



MilComm & PNT Pivot to Resilience

21 January 2025

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Program Executive Officer
MilComm & PNT Program Executive Office



Agenda

- Evolving Space Threat
- MCPNT Organization & Portfolio
- MCPNT Pivot
- FY25 NDAA Changes and Impact
- GPS Resilience
- MILSATCOM: Adapting to the Threat
- Contract Opportunities



“Space Force is a military service dedicated to the newest warfighting domain: Space. Guardians have an obligation to contest and control that region, making it safe, secure and stable.”

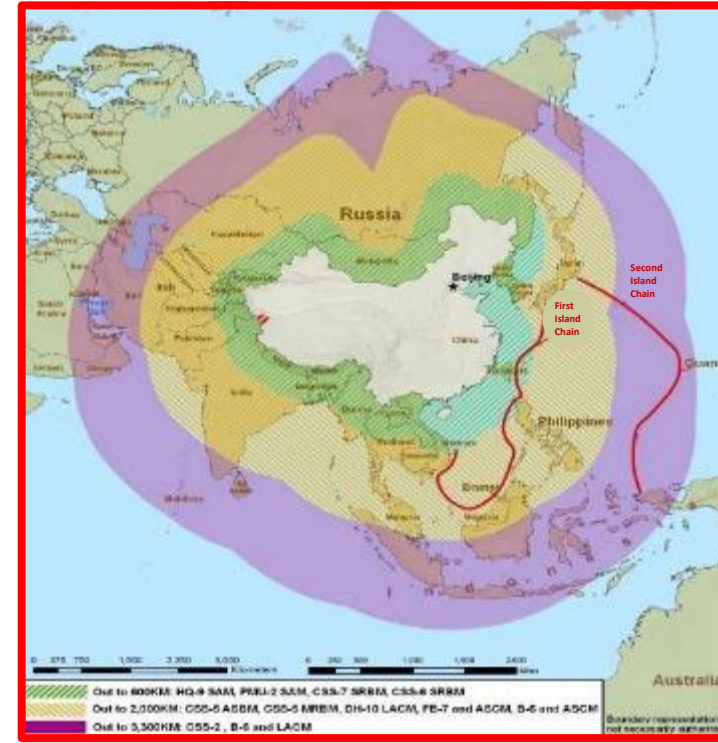
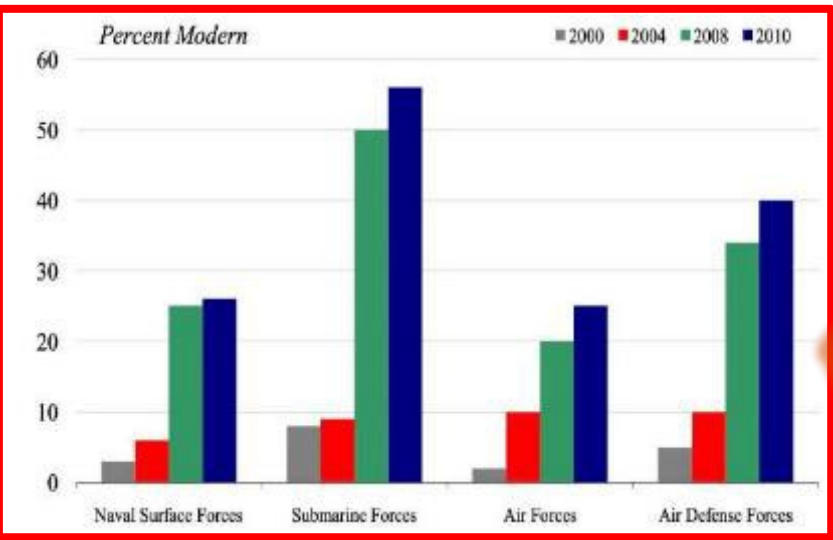
- Chief of Space Operations, General B. Chance Saltzman



