



*U.S. Army Space and Missile Defense Command/
Army Forces Strategic Command*



The Army's Role in Space

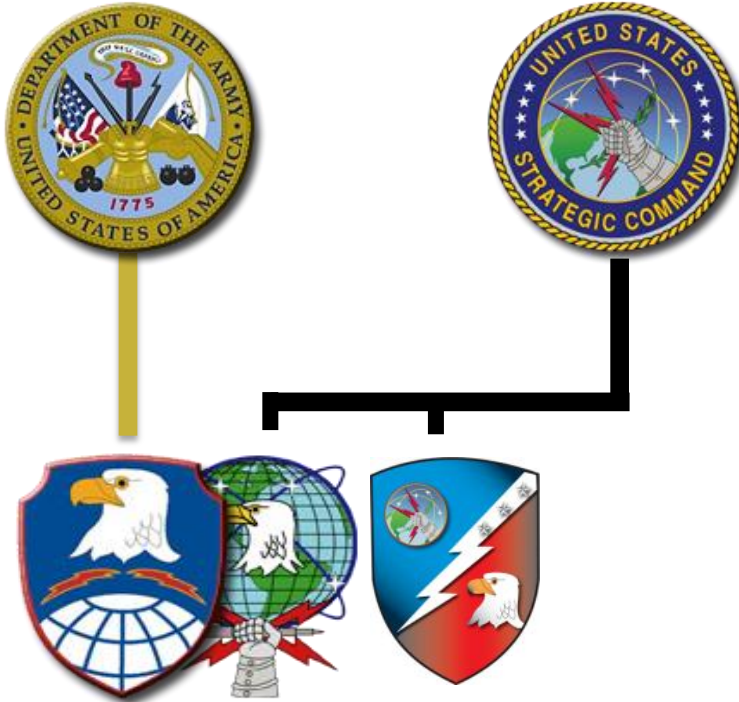
LTG Richard P. Formica

**As Presented to the AUSA
Greater Los Angeles Chapter
Space & Cyber Conference**

3 June 2011



Our Reporting Chain



USASMDC / ARSTRAT

JFCC-IMD

“Three Hats”

Our Mission

USASMDC/ARSTRAT conducts space and missile defense operations and provides planning, integration, control and coordination of Army forces and capabilities in support of U.S. Strategic Command missions; serves as the Army force modernization proponent for space, high altitude and global missile defense; serves as the Army operational integrator for global missile defense; and conducts mission-related research and development in support of Army Title 10 responsibilities.

Assigned as Commanding General Joint Functional Component Command for Integrated Missile Defense

