

Rapid Innovation Fund (RIF)



Program Overview

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Background



- **Established by the Fiscal Year 2011
Defense Authorization Act (Section 1073)**
 - **A competitive, merit-based program**
 - **Accelerate fielding of innovative technologies
into military systems**
 - Pursuant to SBIR phase II projects
 - From lab-developed technologies

***Transition Small Business Technologies
into Defense Acquisition Programs***



RIF Key Requirements



• *Proposals or Projects:*

- Satisfy an operational or national security need
 - Accelerate or enhance military capability
 - In support of major defense acquisition program
- Reduce:
 - Technical risk
 - Cost: Development, acquisition, sustainment, or lifecycle
- Completed within 24 months of award *
- Cost is not more than \$3 million *

* Can be waived by Under Secretary of Defense (Acquisition, Technology & Logistics)

Selection Preference to Small Business Proposals



RIF Implementation Strategy



- ***Competitive, Merit-Based Two-Step Process***

- **Step 1:**

- Issue Broad Agency Announcements (BAAs)
- Industry Response: 3 - 5 page White Paper + Quad Chart
- Evaluations are “Go” or “No Go”

- **Step 2:**

- Highest rated “Go” offerors invited to submit full proposals
 - Further competition – invite for proposal DOES NOT guarantee an award
- Highest-rated proposals lead to award

- ***Public Notice:***

- **Federal Business Opportunities: www.FedBizOpps.gov**
- **Research & Engineering Defense Innovation Marketplace**
- **DoD Office of Small Business Programs and Services’ websites**

Annual RIF Implementation Guidelines



RIF Interest & Workload

FY 2011 – 2013 Summary



Funds: \$889M (RDTE) \$60M (Procurement)

Competitive Source Selection:

- 12 solicitations (BAAs)
- 17 Defense Components (Services & Agencies)
- 8600+ White Paper Proposals
- 800+ Evaluators
- 500+ Full Proposals
- 360 Contract Awards (Estimate)
 - FY11-12 Funds: 263 contracts
 - 240 to Small Biz (91%)
 - FY13 Funds: Anticipate 95 to 105 contracts



RIF Demand & Stats

FY 2011 – 2013 (By Year)



	FY 2011 (Actual)	FY 2012 (Actual)	FY 2013 (Actual or Est.)
Appropriated	\$439M	\$200M	\$250M
Available	\$432M * (Services & Defense-Wide PE)	\$187M (Defense-Wide PE)	\$225M (Defense-Wide PE)
DoD Participants	7	10	16
BAAs Issued	A, N, AF, OSD	A, N, AF, OSD	A, N, AF, OSD
White Papers	> 3,500	> 2,200	> 2,900
Full Proposals	> 200	> 125	> 175
Awards	177	86	95 -105
- Small Biz	95%	85%	TBD
- SBIR	80%	75%	TBD
Avg. Project	\$2.2M	\$2.1M	TBD

* Includes \$371M for RIF awards and \$48M approved SECDEF reprogramming for Rapid Acquisition Authority



RIF FY 2014 Milestones

\$175M Appropriated to OSD



Date(s)	Action
January 3, 2014 January 17, 2014	<ul style="list-style-type: none"> • FY 2014 National Defense Authorization Act Signed • FY 2014 Consolidated Appropriations Act Signed
February 1 – April 2014	DoD components develop requirements
April 2014	BAA Pre-Release in FEBIZOPPs (links posted at other portals / websites) <ul style="list-style-type: none"> • Open period for public discussion with Defense technical PoCs
BAA Pre-Release : + 30 Days + 45 Days + 60 Days	BAA Formally Opens, Begin Accepting Proposals <ul style="list-style-type: none"> • Public discussion limited to formal questions submitted to RIF Portal • Portal closes to new Questions • Answers to all formal questions posted
+ 90 Days	BAA Closes: White Papers (WPs) due from offerors
NLT October 31, 2014	<ul style="list-style-type: none"> • DoD components conduct WP evaluations • Source selection authority establishes WP priorities
NLT November 15, 2014	Components notify all offerors / invite full proposals
NLT January 15, 2015	Full proposals due from offerors
NLT February 15, 2015	Components evaluate full proposals
NLT August 1, 2015	Complete proposal negotiations & contract awards



RIF FY 14: Solicitation Requirements



Single RIF BAA Will Provide Defense Component Requirements in Three Strategic Investment Areas *