Focused on Modernization

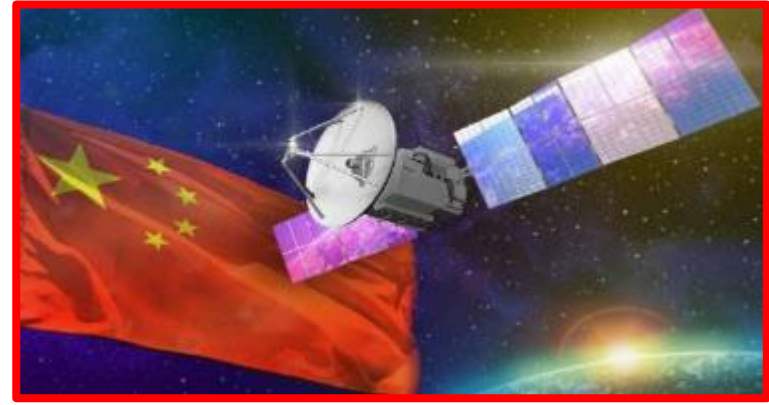
- Still no carrier, no air-refueling bombers

Status of Modernization Required for "World Class Military" by 2049
 Mechanized Informationized Intelligitized



PRC Inventory:

- Satellites: 36+
- Nuclear Warheads: 175+
- Aircraft : 2,300+
- Ships & Subs: 275+
- Missiles: 1,405+



Expanding A2AD Capabilities
 - Large number of SRBMs;
 not diverse

Source: USSF S2
 CMSGT Lerch
 Space Power Conf. 9 Dec 2024

Pre-Xi era primarily **INWARD LOOKING**... fielding new systems focused on A2AD

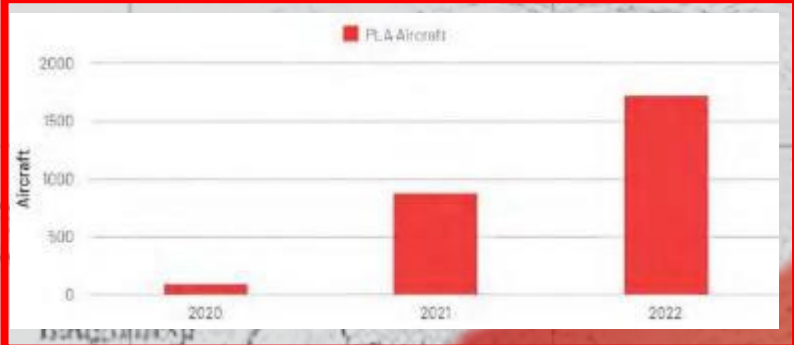
2010
2025



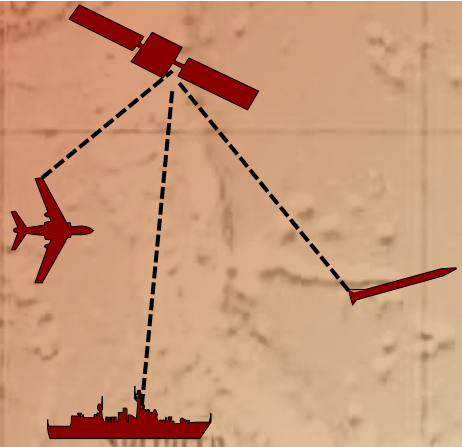
Status of Modernization Required for "World Class Military" by 2049
Mechanized Informationized Intelligentized

