

Directorate of Resources Science & Technology (S&T) Office



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2015 Posture Statement Highlights

- National Interests in Africa
- East Africa, North and West Africa
- Requirements ↑ Resources ↓
 - 55 → 68 Operations
 - 10 → 11 Joint Exercises
 - 481 → 595 Security Cooperation Activities
 - 9 → 33 Offices of Security Cooperation (OSC)
- Immediate Priorities
- Future Requirements / Mitigating Risk



Role, Mission & Vision

ROLE

- Lead Command's support for S&T activities.

MISSION

- Lead Command's support for S&T activities *aligned to Command-validated S&T requirements.*

VISION

- A world-class professional team that supports and leverages the DoD S&T enterprise's resources to minimize the Command's capability gaps.



What is S&T Support?

- ADVOCACY (AO)
- SPONSORSHIP (O6)
- ENDORSEMENT (O7+)
- ADVICE
- ASSESSMENT
- STAFFING

- Serving as Command's S&T lead for S&T *Activities*.



What are S&T Activities?

PROCESSES and PRODUCTS related to:

- Integrated Priority List (ST/IPL), requirements, focus areas
- S&T Demonstrations, Experiments and Capability Transitions
- S&T supporting Engagements, Exercises or Operations
- Joint Capabilities Technology Demonstrations (JCTD)
- Joint Concept Development & Experimentation (JCD&E)
- Joint Emerging / Urgent Ops Needs (JEON / JUON)
- Emerging Capability & Prototyping (EC&P) Line of Effort (LOE) Initiatives
- Coalition Warfare Program (CWP)
- Rapid Innovation Fund (RIF)
- Vendor and Government S&T Office Calls
- MOA-designated LNO responsibilities
- Warfighter Senior Integration Group (W-SIG) TSVTC (bi-weekly)
- Joint Rapid Acquisition Cell (JRAC) SVTC (monthly)
- Quick Reaction Capability Task Force (QRC-TF) SVTC (monthly)
- ASD(R&E) Combatant Command (CCMD) S&T SVTC (monthly)
- Joint Concepts Working Group (JCWG) SVTC (bi-monthly)
- Joint Concepts General Officer Steering Committee (GOSC) SVTC (semi-annual)



USAFRICOM S&T Focus Areas

INTELLIGENCE, SURVEILLANCE & RECONNAISSANCE:

- Long-Range / Long Endurance, Persistent Collection, Radio Frequency Direction Finding (RFDF), Home Made Explosive (HME) / Improvised Explosive Device (IED) Detection, Fused Multi-Int Airborne / Full Motion Video (FMV), Light Detection and Ranging (LIDAR), Foliage Penetration (FOPEN), Measurement & Signatures Intelligence (MASINT), Processing, Exploitation, Dissemination (PED), Machine Language Translation

PERSONNEL RECOVERY:

- Unmanned Aerial and Maritime Personnel Recovery / Rescue, Weather Forecast (Long-range Lightning Detection, Remotely-Sensed Total Rainfall Rate and Accumulation / Upper Air Sounding)

OPERATIONAL ENERGY:

- Reduced Logistics Footprint, Alternative Energy (Solar, Wind, Geothermal), Waste-to-Energy Disposal, Expeditionary Water Purification, Expeditionary Energy Efficient Housing, Power Distribution, Force Protection



USAFRICOM S&T Focus Areas

IDENTITY ACTIVITIES / RESOLUTION:

- Biometrics, Forensics, Documentation and Media Exploitation (DOMEX), Denial of Anonymity, Repository, Coalition Interoperability

MARITIME DOMAIN AWARENESS (MDA):

- Beyond Line-of-Sight, Reporting, Sensor Interoperability, Automated Anomaly Detection, Common Maritime Picture (CMP)

COMMUNICATIONS:

- Coalition / Joint Information Interoperability and Sharing / Force Tracking, Expeditionary and Scalable "Blackberry to Joint Network Node"

MEDICAL:

- Disease Prevention, Immunization, Detection, Diagnosis, Treatment, Biosurveillance, Modeling and Trauma Intervention

