



# **SAIC Aircraft Mission Planning, Rehearsal and Debrief Systems**

Our vision, values and exceptional people contribute to our success

# SAIC Business Overview



SAIC is a FORTUNE 500® scientific, engineering, and technology applications company that uses its deep domain knowledge to solve problems of vital importance to the nation and the world, in national security, energy and the environment, critical infrastructure, and health.

## Our Successes

40 years of continuous growth

- \$10.1 billion in annual revenues for fiscal year 2009
- FORTUNE 500 Company – No. 266

Superb staff of qualified professionals

- Approximately 45,000 personnel worldwide
- 10,000 employees with advanced degrees
- 19,000 with security clearances

Key positions on initiatives of national importance

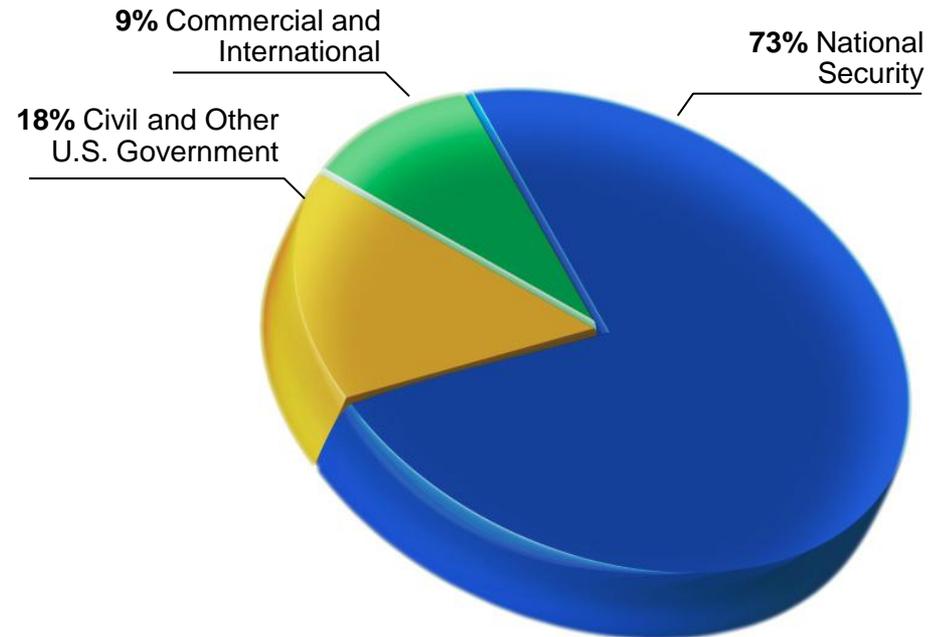
- National Security
- Homeland Defense
- Cybersecurity
- Global Health

Breadth and depth of technology and domain expertise

Leading provider of contracted R&D services

All figures are current as of March 2009

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**\$10.1 billion**  
(FY 2009)

# Major Projects in National Security



For decades, SAIC has provided command, control, and communications (C3) systems to support warfighters at sea, on land or in the air.



## **Future Combat Systems**

SAIC shares lead systems integrator status with The Boeing Company on the Department of Defense's (DoD's) second-largest program – Future Combat Systems. FCS is the Army's principal transformation program and will be the foundation of a rapidly deployable, network-centric force



## **Global Information Grid-Bandwidth Expansion**

SAIC broke new ground in optical mesh technology and inserted high-speed, high-capacity fiber backbone to provide a global, complex network solution in DoD's worldwide information network



## **Navy "Seaport" Systems Support**

SAIC is one of the leaders in prime awards since April 2004 supporting significant system modernization in major Navy commands

## **MRAP Vehicles**

SAIC is playing a key role in rapidly delivering the high-priority, lifesaving Mine-Resistant Ambush-Protected (MRAP) vehicles to soldiers and Marines in Iraq and Afghanistan