China in 2025

Norm-Shattering Behaviors
- Number of ADIZ incursions increasing



Completed Beidou Constellation
- Transitioned to kill-webs vs kill-chain

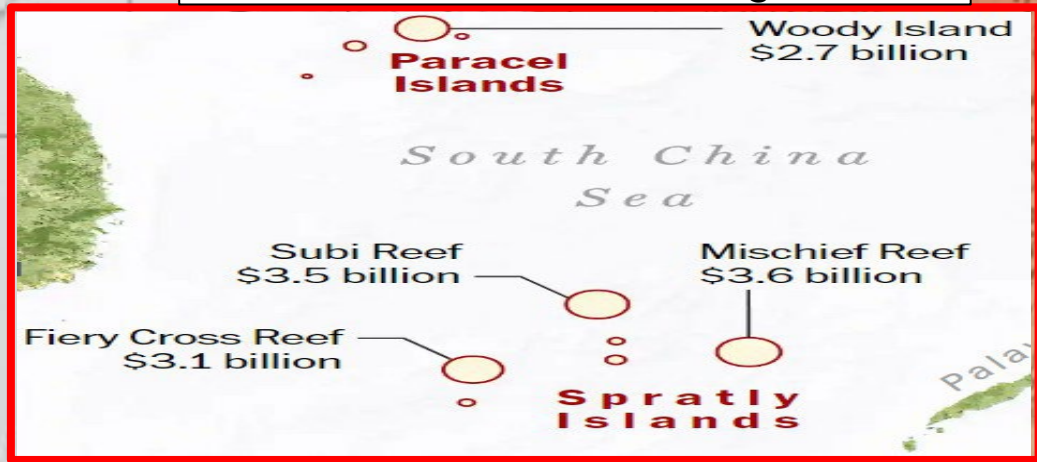


PRC Inventory:

- Satellites: 1015+
- Nuclear Warheads: 500+
- Aircraft : 3,150+
- Ships & Subs: 370+
- Missiles: 3,000+

Area of
PLA
Influence

PRC Solidifies Presence in SCS
- \$13B invested into militarizing islands



Cyber Threat Evolving...
- VOLT/SALT TYPHOON activities



Source: USSF S2
CMSGT Lerch
Space Power Conf. 9 Dec 2024

INCREASINGLY ASSERTIVE... multi-domain operations extending beyond 2nd chain



PROGRAMS IN SUSTAINMENT



PROGRAMS IN DEVELOPMENT/PRODUCTION



1800+

active duty, civilian, and contractor employees

4 GPS Ground Stations

17 GPS Monitoring Stations

2 GPS Control Stations

GPS satellites in sustainment

6-GPS IIR

7-GPS IIR-M

12-GPS IIF

6-GPS III

SATCOM satellites in sustainment

6-AEHF

6-DSCS

2-EPS

5-MILSTAR

5-MUOS

10-WGS

4-UHF

28 satellites/payloads in production or development

WGS11(1) WGS12(1) GPS III(4) GPS IIIIF(10) R-GPS(8) MUOS (2) EPS-R(2)

FY25-29
total budget
\$23.3 billion

32 Active Programs

9 Systems in Sustainment

9 ACAT I Programs

1 ACAT II Programs

5 ACAT III Programs

3 MTAs

3 SWPs

10 AML Exempts

1 Quick Start

8 Ground Systems

Over 2 Million Units

of GPS User Equipment (UE) fielded
with next-gen Military GPS UE starting to field

Over 400,000

GPS User Equipment (UE) sold through
GPS Foreign Military Sales (FMS)