- (1) *delivering nearer-term emerging technologies to current military operations*** **EXAMPLES:** Enhance capabilities in areas such as: electronic warfare; cybersecurity tools; robotics and autonomous systems; spectrum management; intelligence, surveillance, and reconnaissance capabilities; reducing soldier load; improving fixed, mobile, and dismounted force protection; detecting and defeating all forms of improvised explosive devices
- (2) *contributing to breakthrough technologies for future military capabilities*** **EXAMPLES:** Countering weapons of mass destruction; space systems; hypersonics; highly autonomous systems; large-scale data management and manipulation for command and control; enhancing human performance
- (3) *improving the affordability of defense operations*** **EXAMPLES:** Advanced manufacturing; reducing the cost and footprint of energy and other logistical items; interoperability across platforms and systems; innovative prototyping approaches for new platforms and systems

* Source: 2014 SASC Report 113-44 (RIF)



Elements of a Good Proposal



- Responds to a BAA requirement
- Relationship in place with key customers, or otherwise have an ability to reach-out and establish links -
 - DoD acquisition buyers / Program Executive Offices or Program Managers, depots, logistics or warfare centers
 - DoD prime or subsystem contractor who integrates RIF technology
 - DoD laboratory / technology provider
- Technology Readiness Level (TRL)
 - Maturity: TRL 6 – 9
 - Lower TRL accepted if:
 - Breakthrough capability or operational game-changer
 - Cost neutral to the acquisition program's out year procurement or operations & support costs
 - See <http://www.acq.osd.mil/ddre/publications/docs/TRA2011.pdf>



Completed Projects & Results (Army Examples)



Advanced Combat Surveillance Kit



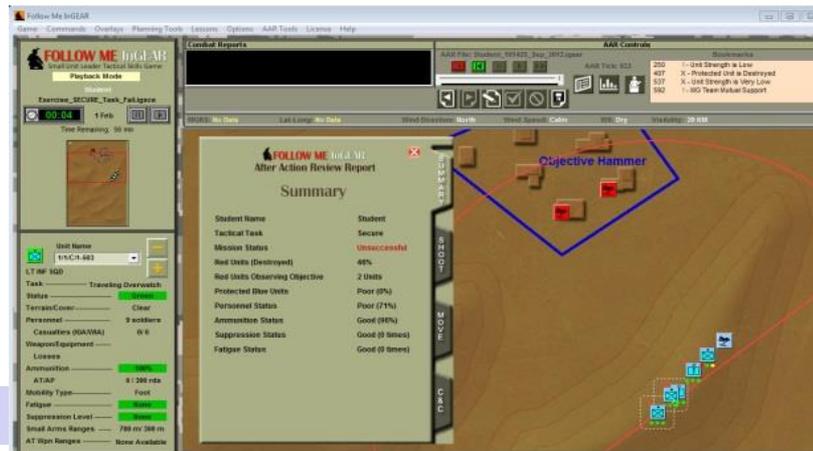
Army Corp of Engineers / Camgian, Inc

- A lightweight, low power sensor for unattended, localization, and tracking of dismounts and vehicles in challenging operational environments
- Detected & tracked multiple objects at over 500 meters in open terrain
- Detected dismounts up 220 meters though medium foliage when target was approaching

- Provides small unit leaders a capability for self-training in tactical command skills by expanding game-based training capabilities
 - Integrates intelligent tutoring system with games
- Software has transitioned to Officer Training at the US Military Academy, West Point, NY

Army Research Institute & Stottler Henke Associates

Automated Intelligent Training



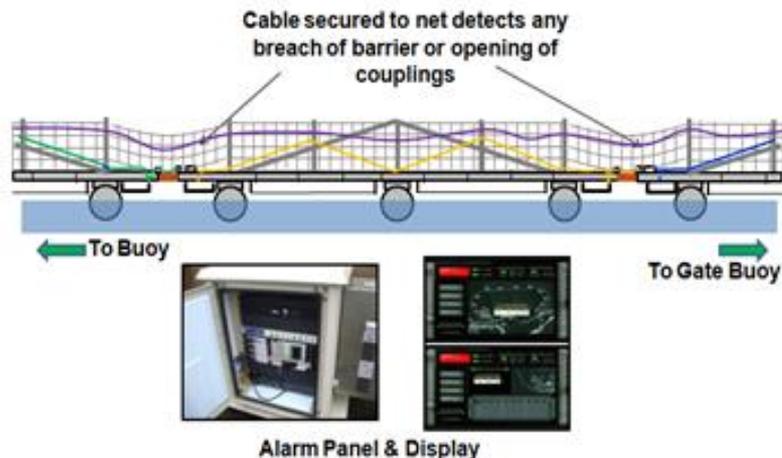


Completed Projects & Results (Navy Examples)