## **Information Assurance**

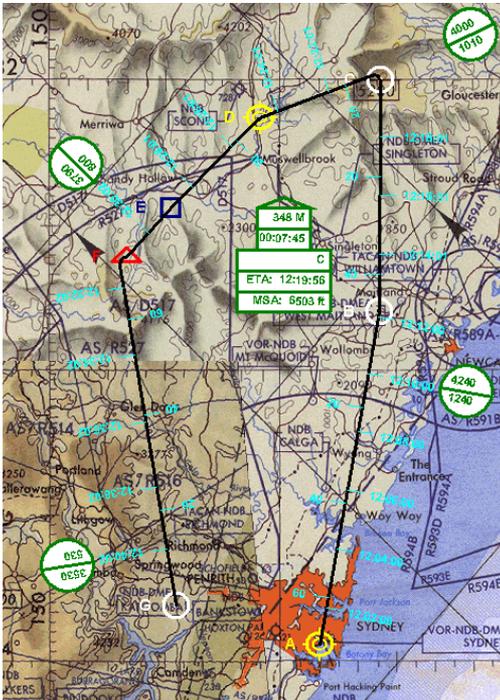
SAIC is a key non-hardware solutions provider within the intelligence community directly supporting customer strategies



## **Coast Guard 24/7 Watch Program**

SAIC supports the entire range of Coast Guard intelligence requirements, from the Commandant's daily briefings to intelligence and information systems support

# SAIC Mission Planning Systems



- SAIC provides state-of-the-art aircraft Mission Planning Systems (MPS) to many domestic and international customers
- Using SAIC’s reliable Core MPS capabilities, aircraft-specific systems are tailored to meet each customer’s unique mission requirements
- The MPS utilizes customized aircraft performance and load models
- MPS users can import and export data from standard interfaces
- SAIC has over 20 years of experience delivering advanced Mission Planning Systems to multinational customers operating a variety of aircraft to include the following:
  - Helicopter Platforms: MH-60, EH-101, WAH-64 APACHE, MH-53 SEA DRAGON, AH-1, UH-1, CH-47, AH-64
  - Fixed-wing Platforms: F/A-18, F-111, A-4, AV-8, VC-25A, VC-32A, KC-135
- SAIC’s proven MPS technology provides a cost-effective, low-risk mission planning solution

MPS is developed and maintained by an organization within SAIC that is Capability Maturity Model® Integration (CMMI®) Level 5 certified and International Organization for Standardization ISO 9001:2000 registered.

CMMI is registered in the U.S. Patent and Trademark Office by Carnegie Mellon University.

# SAIC Mission Planning System Data Flow



## Command & Control Systems



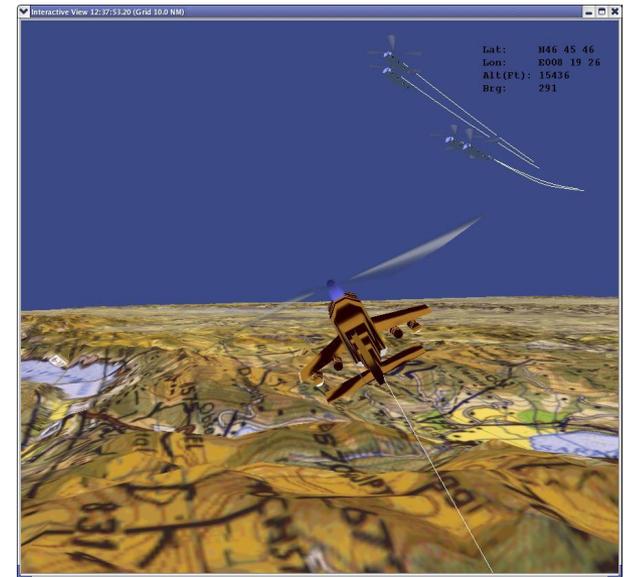
## Air Tasking Orders and Plans



DTC: Mission Plans and Data



DTC: Recorded Mission Data



## Mission Planning System

- Multiple Aircraft
- Aircraft Weight & Balance
- Route Plans
  - ✓ Time, Distance, Fuel, Aircraft Performance
- Assessment
  - ✓ De-confliction
  - ✓ 3-D Rehearsal
  - ✓ Radar and Sensor Terrain Masking
- Order of Battle and COMM Plans
- Write Data Transfer Card (DTC)

