Wideband Enterprise Satellite Systems

**PdM WESS MISSION**
Acquire, deliver, and sustain superior enterprise (strategic) and tactical military satellite communications and payload control capabilities for the US Army, DoD and the Joint Warfighting Community

**PdM WESS VISION**
The Department of Defense choice for world class enterprise satellite communication systems that increase efficiency and enhance responsiveness to warfighter needs
Baseband Systems

- Acquisition Manager for the Army’s Satellite Transport Systems to include: Satellite modems, routers, switches, multiplexers, power distribution systems, precision timing systems, and cryptographic equipment.
- Manages the Army Satellite Earth Terminal Station Relocation Projects at Satellite Gateways.

Future Initiatives:
- Army Transport Convergence: Provides standardized SATCOM capability to fully upgrade Enterprise gateways with iDirect’s KU-Band abilities. Supports Combat Service Support Very Small Aperture Terminal (CSS VSAT). Allows the Army to support its growing reliance on satellite resources while also leveraging underutilized Army Enterprise Gateways. Reduces the Army’s dependence on commercial networks. Provides increased network security.
Satellite Terminals Systems

- Provides the DoD and National Command Leadership with secure, high-capacity satellite connectivity enabling reach back for voice, video, and data communications and transfer of intelligence information.

- Modernization of Enterprise Terminals (MET) program replacement of 100 Legacy terminals to be updated through 2025
  - Nine variants of terminals
    - 17 of 37 terminals fielded for Army
    - 14 of 33 terminals fielded for Air Force
    - 9 of 15 terminals fielded for Navy

- Provides Senior National Leadership Communications (SNLC) Network between U.S. President and Russia/ Ukraine/ Belarus/ Kazakhstan leaders.

- Provides Global HEMP-protected SATCOM for forward-deployed missile tracking radar systems in support of Missile Defense
PdM WESS Product Offices (Continued)

Wideband Control

Provides for the management and control of the Defense Satellite Communications System (DSCS) and Wideband Global SATCOM (WGS) satellite program resources and earth terminal communications networks, which are required for rapid and efficient reaction to operational needs.

Portfolio Includes:

- Common Network Planning Software (CNPS)
- Remote Monitoring and Control Element (RMCE)
- Wideband Satellite Communications (SATCOM) Trend Analysis and Anomaly Resolution System/Wideband SATCOM Operational Management System (WSOMS) Mediated Interoperability Infrastructure (WSTARS/WMII)
- Wideband Training & Certification System (WTCS)
- Wideband Remote Monitoring Sensor System (WRMS)
- Joint Management and Operations Sensor (JMOS)
Combat Service Support (CSS) Satellite Communication (SATCOM) provides a highly effective, easy to use, transportable Satellite Communication solution and wireless capability to the CSS community.

Composed of:
- Very Small Aperture Terminal (VSAT)
- CSS Automated Information System Interface (wireless)
- Data Communication Network (DCN) - Commercial network which includes 15 satellites and five regional teleport sites

Future Initiatives:
- Next Generation CSS VSAT / CAISI: Will provide a light weight expeditionary Satellite Communication capability to the CSS community.
PdM WESS Stakeholders

- POTUS
- WHCA
- SNLC

- Dept of State
- SNLC

- Dept of Defense
- DOD OIO

- Joint Staff J6

- USA
- CIO/G-6
- G-8

- USN

- USAF
- AFWET

- USCENTCOM
- RSSC-East

- USINDOPACOM
- RSSC-PAC

- USEUCOM
- RSSC-EUR

- SMDC/ARSTRAT

- 1st Space Brigade

- 53rd Signal Bn

- USSOUTHCOM

- RSSC-East

- USAFRICOM

- RSSC-EUR

- USSSTRATCOM

- RSSC-East

- RSSC-West

- USSOCCOM

- RSSC-East

- USTRANSCOM

- RSSC-West

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- RSSC-EUR

- USSSTRATCOM

- RSSC-East

- RSSC-West

- USSOCCOM

- RSSC-East

- USTRANSCOM

- RSSC-West

- International Partners
- Australia

- Canada

- Denmark

- Luxembourg

- Netherlands

- New Zealand

- Norway

- Czech Republic

- MDA

- ARCYBER

- NETCOM

- 2nd SIG BDE

- 7th SIG CMD

- 21st SIG BDE

- 311th SIG CMD

- 1st SIG BDE

- 516th SIG BDE

- 335th SIG CMD

- 160th SIG BDE
Research & Development Efforts

Digital IF
- Enables Continuity of Operations (COOP)
- Provides Flexible Architecture
  - Geo-diversity via DISN/DoDIN
- Increases SATCOM Availability
- Reduces the impact of weather, interference and loss of resources
- Potential for Growth

Interference Cancellation
- Interfering signals are detected and characterized
- Algorithms will eliminate/reduce the impact of friendly and adversary interference sources.
- Stand-alone capability is available in the commercial market
- Various Vendor implementations were characterized at JSEC in FY17
- PdM WESS in partnership with CERDEC is currently reducing the Stand-alone/box-level commercial implementations to a software/firmware functions that can augment future SATCOM modems

SATCOM Diversity
- User data from the network interface is divided and sent over multiple links. Redundancy and/or coding across multiple links is used to protect data.
- Total user data is reformed on the receive using available links.
- Will support flexible communications over multiple links on different satellites, bands, and frequencies as well as terrestrial links.
- Maintains end to end applications and supports maximum data rate achievable based on condition of links available.

Connectivity Reliability
- Anticipate procurement in FY22-FY23
- Anticipate procurement in FY24-FY25
- Anticipate procurement in FY25-FY26

All PdM WESS RDTE efforts are focused on Gateway Resiliency
## WESS Business Opportunities

<table>
<thead>
<tr>
<th>Procurement Type</th>
<th>Description</th>
<th>Vehicle Contract or Method</th>
<th>Projected Quarter FY of Solicitation</th>
<th>Contracting Office</th>
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<td>Modernization of Enterprise Terminals (MET) Sustainment Follow On</td>
<td>Full and Open</td>
<td>Q4 2019</td>
<td>ACC Rock Island</td>
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<td>Services</td>
<td>Common Network Planning Software (CNPS) Follow On</td>
<td>GSA Alliant/Fair Opportunity</td>
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<td>Services</td>
<td>Combat Service Support Communications (CSS COMMS) Systems Engineering Technical Assistance (SETA) Follow-on</td>
<td>PMSS3</td>
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<td>Services</td>
<td>Team Track Follow-on</td>
<td>TBD</td>
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<td>Services</td>
<td>GFE Hardware/VMWare Software – Wideband Remote Monitoring Sensor (WRMS) Follow-on</td>
<td>CHESS, GSA</td>
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<td>Wideband Control SETA Follow-on</td>
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<tr>
<td>Services</td>
<td>Spectrum Migration (AWS-3) Ft. Rucker and Ft. Campbell</td>
<td>Full and Open</td>
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<td>Services</td>
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<td>Supply</td>
<td>Combat Support Service Very Small Aperture Terminal (VSAT) Modernization</td>
<td>Competitive</td>
<td>FY20-21</td>
<td>ACC Rock Island</td>
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Questions?

Thank you for attending!