Port Security Barrier (PSB) Intrusion Detection System

Strategic Systems Programs /
Sound & Sea Technology

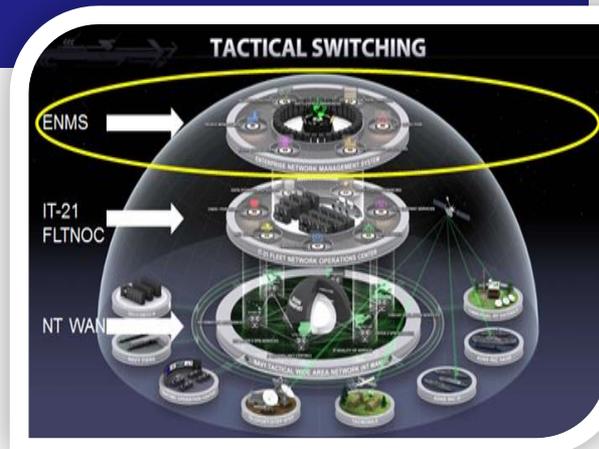


- Demonstrated fiber optic continuity sensor to monitor PSB continuity
- Optic-electronic alarm & software monitor gate conditions
 - Ensures threats cannot exploit undetected gaps
- Over \$2M budgeted to procure PIDS from FY14 to FY16 for Kings Bay, GA & Bangor, WA

SPAWAR / Referential Systems Inc

Network Planning & Real-Time Automated Management System

- Enables more real-time management of critical network assets and ability to quickly configure network traffic
 - Visualization of network traffic flow status
 - Improved response to network alerts
 - Simplified user interfaces
- Deployed to four Fleet Network Operations Centers





Promising Projects (Air Force Examples)



Advanced Composite Radomes

AF Sustainment Center / Ebert Composites Corp

INTEGRATING TWO
KEY TECHNOLOGI



- Combines innovative advancements in 3D thermoplastic fibers and hydrophobic film to eliminate delamination issues
- Developed one-step pultrusion process that creates spherical shape needed for radome panels
- Full scale prototype (Summer 2014)

AF PEO C3I & Networks /
Windmill International Inc.

Lightweight Tactical Suitcase Portable Receive Suite

- Enables deployed military forces to access Global Broadcast System (GBS) for satellite imagery, weather info, map data, classified and unclassified intelligence
- Several hundred expected to be ordered, primarily for special forces

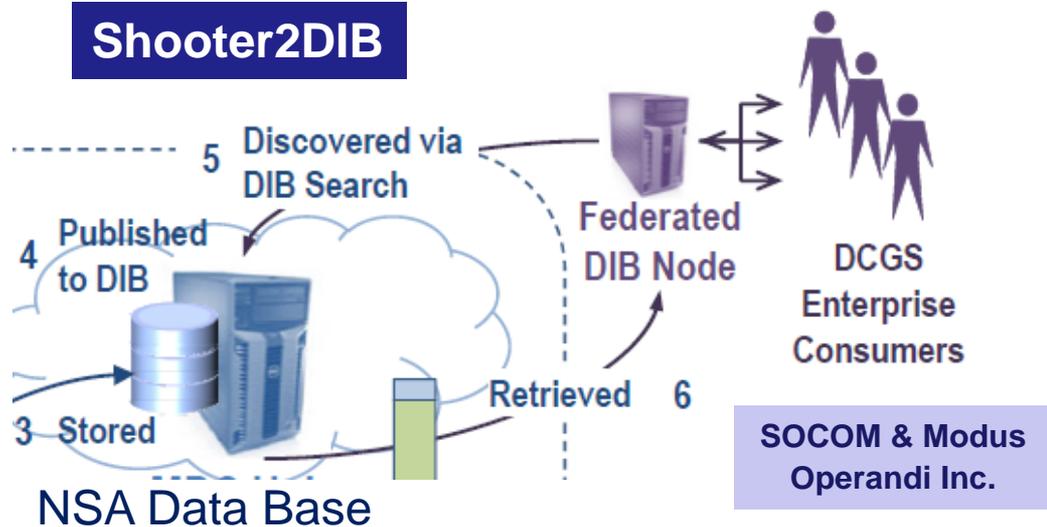




Completed Projects & Results (Defense Agency Examples)