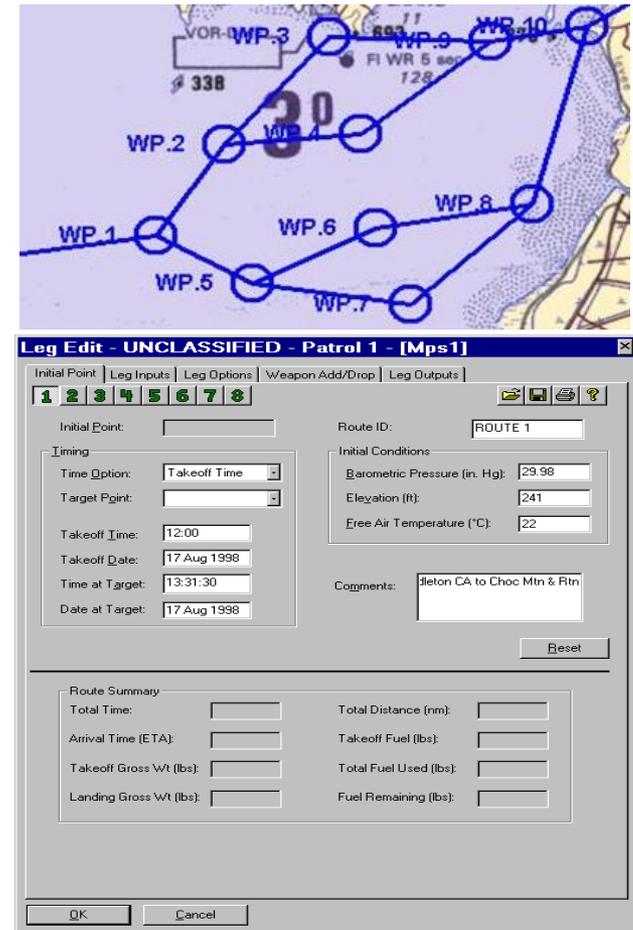
## Mission Planning System

- Read Data Transfer Card
- Aircraft Maintenance Data
- Aircraft Flight History
- Updated Mission Data
- Mission Debrief

# SAIC Mission Planning Systems on Commercial Off-the-Shelf Hardware



- Microsoft® Windows®-based MPS Solutions
  - Low-cost hardware
    - Initial procurement
    - Maintenance/Enhancement
  - Flexible hardware configurations
    - Laptop/Notebook
    - Personnel Workstation
  - Familiar Microsoft Windows environment
    - Intuitive interface
    - Network management utilizing existing assets
  - Compatible with other Windows environment tools
    - Data analysis
    - Data presentation
  - Graphical User Interface (GUI)
    - Microsoft look-and-feel GUI
    - Extensive use of toolbars
    - Convenient tabbed dialogue boxes
  - Framework
    - Microsoft document-view architecture
    - SAIC's proven Core MPS and Mission Support Library
    - Supports standard map data sources and imagery formats



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# SAIC MPS Sample Menu Layout