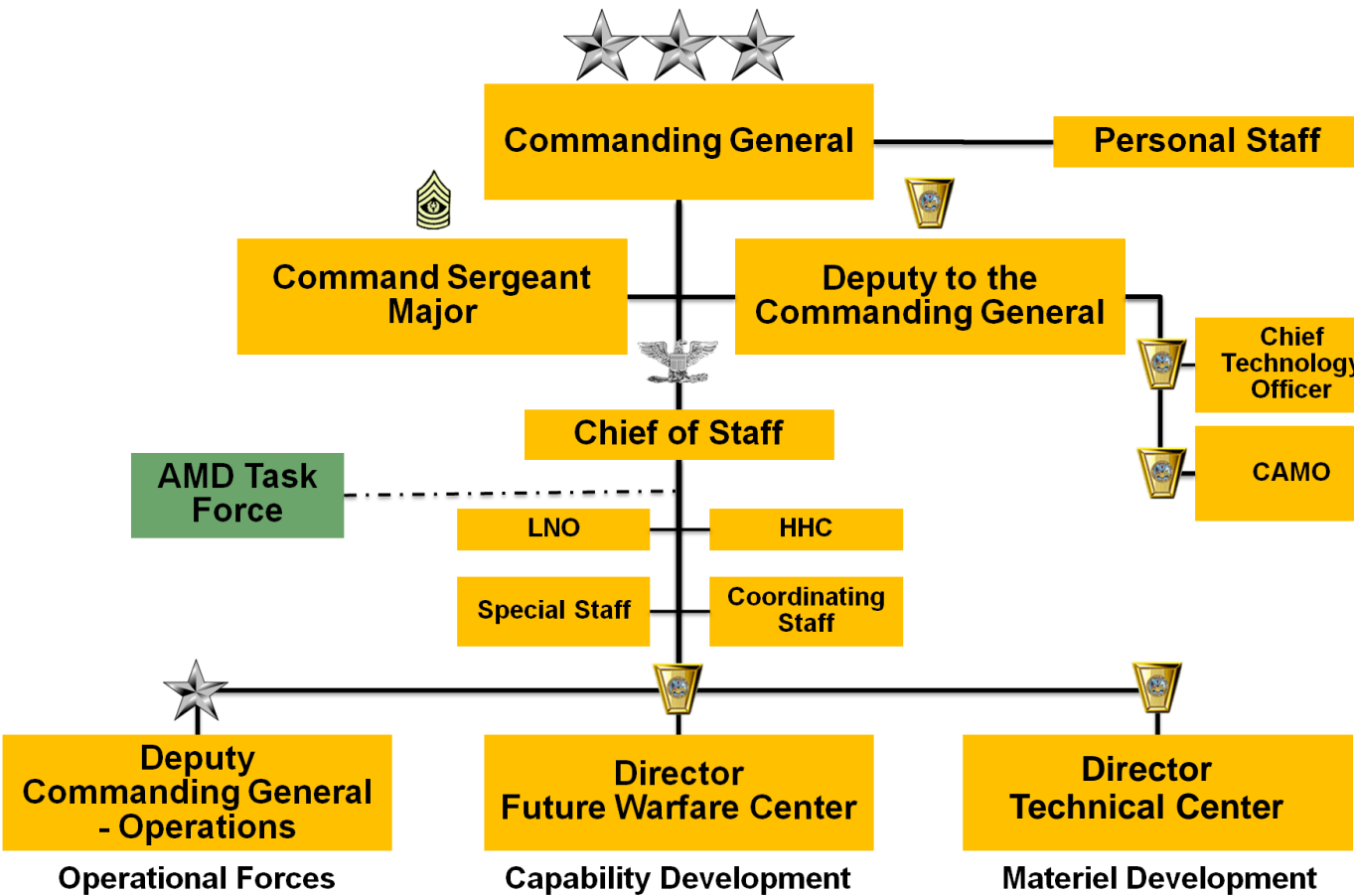


Command Vision

- **USASMDC/ARSTRAT – a diverse, complex, and global command that provides critical capabilities to our Army, USSTRATCOM, COCOMs/ASCCs; in synch with JFCC-IMD**
- **One command...split based... multi-component...diverse constituencies...dispersed locations...talented work force of Soldiers, Civilians, contractors; public servants**
- **The Army’s force modernization proponent for Space, High Altitude, and Global Missile Defense; the Army’s operational integrator for Global Missile Defense:**
 - **Providing trained and ready space and missile defense forces and capabilities to the COCOMs and to the Warfighter**
 - **Building future Space and Missile Defense forces**
 - **Researching, testing, and integrating Space, Missile Defense, directed energy, & related technologies**
- **Close, collaborative relationships with MDA and a multitude of stakeholders**
- **Nested within the Army’s enterprise; engaged with and embedded in the HQDA AMD TF**
- **Provide staff support to ARCYBER until FOC; retain close organizational linkages**
- **Disciplined stewards of our nation’s resources – accountable, cost culture**
- **Precise, confident, fit, disciplined, courageous Soldiers and Civilians; tough, caring, courageous leaders. Committed to safety in all that we do**
- **A responsible and cooperative tenant at Redstone Arsenal, Peterson AFB, and on the installations on which we live and serve**
- **A values based command – caring for and serving Soldiers, Civilians, Families**



Organizational Chart



Three Core Tasks:

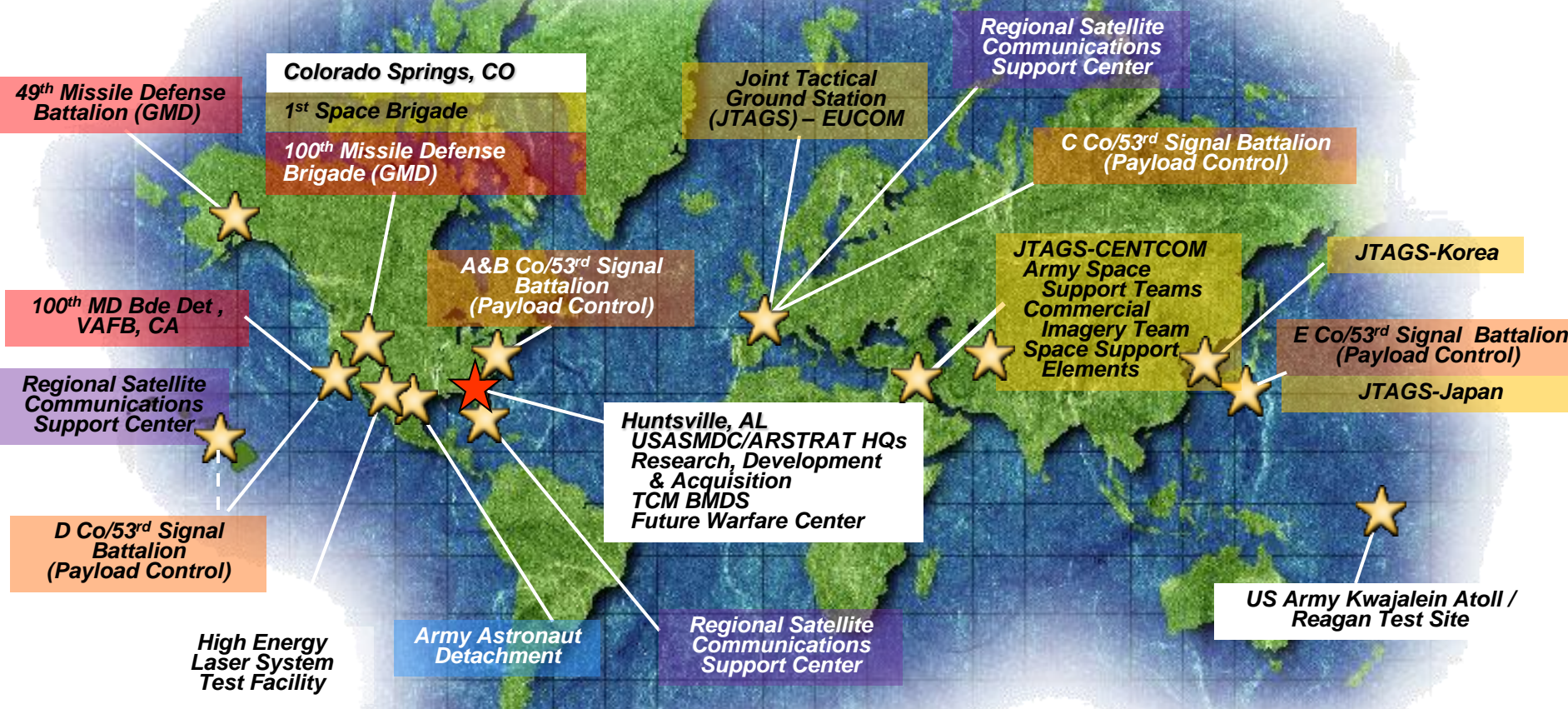
- Providing trained and ready space and missile defense forces and capabilities to the COCOMs and to the Warfighter
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USASMDC/ARSTRAT: A Global Command



Uniquely Organized – Geographically Well-Positioned

“Secure the High Ground”

The sun never sets on USASMDC/ARSTRAT



The Army as a User of Space Capabilities

- US Army is America's principal land force, reliant on space-based systems for:
 - Communications
 - Position, Navigation and Timing
 - Intelligence, Surveillance and Reconnaissance
 - Missile Warning
 - Weather
- Critical elements to Army's ability to Shoot, Move, and Communicate
- Seamless integration due to coordination/cooperation across services and other DOD and Joint agencies
- Our focus: assured access to space for the tactical Warfighter
- Must ensure the Army does not have "A Day Without Space"