Shooter2DIB



- Accelerates exploitation of intelligence by publishing Signal Intelligence data to the DCGS Integration Backbone (DIB)
- Capability transitioned to the Distributed Common Ground System (DCGS) Management Office for the DCGS Enterprise

SOCOM & Systema Technologies, Inc

- Doubles the number of targets that can be attacked from a single CLT while maintaining the overall system
- Smaller warheads combined with precision delivery minimizes collateral damage
- Transitioned to CLT Program of Record

Multi-Missile Common Launch Tube (CLT)





Resources for Industry: Defense Innovation Marketplace

(1 of 2)



Improve Industry Understanding of DoD Needs -- www.DefenseInnovationMarketplace.mil

CONNECTING INDUSTRY & DoD

The Defense Innovation Marketplace is a centralized market research resource:

For Industry. to learn about Department of Defense (DoD) S&T/R&D investment priorities, capability needs and technology interchanges.

For Government. to access search tools to assess and then leverage industry IR&D projects for current and future programs.

INNOVATION OPPORTUNITIES

Resources for Industry
DoD Info for Business & Program Planning

Submit IR&D Data
Share projects with DoD Customers

Resources for DoD
DoD employee access of IR&D Search tool

Strategic Documents

- Chairman's 2nd Term Strategic Direction "NEV"
- Expeditionary Forces Capstone Concept "NEV"
- Reliance 21 Operating Principles
- Precision Strike Annual Review Presentation
- Army FY15 Budget Overview
- Army FY15 Budget Materials
- 2015 Defense Budget Priorities
- 2014 Quadrennial Defense Review

Doing Business with DoD

- Unmanned Carrier Launched Airborne Surveillance and Strike System "NEV"
- DoD Cyberspace Operations R&D "NEV"
- 2014 A STTR Solicitation "NEV"
- Combating Terrorism Technical Support/IT SVIG Support "NEV"
- R&D of Next Generational Naval Integrated Power Systems

News & Events

- DAU March Newsletter
- Top Downloads February
- Army Technology Magazine
- Defense AT&L Magazine
- Army Tactical Network Industry Seminar
- Supply Chain Hardware Integrity for Electronics Defense Proposers Day
- DoD FY15 Budget Outline

Search Trends

What did you Miss?
Top Marketplace pages and downloads.

TECHNOLOGY INTERCHANGES

Aeronautical
Dialogue with Industry and IR&D Interchange

Resources for Small Business: Rapid Innovation Fund and DoD Small Business Links

Rapid Innovation Fund (RIF)

The Rapid Innovation Fund provides a collaborative vehicle for small businesses to provide the department with innovative technologies that can be rapidly inserted into acquisition programs that meet specific defense needs. RIF is administered by the Office of the Secretary of Defense (OSD) Assistant Secretary of Defense for Research and Engineering (ASD R&E) and Office of Small Business Programs (OSBP).

DoD will issue four solicitations in FY2013, titled Rapid Innovation Fund (RIF) Broad Agency Announcements (BAA). Each solicitation will list the technology areas of interest, instructions for submission of a "white paper" and source selection criteria. The white paper will be used as the initial basis for award determination. Firms whose white papers are selected will be invited to submit a full proposal that will be used as the basis for selection of contract awards. Bidders can submit one or more ideas to one or more of the BAAs.

