**UNITED STATES**
**SECURITIES AND EXCHANGE COMMISSION**
**WASHINGTON, DC 20549**

# FORM 8-K

**CURRENT REPORT**
**PURSUANT TO SECTION 13 OR 15(d) OF THE**
**SECURITIES EXCHANGE ACT OF 1934**

Date of report (Date of earliest event reported): October 28, 2008

# Mercury Computer Systems, Inc.

**(Exact Name of Registrant as Specified in Charter)**

| **Massachusetts** | **000-23599** | **04-2741391** |
|---|---|---|
| **(State or Other Jurisdiction of Incorporation)** | **(Commission File Number)** | **(IRS Employer Identification No.)** |

| **199 Riverneck Road, Chelmsford, Massachusetts** | **01824** |
|---|---|
| **(Address of Principal Executive Offices)** | **(Zip Code)** |

Registrant's telephone number, including area code: (978) 256-1300

**Not Applicable**
**(Former Name or Former Address, if Changed Since Last Report)**

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

**Item 7.01 Regulation FD Disclosure.**

The management of Mercury Computer Systems, Inc. ("Mercury") will present an overview of Mercury's business on October 29, 2008 at Mercury's 9th Annual Investor Conference. Attached as Exhibit 99.1 to this Current Report on Form 8-K (the "Report") is a copy of the slide presentation to be made by Mercury at the conference.

This information is being furnished pursuant to Item 7.01 of this Report and shall not be deemed to be "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that section and will not be incorporated by reference into any registration statement filed by Mercury under the Securities Act of 1933, as amended, unless specifically identified as being incorporated therein by reference. This Report will not be deemed an admission as to the materiality of any information in this Report that is being disclosed pursuant to Regulation FD.

Please refer to page 2 of Exhibit 99.1 for a discussion of certain forward-looking statements included therein and the risks and uncertainties related thereto, as well as the use of non-GAAP financial measures included therein.

**Item 9.01 Financial Statements and Exhibits.**

(d) Exhibits.

| Exhibit No. | Description |
|---|---|
| 99.1 | Presentation materials dated October 29, 2008. |

**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this Report to be signed on its behalf by the undersigned thereunto duly authorized.

Dated: October 28, 2008

MERCURY COMPUTER SYSTEMS, INC.

By: /s/ Alex A. Van Adzin
Alex A. Van Adzin
Vice President, General Counsel,
and Corporation Secretary

**EXHIBIT INDEX**

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| --- | --- |
| 99.1 | Presentation materials dated October 29, 2008. |

Exhibit 99.1

MERCURY COMPUTER SYSTEMS

# Ninth Annual Investors' Conference

## Converged Sensor Networks: The Path to Market Leadership

October 29, 2008

# Forward-Looking Safe Harbor Statement

This presentation contains certain forward-looking statements, as that term is defined in the Private Securities Litigation Reform Act of 1995, including those relating to anticipated fiscal 2009 business performance and beyond. You can identify these statements by our use of the words "may," "will," "should," "plans," "expects," "anticipates," "continue," "estimate," "project," "intend," and similar expressions. These forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those projected or anticipated. Such risks and uncertainties include, but are not limited to, general economic and business conditions, including unforeseen weakness in the Company's markets, effects of continued geopolitical unrest and regional conflicts, competition, changes in technology and methods of marketing, delays in completing engineering and manufacturing programs, changes in customer order patterns, changes in product mix, continued success in technological advances and delivering technological innovations, continued funding of defense programs, the timing of such funding, changes in the U.S. Government's interpretation of federal procurement rules and regulations, market acceptance of the Company's products, shortages in components, production delays due to performance quality issues with outsourced components, the inability to fully realize the expected benefits from acquisitions or delays in realizing such benefits, challenges in integrating acquired businesses and achieving anticipated synergies, and difficulties in retaining key customers. These risks and uncertainties also include such additional risk factors as are discussed in the Company's recent filings with the U.S. Securities and Exchange Commission, including its Annual Report on Form 10-K for the year ended June 30, 2008. The Company cautions readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date made. The Company undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made.

Use of Non-GAAP (Generally Accepted Accounting Principles) Financial Measures

In addition to reporting financial results in accordance with generally accepted accounting principles, or GAAP, the Company provides non-GAAP financial measures adjusted to exclude certain specified charges, which the Company believes are useful to help investors better understand its past financial performance and prospects for the future. However, the presentation of non-GAAP financial measures is not meant to be considered in isolation or as a substitute for financial information provided in accordance with GAAP. Management believes these non-GAAP financial measures assist in providing a more complete understanding of the Company's underlying operational results and trends, and management uses these measures, along with their corresponding GAAP financial measures, to manage the Company's business, to evaluate its performance compared to prior periods and the marketplace, and to establish operational goals. A reconciliation of GAAP to non-GAAP financial measures discussed in this presentation is contained in the Company’s Fourth Quarter and Fiscal Year 2008 earnings release, which can be found on our website at www.mc.com/mediacenter/pressreleaseslist.aspx.

# Agenda

- Corporate Overview
  - Mark Aslett, CEO, Mercury Computer Systems
  - Mercury Situational Business Analysis
  - Plans for ACS Defense –the Need for a Converged Sensor Network
  - Mercury Federal – Evolving our COTS business Model
- Keynote:  Piercing the Fog of War
- The Converged Sensor Network™:  Market Leadership
- Mercury Federal Systems (MFS)
- Advanced Computing Solutions
- Financial Review
- Closing Remarks / Q&A

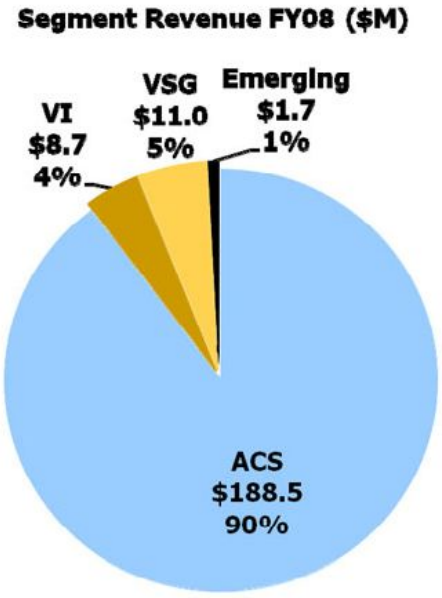
# Introduction

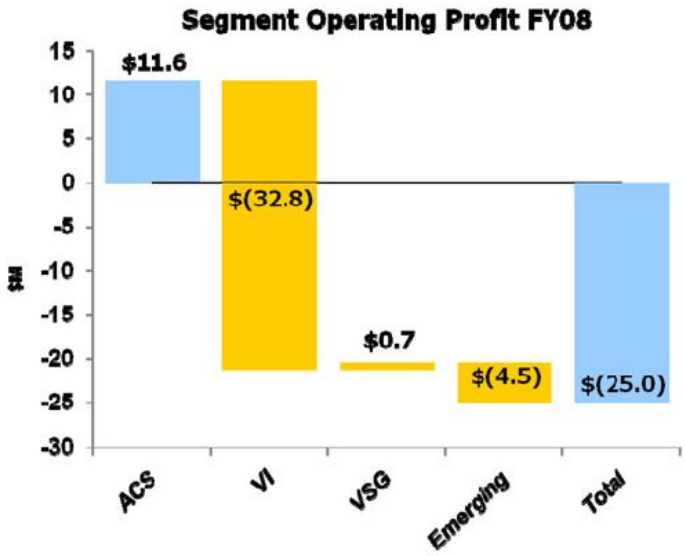
- New strategy and management team well established
- Improved FY08 financial performance
- Strong core defense business –stabilizing commercial
- Defense provides long-term profitable growth potential
- Need to evolve COTS board business –Converged Sensor Network™ architecture
- Mercury Federal Systems a means to evolve Mercury's business model and expand our total addressable market

**Become the government's trusted partner for next-generation ISR signal processing and computing solutions**

# Significant company dynamics (#'s GAAP FY08)

- Revenue and profitability strength in ACS business
- Non-core businesses eroding operating profits



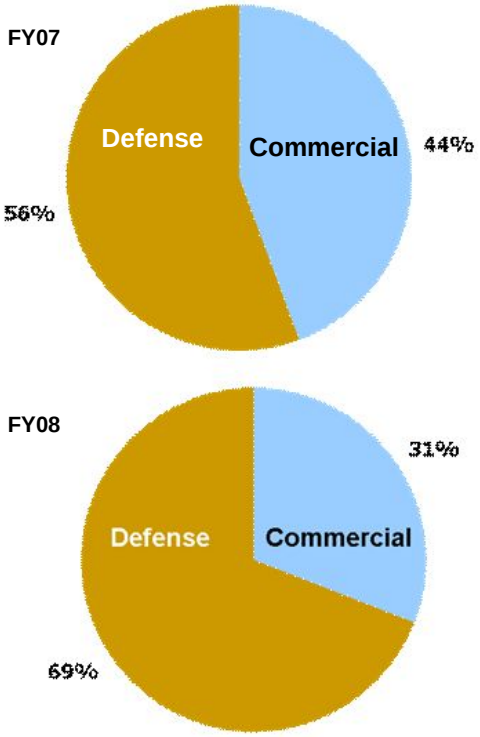

Includes $7.3M amortization expense, $5.2M restructuring, $18M goodwill impairment, $3.2M gain for sale of long-lived asset, and $0.8M inventory write-down

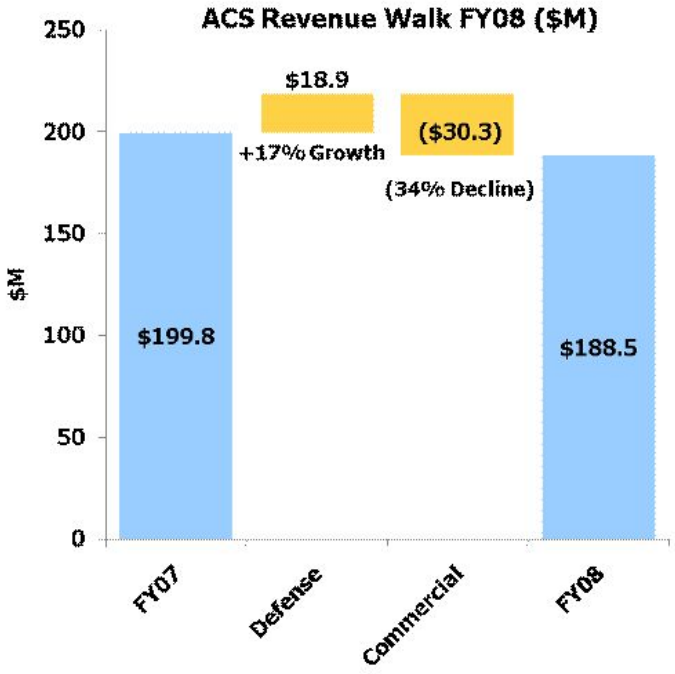
Notes:

FY08 Operating Profit Total excludes stock-based compensation expense

# Major ACS business dynamics

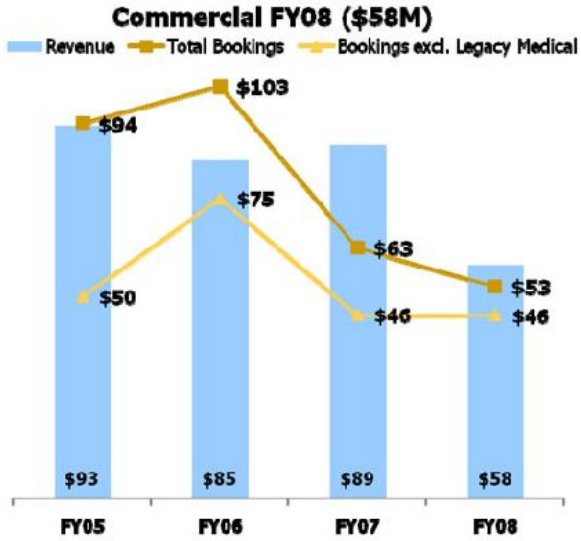
- Focus on strengthening and growing the defense business

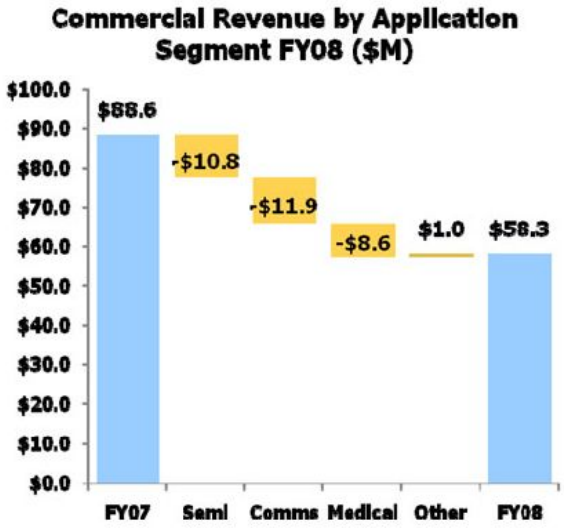


# ACS commercial segment dynamics

- Commercial bookings slower rate of decline in FY08
- Current market conditions challenging




- Significant volatility has added unpredictability to ACS
- Focused on commercial and defense leverage