200 More than
in work and active engagement with 60 allied nations

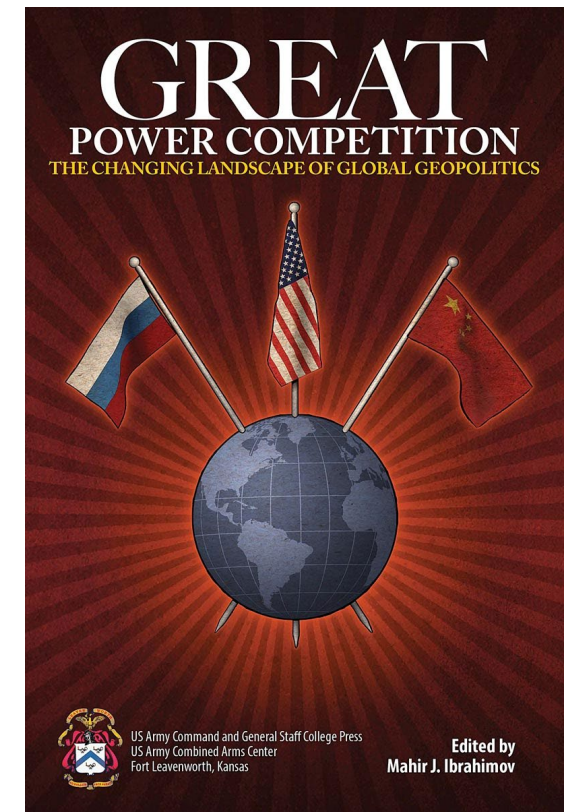
17,000+
SATCOM Terminals

MCPNT BY THE NUMBERS



MCPNT Pivot for GPC

- **Capability Delivery:**
 - Current programs focused on execution
 - OCX, MGUE Inc 1, & WGS-11 in 2025
- **Race to Resiliency:**
 - USSF's first Quick Start for Resilient GPS (R-GPS)
 - SATCOM Disaggregation
- **Commercialization & International:**
 - Luxembourg mPOWER
 - PTS-G
 - Space Norway (EPS-R)
- **Non-Traditional:**
 - Reverse Industry Days
 - SpaceWERX Challenge Events
 - STRATFI / TACFI



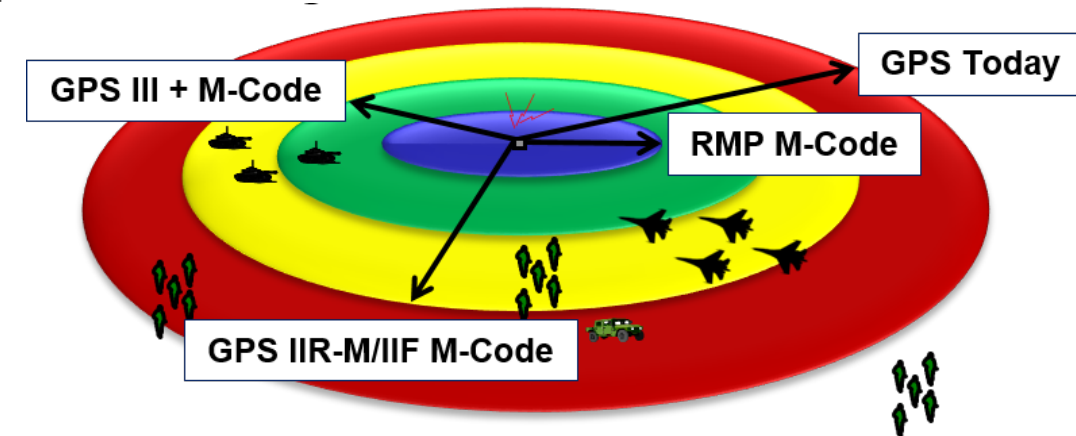
Outpace the Threat & Accelerate Joint Warfighter Capabilities



Modernized Military GPS Capabilities

GPS M-Code is a military signal designed to enhance **anti-jamming** and **secure access** for military GPS users