The Army's Space Policy and Strategic Plan

- Army Space Policy updated in 2009
 - Focuses on operational and tactical needs of land forces
 - Assigns space related Army organizational responsibilities
 - Follows implemented DOD space policies and procedures
 - Re-establishes objectives for Army space
 - Continues the Army Space Council
- Army Space Strategic Plan signed May 2011
- Focus of space strategy: to assure access to resilient and relevant space-enabled capabilities
- Three tenets:
 - Provide requisite space-enabled capabilities to support current operations and future transformation efforts
 - Leverage existing DOD, national, commercial, and international space-based capabilities
 - Pursue cross-domain solutions to create a resilient architecture to mitigate threats, vulnerabilities, and assure access to critical capabilities needed to sustain land force operations



The Army as a Provider of Space Capabilities

- Historically, ground segment has been greatest investment
 - C2 systems
 - Communication terminals
 - Intelligence feeds
- SMDC/ARSTRAT is the Army's space proponent
 - Coordinates with Army Intelligence and Signal communities; STRATCOM; other Joint elements
 - Provides trained and ready space forces and capabilities to the COCOMs and the Warfighter
 - Builds future Space forces
 - Conducts space mission-related research and development activities



Providing Trained and Ready Space Forces and Capabilities

- More than 1,100 Soldiers and Civilians in 1st Space Brigade provide access space-based systems
- Three battalions composed of AC, NG, RC provide COCOMs:
 - Satellite communications
 - Space operations
 - Missile warning
 - Forward deployed Space Support and Commercial Imagery Teams
- Army Space Support Teams (ARSST) are on-ground space experts, provide key imagery, forecast impact of space weather, provide responsive support
- SMDC/ARSTRAT plans, manages and operates DoD's Regional Satellite Communications Support Centers, and Wideband Satellite Communications Operations Centers
- Provides Joint Friendly Force Tracking Common Operating Picture feeds to COCOMs
- Provides theater ballistic missile early warning and battlespace characterization with JTAGS
- Provides geospatial intelligence production in support of COCOMs and civil authorities (e.g. AFRICOM/Libya, PACOM/Fukushima nuclear plant, southeast/midwest storms)
- Operates USAKA/RTS providing Space Situational Awareness capabilities supporting satellite collision avoidance, imaging, and deep space surveillance
- SMDC/ARSTRAT is Army's personnel developer for FA-40s
 - Serve in Army, Joint, DOD commands and organizations
 - Comprised of both military and civilian personnel with wide variety of backgrounds
 - Integrated FA40s into OSD, JCS, and other key agencies/institutions



Building Future Space Forces

- SMDC/ARSTRAT is Army's force modernization proponent for space, high altitude, and global missile defense
- Capability development is nested with the broader Army capability development efforts
- Follows Army and TRADOC processes in building future space forces
- Developed space and missile defense doctrine to include FM3-14, Space Operations and FM3-27, Ground Based Midcourse Defense Operations
- Developed the operational organization for space forces including 1st Space Brigade and 100th Missile Defense Brigade
- Work through HQDA to update force structure through TAA and FDU processes
- Trains our space professionals; recognized as Institute of Excellence by TRADOC
- Work requirements through JCIDS such as the Persistent Platform in support of High Altitude
- Supporting Army leader development: teaching the 3Y course at CGSC, supporting space curricula at USMA, and numerous courses taught at branch Centers of Excellence with Mobile Training Teams



Researching, Developing, Testing and Integrating Future Space Capabilities

- Army is an instrumental Joint partner in addressing tomorrow's space requirements
- Recognizes need to prioritize, leverage, and invest in promising space research and development technologies
- Highlight three technology endeavors:
 - Space and Missile Defense Command – Operational Nanosatellite Effect (SMDC-ONE) – pursuing Joint Capability Technology Demonstration, FY12
 - Kestrel Eye – planning for 2012 launch
 - Vertical/Horizontal Integration of Space Technologies and Applications (VISTA) – ready for transition in 2012