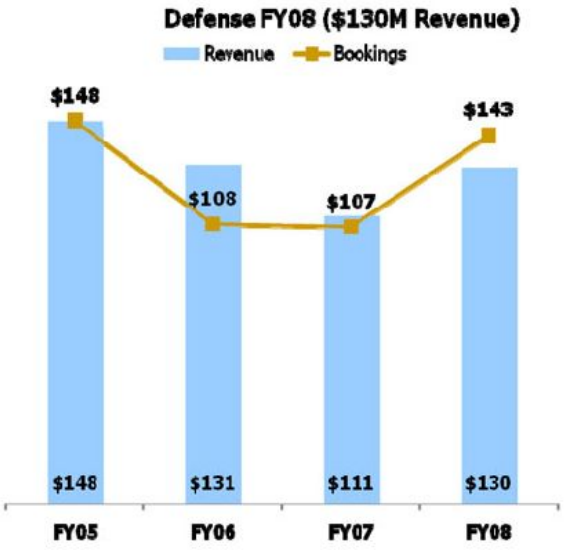
# Refocusing ACS commercial opportunities

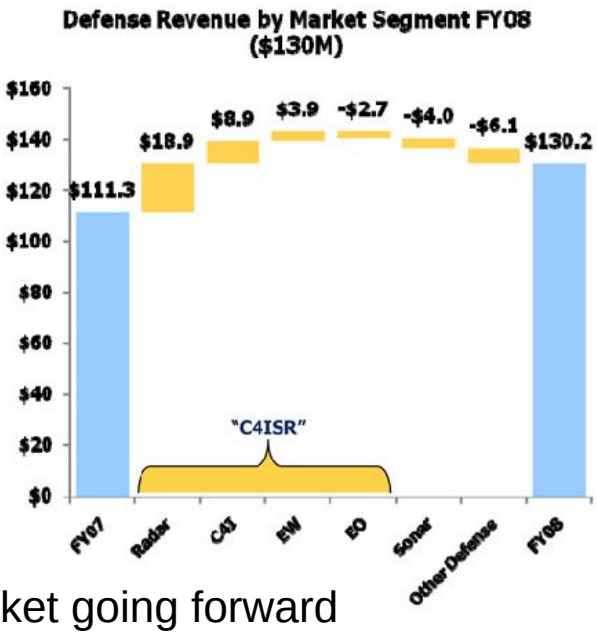
- Focus on existing customer accounts and industry segments
- Selective tactical new pursuits leveraging existing products or planned roadmap
- Maximize R&D synergies across product lines and defense
- Converged Sensor Network™architecture applicable to commercial markets

**Strengthen ACS by slowing commercial revenue decline and leveraging products and technologies with defense**

# Strength in ACS defense markets

- 17% revenue growth and 33% bookings growth in FY08
- Strong revenue growth in Radar, C4I and EW




- Focused on the C4ISR market going forward

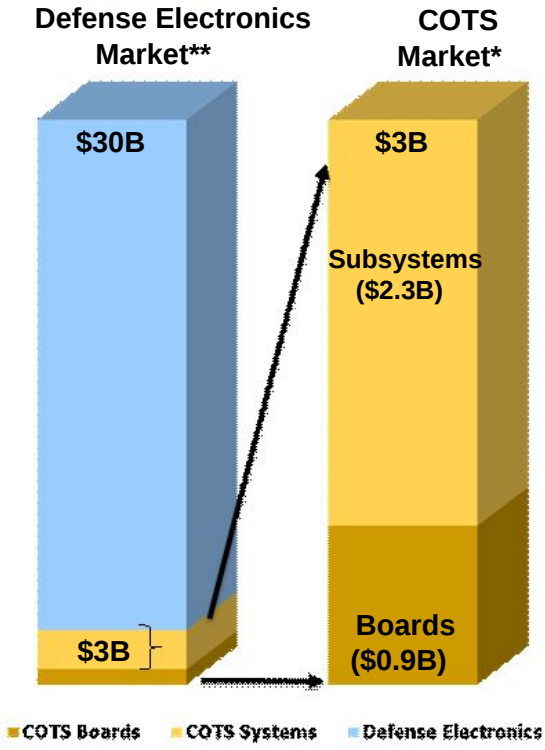
# Growing and evolving our defense core

- Highly penetrated across many programs and platforms presents good upgrade opportunities and lower risk
- Design win-led – refresh product portfolio
- Tactically penetrate more programs on new and existing platforms on land, air, and sea
- Expand presence in additional defense application segments, such as Electronic Warfare (EW) and C4I
- Revolutionize embedded sensor processing with Converged Sensor Network™

**Leverage defense installed base, product roadmap and relationships to expand into new applications and platforms**

# COTS defense market trends

- COTS comprises $3B (10%) of defense electronics TAM
- Defense primes driving increased outsourcing
- Platform upgrades, obsolescence, and new functionality driving end-user growth




Figures in Billions and are approximate

Sources: * Venture DevelopmentCorp. EmbeddedCOTS in Military, Aerospace, & Defense Study, 2008 **TEALGroup, Corp, Military Electronics Briefingwith Mercuryanalysis

# COTS board industry dynamics

- Industry consolidation causing hardware commoditization
  - Top 3 companies have 56% market share
- Declining opportunity to add value at the board level
  - Board-to-board interconnect technology available to all
  - Processor technology suppliers common to all competitors
- Commercial technology providing alternatives to embedded computing in some instances
- Design win-led - slow time to production revenue
- Market size relatively constrained

**We will strengthen our traditional COTS business while addressing the broader military electronics market**

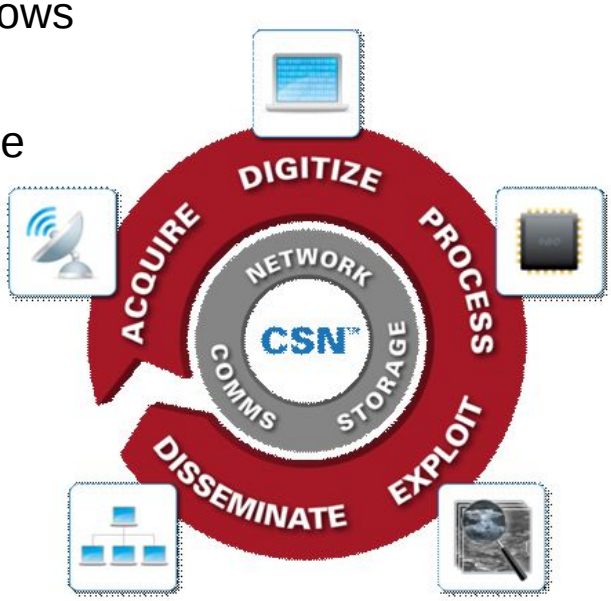
# Sustain and differentiate COTS business

- Innovate interconnect expertise to unique, low-latency IP networking connectivity
- Evolve software to provide higher value-add:  security, high availability, virtualization, scalability and portabilty
- Leverage commercial telecom products and experience into defense, e.g., GPUs, ATCA
- Move from board-centric to an architectural basis of competition – Converged Sensor Network™

**Evolution of COTS business is necessary to differentiate, sustain and provide higher value in our traditional business**

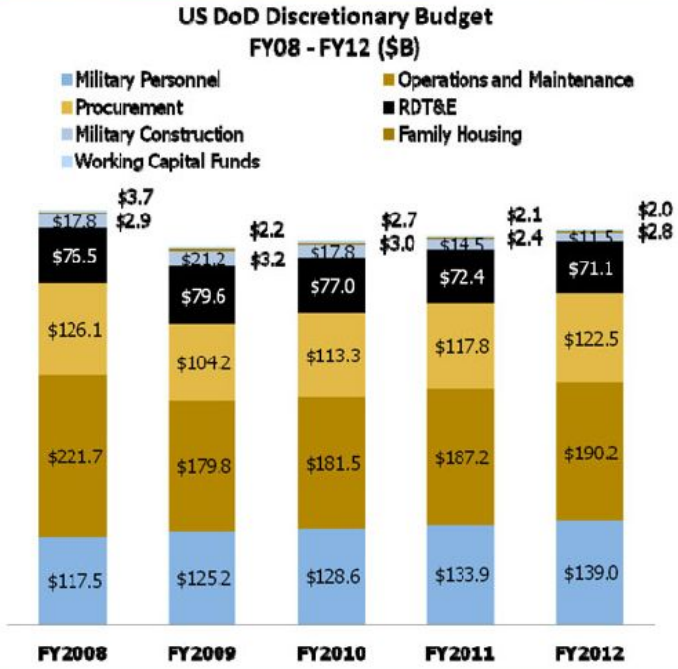
# Converged Sensor Network™ vision

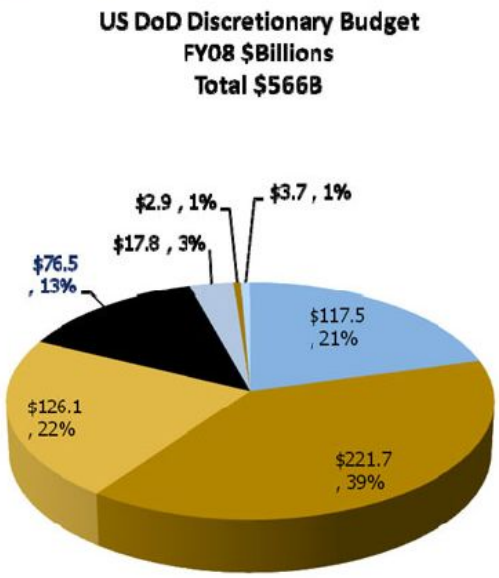
- Target real need – money flows
- Next-generation platform-independent ISR architecture
- Beyond COTS –expand addressable market 10x
- Leverages technology strengths, installed base, and recent acquisitions
- Provides catalyst for growth




**Become the government's trusted partner for next-generation ISR platform signal processing and computing**

# High-level defense market data look promising



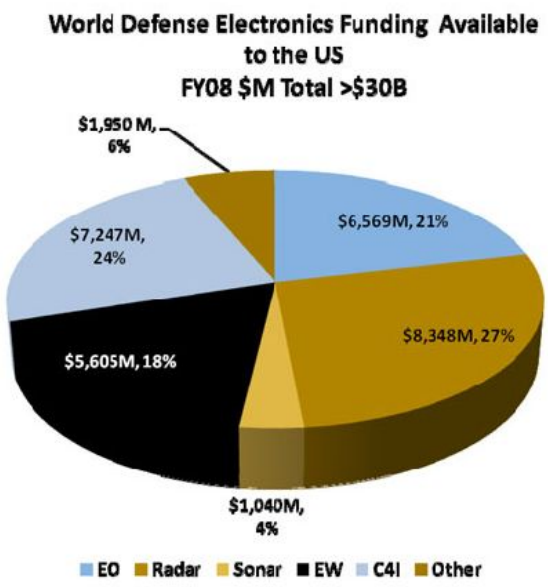




**The defense military electronics market will continue to ride the wave of war funding, digitization, and net-centricity**

Source : The Military Electronics Briefing, 2008 Ed. , The TEAL Group www.mc.com

# Military electronics is a market sweet spot

- Retrofit and upgrades remain strong for legacy programs
- Increased need for EW – Intelligence, Surveillance, Reconnaissance assets
- Networked nodal platforms, virtualized sensors
- Next-gen onboard processing, exploitation and dissemination architecture critical




**$90B or 27% of the cumulative military electronics market spend over the next 10 years will be available for new primes**

Sources : The Military Electronics Briefing, 2008 Ed. , The TEAL Group, Frost & Sullivan, U.S C4ISR Market 2007

# Commentary on the election and DoD budget

- History shows defense budget more related to what is happening, not who is in charge
  - Democrats presided over Vietnam and WWII
  - DoD budget decline started with Bush-41 and rose under Clinton
- Budget and funding deemed to be at a *bare minimum* according to military leadership
  - Military needs to recapitalize, replace damaged and worn equipment, fund GWOT and invest in new systems
  - Funding may shift according to who wins the election
- McCain –seen as the strongest supporter of defense
- Obama – pull out of Iraq but keep defense spending stable

**Overall defense budget likely to remain intact with reduced supplemental spending – funding priorities may change**

Source : The Spade Index Sep/Oct 2008

# Transitioning Mercury's business model

**Today's Model**

- Government frustrated with current prime model
- Platform-centric approach
- Proprietary stovepipe processing architectures
- Pay multiple times for similar capabilities
- Slow time to deployment
- Maybe not best in class

# Transitioning Mercury's business model

## Today's Model

- Government frustrated with current prime model
- Platform-centric approach
- Proprietary stovepipe processing architectures
- Pay multiple times for similar capabilities
- Slow time to deployment
- Maybe not best in class

## Emerging Model

- Platform-independent
- Best of breed model proven on sensor side
- Likely to occur for signal processing and computing
- Pay once –common architecture across multiple platforms
- Fast time to deployment

**Become the government's trusted, platform-independent signal processing and compute partner**

# ACS Defense and MFS – a hybrid business model

## ACS COTS Defense

- Total addressable market COTS defense electronics ($3B annually)
- Be told what board to develop by a prime
- Board-level design wins
- Develop everything on our own nickel
- Long payback period – high risk

# ACS Defense and MFS – a hybrid business model

## ACS COTS Defense

- Total addressable market COTS defense electronics ($3B annually)
- Be told what board to develop by a prime
- Board-level design wins
- Develop everything on our own nickel
- Long payback period – high risk

## with Mercury Federal

- Total addressable market military electronics market ($30B annually)
- Consult on overall signal processing architecture with the government
- Platform design wins
- Paid to develop elements that do not exist
- Lower risk, faster returns

# Benefits of a hybrid business model to Mercury

- Closer to the end customer – track the money flows, insight years ahead of the competition
- Leverages our past business model into the future
- Funded product development helps lower R&D expenses, accelerate growth and reduces risk
- Larger deal sizes overall –fighting for a bigger piece of the platform and military electronics pie
- MFS Services-led strategy will balance hardware revenue – lower volatility once established
- MFS faster time to revenue than pure hardware model

**We will not compete with our current customers on applications and algorithms**

# Summary

- Rationalize portfolio of non-core businesses by end FY09
- Strengthen ACS defense business –stabilize commercial
- Grow ACS defense business by targeting upgrades, new platforms and applications
- Evolve beyond COTS board business due to industry size constraints and dynamics – Converged Sensor Network™
- Mercury Federal a means to evolve Mercury's business model and expand our total addressable market