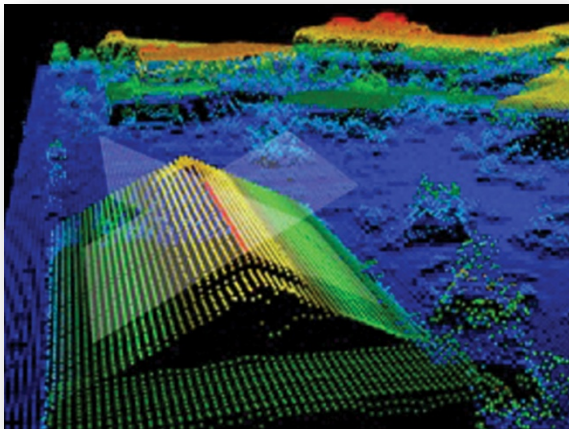
NON-LETHAL SYSTEMS:

- Mobile Counter-Personnel (Sound, Light, Munition), Counter-Materiel (Vehicle, Vessel, Radio-Frequency), Active Denial



Projects (Active)

Name	Type	Sponsor	USAFRICOM Stakeholder
Agadez Contingency Base Camp Energy and Infrastructure System	Engineering Analysis	OEPP	J4
Bombardier 700 High Altitude Laser Illuminating Detection and Ranging (LIDAR) Operations Experiment (HALOE)	Operational Test	DARPA, DTRA	J2
Cloudbreak	Rapid Fielding Initiative	DISA, DASD-ECP	J3, KM
Coalition Tactical Awareness & Response (CTAR)	JCTD	AFRICOM, NRL	J2
Directed Energy Explosive Hazard Neutralization (DEEHNS) (Sweden)	Coalition Warfare Proposal	ARDEC	J3
Ebola Virus Test Kit	Prototype	ECBC	J004, J47, JTF-UA



HALOE



Cloudbreak



CTAR



Projects (Active)

Name	Type	Sponsor	USAFRICOM Stakeholder
Information, Volume & Velocity (IV2)	JCTD	CENTCOM, DISA	J2, J39, J4, J6, J9
Joint Fiber Laser Mission Engagement (J-FLaMe)	Joint Test	JT&E	J374
Joint Partner Integration Enterprise (JPIE) Joint Test Nomination (JTN)	Joint Test	EUCOM	J2
Liberian Environmental Protection Agency (EPA) Cooperation	Initiative	OSD ATL	J4
Niger Forward Ops Base (FOB) Energy	Tech Demo	RDECOM	J4
Rapid Integrated Strategic Assessment (RISA) for Water Security	Tech Proposal	NGA	J4, J2, J3, J5
South African 40mm Grenade	Foreign Comparative Test	ARDEC	J1/8 (J5)
United Nations (UN) Peacekeeping Operations (PKO) Enabling Tech	Tabletop Discussion (TTD)	OUSD AT&L	J1/8



IV2

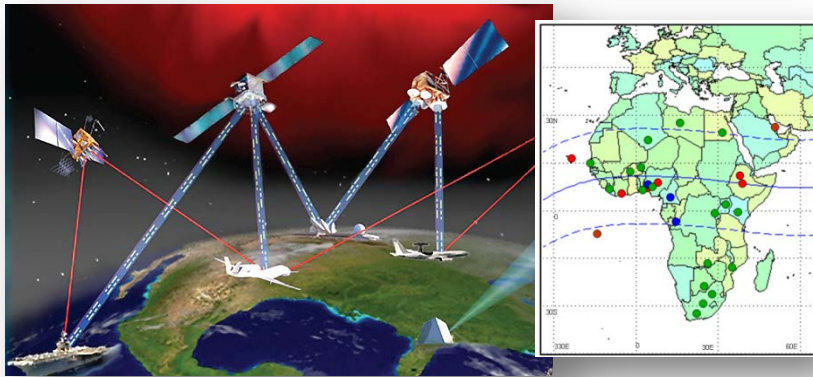


J-FLaMe

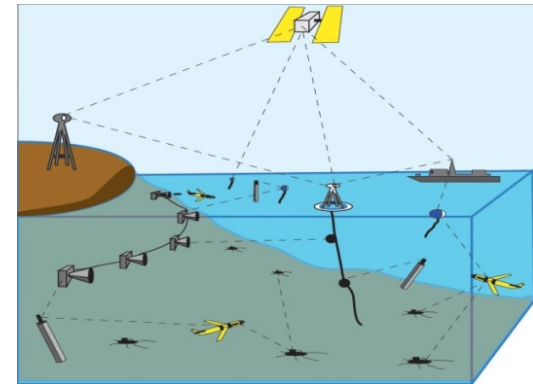


Projects (Coalition Warfare Program)

