Making Sense of it All. . .Satellite Systems

argon ST

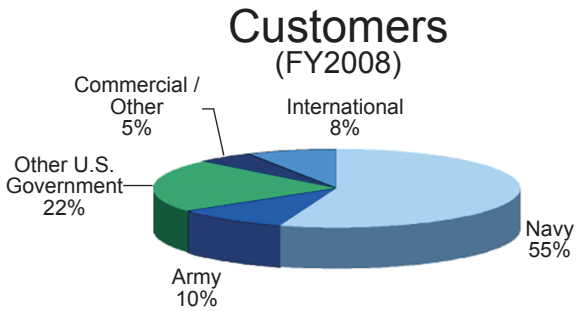
Introduction to Argon ST

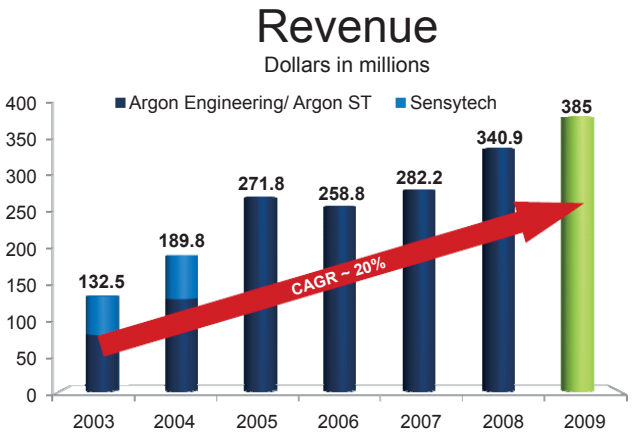
Argon ST designs, develops, and deploys:

- Sensors and countermeasures
- Information operation and electronic attack systems
- Communication systems and networks
- Navigation systems
- Geolocation systems
- Integrated net centric systems

These systems allow users to:

- Find, fix, track, target, engage, and assess the threat
- Develop situational awareness and understanding
- Deliver the intelligence in time to make a difference
- Deny understanding of the environment to our enemies





A Wide Range of Technologies & Expertise

Communications & Sensor Systems Engineering

Antennas
HF DF Antennas
Acquisition Antennas
V/UHF and DF Antennas

Antenna Interface Units
HF, V/UHF AIUs and RF Controllers

RF Distribution
HF, VHF, V/UHF and UHF RFD Us

Receivers
A/D Conversion
Signal Processing
HF, VHF, V/UHF and UHF DPUs

Workstations
Operating Systems
Servers, and Databases
Operating System and Sensor Servers, Workstations, Laptops, and Printers

Comms Interface
Local Network
Secure Interface
Comms Network
SATCOM / HF

Communications

A best-of-breed signal intercept provider, Argon ST delivers communications ESM sensors for use on ships, submarines, aircraft, and military vehicles (manned and unmanned). These sensors can be human-portable or designed for fixed sites.

Signal Processing

Argon ST production systems delivers to over 300 installations world-wide, providing passive and active detection, location, and threat identification of targets.

Electronic Warfare Technology

A world-class provider of combat electronics, Argon ST provides integrated sensors for threat warning, ESM, and ELINT across the full RF spectrum with state-of-the-art performance.

Creative People Applying Advanced Technology

Core Capabilities

SIGINT/IO

- Automatic signal detection, recognition, and copy
- Signal exploitation
- DF & Geolocation
- BF & interference cancellation
- Conventional, military, and commercial signals

ESM/ELINT

- Automated emitter detection, identification, & DF
- Library comparison
- SEI Integration
- Low latency with high throughput processing

COMMUNICATION

- Satellite Communication
- Software Defined Radio
- High Data Rate Wireless Communications
- Advanced Wireless Networks
- Data Links
- Gateways

ADVANCED IMAGING

- Custom EO/IR Sensors
- Image processing
- Cuing and target geolocation
- Hyper-spectral and Multi-spectral systems
- Counter-sniper

Analysis

- Signal Analysis
- Advanced Algorithms
- Image Processing
- Data Fusion

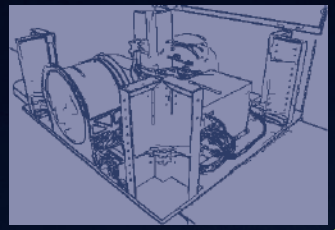
Navigation

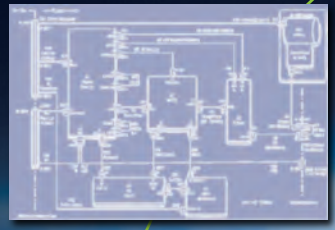
- Anti-Jam GPS Systems
- Navigation without GPS