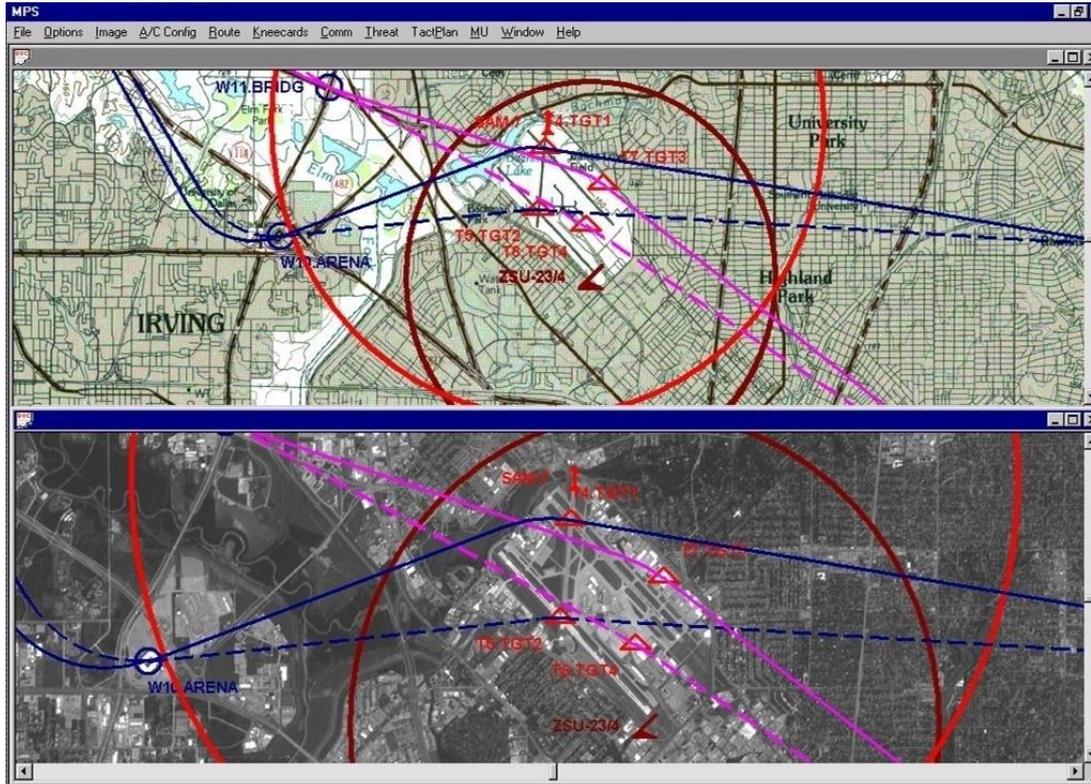
The screenshot shows the SAIC MPS software interface with various menu items highlighted by red arrows pointing to callout boxes. The main window displays a map of the Penang region with a flight path consisting of waypoints (WP.1 to WP.11) and weapon events (WE.12). The callout boxes are as follows:

- Image**: Display Map..., Annotate Map..., Zoom In (+), Zoom Out (-), Scroll Map, Print Map (F2), Strip Chart Preferences..., Select Strip Chart, Rotate Strip Chart, Capture Strip Chart (F3), Print Strip Chart (Ctrl+F2), 3-D View..., 3-D Preferences...
- Mission Definition**: Patrol 1 (checked), Patrol 2, Patrol 3, Patrol 4, Aircraft Configuration..., Aircraft Load..., Laser Codes..., Weapon Programming...
- Order of Battle**: Engagement Areas..., Boundaries & Phase Lines..., Threat Char/OOB..., Radar Terrain Masking...
- Flight Plan**: Waypoints and Control Measures..., Connect..., Leg Edit..., Route Summary..., Options..., Point Performance..., Kneeboard, 2-D Elevation View...
- Flight Review**: Assessment..., Deconfliction..., Sun/Moon...
- Comm/Nav**: Comm Day 1..., Comm Day 2..., ADF..., XPNDR/NAV/Radio..., IDM Settings..., Multiple Word of Day..., CEOI...
- DTC**: Mission 1 Data..., Mission 2 Data..., ECR..., Write..., Read..., Zeroize...
- Help**: Index, Using Help, Tutorial, About MPS
- Window**: New Window, Cascade, Tile, Arrange Icons, 1 Mission 1 - Patrol1 (checked)
- Diagnostics**: System Check...
- Post Flight**: Post Flight Data...
- Options**: Main Toolbar (checked), Status Bar (checked), Image Toolbar, Flight Plan Toolbar, Annotate Toolbar, Order of Battle Toolbar, DTC Toolbar, Error/Warning Display, Classification..., Preferences...
- File**: New (Ctrl+N), Open... (Ctrl+O), Close, Save (Ctrl+S), Save As..., Print... (Ctrl+P), Print Setup..., Lesson9.MSN, Lesson5.MSN, Lesson4.MSN, Lesson3.MSN, Exit