Name	Type	Sponsor	USAFRICOM Stakeholder
Space Situational Awareness Environmental Monitoring to Mitigate Severe Ionspheric Impacts to DoD C3I Systems in Africa (SSA EM)	CWP (Active)	USAF, South Africa	J2, J3
Coalition ISR Asset Interoperability (CIAI)	CWP (FY15 Endorsement)	USA, Canada	J2
Compact wide-band optics for multispectral infrared (IR) imaging system (CIRIS)	CWP (FY15 Endorsement)	USN, United Kingdom	J4
Collaborative Situational Awareness, C2 Development & Integration (CSA DEV)	CWP (FY15 Endorsement)	USN, Italy	J2, J3
High Altitude Long Endurance Solar Powered UAS (SOLAR POWERED UAS)	CWP (FY15 Endorsement)	USN, United Kingdom	J2
High Efficiency, Ultra-Thin Silicon Solar Cells for Expeditionary Power (THIN SI SOLAR)	CWP (FY15 Endorsement)	USN, USMC, Australia	J4
Coalition interoperable, undersea wireless power and data (uPODs)	CWP (FY15 endorsement)	USN, South Korea	J2, J3, J6
Integrating / collecting data in austere / denied environment w/autonomous systems (SPIDERWEB)	CWP (FY16 Potential)	USN, South Africa	J2
Directed Energy Explosive Hazard Neutralization (DEEHNS)	CWP (FY16 Potential)	USA, Sweden	J34



SSA EM



SPIDERWEB



Projects (Rapid Innovation Fund)

Name	Type	Sponsor	USAFRICOM Stakeholder
Identity Activities in Africa	RIF (FY15 Endorsement)	USAFRICOM	J34
Infectious Diseases in Africa	RIF (FY15 Endorsement)	USAFRICOM	J004-SG
Intelligence, Surveillance & Reconnaissance (ISR) in Africa	RIF (FY15 Endorsement)	USAFRICOM	J2
Operational Energy in Africa	RIF (FY15 Endorsement)	USAFRICOM	J4



Identity Activities in Africa
Crossmatch's SEEK Avenger



Infectious Diseases in Africa
USAMRIID Ebola assay test



Operational Energy in Africa
Army's Network Integration Evaluation 12.2,
at White Sands Missile Range, NM. 2012.

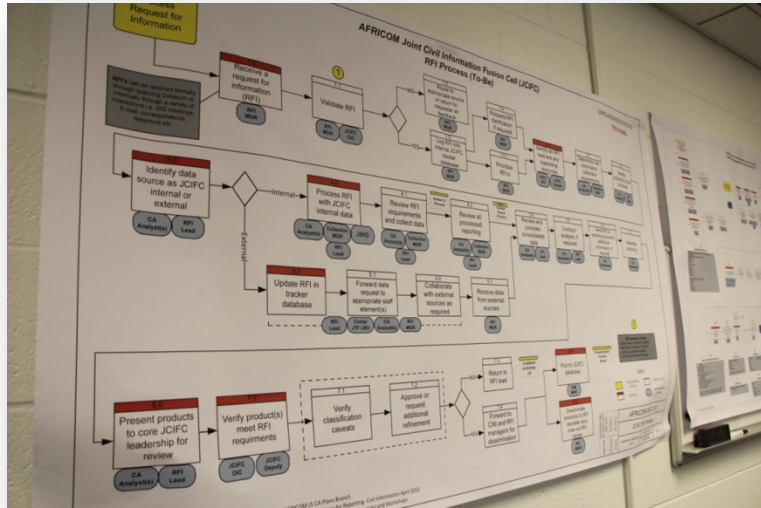


Projects (Completed)