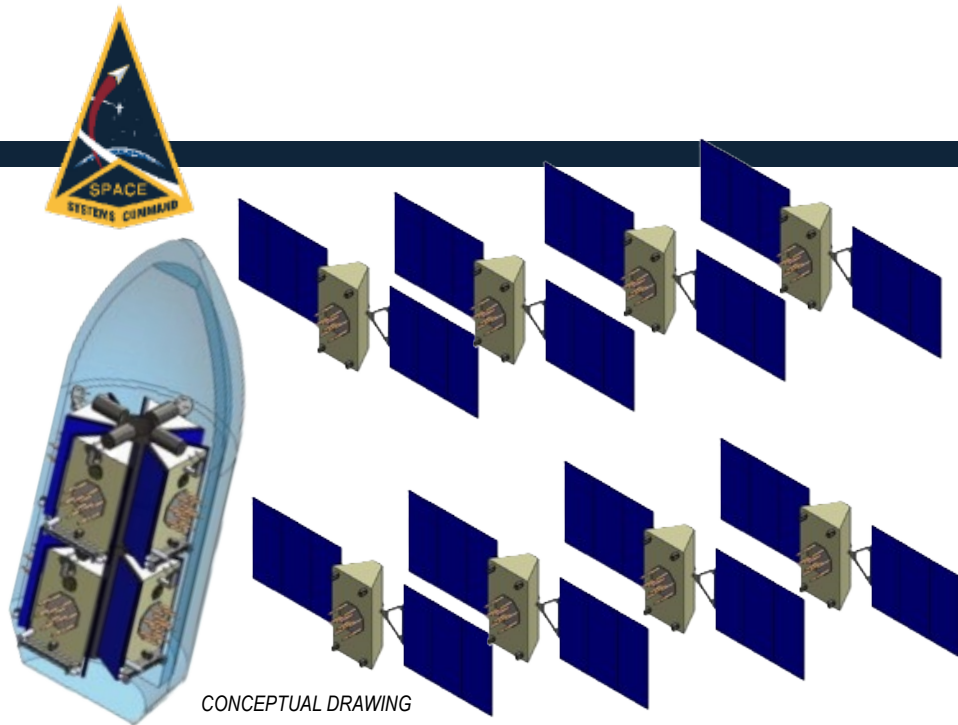
- Modernized military signal M-Code
 - Stronger military signal encryption to mitigate spoofing
- Modernized military MGUE receivers
 - Anti-Spoof and Digital Anti-Jam
- Resilient GPS satellites
 - GPS Boosted Earth Coverage M-Code Power
 - GPS Regional Military Power “Beta” further increases M-Code Power
- Modernized military GPS satellites (GPS III/IIIF)
 - GPS III Boosted Earth-Coverage M-Code power
 - Regional Military Power (RMP) on GPS IIIF satellites further increases M-Code power to reduce jammer effects and provides additional cryptography



Red – GPS Today
Yellow – M-Code Receiver
Green – M-Code with GPS III/R-GPS Boosted Power
Blue – P(Y) or M-Code with Anti-Jam Antenna
Blue – R-GPS LEAP 2/3 Power capability
Blue – Regional Military Protection (RMP)

M-Code receivers and Anti-Jam antennas will provide maximum protection against jamming and spoofing, and enable the full benefits of Modernized Military GPS

Resilient GPS (R-GPS)