Operations Support

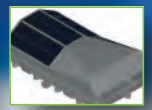
- Program Planning and Management
- Quality Management
- Configuration Management
- Process Management
- Manufacturing
- Training
- Logistics
- Field Support

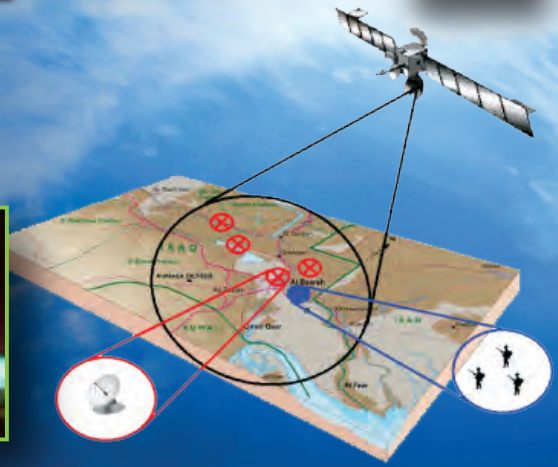
End-to-End Systems Engineering





- Space Segment
- Gateway Segment
- User Segment





Space Segment: Payload & Subsystems

Complex Communications Solution:

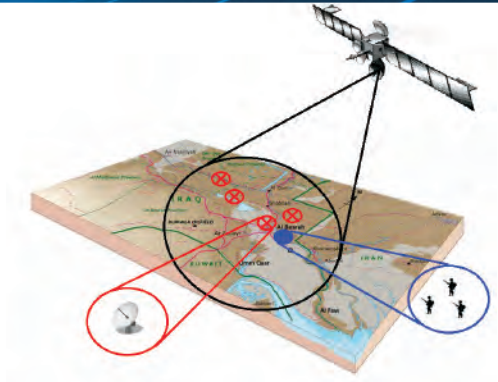
- Large number of uplinks and downlinks
- AIS receive with collisions
- Single RF chain and antenna
- Highly efficient Power Amplifier solution
- On-orbit operational flexibility

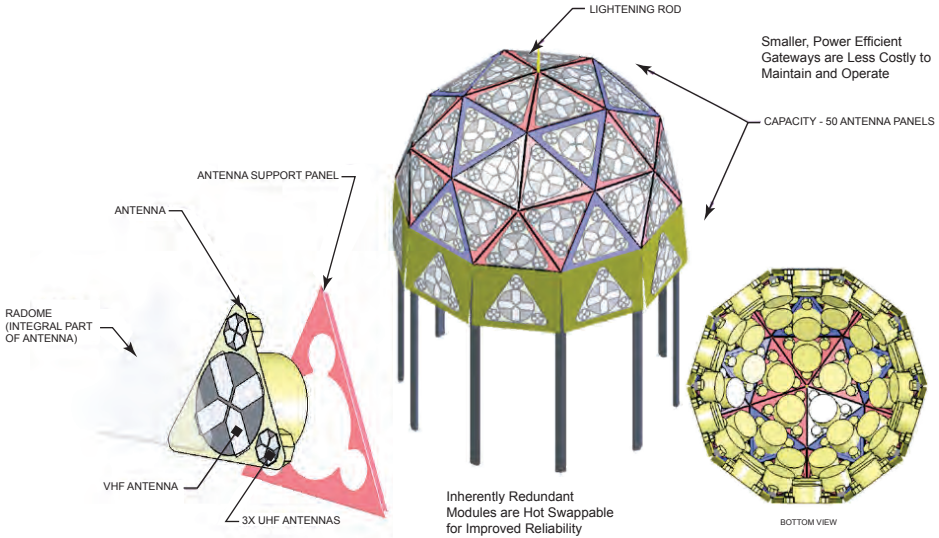
Very Aggressive Schedule:

- Maximal reuse of space-qualified COTS
- Strong Communications Systems Engineering
- Software Defined Radio Architecture
- Parallel sub-system development