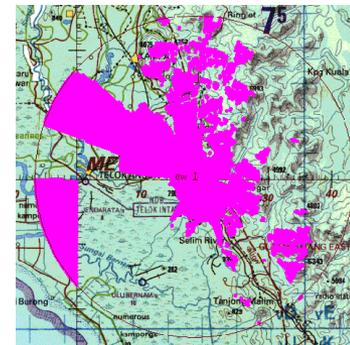
# SAIC MPS Map Display



- Supports multiple aircraft (up to 32) in a single mission
- Flexible overlay symbology
- User-defined displays allow customization to individual preferences
- Support for multiple map scales (1:4M to 1:8K) and imagery data
- Display sensor coverage assessment and radar terrain masking



Sensor Coverage

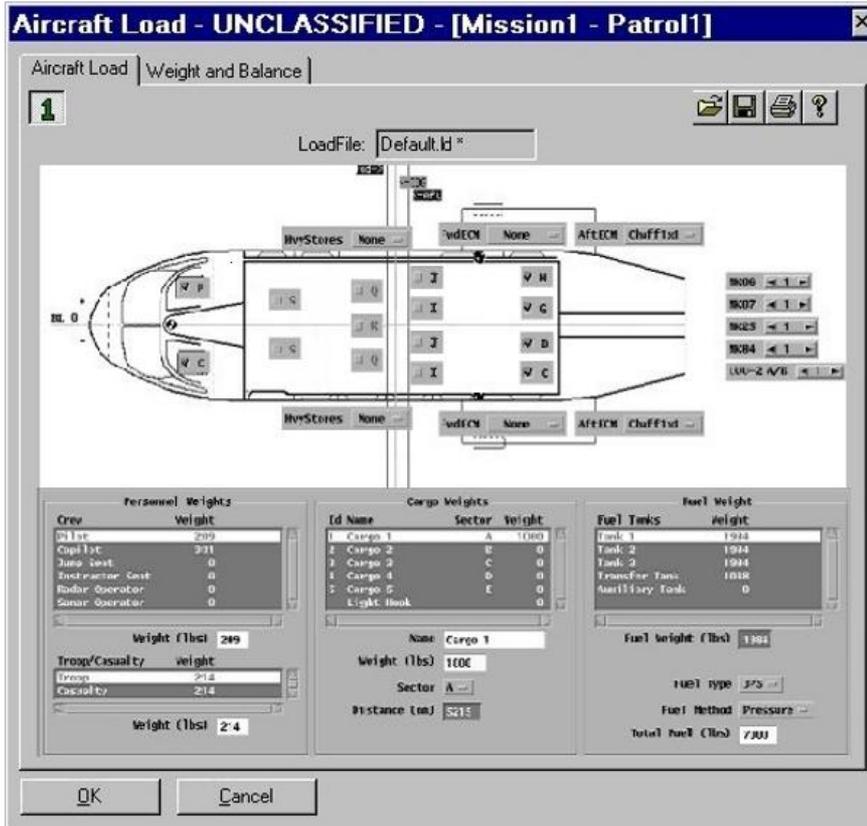


Radar Terrain Masking

Pilots plan over familiar maps

Multiple map windows / scales displayed with concurrent data

# SAIC MPS Aircraft Load Capability



- Load module includes complete loading rules and limits
- Automatically computes weight and center of gravity
- Library capability allows users to save and recall common aircraft load plans
- Supports standard aircraft configurations
- End user has the ability to customize aircraft load data

Load module allows pilots to quickly and accurately calculate the weight and center of gravity of planned loads



# SAIC MPS Point of Contact



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