**Become the government's trusted partner for next-generation ISR signal processing and computing solutions**

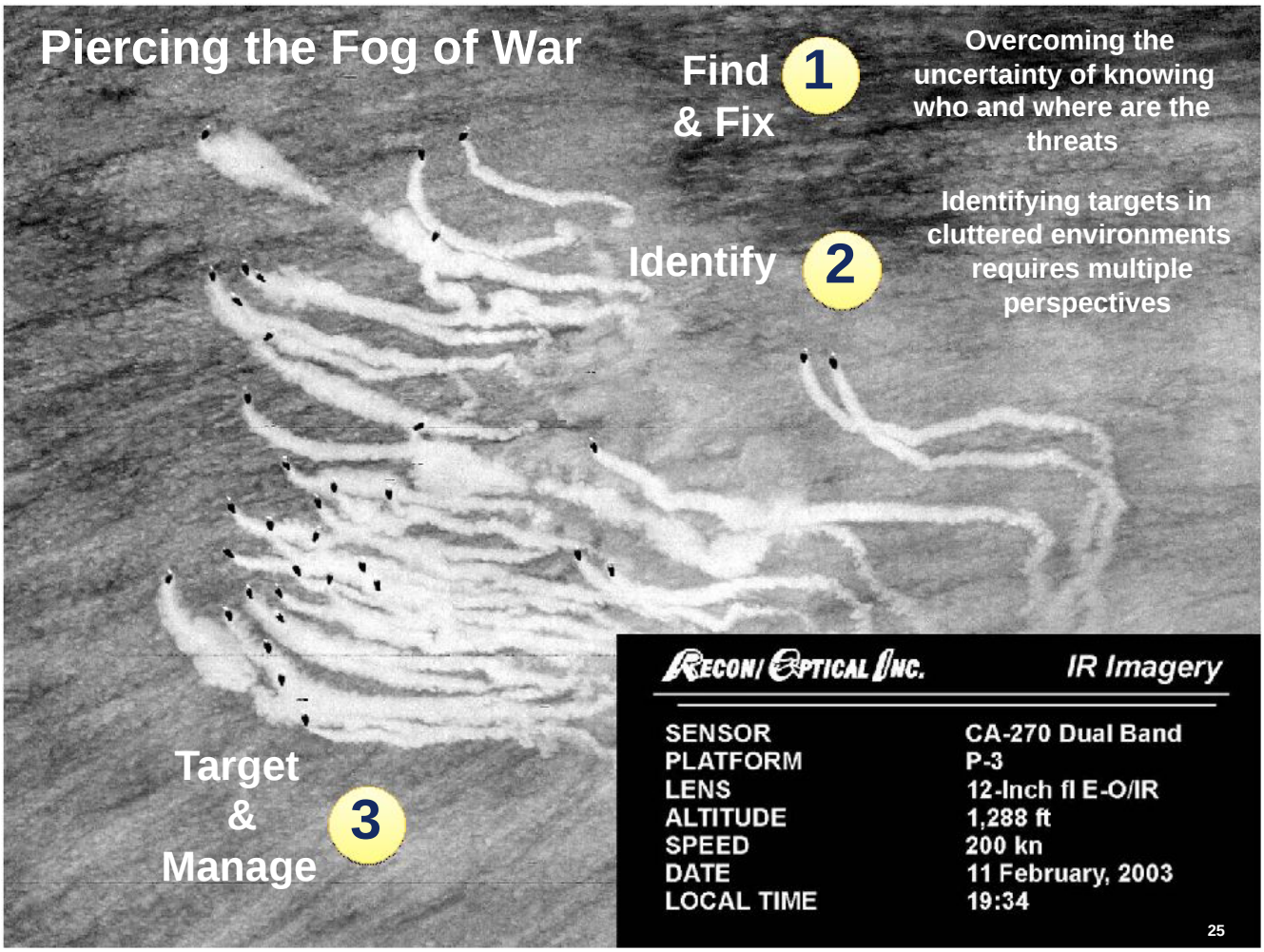
# Agenda

- Corporate Overview
- Keynote:  Piercing the Fog of War
  - J. Michael Johnson, RADM USN (Retired) and former President and CEO of Recon Optical, Inc.
- The Converged Sensor Network™:  Market Leadership
- Mercury Federal Systems (MFS)
- Advanced Computing Solutions
- Financial Review
- Closing Remarks / Q&A

## Mercury's** challenge

Turn the "Quicksilver" of today's digital data into useable information leading to **Knowledge**

** Mercury: also known as Quicksilver


Piercing the Fog of War
Find & Fix
1
Overcoming the uncertainty of knowing who and where are the threats
Identify
2
Identifying targets in cluttered environments requires multiple perspectives
Target & Manage
3
RECON/OPTICAL INC.
IR Imagery
SENSOR
CA-270 Dual Band
PLATFORM
P-3
LENS
12-Inch fl E-O/IR
ALTITUDE
1,288 ft
SPEED
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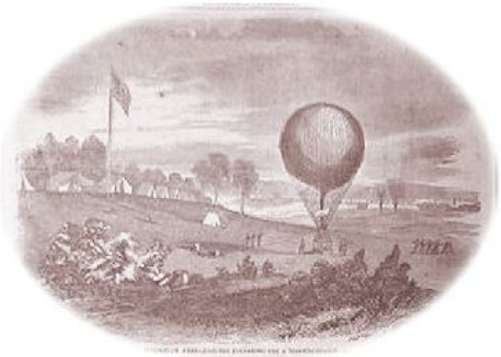
25

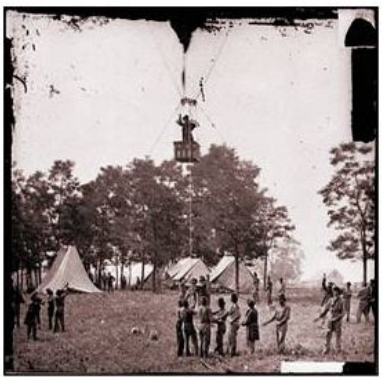
# Challenges in C4ISR

- Confronting an “Asymmetric” & “Amorphous” Threat
- Satisfying Growing Demand – Volume, Accuracy, Currency/Latency, Availability, Relevance
- Conducting Multi-Intelligence Collaboration
- Modernizing Current Infrastructure – Information Assurance & Appropriate Protection
- Transforming the Workforce

**Equivalent to “Building a Car While Running the Indy 500”**

# Changing nature of ISR





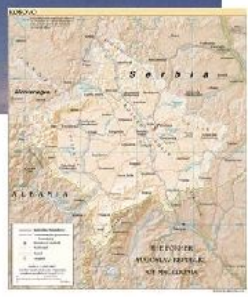

WORLD
WAR II

# DESERT STORM


# BALKANS




BOSNIA

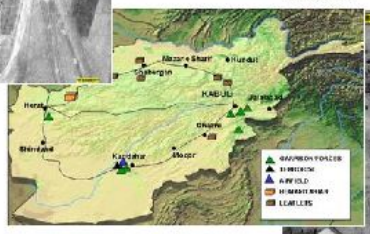




KOSOVO

# AFGHANISTAN







IRAQI
FREEDOM

# Film-based to digital-based ISR

## 80+ years of film

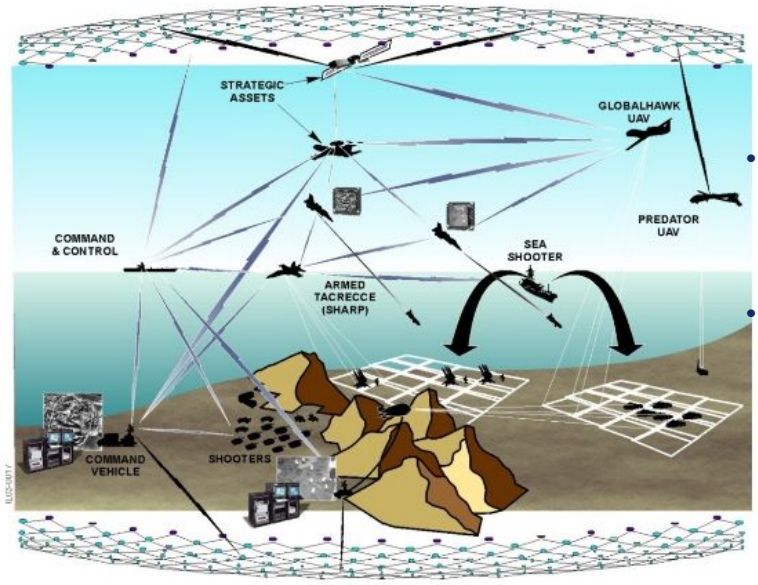
- Thousands of Aircraft with 1 to 4 cameras
- Limited by film capacity, ~1000 miles of film per camera
- Often took days to get actionable intelligence to users
- Very manpower-intensive to process & analyze film

## 15+ years of digital

- Primarily limited by resolution, bandwidth and recording capacity
- Can capture tens of thousands of miles of imagery per camera
- Multi-spectral collection systems
- Computing power, software, and distribution have become the linchpin to creating information

**Market is looking for more bandwidth-/time-efficient sensors capable of extracting knowledge as a "node" or multiple "nodes" in a sensor network**

# Today's architecture is fundamentally flawed




Net-centricity with Legos

- Connectivity stacked on top of a variety of existing architectures
- Re-plumbing decade-old architecture will just overwhelm decision-makers and analysts that are still the backbone of today's ISR architecture

**Must develop new architectures that heal, instead of add to, the old ones!**

# ISR is in rapid transition

From Strategic Precision Targeting by a select few

To Tactical Precision Targeting for Every Soldier, Airman, Sailor, and Marine

**What's needed is a commensurate transition to multi-level collaborative "nodal" networks**

- Automatic, sensor-node to sensor-node cooperative tasking, collection and data exploitation
- Connection policies (security included) that are based on the end-user's information requirement

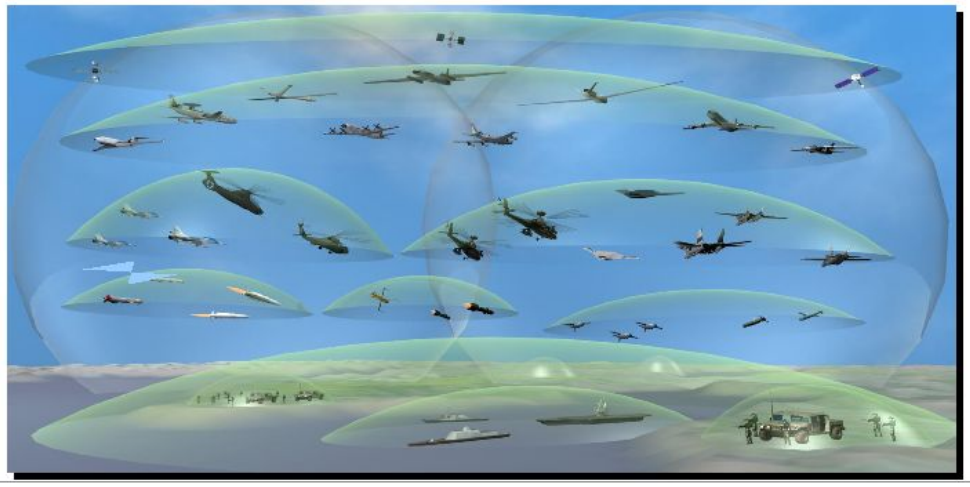
# Tomorrow's architecture – nodal by design

## Nodes capable of "Knowledge Extraction"

- Coherent Change Detection, nodal ID and Moving Target Indication
- Multi-sensor fusion
- Cooperative engagement and cross-cueing

## Nodes capable of being Servers and Clients

- Enhanced Imagery Intelligence, Feature Extraction
- Efficient Bandwidth Utilization through network-optimized Push/Pull mechanisms