Ground Segment: Capabilities to Maximize Space Asset Utility

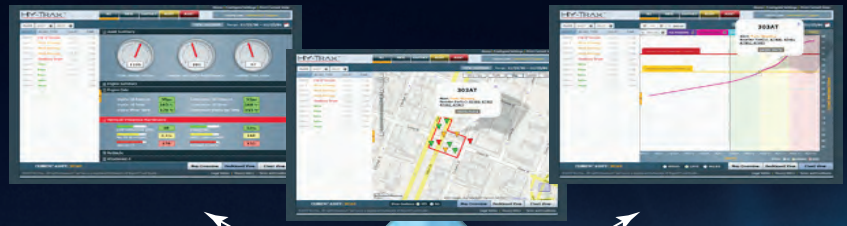
- Proximate co-channel interference cancellation
- Extremely high precision emitter geolocation
- Geodesic antenna arrays and adaptive beamforming
- Anti-jam and covert communications
- Signal Intelligence (SIGINT)
- Custom digital modems





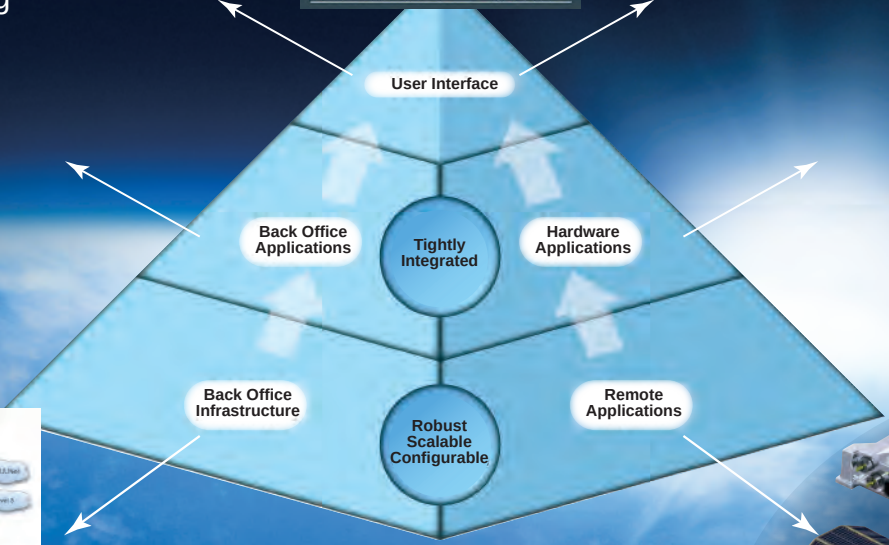
Performance - in Operations

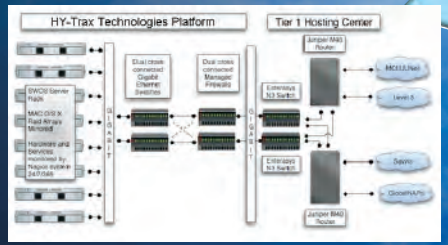
User Segment: Systems Approach to End-User Requirements



- Data post-processing
- Device management
- Data mining
- Smart algorithms

- Data pre-processing
- Re-configurable
- Least cost routing





Mobile Communications

Achieving End-User Value

Value Proposition

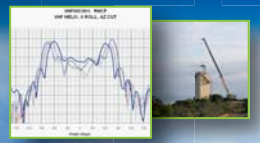
Achieve Aggressive Timelines

SRR | PDR | SDR CDR | EM | STRR | FAT | #1FLIGHT | LAUNCH

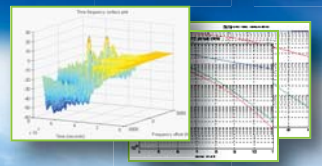
Zero to Launch ... FAST!

Solve Hard Problems

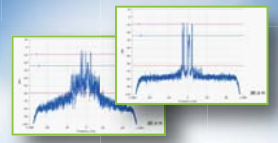
QFH ANTENNA



AIS RECEIVE



EFFICIENT POWER AMP



Apply World Class Staff

Ready to Engage

Secondary Payloads
- Rideshare
- Additional components
- Additional functions

Design Leverage & Reuse
- Algorithms
- Efficient power amplifiers
- Digital and FPGA designs
- Control software

Technologies
- AIS Receivers
- Efficient Power Amplifiers
- Precision Orbit Determination
- Integrated Comm/Nav Transceivers
- "Above Plane" GPS Receivers

Strategic Opportunities
- Distributed Payloads
- Emerging capabilities

Immediate Opportunities → Strategic Fit

Across the Life Cycle

Systems Engineering
- Communications Engineering
- Payload Engineering

Design and Development
- Algorithms
- Digital, FPGA
- RF and Analog Software

Integration and Test
- Test Planning
- Automated Test Equipment
- CCSDS SW Integration

Post Launch Support
- Performance Enhancement
- Constellation Management
- Software Upgrades

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