Name	Type	Sponsor	USAFRICOM Stakeholder
Civil Affairs Planning Ops for Steady State Operations (CAPOSSO)	Joint Concept and Experiment	JS J7	J4
Civil Information Fusion Concept (CIFIC)	Joint Concept	JIWC, JS J7	J2
Infectious Disease Modeling Proposal	Modeling Analysis	NRL	J004, J47
Interagency & Multinational Info Sharing Arch & Solution (IMISAS)	Joint Concept and Experiment	JS J7	J2, J3, J4, J5, J9
Science, Technology, Engineering, Mathematics (STEM) Education Week at Robinson Barracks Elementary / Middle School (RBEMS)	Outreach	DODEA	J1/8



CAPOSSO

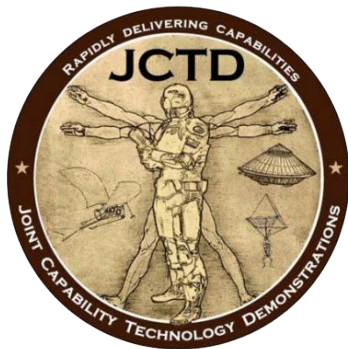


CIFIC



Projects (Operational Needs, Agreements)

Name	Type	Sponsor	USAFRICOM Stakeholder
Vertical Take-off Unmanned Aerial System (VTUAS)	JEON	AFRICOM, SOCOM	J2, J3
Special Purpose Systems (SPS)	JUON	AFRICOM	J3
Long-Range, Multi-Day	JEON	AFRICOM	J2, J3
Ebola-infected Contaminated Human Remains (E-CHR)	JUON	AFRICOM	J004, J3, J4
Joint ISR - Process, Exploitation, Dissemination (PED)	JEON	EUCOM	J2, J3
Near-real Time (NRT) Identity Resolution (IDRes)	JEON	CENTCOM	J2X, J3
OSD Joint Capability Tech Demo (JCTD) - CUMO	MOU	ASD(R&E) JCTD	J1/8
RDECOM Forward Advisor, S&T (FAST) - NAYLOR	MOA	RDECOM	J1/8
RDECOM Forward Advisor, S&T (FAST) - HANNAH	MOA	RDECOM	J1/8





Engagement Tracker

CUSTOMERS:

- Command **J00-SG, J1/8, J2, J3, J4, J5, J6, J7, J9**
- Sub-command **USARAF, NAVAF, SOCAF, MARFORAF, AFAF, CJTF-HOA**

STAKEHOLDERS:

- OSD **W-SIG, JRAC, OASD(R&E)-ECP, JCTD**
- JS **J4, J7, J8, JNLWP**
- Service and CSAs **DTRA, DARPA, JPRA, DLA, DHA, DIA, NSA, NGA, NRO, IARPA**

PARTNERS:

- Other USG Military **CENTCOM, EUCOM, PACOM, NORTHCOM, SOCOM, STRATCOM, CYBERCOM, SOUTHCOM, TRANSCOM
ONRG, RFEC-Atlantic, AFRL**
- Non-DoD USG orgs **CDC**
- Foreign Militaries **CSIR (ZA), NATO, AU**
- COIs **WMD, Biomedical, C-IED, Energy & Power, Sensors & Processing**
- NGO **WHO**



Projects (Joint Concept and Experiments)

Name	Type	Sponsor	USAFRICOM Stakeholder
Combating Transnational Org Crime	Joint Experiment	SOUTHCOM	J364, J6
Combined Operational Access (COA)	Joint Experiment	JS J7	J3, J6
Cross Domain Synergy Experimentation	Joint Experiment	JS J7	J3, J6
Cyber Awareness & Defense (CAD)	Joint Experiment	USAF	J364, J6
Cyberspace (JCC)	Joint Concept	JS J7	J364, J6
Expeditionary Mission Network (Cloud Enabled)	Joint Experiment	JS J3	J2, J3, J6
Future Special Ops Forces (SOF) and Interagency Task Forces (TFs)	Joint Experiment	SOCOM	J3
Integrated Campaigning (JCIC)	Joint Concept	JS J7, USA, USMC, SOCOM	J5
Joint & Coalition Integrated Air & Missile Defense (IAMD) C2	Joint Experiment	USN	J6
Joint Access and Maneuver in the Global Commons (JAM-GC)	Joint Concept	JS J4	J3, J4
Maritime Mine Countermeasures	Joint Experiment	NORTHCOM	J3
Missile Command (JCMC)	Joint Concept	JS J7	J3, J6
Movement and Maneuver (JCMM)	Joint Concept	JS J7	J3, J6
Robotics and Autonomous Systems (JCRAS)	Joint Concept	JS J7	J2, J3, J6
Strategic Communications (SC)	Joint Integrated Concept	JS J3	J9
Sustainment (JCS)	Joint Concept	JS J7	J3, J6