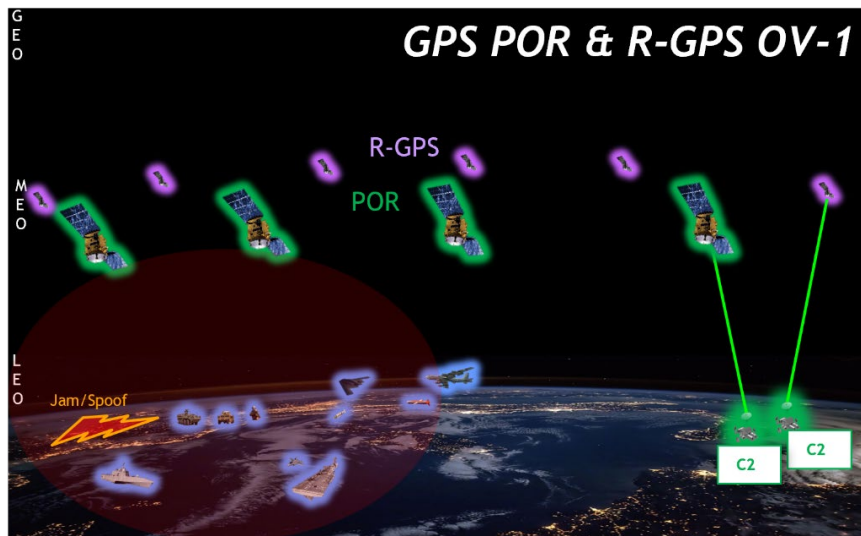


- Resilient GPS augments GPS constellation with proliferated small satellites

- Implementing SWAC Force Design and Defense Science Board recommendations
- Transmit core GPS signals providing resilience to Million+ military (DoD & Allied) and Billion+ worldwide civilian users
- “YMCA” signals: L1 C/A, P(Y), and M-Codes
- Acquired in LEAPs (Lite Evolving Augmented Proliferation)
 - Up to 8 SVs

- Leveraging new FY24 NDAA “Quick Start” Authority

- Strategy leveraging both traditional and non-traditional vendors
 - Phase 0: 4 vendors to executable design concepts in early 2025
 - Phase 1: Up to 2 vendors to Full Design and Payload Demo in 2026
 - Phase 2: Up to 2 vendors; up to 8 SVs for launch as early as 2028
- USSF Affordability Goal: \$50 - \$80M per SV



Resilient GPS LEAP 1 Phase 0 Awarded September 2024 - 6 Months from Approval to Award!



MILSATCOM: Adapting to the Threat





Non-Traditional and Commercial Contract Awards & Opportunities

Contract Type	Award	Value
SBIRS: Alt PNT SBIRS Contract Awards	Q4FY24	\$41.8M (22 x \$1.9M)
TACFI: Tactical Funding Increase Award	Q2FY24 Q3FY24 Q4FY24	\$5.7M (3 x \$1.9M) \$3.6M x 1 \$1.25M x 1
STRATFI: Strategic Funding Increase Award	Q3FY24 Q4FY24	\$3.3M \$4M

FY24 Contract Awards: \$59.65M

Opportunity	Award Window	Value
SBIRS: MILSATCOM SBIRS Contract Awards	Q3FY25	\$15.2M (8 x \$1.9M)
COMMERCIAL: Timing Over Commercial Signal	FY25	\$10M

FY25 Potential Awards: \$25.2M



Active Solicitations and Upcoming RFPs

FY25-FY26 Contracts Value: ~\$22.8 Billion

Contract	Contract Type	Competitive / Sole Source	RFP Release/ Award Date	Value
ESS Space Development and Production - Active Solicitation	CPIF/CPAF/CPFF/FFP	Competitive	Q2FY24 / Q2FY25	~\$8B*
MUOS Ground Modernization - Active Solicitation	CPIF/CPAF/CPFF/FFP (IDIQ)	Sole Source	Q2FY24 / Q1FY25	\$2.2B ceiling
Tiqker Space Duty Acceleration (TACFI) - Active Solicitation	FFP	Sole Source	Q3FY24 / Q4FY24	\$3.9M
PTS-R EMD, Production & Operations - Active Solicitation	FFP	Competitive (Limited)	Q3FY24 / Q2FY25	~\$6.3B*
ESS Out-of-Band Command & Control (OOB-C2) Application via Command and Control System - Consolidated (CCS-C)	Task Order via IDIQ	Sole Source	Q1FY25	~\$40M
Enterprise Management & Control (EM&C) [OTA]	FFP	Non-Competitive	Q1FY25	\$5M
Enterprise Management & Control (EM&C) - Development	IDIQ	Competitive	Q1FY25	< \$100M
Enterprise Management & Control (EM&C) - Integrator	IDIQ	Competitive	Q1FY25	> \$100M
Protected Tactical SATCOM-Global (PTS-G)	IDIQ (FFP)	Competitive	Q2FY25	~\$4B ceiling
ESS GIF & SOSI (Phase 2)	FPOF & CPAF	Sole Source	Q2FY25	\$287M
MUOS SLE Space (Phase 2)	FFP/CPFF	Limited Competition	Q2FY25	~\$2.2B
Space Hub Integrated ECU Leading-Edge Development (SHIELD)	FFP	Sole Source	Q2FY25	~\$20M
ESS Mission Planning Apps (Phase 3)	TBD	Sole Source	Q4FY26	~\$240M