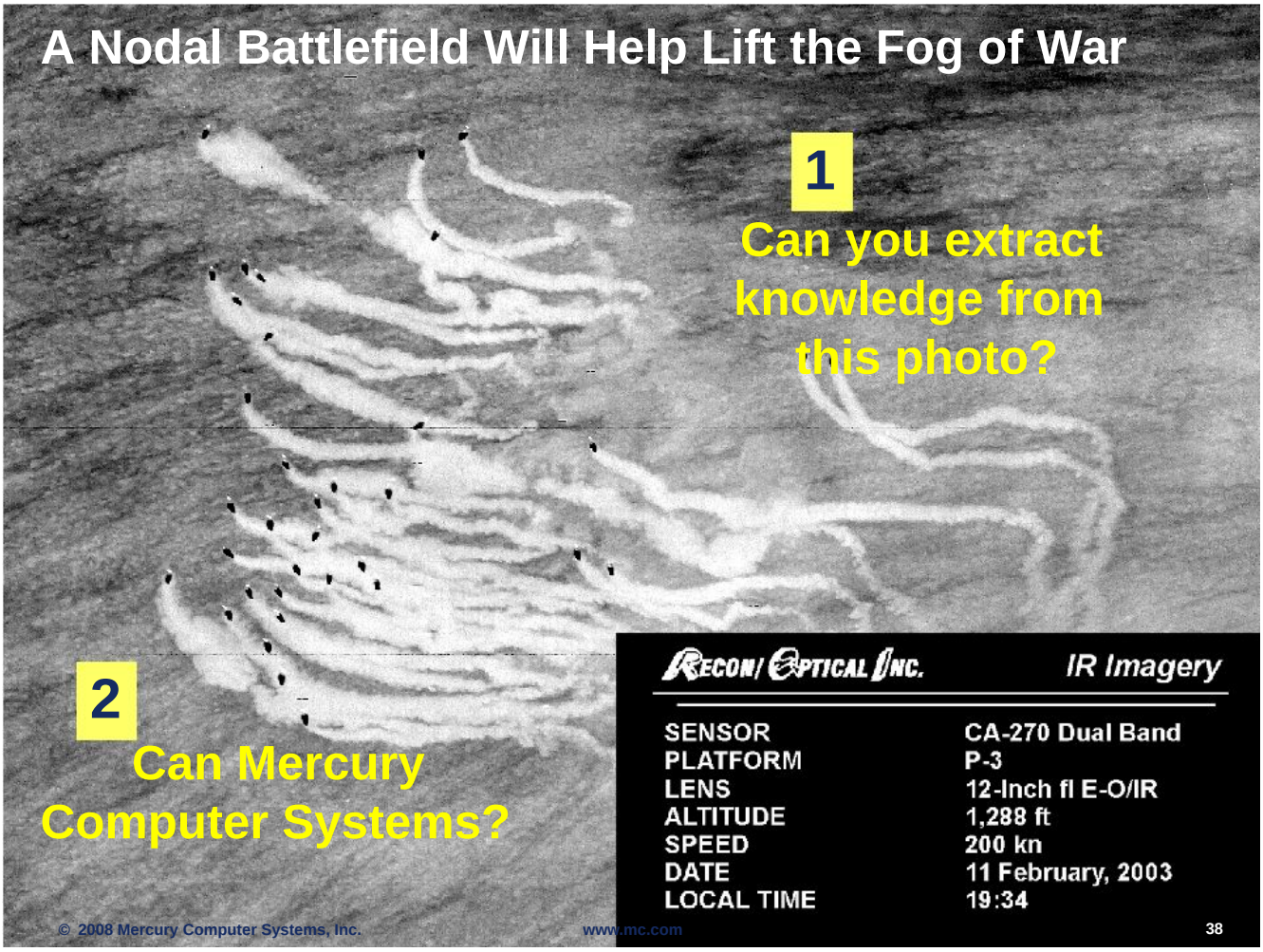


# Mercury's Opportunity – "Nodalectic" by design

- Government frustrated with current "Platform-Centric" model
  - Redundant capabilities without the benefits of redundancy, scalability
  - Slow time to field
  - Maybe not best-of-breed
- Commercial – Military cross-over: commercial technologies now driving new capabilities
- "Converged Sensor Networking," Mercury's new "Nodal" concept could be the core of a new ISR Architecture
  - Platform-agnostic
  - Blend of "Best Practices"in Commercial & Military Development, Design & Manufacturing
- Mercury has the opportunity to establish itself as a solutions integrator in ISR

**Become the government's trusted partner for a next-generation ISR architecture for Nodal Knowledge Extraction**

# A Nodal Battlefield Will Help Lift the Fog of War



**1**

**Can you extract knowledge from this photo?**

**2**

**Can Mercury Computer Systems?**

RECON/OPTICAL INC. — IR Imagery

| | |
|---|---|
| SENSOR | CA-270 Dual Band |
| PLATFORM | P-3 |
| LENS | 12-Inch fl E-O/IR |
| ALTITUDE | 1,288 ft |
| SPEED | 200 kn |
| DATE | 11 February, 2003 |
| LOCAL TIME | 19:34 |

# Agenda

- Corporate Overview
- Keynote:  Piercing the Fog of War
- The Converged Sensor Network™:  Market Leadership
  - Ian Dunn, CTO, Mercury Computer Systems
  - Mercury Innovation Addresses Access to Critical Information
  - Converged Sensor Network™Defined
  - Industry-Leading Technology
- Mercury Federal Systems (MFS)
- Advanced Computing Solutions
- Financial Review
- Closing Remarks / Q&A

# Key transitions in Mercury's history

**1.**
**RACEway: 1990-2008 & Beyond**

From **array processing** inside a computer workstation…

…to **multi-computing** inside everything from medical scanners to surveillance radars

**Enabling OEMs to integrate a supercomputer into their equipment**

**2.**
**COTS Mandate Begins in 1991**

From **proprietary microprocessors** being developed by every prime contractor…

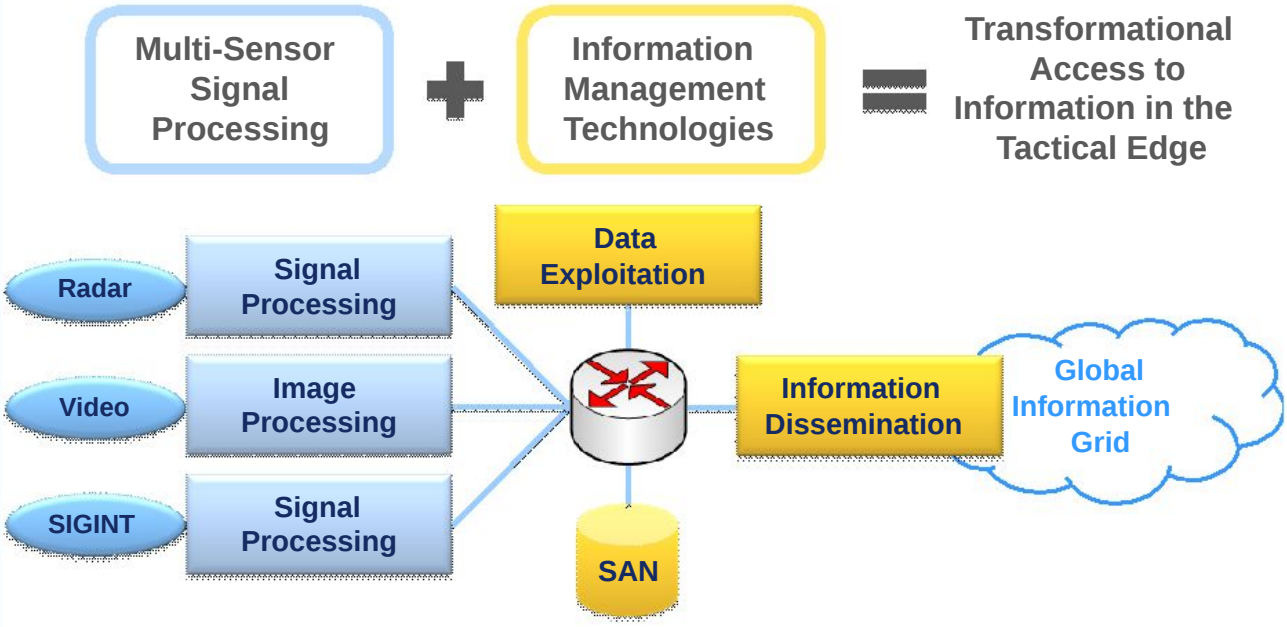
…to **COTS-based computer boards** being used across all military electronics

**Delivering highest density per cubic foot, a key metric in military electronics**

# Mercury's next big transition

## Converged Sensor Network ™ (CSN ™) Architecture

A revolutionary open architecture that combines



# Why now? Information is paramount

**Ground-based exploitation takes too much time and too many people**

**Sensor data rates continue to outstrip available data link bandwidths**

***What's needed?***

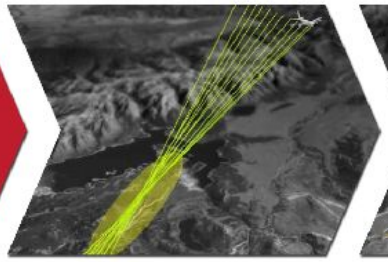
**Timely Access**

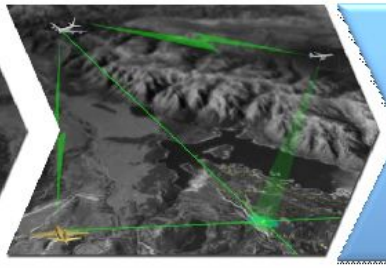
**Networked tactical exploitation in the sky, on the ground**

**Single sensor platforms don't collect adequate target information**

**Targets in heavy clutter require cooperation – find, classify, and track**

**Accurate Access**





**Multiple, persistent perspectives**

# Why CSN™? Transformational access/flexibility

**Virtual Sensor**

- Shared access through virtualization
- Deterministic processing through embedded Service-Level Agreements

**Service-Oriented**


- Processing, data and communication capabilities as network-based services
- Rapid configuration and deployment framework

**Open Architecture**

- Open, standard APIs for ease of migration to and from the tactical edge
- Optimized for time-critical applications

**Highly Available**


- Graceful elevation, degradation of capabilities to address changing needs/availability

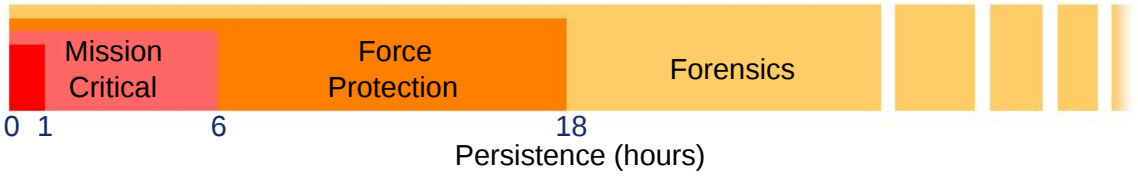
# To the warfighter, CSN™ is on-demand sensing

**Virtual Sensor**

**Service-Oriented**


- Engage an entire network of sensors with a single “virtualized” interface
- Capable of translating information needs into cooperative tasking and exploitation services
- Retain targets throughout the field of regard of the sensor network

*Service multiple, simultaneous missions*




**CSN is the basis for a more effective, efficient ISR: more persistence, less bandwidth, and smaller footprint**

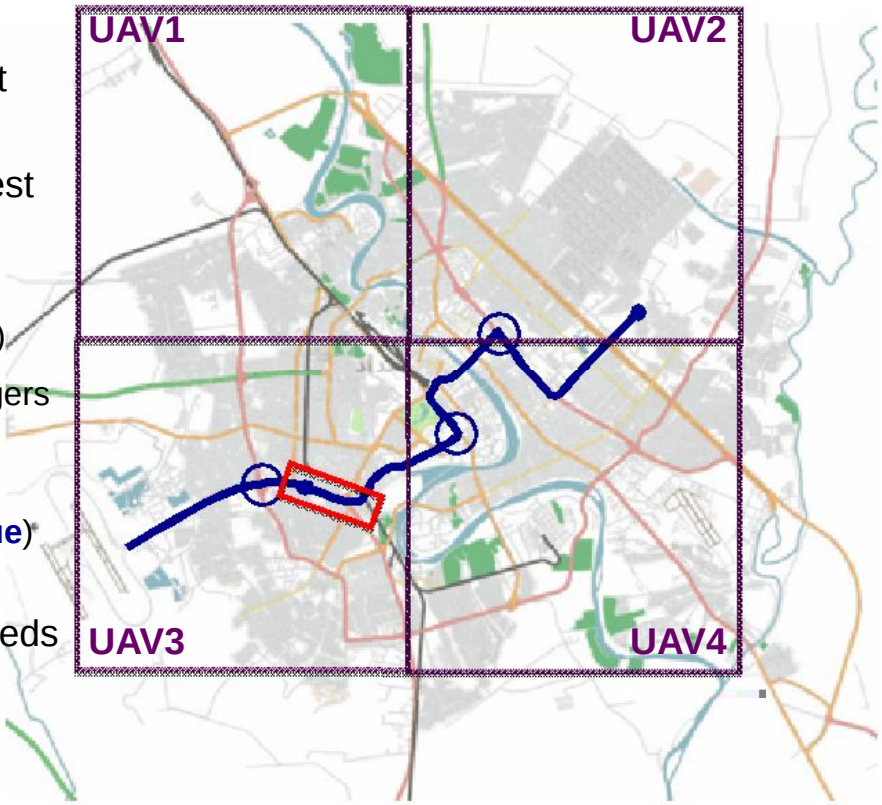
# Force protection scenario with CSN™

-3h: Review latest imagery and threat assessments

-1h: Configure request for persistent surveillance

- Moving window (**red**)
- Mission-specific triggers and threat tracking
- Mark hot spots for special handling (**blue**)

0h: Subscribe to persistent video feeds and alarms



# To the OEM, CSN™ is an embedded cluster

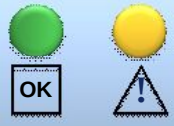
**Service-Oriented**


- Facilitate rapid prototyping in the lab and ease of migration to the field

**Open Architecture**

- Support for open, plug and play of new software capabilities, reducing development, maintenance, and logistics