Take-aways

- Space-based capabilities are critical elements of Army's ability to Shoot, Move, and Communicate
- Space is inextricably linked to warfighting
- The Army's role in space consists of three key elements:
 - as a user of space capabilities;
 - to articulate the Army's space strategy and policy
 - as a provider of space capabilities
- SMDC/ARSTRAT will continue to provide trained and ready space forces and capabilities to the COCOMs and the Warfighter; build future space forces; and research, develop, test, and integrate future space capabilities



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Back ups



USASMDC/ARSTRAT Deliverables

Operations:

- Provides more than 830 Operational Forces in support of BMDS and Space Operations; CONUS-based, forward-stationed or deployed; provides 6 ARSSTs, 1 CIT and 3 special space teams/detachments at ARFORGEN Cycle of 1:2 AC/1:4 RC
- Provides deployed-in-place multi-component missile defense crews at Ft. Greely, AK, Vandenberg AFB, CA and Schriever AFB, CO; 24/7/365, protecting 300 million Americans
- Delivers theater missile warning to deployed forces via JTAGS to CENTCOM, PACOM and EUCOM
- Operates three Regional SATCOM Support Centers and five Wideband SATCOM Operations Centers supporting deployed Army forces, COCOMS, DOD, POTUS, Allies, and other agencies
- Plans and manages global SATCOM resources as the SATCOM System Expert (SSE) for the Defense Satellite Communications System and the Wideband Global SATCOM system
- Monitors, detects and characterizes SATCOM interference on vital U.S. Space-borne capabilities and platforms
- Provides Joint Friendly Force Tracking Common Operating Picture feeds to Combatant Commanders
- Produces state-of-the-art Geospatial Intelligence using space-based assets in support of multiple COCOMs and deployed Warfighters
- Operates USAKA/RTS providing Space Situational Awareness capabilities supporting satellite collision avoidance, imaging, and deep space surveillance
- Executes Life Cycle Management Functions for 291 FA40 Space Operations Officers
- Provides Operational support for Human Space Flight programs with 3 astronauts and 1 in training



USASMDC/ARSTRAT Deliverables

Capability Development:

- Executes Army proponentcy and ensures JCIDS accomplished for Space, Missile Defense and High Altitude capabilities
- Operates TRADOC-certified Army Institution of Excellence for Space and Missile Defense training
- Provides DOTMLPF analysis and solutions aligned with TRADOC capability development framework (e.g. C2BMC, AN/TPY-2, JFFT, JTAGS, High Altitude)
- Conducts Army Concept Development and Experimentation for Space, Missile Defense and High Altitude
- Integrates Friendly Force Tracking (FFT) into FBCB2
- Developing a hand-held battle command device ISO USSOCOM
- Provides direct analytical support to the Army Missile Defense Task Force and JFCC-IMD
- Conducting Tactical Space Protection Study ISO Army G3/5/7



USASMDC/ARSTRAT Deliverables

Materiel Development:

- Conducts missile testing for ICBM and BMDs at USAKA/RTS Major Range & Test Facility Base
- Provides solutions to capability gaps for the COCOM & Warfighter for persistent comms, ISR, C-RAM, C-IED and conventional strike with Nanosats, High Altitude, Solid State Lasers, Hypersonic Weapon & other related technologies:
 - Persistent comms gap: SMDC-ONE launched 2010, pursuing JCTD for 2012
 - ISR gap: LEMV operational deployment ISO of OEF 2012; first launch of Kestrel Eye nanosat with ISR payload scheduled in early 2012
 - C-RAM gap: Build on capability resulting from 100Kw Solid State Laser milestone achieved in 2010
 - C-IED gap: High Power Microwave Weapons and other technologies
 - Conventional Strike gap: Advanced Hypersonic Weapon (Flight Test scheduled for 1Q, FY12)
- Researches and develops cyber capabilities to support ARCYBER
 - Developing TTPs for Mission-critical Information Sharing across Service networks for Joint operations (JT&E Phase 1 Feasibility Study, Mar-Sep 2011)
 - Identifies/mitigates Information & Communications Technology risks in Army Supply Chain to protect against data corruption and counterfeiting of critical parts and materials for weapon systems

Contracting & Acquisition Management:

- Manages 2,278 active contracts (total value \$17.6B) for Army and other agencies (FY10 obligations: \$2.4B)