RIF Awards

- FY 2011 RIF Awards (Final Posting)
- FY 2012 RIF Awards (Posted October 02, 2013) "Final Posting"

Additional Information

- RIF Overview Briefing
- FY11 NDAA Language (section 1073)
- Small Business Resources

Small Business Resources

Small Business Strategic Materials

- SBIR Reauthorization Policy
- Testimony of Mr. Andre Gudgeon to the House Armed Services Committee February 7, 2012
- STTR Pre-Solicitation Release Topics

Small Business Offices

- DoD Office of Small Business Programs
- Air Force Office of Small Business Programs
- Army Office of Small Business Programs
- What the Army Buys
- Army Single Face to Industry
- Small Business Development Center
- Navy Office of Small Business Programs
- Find a Small Business Specialist
- Air Force Office of Small Business Programs
- What the Air Force Buys
- Find an Air Force Small Business Specialist

Other Defense Agencies

- Defense Information Systems Agency
- Defense Intelligence Agency
- Defense Logistics Agency
- Defense Contract Management Agency
- Missile Defense Agency
- Defense Intelligence Agency
- National Geospatial-Intelligence Agency
- United States Special Operations Command
- Defense Threat Reduction Agency
- United States Transportation Command
- Defense Advanced Research Projects Agency
- Washington Headquarters Services

Success Stories

Click Here to read Air Force Small Business Innovation and Transition success stories.

Useful Guides and Materials

- Overview of Small Business Set-aside Program
- DoD Guide to Contracting Opportunities
- What the Army Buys
- Marketing to the DoD: The Basics
- Guidebook for Facilitating Small Business Team Arrangements
- Mentor-Protégé Program
- Opportunities
- Small Business Pavilion on the AUSA Show Floor
- Rapid Innovation Fund Overview & Update
- Awards, Opportunities, and SBIR.net
- DoD Research & Technology SBIR Opportunities
- Conferences

Other

- Small Business Administration Clusters

Open Solicitations

Requests For Information/ Proposals (RFIs/RFPs)

- DoD 2014 A STTR Solicitation "NEV" (closed 4/9/2014)

Talk to a DoD SBIR Expert

Marketplace: Resources for Industry

- DoD R&D Roadmaps; Investment Strategy
- Business Opportunities with the DoD
- Virtual Interchanges & Events
- Secure Portal for IR&D Project Summaries
- Top Downloads / Pages visited



Resources for Industry: Small Business Innovative Research (2 of 2)



Doing Business with the Department of Defense

<http://www.acq.osd.mil/osbp/sb/index.shtml>

- “How-To” work with Defense
- Guides on Marketing to Defense
- Programs for Small Business
 - SBIR / STTR
 - Mentor Protégé
- Contracting with Defense
- Small Business Training
- Conferences & Workshops
- Frequently Asked Questions

Talk to an Small Business Program Expert

<http://www.acq.osd.mil/osbp/sbir/contacts/sbir-contacts.shtml>

- 14 Points of Contact Across the Department of Defense

For Questions / Additional Information --

<http://defenseinnovationmarketplace.mil/RIF.html>

DoD Focal Point	Office	Phone	Email
Dan Cundiff	OSD (R&E) RF	571-372-6807	thomas.d.cundiff.civ@mail.mil
CAPT Dick Balzano	OSD (OSBP)	571-256-7785	richard.a.balzano.mil@mail.mil
Rob Saunders	Army (ASA/ALT)	703- 617-0279	robert.m.saunders14.civ@mail.mil
Bob Smith	Navy (ONR)	703-696-7954	robert.l.smith6@navy.mil
LtCol Greg Barnett	AF (SAF)	571-256-0332	gregory.barnett@pentagon.af.mil



BACK-UP



Representative Projects

Army



Project Name	Company	Project Description	DoD Need
Advanced Combat Surveillance Kit	Camgian Microsystems	Small light-weight micro-radar system that provides unattended detection, classification, and tracking of dismounts and vehicles for several months in challenging operational environments.	Force Protection
Integrated Vehicle Platform Protection System	Corvid Technologies	A reduced weight, occupant centric crew cab platform that provides better protection from threats.	Force Protection
Robotic Forward Base Resupply & Weight Reduction	Cybernet Systems Corporation	A robotic vehicle designed to autonomously deliver supplies and provide medical evacuation capabilities to Forward Operating Bases.	Force Support: Medical
Battlefield Seizure Detector for Traumatic Brain Injury (TBI) Assessment	NeuroWave Systems, Inc.	Miniaturization of existing NeuroFast system in a disposable, autonomous, smart sensor and compliance testing for relevant military & international standards.	Force Protection
Fueled, Man-Portable Generator Set	Precision Combustion, Inc.	A conversion kit that will enable small gasoline-powered commercial off the shelf generators to use JP-8 fuel, reducing the need for multiple fuel sources at forward operating bases	Logistics: Reduce fuel consumption