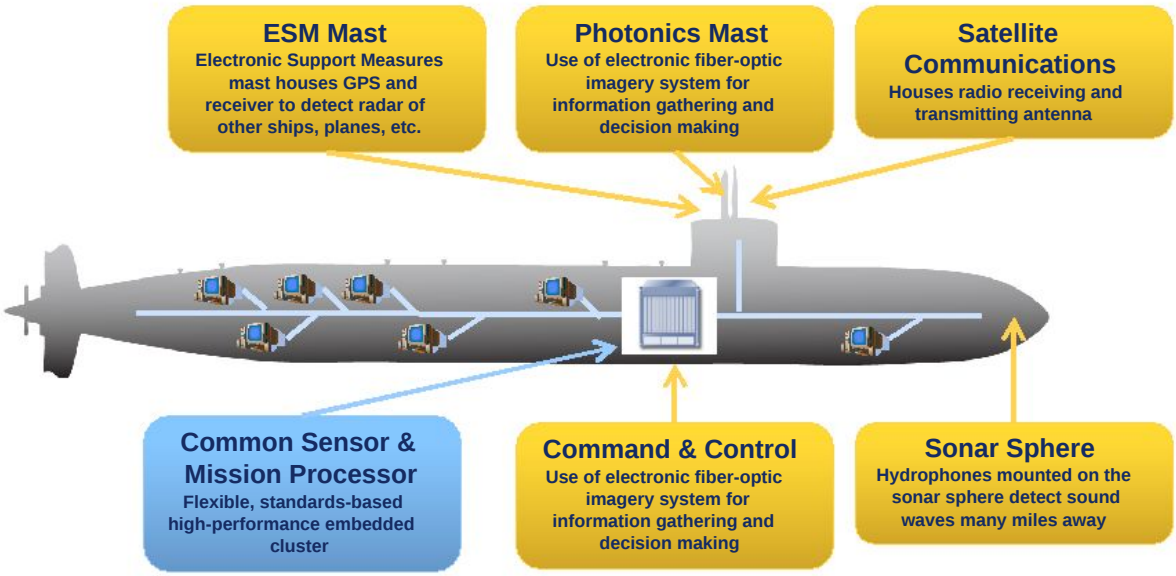
**Highly Available**




- Ensure 24/7 reliability, availability, serviceability

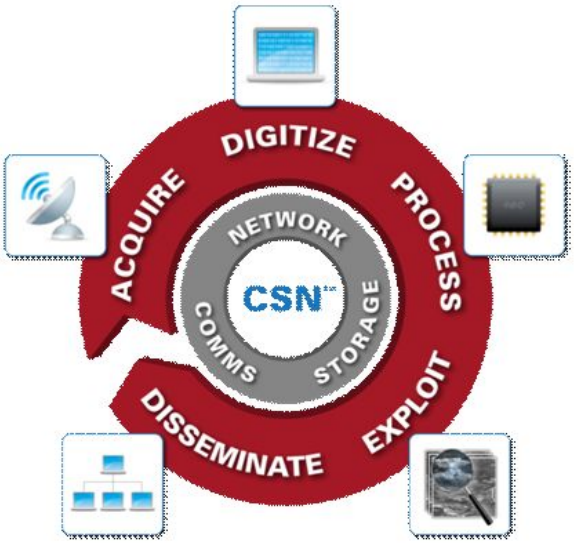
**CSN delivers improved efficiencies in R&D and lowers risk to improve product velocity and ROI**

# A real combat system built with CSN™




- Converged offering of signal processing, data exploitation, mission processing and storage
- Service-oriented, highly available solution built on top of dual redundant IP backbones

# Capabilities of CSN Architecture



# Capabilities of CSN Architecture

ECHOTEK™ SERIES

***Integrated performance with modular products***

- RF tuners
- IF signal processors

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- IF signal processors


PowerStream®

***Market leader in Digital Signal Processing***

- Low latency streaming IO
- Highest density signal and image processing

# Capabilities of CSN Architecture

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- Low latency streaming IO
- Highest density signal and image processing

Ensemble

***Building new capabilities***

- IP networking
- Information management technologies

# Capabilities of CSN Architecture

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***Market leader in Digital Signal Processing***

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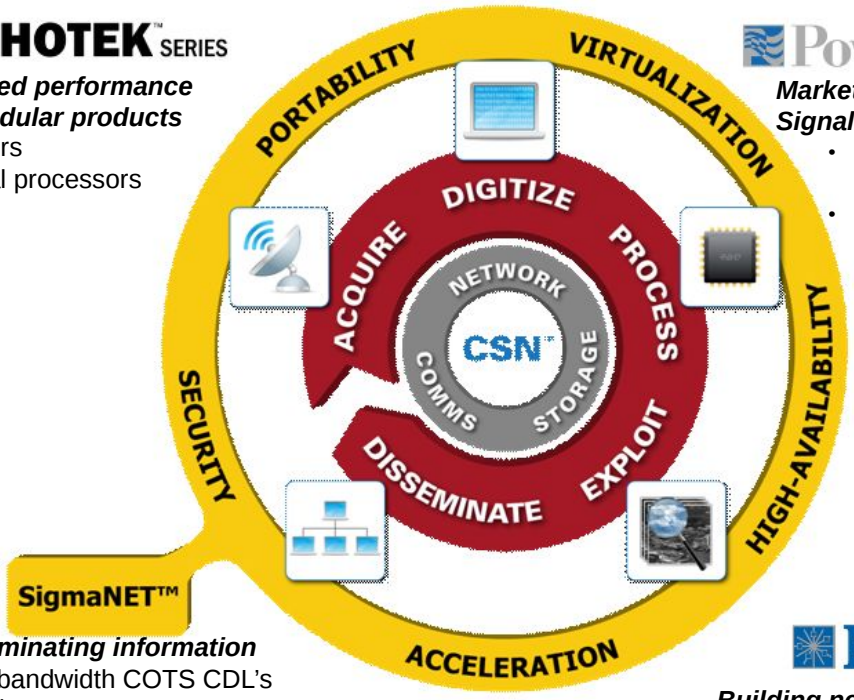



***Disseminating information***

- High-bandwidth COTS CDL's
- Satellite comms
- Gateways
- Datalinks
- Networking

Ensemble

***Building new capabilities***

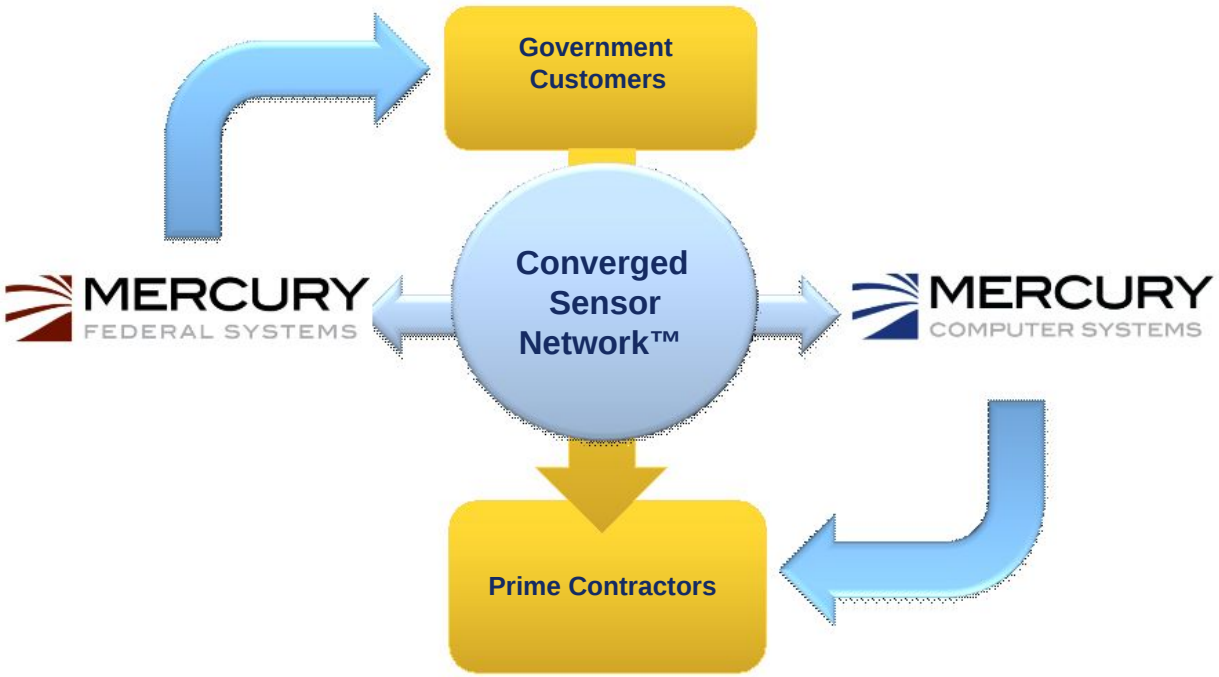
- IP networking
- Information management technologies

# Converged Sensor Network™ Vision

- Leverage past acquisitions and organic product development to focus on providing an open, off-the-shelf architecture
- Become the technology leader in embedded convergence
  - Convergence of real-time and non-real-time applications
  - Convergence of multiple sensors, users and missions on a single, unified tactical architecture
- Make CSN™the foundation of a new ISR architecture to deliver transformational access in the tactical edge

**Be the recognized market leader in delivering next-generation Converged Sensor Network™ solutions**

# Mercury's Team to execute CSN™



# Agenda

- Corporate Overview
- Keynote:  Piercing the Fog of War
- The Converged Sensor Network™:  Market Leadership
- Mercury Federal Systems (MFS)
  - Terry Ryan, SVP & GM, Mercury Federal Systems
  - Why the Necessity for Mercury Federal?
  - Mission and Objectives
  - Success Stories
- Advanced Computing Solutions
- Financial Review
- Closing Remarks / Q&A

# Defining the next-generation architecture

- In 1993, "we" defined the current ISR system architecture being deployed today…
  - Ground station centric at the Division-level
  - One platform, one ground station
  - Collect and dump all data (watch and hear >25%)
- In 2008, that architecture is……
  - Outdated because of different and changing threat
  - Does not adequately scale with advances in technology
- Mercury possesses the technology expertise and defense heritage to successfully meet this pressing need for a new architecure

**Mercury Federal will leverage MCS technology and establish a government-amenable business model to define and create the next-generation processing and compute architecture for ISR systems**

# The Federal market: continuously evolving

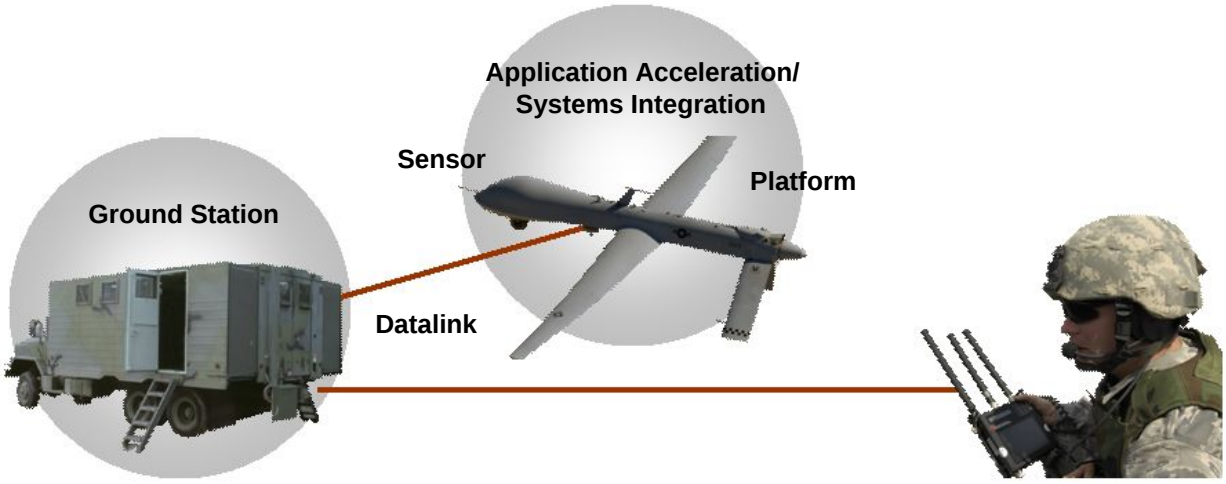
| DoD | 1993 | 2008 | 2013e |
|---|---|---|---|
| Budget ($B) | 258 | 490 | 511 |
| Supplemental ($B) | None | +190 GWOT | None planned |
| R&D ($B) | 44 | 78 | 63 |
| Procurement ($B) | 56 | 101 | 113 |
| C4ISR Budget ($B) | 13 | 18 | 24 |
| UAS Platforms (#) | 25 | 2,100 | 3,300 |
| Ships/Subs (#) | 600 | 340 | 313 |
| Fed Svcs ($B) | 95 | 250 | 310 |
| Embedded S/W ($B) | 0.4 | 3 | 4.2 |

**Growth trend will be in C4ISR systems integration and related engineering services**

Source: DoD Budget Request FY93 and FY2008

# 1993 Airborne ISR R&D costs

| Signal Processing / Systems Integration | Platform | Sensor | Datalink | Ground Station |
|---|---|---|---|---|
| 10% | 40% | 30% | 5% | 15% |

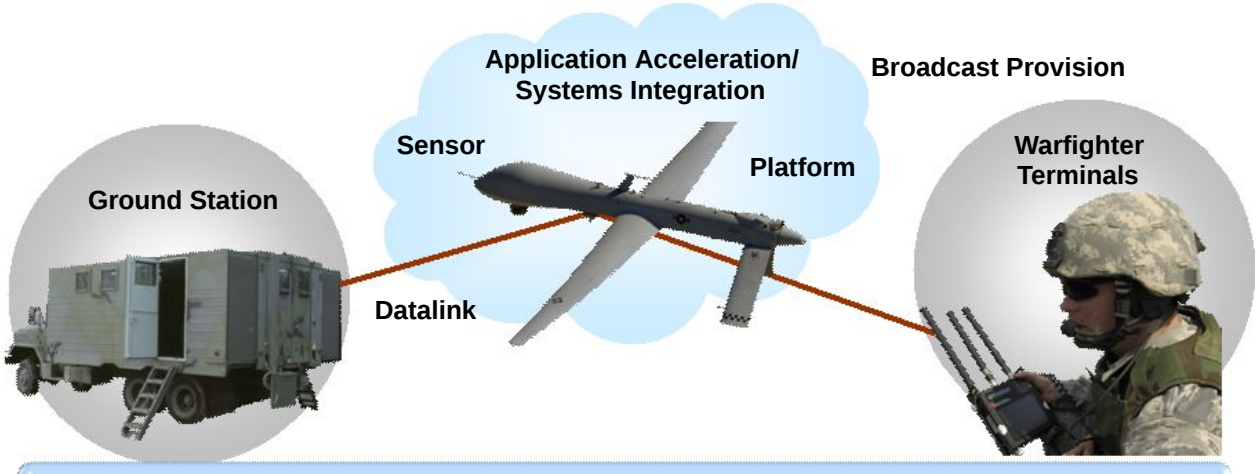



**R&D was focused on deploying long-endurance airborne assets to augment satellites**

Source: DoD Budget Request FY93 and FY2008

# 2008 Airborne ISR R&D costs

| Signal Processing / Systems Integration | Platform | Sensor | Datalink | Ground Station | Warfighter Terminals | Broadcast Provision |
|---|---|---|---|---|---|---|
| 10% | 40% | 30% | 5% | 15% | | |
| 45% | 10% | 15% | 10% | 10% | 5% | 5% |