*In Source Selection; Values Pre-Decisional

FY25 National Defense Authorization Act



- **CRWL Modifications**

- Transfers authority for maintaining the Contractor Responsibility Watch List (CRWL) to the SAE



- **USSF Satellite Ground Systems**

- SAE may not authorize a launch unless the associated ground system is operationally ready at the time of launch
- Includes a waiver option through SecAF



- **Hybrid SATCOM Architecture**

- Requires SAE to conduct a pilot program demonstrating a hybrid SATCOM architecture at SSC



- **Resilience of PNT Technologies and Services**

- Includes language noting DoD “despite more than a decade of congressional direction, delays, and billions in cost overruns – continues to resist adequately addressing” service’s PNT needs
- Notes FY11 NDAA directive to transition all receivers to M-Code has still not happened
- SecDef is directed to provide a briefing on status of fielding resilient PNT across DoD



FY25 NDAA Authorized Funding Levels

DoD Top Line: \$849.9B (increase of \$361M from FY25 PB of \$849.5B)

USSF RDT&E: \$18.7B (decrease of \$328M from FY25 PB of \$18.37B)

- Notable Info:

- OCX increase of \$55M (space force requested realignment for OCX shortfalls)
- PTES increase of \$3M (cloud-based beam forming technologies)
- PTS reduction of \$46.2M (PTS-R EMD delay)
- ESS reduction of \$6.7M (ECO risk/excess to need)
- ESS reduction of \$37.6M (ESS C2 terminal acquisition early to need)
- GPSIIIF reduction of \$10.1M (under execution)

USSF Procurement: \$3.79B (decrease of \$458.6M from FY25 PB of \$4.26B)

- Notable Info:

- GPSIIIF Reduction of \$323.6M (early to need)

USSF O&M: \$5.2B (decrease of \$75M from FY25 PB of \$5.29B)





Leadership Team

as of Jan 2025



Mr. Cordell DeLaPena, Jr.
Program Executive Officer



Ms. Charlotte Gerhart
Deputy Program Executive Officer



Col Ryan Rose
Deputy Director



Col Mark Scherbarth
IMA to the PEO



Maj Samuel Meyer
Chief of Staff



Mr. George Gonzales
Director SATCOM Sustainment



Ms. Erin Carper
Acq Delta – Tactical SATCOM



Col Albert 'AJ' Ashby
Acq Delta – Strategic SATCOM



CAPT Peter Sheehy
Acq Delta- Narrowband SATCOM



Col Matthew Spencer
PNT SYD Commander



Col Andrew Menschner
MD 31 Commander



Mr. Marcus McInnis
Director of Engineering



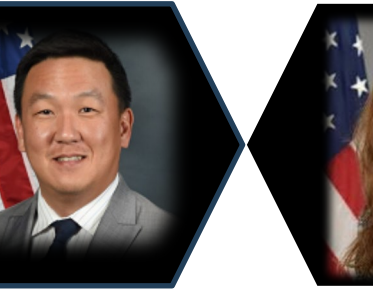
Mr. Lucas Sprenger
Director of Finance



Ms. Wendy Gonzales
Director of Acq Logistics



Mr. Vincent Johnson
Director of Mission Services



Mr. Roy Lee
Director of Contracts



Ms. Julia Green
Director of Transition



Questions?