Representative Projects

Navy



Project Name	Company	Project Description	DoD Need
Improvised Explosive Device (IED) Human Network Interdiction	Modus Operandi, Inc.	Improve counter-IED capabilities by assisting analysts in discovering, linking, analyzing, & sharing information about the key players and their activities.	Force Protection
Defeating A2/AD with Materials Identification Reflectivity Kernel (MIRK)	Prometheus Inc.	Reliably detect bottomed submarines and mines in real time with fewer false alarms.	Anti-Access / Area Denial
Ground Moving Target Indicator (GMTI) / Synthetic Aperture Radar (SAR) Payload	Trident Systems Inc.	A small, lightweight, modular radar payload for the RQ-21A Unmanned Aircraft System to detect and track targets over a large area, improving surveillance and IED detection	ISR & Force Protection
Extended Range Wide Band Radio Frequency (RF) Distribution System	Out of the Fog Research, LLC	A shipboard mast-mounted communications component that will filter, attenuate and blank the interfering signals so that very low level Signals of Interest can be received.	Battlespace Awareness/ISR
Integrated Solar Controller / Generator & Hybrid Power System	Iris Technology	A suite of power devices that combines solar power generation, energy storage, & diesel generator technology	Logistics: Reduce Power Dependency
Mine Roller Wheel Assembly Improvement	GS Engineering	Improve the USMC Mine Roller by minimizing roller hop & increasing operational speed.	Force Protection



Representative Projects

Air Force



Project Name	Company	Project Description	DoD Need
Compact, Multi-Spectral, Real-time Imager for Standoff IED Detection	Solid State Scientific Corp.	An IED sensor that uses a single COTS focal plane array of visible and near infrared color bands to provide the operator a real-time video image suitable for the detection of IEDs and other anomalous signatures.	Force Protection
Enhanced GMTI-based ISR	LongShortWay, Inc.	An efficient light weight engine that leverages new diesel injection technology; goal is delivering 43% of the energy in fuel directly into useable engine power.	Logistics: Reduce Costs
Aerial Deployment of Counter IED Sensor Suite for Dismounts	Guided Systems Technologies Inc.	A small, optimized autonomous aerial platform with plug and play sensor capability to significantly enhance ISR in counter IED operations.	ISR & Force Protection
Full-Rate Production of Missile Rail Repair	IBC Materials, Inc.	A micro plasma oxidation coating to address excessive wear and cracking of the missile launcher rails for the F-15, F-16 & F/A-18 aircraft.	Logistics: Reduce Costs
Protect High Temperature Coating	Texas Research Institute Austin, Inc.	Integrates unique high temperature resistant, abrasion-resistant coatings in critical high temperature abrasion prone areas.	Logistics: Sustainment & Reduce Costs



Representative Projects Defense Agencies



SOCOM			
Project Name	Company	Project Description	DoD Need
Secure Smartphone for Covert Operations	Chiral Software, Inc.	Low-profile secure comms smartphone for SOF; reduces risk of visual or electronic identification or interception in close-quarter urban operations.	Command & Control / Cyber Operations
Smart Mobile Identity	AOptix Tech. Inc.	Handheld biometric data collection system based on Apple iPhone and iOS platform – gather & process iris, face, & fingerprint data; provide match against watch list.	Biometrics
DTRA			
Project Name	Company	Project Description	DoD Need
Modular Electromagnetic Pulse Source Using Photoconductive Switch	UES, Inc.	A modular light-weight, battery powered prototype that will increase the affordability, transportability, and use of testing systems.	Force Support: Improve Test & Evaluation
Checkpoint Explosive Detection System (CPEDS)	Alakai Defense Systems	A small, ruggedized standoff explosives detection system with a five to fifty foot standoff range; reduces operator exposure to hazardous situations.	Force Protection
MDA			
Project Name	Company	Project Description	DoD Need
Thermal Batteries for Interceptors	EMF Systems, Inc.	Develop qualified manufacturing source for magnesium-oxide based batteries to alleviate issues with dwindling stockpiles and supply.	Force Support: Diminishing Mfg. Sources
Methodologies for a Partial Frame Correlation of Multiple Sensors	SciTec, Inc.	Develop processing capability in the image chips to enable tracking of multiple simultaneous targets while integrating with existing comms paths for improved targeting	Battlespace Awareness