**Budget priorities being realigned to maintain technology edge**

Source: DoD Budget Request FY93 and FY2008

# Positioning for growth in times of transformation

***"Our conventional modernization programs seek a 99 percent solution in years… today's wars require 75 percent solutions in months."***

Defense Secretary Robert Gates; September 29, 2008

**Mercury Federal has the technical and engineering services platform to address new acquisition cycles**

# Mercury Federal Systems market opportunity

- Government Program Managers challenged to deal with complexities of developing open system solutions in data-intense, multicore computing environments
  - Especially in Intelligence, C4ISR, and Homeland Security spaces
  - "Digital immigrants versus digital natives"
- DoD increasingly frustrated with paying for multiple processing architectures; lack of cooperation among the Services is now an affordability issue
- Absence of government-sponsored activities for rapid development of innovative processing solutions

**MFS emerging as DoD's objective and trusted partner in C4ISR signal processing and multicomputing solutions**

# Tailored offerings enhance MFS value proposition

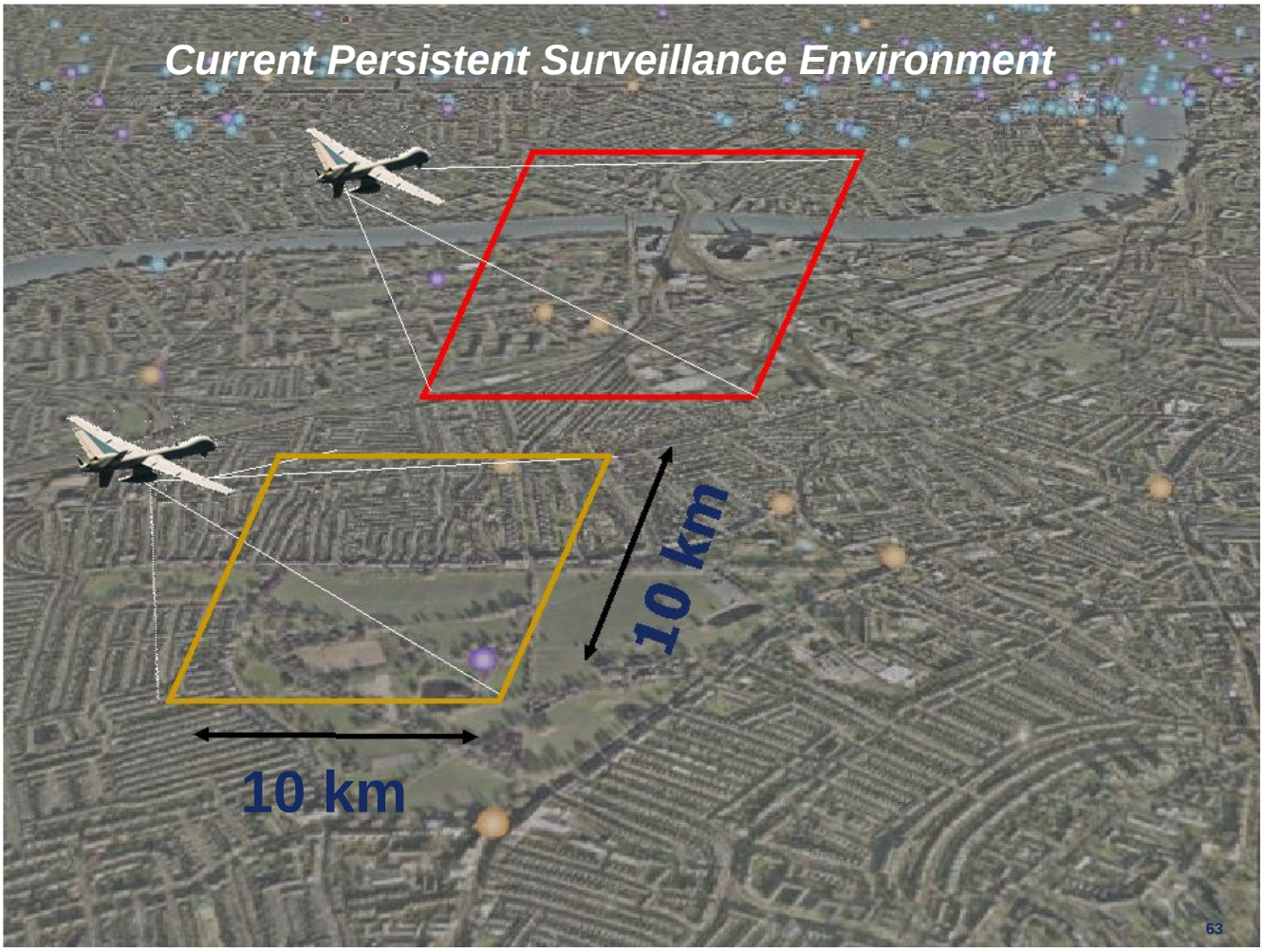

Secure Government RDT&E Funding

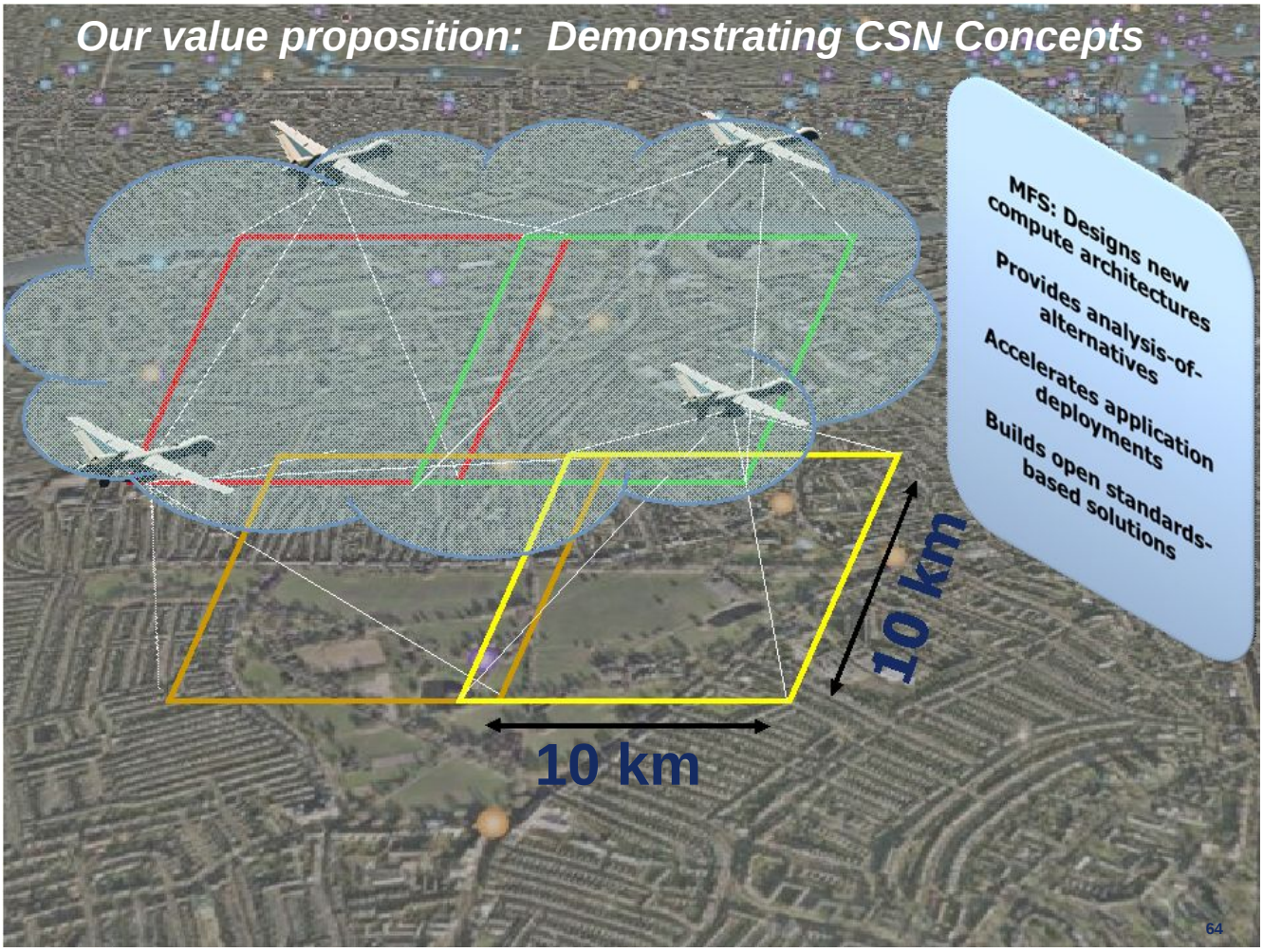
"As is" versus "to be"

Porting infrastructure

MFS development: *license strategy*

MFS working with ACS


Current Persistent Surveillance Environment
10 km
10 km
63


Our value proposition: Demonstrating CSN Concepts
MFS: Designs new compute architectures
Provides analysis-of-alternatives
Accelerates application deployments
Builds open standards-based solutions
10 km
10 km
64

# Sustaining growth in FY09

- Positioning component parts of the CSN™approach on the critical path of key government programs
- Executing directed government-funded initiatives to support the development of new elements of the CSN™architecture
- Expanding our core team of cleared engineers that can develop applications and IP around the CSN™vision
- Using our corporate hybrid business model
  - We are the enablers of modernization

**Focused on quickly fielding CSN™ processing solutions**

# Agenda

- Corporate Overview
- Keynote:  Piercing the Fog of War
- The Converged Sensor Network™:  Market Leadership
- Mercury Federal Systems (MFS)
- Advanced Computing Solutions
  - Didier Thibaud, SVP & GM, Advanced Computing Solutions
  - ACS Overview and Current Success
  - ACS Growth Strategy
  - Converged Sensor Network Product Focus
  - Continuing to Win with Innovation and Technology Leadership
- Financial Review
- Closing Remarks / Q&A

# Introduction

- Commercial business to lead CSN™ technology
- Focus on C4ISR Defense
- Market Leadership in C4ISR Embedded Computing
- Design wins in major programs to fuel growth

# Advanced Computing Solutions

**Leading provider of high-performance embedded computer systems and software to computationally challenging markets**

## Defense Segments (By Sensor)

- Radar
- EW (Electronic Warfare)
- Sonar
- EO (Electro-Optical)
- C4I (Command, Control, Communications, Computers & Intelligence)

## Commercial Segments

- Medical
- Homeland Security
- Semiconductor
- EDA (Electronic Design Automation)
- Telecommunications

# Industry technology drivers

- Reduction in system size, weight and power to meet smaller platform requirements (e.g., Tactical UAV)
- New battlefield requires networked distributed access and information sharing
- Onboard exploitation required for information dissemination
- More emphasis on open standards to improve interoperability

**Significant opportunities aligned with Mercury's capabilities and Converged Sensor Network™ strategy**

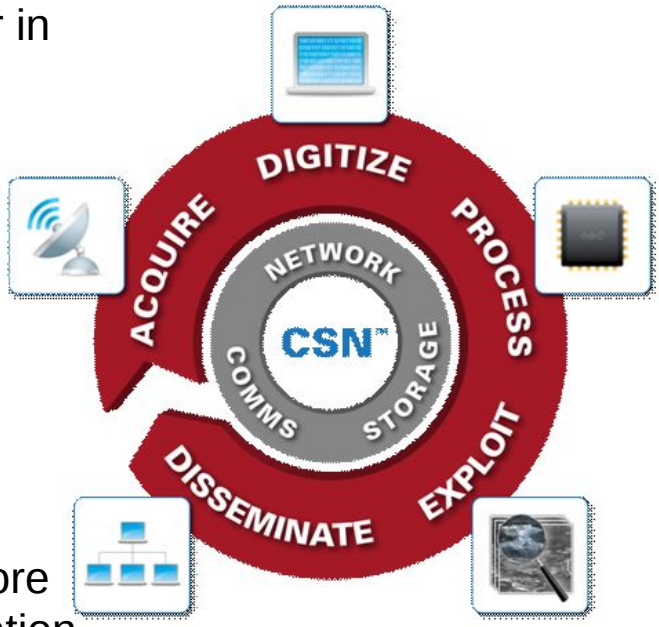
# ACS capabilities


- Capabilities cover full C4ISR processing needs
- Technical expertise and domain knowledge of our customers' applications combine to deliver reliable performance and sustained value
- ACS complements Mercury Federal by supplying foundational products

