining Engineering projects
 - Combined Technology Test
 - Baltimore - Washington International Test bed Operations
 - Automated Terminal Radar System
 - Dynamic Oceanic Track System
 - Flight Data Input/Output
 - Enhanced Traffic Management System
 - Standard Terminal Automation Replacement System (STARS)
- ❖ Developed the project plan and schedules and conducted the Combined Technology testing at Miami International Airport
- ❖ Performed as a lead contractor for development and implementation of the STARS. Reduced and analyzed test data and results for incorporation with reports on software/hardware system tests
- ❖ Developed Quality Assurance Specifications and a Test & Evaluation Master Plan for the FAA's Wide-Area Differential Global Positioning System.

US Navy (DOD)

- ❖ Performed Systems Integration on the Navy's Integrated Launch and Recovery Television Surveillance (ILARTS) project
- ❖ Inserted a new personal computer system between real-time sensors on an aircraft carrier flight deck and on-board video display/recording system.
- ❖ Provided complete system integration and all required software development and logistics installation planning.



SOFTWARE PRODUCT DEVELOPMENT

Global Systems Technologies, Inc. (GST), an ISO 9001-2000 company and a member of the National Safe Skies Alliance provides state of the art engineering and information technology support services to commercial customers and government agencies through operating facilities nationwide. Software products are designed and developed at its offshore facility in India. Current R&D projects at GST include biometric based information systems for law enforcement and aviation security.

Software Product Development

- ❖ Provides complete life cycle support, from analysis and programming through customer assistance
- ❖ Provides customization and functional enhancement of products, change in hardware/software, data and system security and database tuning
- ❖ Software products designed and developed include:
 - **DOMS** - Doctors Office Management System is a comprehensive interactive medical office management system that is HIPAA compliant. DOMS manages all processes from appointment scheduling to viewing a patient's medical record to generating a HCFA 1500 form or electronic claim
 - **TPAS** – Third Party benefits Administration Software is an insurance claims adjudication system that supports multiple benefit/insurance plans
 - **ARFIN** – is an accounting and business solution for small to medium sized businesses. ARFIN is designed for service industries, consultants, and government contractors. It automates T&M, Cost Plus and CPFF billing. Integrated enterprise functions include contracts administration, timesheets, payroll, invoices, cash receipts, purchasing, vendor lists and human resources
 - **EHRS** - Exxis Human Resources Suite – key features of the package are: demographics, skills inventory, benefits/compensations, training certification, employee health, event scheduling, automate memos/e-mail and applicant requisition matching
 - A 3-D mathematical modeling system for artificial limbs

Web and Internet Application Development

- ❖ Provides web site solutions. Designs, develops and maintains graphically rich and interactive sites. Programs used include Macromedia Dreamweaver, Fireworks and Flash as well as code in ASP, Perl, HTML, Java script and XML

Software Re-engineering

- ❖ Provides migration services – inventory taking, application analysis, migration methodology determination, impact analysis, migration of application database, screens, logic and reports
- ❖ Provides product testing services, testing strategy, architecture, data management, execution and reporting
- ❖ Provides product maintenance and support, bug fixing, help desk documentation (user and technical) and training.



Logistic Support

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US Navy (DOD)

S-3 Logistic Support Contract

As a subcontractor to Stanley Associates, GST provides logistics support to the S-3 Fleet Support Team (FST), Naval Aviation Depot (NADEP), North Island, Naval Air Systems Command (NAVAIR), and S-3 Type Wing Commanders, and on-site to S-3 COMSEACONWINGLANT (NAS, Jacksonville, Florida) and COMSEACONWINGPAC (NAS, North Island, California).

Logistics Planning - We identify and assess the principal factors impacting the supportability of a specified weapon system/subsystem to quantify the scope and nature of logistic support required to meet specific operational mission requirements efficiently and effectively. Assess ILS planning/management data and documentation to identify supportability problem areas. Recommend quantitative and qualitative methodologies to evaluate the impact of ILS shortfalls. Recommend actions to correct/alleviate identified support problems.

We monitor S-3 readiness, reliability, maintainability and supportability data, TYCOM and other Fleet inputs and reports, NAVICP, NALDA, and AV-3M data for the most significant factors affecting supportability. Conduct root cause analyses of these factors and provide recommendations to alleviate the supportability problems.

Develop Supportability Analysis – We analyze maintenance and logistics cost data bases, and provide assessments of logistic support costs, schedules, availability, level of incorporation, and impact on ILS/operational readiness of proposed Engineering Change Proposals. We provide logistics support for Engineering Change Proposals (ECPs) developed under the Operational Safety Improvement Program and for non-safety related proposals developed in routine in-service support.

We develop procedures and alternative methods for quantitative and qualitative assessments of maintenance and logistics support systems' performance during and after fleet introductions, initial operations, and first deployment.

In support of depot level logistics operations, we develop, maintain and update a report of failed, removed, missing and cannibalized material from aircraft scheduled for Standard Depot Level Maintenance (SDLM)/ Integrated Maintenance Concept (IMC) prior to NADEP/fleet introduction and during SDLM/IMC rework.

We provide logistical input on failed items to determine work-around procedures and identify cost effective solutions. Research maintenance data reviews for trend analysis and demand usage rates and propose solutions to avionics problems affecting readiness, reliability, maintainability and supportability.

We perform liaison with local NADEP and manufacturers representatives, vendors, and organizational level supply and maintenance personnel to resolve logistical problems.

We analyze overall system/equipment reliability, maintainability and availability characteristics to determine projected availability. Provide Readiness Improvement Status Evaluation and other status reports, identifying current fleet readiness problems, mission capability/full mission capability, factors causing readiness degradation, corrective action, and get well dates.



Maintenance Planning & Development - We conduct technical studies and analyses to develop procedures and provide recommendations to enhance life-cycle supportability, availability and maintainability. We provide logistics support for the planning, scheduling, installation, and final testing of Airframe Changes (AFC), Accessory Changes (AYC) and Avionics Changes (AVC) relating to the S-3 Weapon system.

We monitor the turn-around-time of modifications, perform on-going liaison with NADEP, prime manufacturers, vendors and fleet facilities. Provide verification status of Intermediate level changes upon installation of each AFC, AYC and AVC. Analyze current S-3 supportability, readiness and maintainability data, and projections for the S-3 and provide recommendations to enhance life-cycle support.

We study and categorize support equipment availability, selection, capability and limitations to promote standardization of equipment, repair and recoverability procedures.

MEASURE Logistics Information Management Support Services

The primary functions of the MEASURE AIS are to recall metrology assets at specific intervals for cyclic calibration and to document all calibration actions and related transactions. Data is collected, collated and disseminated to those participating activities having a requirement for the information. Secondary purposes include the generation and distribution of recall reports, production reports, work-in-process reports and a wide variety of other recurring products for use by supervisors and managers at all echelons of command. Additionally, the MEASURE AIS is used to:

- 1) assist in the development and support of Navy METCAL Program resource budgets;
- 2) plan and analyze calibration facility workloads;
- 3) record and document configuration changes;
- 4) update database files;
- 5) provide technical data used in reliability analyses and calibration interval assignment; and
- 6) document the traccability of measurements to standards maintained by the National Institute of Science and Technology (NIST).
- 7) monitor the readiness of individual Fleet units as well as Battle Groups.

Services include:

- Logistics Information Systems Development
- Data Management Analysis Effort
- User Assist Support
- System Analysis/Software Support
- Remote Operations Effort
- Inventory Tracking
- Routine Maintenance
- Configuration Control