FY24 Awarded Contracts

Contract	Contract Type	Sole Source or Competitive Contract	Award Date	Value
MCPNT SAFS Financial Support Services	FFP	Competitive	Q1FY24	\$185M
SAFS-2 SATCOM Financial Services	CPFF	Sole Source	Q2FY24	\$9.9M
SAFS-2 PNT Acquisition and Financial Services	FFP	Sole Source	Q2FY24	\$20.3M
WGS-12	FFP	Sole Source	Q2FY24	\$439.6M
SLE Space Risk Reduction and Early Design (Phase 1)	FPIF	Competitive	Q2FY24	\$132M
Foreign Military Sales BAE Selective Anti-Spoofing Module SAASM 3.7 Single Chip Module	FFP	Sole Source	Q2FY24	\$8.5M
Foreign Military Sales BAE GPS Receivers	FFP	Sole Source	Q2FY24	\$7.4M
Foreign Military Sales Trimble Military and Advanced Systems Receivers	FFP	Sole Source	Q2FY24	\$18M
ESS Mission Planning Apps (Phase 1 & 2)	FFP x 5 and FPIF x 2	Competitive	Q4FY24	\$250K x 5, \$20M x 2
WGS GSCCE	FFP	Sole Source	Q4FY24	\$28.6M
Resilient GPS Phase 0	FFP	Competitive	Q4FY24	\$10M x 4

FY24 Contract Awards: \$930.55M



Military Communications & PNT Programs

Tactical SATCOM

- Air Force Wideband Enterprise Terminal (AFWET) [ACAT III]
- Protected TACTICAL SATCOM (PTS) [MTA (ACAT I-equiv)]
- Protected TACTICAL Enterprise Services (PTES) [SWP (ACAT I-equiv)]
- Wideband Global SATCOM (WGS) [ACAT IC]
- Air Force and Army Anti-Jam Modem (A3M) [ACAT III]

Strategic SATCOM

- Evolved Strategic SATCOM (ESS) [MTA (ACAT I-equiv)]
- ESS End Cryptographic Unit (ECU) [MCA (ACAT III)]
- ESS Ground Resilient Integration & Framework for Operational Nuclear Command, Control and Communications (NC3) (GRIFFON) [SWP (ACAT I-equiv)]
- Enhanced Polar System - Recapitalization (EPS-R) [ACAT IC]

MILSATCOM Product Support Satellite Systems - Sustainment

- Advanced Extremely High Frequency (AEHF) [ACAT IC]
- MUOS [ACAT IC]
- Defense Satellite Communications System (DSCS) [ACAT IC]
- MILSTAR [ACAT IC]
- Global Broadcast Service (GBS) [ACAT IC]
- Ground Multi-Band Terminals (GMT) [ACAT IC]
- Airborne Integrated Terminal Group (AITG) [ACAT II]
- Command and Control System-Consolidated (CCS-C) [ACAT II]
- WGS [ACAT IC]
- WGS Anti-Jam [ACAT III]
- EPS [ACAT IC] C2 Modifications
- AEHF Ground [AML Exempt]

Narrowband SATCOM

- Mobile User Objective System (MUOS) [ACAT IC]
- MUOS Service Life Extension (SLE) [ACAT IB]

Global Positioning System (GPS) [ACAT IC]

- GPS III [ACAT IC]
- GPS III F [ACAT IB]

GPS User Equipment

- Military GPS User Equipment (MGUE) Increment (Inc) I [ACAT IC]
- MGUE Inc 2 Miniature Serial Interface (MSI) [MTA (ACAT I-equiv)]
- MGUE Inc 2 Joint Modernized Handheld (JMHH) [MTA (ACAT III-equiv)]
- GPS Foreign Military Sales (FMS)

GPS Ground/C2

- Next Generation Operational Control System (OCX) [ACAT ID]
- OCX 3F [ACAT II]

Satellite Systems - Sustainment

- GPS [ACAT IC]
- GPS III Contingency Operations (Cops) [ACAT III]
- M-Code Early Use (MCEU) [ACAT III]
- Military User Equipment (MUE)

Global Positioning System (GPS) [Quick Start]

- Resilient GPS (R-GPS)