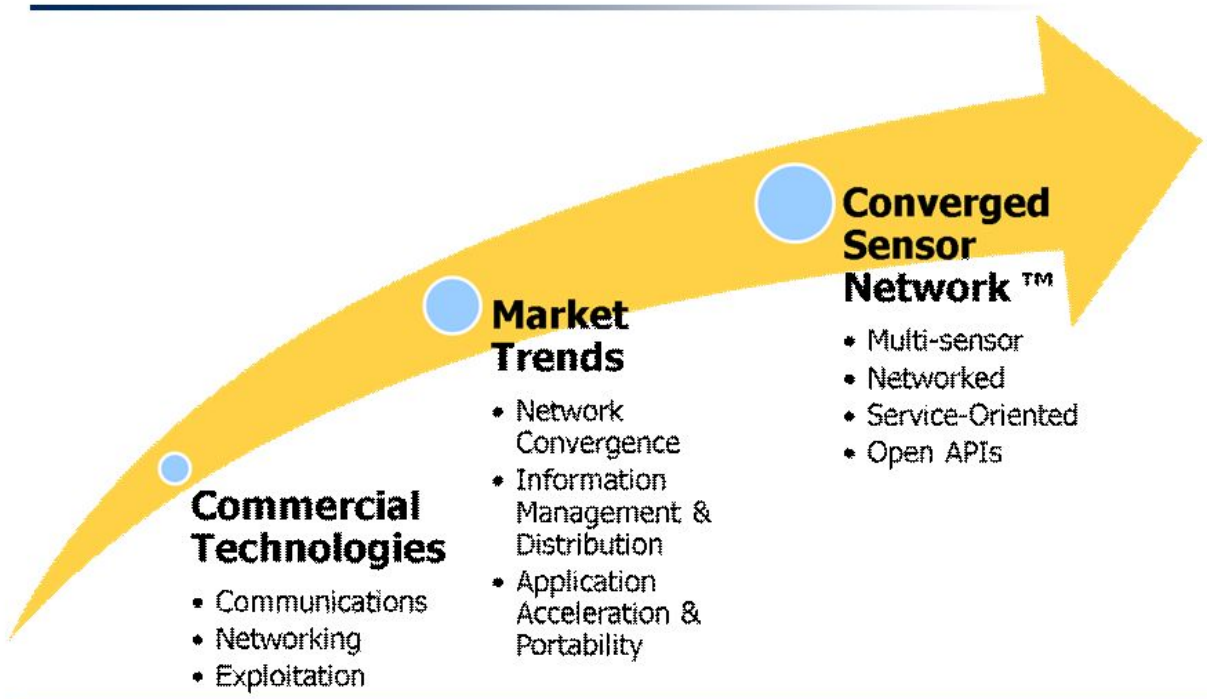
**ACS's core capabilities provide solutions for customers' toughest embedded computing challenges**

# Delivering value to C4ISR customers

- Traditionally market leader in digital signal processing
- Focus on providing more functions through acquired capabilities
  - RF and mixed-signal assets
  - SBC and Intel
- Building capabilities for more subsystem market penetration
  - Networking competence
  - Information management solutions



# Commercial technology at the root of CSN™




**Commercial technologies and trends form the foundation from which ACS can leverage advancements**

# Success in SATCOM – Disseminate

- Mercury pushed the envelope of the ATCA standard to solve state-of-the-art beamforming challenges
- Mercury delivered:
  - Providing 300 Gbps of connectivity
  - High-availability middleware
  - Highest performance FPGA system
  - First commercial CSN™-ready platform

**High-performance ATCA communications system, the root of Mercury's CSN™ architecture**

# Success in semiconductor inspection – Exploitation

- Mercury's solution provides TFLOPS of Cell processing to weed out semiconductor flaws and increase yield for KLA Tencor

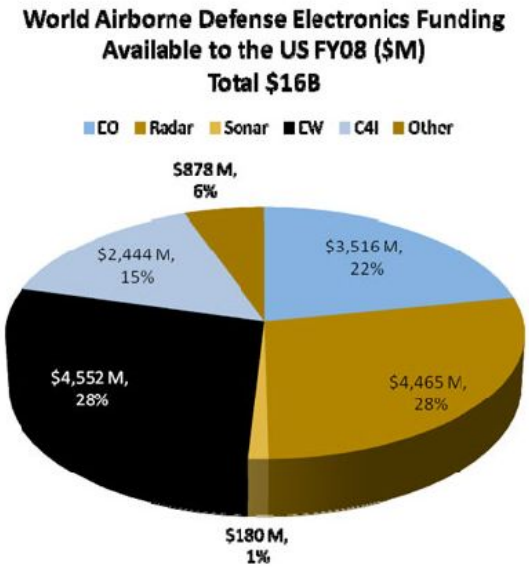
- Mercury's expertise delivered:
  - 4x the performance levels of previous-generation systems
  - Largest image exploitation computer

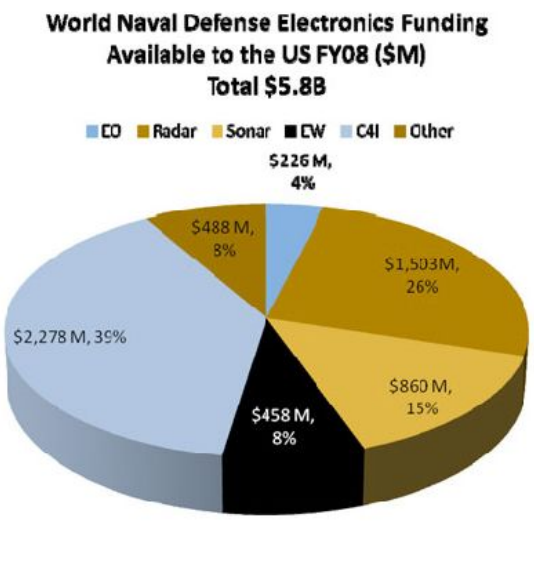
**Unique image processing and algorithm optimization expertise results in growing opportunities**

# Leveraging commercial knowledge into defense

- Bring the best of commerical technology and expertise to provide superior defense products
  - Economies of scale and scope
  - Early adoption and verification of technology
  - Shorter development cycles
  - Capitalize on development synergies
- Cross-market product development strategy
  - Speed time to market with lab to deployment product offering
  - MicroTCA to 3U VPX seamless transition
  - Increasing overlap in interconnectivity and communication needs
- Capability to optimize applications positions us to meet the constraints of size, weight and power

# Airborne and naval electronics



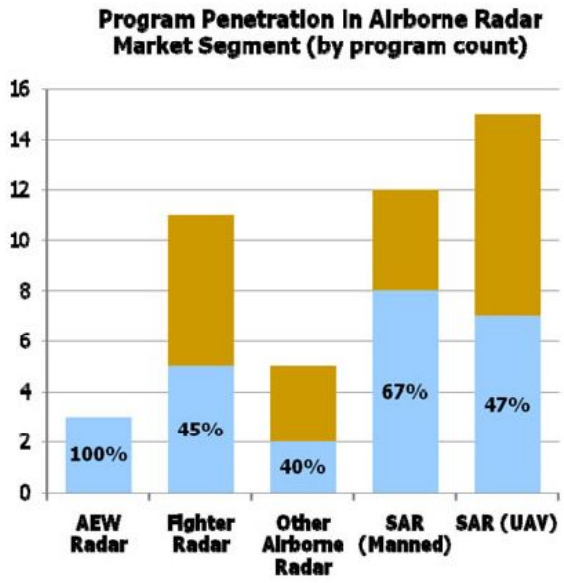




**The largest airborne defense electronics market sector will be radar, followed by C4I, EW, and EO. EW will likely offer the best opportunities for both growth and value**

Source : The Military Electronics Briefing, 2008 Ed. , The TEAL Group

# Defense market leadership in airborne radar

- Highly penetrated in major Airborne programs
  - COTS provider in 54% of major airborne radar programs
  - Significant subsystem processing content
  - Example programs include: APY-3 (JSTARS), APY-2(MESA), MP-RTIP (Global Hawk), Lynx & Lynx II (Predator), APG-77(F-22), F-16
- As incumbent, well positioned as supplier of choice for technology upgrades




**Recognized as the COTS Digital Signal Processing leader in Airborne Radar**

Source : Major Program Lists are derived from the TEAL Group, 2008

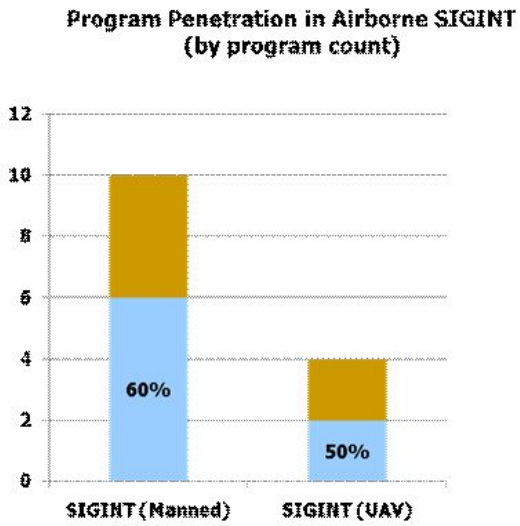
# Continued success in naval radar – Aegis

- Navy's multibillion-dollar Aegis Ballistic Missile Defense (BMD) program built by Lockheed Martin
  - Mercury provides the highest performance deployed radar signal processing solution (1+ TFLOPS) with new CSN™ architecture
  - Deployment starts in 2010

**Lockheed Martin and Mercury have worked closely to incorporate the BMD Signal Processor into the SPY-1 radar**

# Defense market leadership in airborne EW

- Highly penetrated in major Airborne SIGINT programs
  - COTS provider on 57% of Airborne SIGINT
  - ASIP (Global Hawk, Predator)
  - Guardrail, Rivet Joint
- Leveraging experience to pursue upcoming next-generation SIGINT programs
  - Aerial Common Sensor (ACS), EP-X




**Highly penetrated on manned and unmanned SIGINT Airborne Programs**

Source : Major Program Lists are derived from the TEAL Group, 2008

# Design wins driving growth in Defense

Global Hawk

Predator

Rivet Joint

JSTARS

F-35 JSF

BAMS

MESA

F-16

MP-RTIP

Guardrail

JCREW

PAR-2000

Commander

LRR

HML

SIGINT Ground System

Aegis

SQQ-89

Sampson

Empar

International Combat System

Naval SIGINT Platform

**Partial list of well-known programs relying on Mercury technology**

# Success in counter-IED – full CSN™ implementation

- US Army awarded Mercury a contract to develop a testbed for counter-IED systems development
- Mercury is providing a state-of-the-art processing platform including an innovative middleware solution to enable next-generation multi-mission scenarios

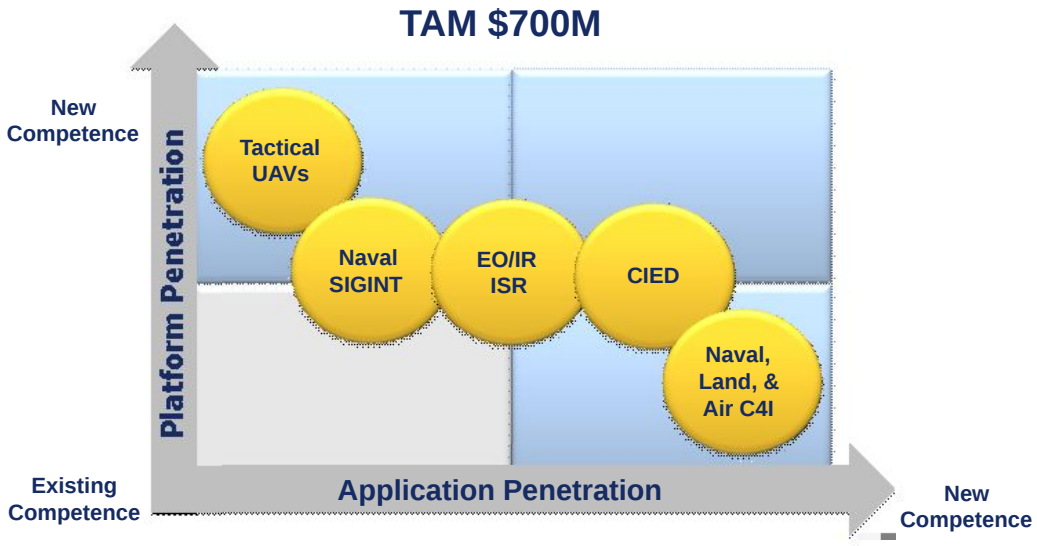
**Mercury technology being used for foundation of Army's next-generation EW system aligned with CSN™ Architecture**

# Success in defense comms – Dissemination

- Raytheon's HDR-RF Ground Modem contract from the US Air Force to provide a wideband modem subsystem
- Mercury provided COTS software radio processing subsystem
- First waveform-portable COTS wideband datalink solution

**Acquisition of Advanced Radio Corp. (ARC) and Echotek enabled success with state-of-the-art technology in a new segment of the C4I market**

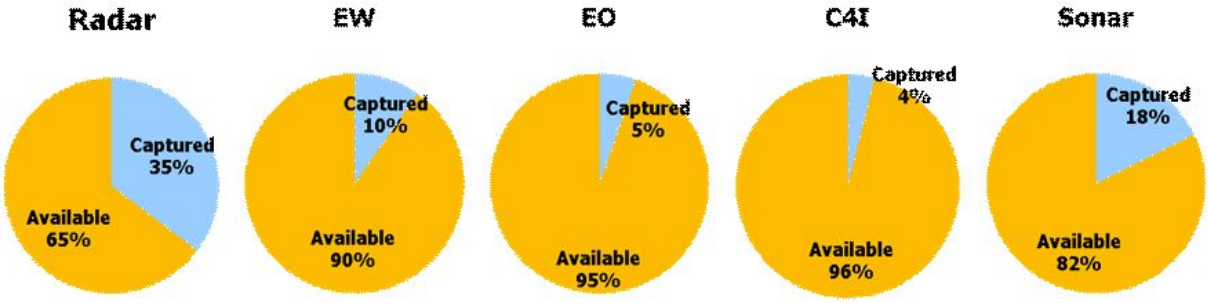
# Tactical market growth opportunities




**Expand into additional applications on existing platforms; leverage application expertise into new platforms**

# ACS defense committed to growth

**Penetration by segment (number of programs)**




- Unparalleled COTS provider success in airborne radar markets
- EW penetration attributed to airborne SIGINT wins
- Grow within penetrated segments with existing capabilities by winning upgrades and technology refreshes