J804 Science & Technology Office

Upcoming Events

UNCLASSIFIED

- ~~1 FEB: Establish Role, Mission, Vision, Responsibilities, Activities, Projects, Engagement Tracker~~
- ~~25 FEB: USAFRICOM FY15 S&T Focus Areas established.~~
- ~~26 FEB: Office Call with Tri-service R&D Leadership @ London, UK.~~
- ~~27 FEB: Coalition Warfare Program (CWP) Endorsements due.~~
- ~~13 MAR: Rapid Innovation Fund (RIF) Proposals due.~~
- ~~17 MAR: DoD / Component Urgent Needs Review SVTC.~~
- ~~23 MAR: DARPA Adaptive Execution Office Visit @ Arlington, VA.~~
- ~~23 MAR: Joint Personnel Recovery Agency (JPRA) J9 Research & Technology Division Visit @ Fort Belvoir, VA.~~
- ~~23-25 MAR: Medical Research, Development and Acquisition Conf @ College Park, MD.~~
- ~~24-26 MAR: NDIA Combatant Command (CCMD) S&T Conf @ Springfield, VA.~~
- ~~24-26 MAR: Joint Concept for Robotic & Auto Systems (JCRAS) Workshop @ Alexandria, VA.~~
- ~~24-26 MAR: RDECOM FAST Conference @ Aberdeen, MD.~~
- ~~25 MAR: CWP Review~~
- ~~26 MAR: DTRA CB Office Call @ Fort Belvoir, VA.~~
- 30 MAR: DARPA Office Call ref Machine Language Translation @ J804.
- 1 APR: Quad charts established for at least half of active projects.
- 14-15 APR: DTRA Underground Facilities R&D Conf @ Springfield, VA.
- 15 APR: Joint Concepts Working Group (JCWG) SVTC.
- 20-24 APR: CSIR Orientation w/RFEC; SSA C3I @ Pretoria, Cape Town, Stellenbosch, ZA.
- 1 MAY: USAFRICOM STIPL updated / Quad charts established for all active projects.
- 4-7 MAY: Unmanned Systems 2015 Conference @ Atlanta, GA.
- 12 MAY: S&T Update to J1/8 DIR.
- 12-14 MAY: Chemical and Biological Defense (CBD) S&T Conf @ St. Louis, MO.
- 13 MAY: Joint Concepts General Officer Steering Committee (JC GOSC) SVTC.
- 15 MAY: Evaluate feasibility of an S&T WG.
- 19-21 MAY: NDIA USSOCOM Special Ops Forces Industry Conf (SOFIC) @ Tampa, FL
- 19-22 MAY: OSD EC&P Technology Assessment Panel (TAP) @ DC.
- ~~1-4 JUN: USAFRICOM / USEUCOM S&T Conf @ Stuttgart.~~
- 5 JUN: Sandia National Lab (SNL) Office Call @ J804.
- 1 JUL: ACI governing Command S&T processes established.
- ~~1 OCT: S&T incorporated into at least 2 exercises or engagements completed.~~
- 1 OCT: USAFRICOM FY16 S&T Strategy established.
- 1 OCT: Office Calls with Component S&T POCs completed.
- FY16: Submit S&T COP slide to Ccdr's Quarterly Strategic Situational Awareness brief.

UNCLASSIFIED



Focus Areas, Country Engagement Priorities

- ISR, PR, OE, IDRES, MDA, C4, Medical, Non-Lethal
- South Africa, Ethiopia, Kenya, Algeria, DRC, Angola, Liberia
- USAFRICOM S&T POCs:
 - Mr C. Van Anderson 314-421-7921
 - Mr Mark Cumo 314-421-2453
 - LTC JT Naylor 314-421-4752
 - CPT Brian Hannah, PHD 314-421-3279