**Tremendous opportunity to leverage capabilities into new segments**

# ACS 3-phased growth plan

- Defensive Positioning
  - Traditional market segments where Mercury's innovation has resulted in a significant installed base
  - Continue leadership and program capture within these segments
- Tactical Growth
  - Market segments where Mercury's existing capabilities are leveraged
  - Focus on new application and platform pursuits
- Strategic Growth
  - Execution of Converged Sensor Network™ roadmap

# Why customers choose Mercury

- Superior performance and reliability
- Close collaborative relationships with our customers
- Technology and domain expertise contributions
- Range of open-standard and flexible products
- Ability to deliver complex subsystems
- Mitigate customer risk and reduce time to field

# Why we will get to the next level

- Be the competitive advantage for our customers with CSN™
- Leverage commercial expertise for quicker time to deployment
- Clear understanding of the future of the market based on the combined knowledge of Mercury Federal and ACS
- Provide Converged Sensor Network™ Solutions that:
  - Meet the needs of the networked battlefield
  - Assist our customers in providing new capabilities to the warfighter
  - Transition easily from lab development to deployment

# Summary

- Expand beyond signal processing
- Stabilize and focus our commerical business
- Leverage commercial technology expertise into defense CSN™offerings
- Well-positioned to take advantage of C4ISR for growth
- Growth fueled by new application and platform design wins

# Agenda

- Corporate Overview
- Keynote:  Piercing the Fog of War
- The Converged Sensor Network™:  Market Leadership
- Mercury Federal Systems (MFS)
- Advanced Computing Solutions
- Financial Review
  - Bob Hult, CFO, Mercury Computer Systems
  - FY08 Financial Results
  - FY09 Guidance
- Closing Remarks / Q&A

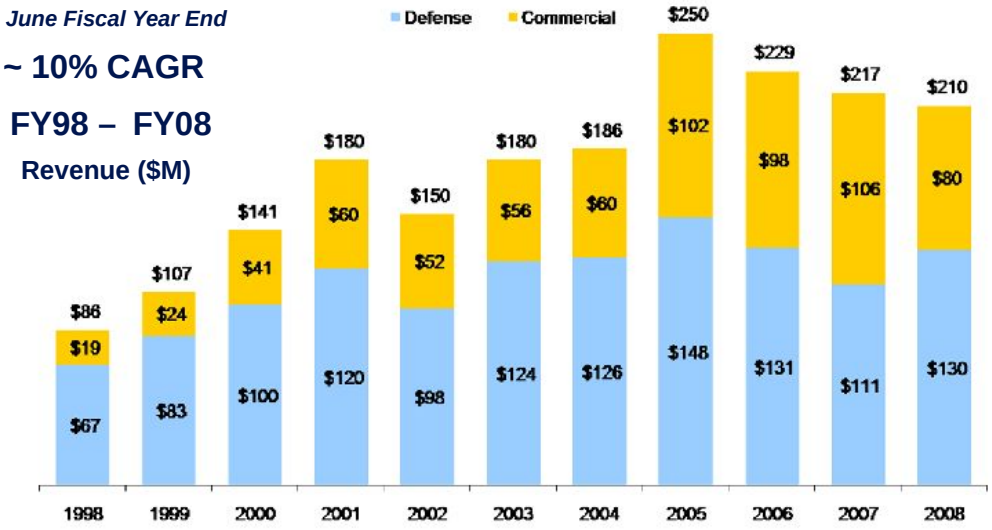
# FY07 vs FY08: improved performance

| Non-GAAP | FY07 Actual | FY08 Actual | FY08 vs. FY07 |
|---|---|---|---|
| **Revenue ($M)** | 217 | 210 | (3%) |
| **Gross Margin % Revenue** | 56.4% | 60.7% | 4.3 pts |
| **Operating Expenses ($M)** | 136 | 124 | 9% Improvement |
| **Operating Profit % Revenue** | (15) (6.8%) | 3 1.5% | $18M Improvement |
| **EPS** | $(0.32) | $0.23 | $0.55 Improvement |
| **Operating Cash Flow ($M)** | $(10) | $14 | $24M Improvement YTD |
| **# Employees** | 729 | 670 | 8% reduction |

**Notes:**
1) All historical income statement figures adjusted for the discontinued operation of Embedded Systems & Professional Services and SolMap.
2) All numbers are non-GAAP.

# Revenue growth follows investment cycles:

## Driven by Defense



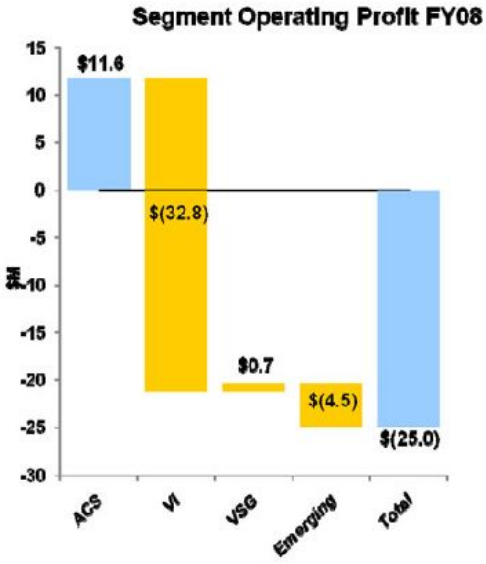

**Notes:**

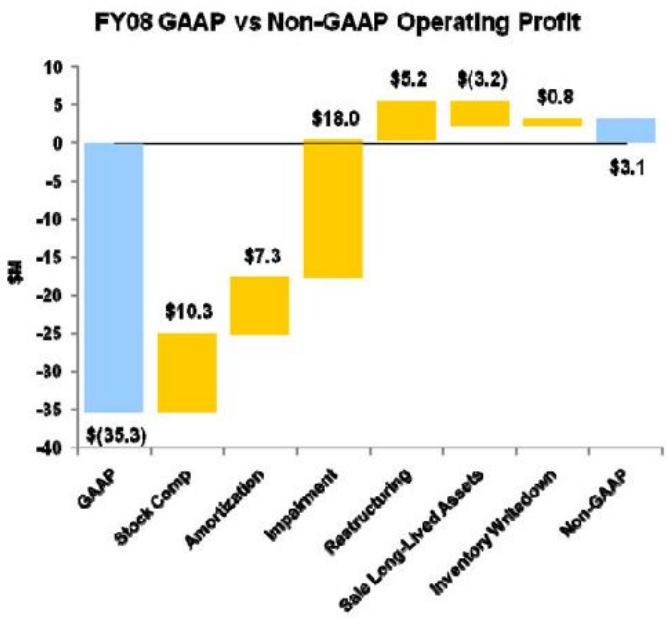
1)Represents total Company revenues; VI, VSG and Emerging businesses revenue treated as Commercial

2)All historical figures adjusted for the discontinued operation of Embedded Systems & Professional Services and SolMap

# Segment operating profit (#'s GAAP)

- Profitability strength in ACS; non-core businesses eliminating operating profits



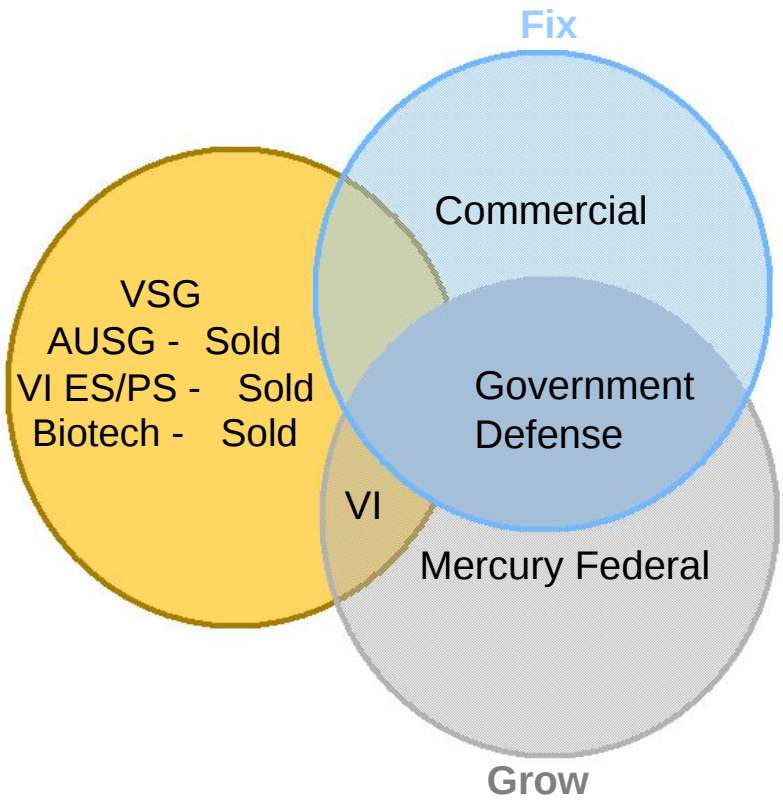

**Notes:**

1)FY08 Segment Operating Profit Total excludes stock-based compensation expense.

2)Includes $7.3M amortization expense, $5.2M restructuring, $18M goodwill impairment, $3.2M gain for sale of long-lived asset, and $0.8M inventory write down.

# Strategic Direction – sell, fix or grow

Sell or Shutdown



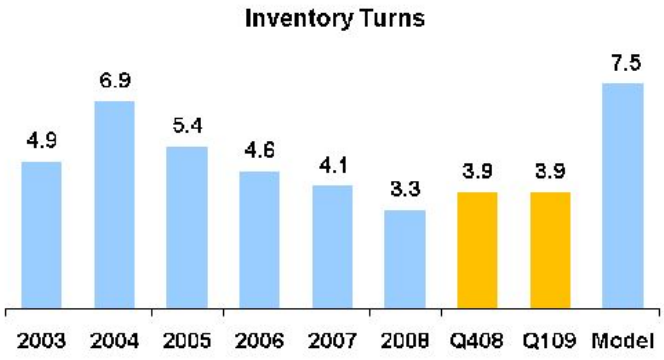
# Strong balance sheet

- $125M convertible debenture (May 2009 Put)
- Net cash positive: $42M
- $50M ARS's
  - UBS payback @ par in June 2010
  - Access to $35M zero cost margin loan at UBS

| *Quarter ended September 30, 2008* | |
|---|---|
| Cash and Equivalents | $167 |
| Total Current Assets | $175 |
| Total Assets | $323 |
| | |
| Total Debt | $125 |
| Total Liabilities | $179 |
| Stockholders' Equity | $144 |

# Focus on working capital

- Supply chain transformation
  - Operational efficiencies
  - Manufacturing lead times
  - Cost of quality
  - Competitive advantage for Mercury and customers
  - Inventory reduced $7.1M
- Customer satisfaction
  - DSO's at model
  - End-of-quarter shipment skew




# Gap to target business model (#'s non-GAAP)

| Non-GAAP | Total Company Actual FY08 | ACS Actual FY08 | Target Business Model |
|---|---|---|---|
| **Revenue** | 100% | 100% | **100%** |
| **Gross Margin** | 61% | 59% | **58+%** |
| **SG&A** | 35% | 27% | **Mid 20%** |
| **R&D** | 24% | 22% | **High Teens** |
| **Income from Operations** | 2% | 10% | **15%** |

**Notes:**

1) All historical income statement figures adjusted for the discontinued operation of Embedded Systems & Professional Services and SolMap.

# Guidance summary (non-GAAP)

| | Q1 | | Q2 | | Q3 | | Q4 | | Q109 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Reported | Guidance | Reported | Guidance | Reported | Guidance | Reported | Guidance | Reported | Guidance |
| Revenue ($M) | 49.2 | 48.0 | 52.6 | 51.0 | 56.5 | 53.0-55.0 | 55.2 | 53.0-56.0 | 49.1 | 47.0-49.0 |
| EPS ($) | 0.09 | (0.08) | 0.04 | (0.05) | 0.04 | (0.04)-0.00 | 0.01 | (0.05)-0.01 | 0.07 | (0.07)-(0.03) |

**Last 5 quarters' revenue and EPS exceeded or met the top end of guidance**

# Q2 Fiscal Year 2009 guidance

| Quarter Ending December 31, 2008 | | |
|---|---|---|
| **Revenues ($M)** | **$47 - $49** | |
| | **GAAP** | **Non-GAAP** |
| **Gross Margin** | **Approximately 59%** | **Approximately 59%** |
| **EPS** | **$(0.22) - $(0.14)** | **$(0.05) - $0.00** |

- Impact of equity-based compensation costs related to FAS 123R of approximately $2.4M excluded from non-GAAP
- Acquisition-related amortization of approximately $0.8M excluded from non-GAAP

**Notes:**
1) Figures in millions, except percent and per share data

# Agenda

- Corporate Overview
- Keynote:  Piercing the Fog of War
- The Converged Sensor Network™:  Market Leadership
- Mercury Federal Systems (MFS)
- Advanced Computing Solutions
- Financial Review
- Closing Remarks / Q&A

# Thank you!

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MERCURY COMPUTER SYSTEMS

# Appendix

# GAAP to non-GAAP reconciliation

- Q209 Guidance Reconciliation*

| | RANGE | | |
|---|---|---|---|
| | Income (Loss) Per Share - Diluted | | Income (Loss) Per Share - Diluted |
| GAAP expectation | $ (0.22) | | $ (0.14) |
| Adjustment to exclude stock-based compensation | 0.11 | | 0.10 |
| Adjustment to exclude amortization of acquired intangible assets | 0.04 | | 0.04 |
| Adjustment for tax impact | 0.02 | | - |
| Non-GAAP expectation | $ (0.05) | | $ 0.00 |

** Per Company guidance range, October 22, 2008 earnings conference call*