

REPORT DOCUMENTATION PAGE					Form Approved OMB No. 0704-0188	
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1. REPORT DATE (DD-MM-YYYY) 01/30/2017		2. REPORT TYPE Final Technical Status Report			3. DATES COVERED (From - To) 03-20-2014 to 01-30-2017	
4. TITLE AND SUBTITLE Special Purpose Systems OTIA 17_14-01-INIT302				5a. CONTRACT NUMBER W15QKN-12-9-0001		
				5b. GRANT NUMBER N/A		
				5c. PROGRAM ELEMENT NUMBER Base Agreement # 2009-616A		
				5d. PROJECT NUMBER DOTC-14-01-INIT302		
6. AUTHOR(S) Shawn Frederick				5e. TASK NUMBER N/A		
				5f. WORK UNIT NUMBER N/A		
				7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) SAIC 14064 Westgate CT. P.o. Box 189 Crane, IN 47522		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Crane Division, Naval Surface Warfare Center (NSWC Crane) Spectrum Warfare Systems Department, IR/RF Systems Technology Division 300 Highway 361 Crane, IN 47522-5001				8. PERFORMING ORGANIZATION REPORT NUMBER N/A		
				10. SPONSOR/MONITOR'S ACRONYM(S) NSWC Crane WXRL		
12. DISTRIBUTION/AVAILABILITY STATEMENT Unlimited				11. SPONSOR/MONITOR'S REPORT NUMBER(S) N/A		
				13. SUPPLEMENTARY NOTES		
14. ABSTRACT SAIC supported the development and evaluation of new compositions and processing equipment. We aided in the development of new equipment that will be utilized to improve the current and future processing of countermeasures. This new equipment included equipment such as a waterless leak tester, Wind stream testing, improved marking systems, and roll crimping stations and worked closely with Resodyn Corporation in creating a new mixing regimen. SAIC provided machining and milling as well as assembly to support the airborne expendable concepts. SAIC has supported Crane Army Ammunition Activity with numerous components and sub-assemblies in support of various Navy infrared expendables.						
15. SUBJECT TERMS						
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON	
a. REPORT	b. ABSTRACT	c. THIS PAGE			Shawn Frederick	
U	U	U			19b. TELEPHONE NUMBER (Include area code) 812-863-3114	

REPORT REQUIREMENTS

If classified information is required to be submitted under this Agreement, it must be submitted to the addresses specified in the SOW or DD254. No classified information should be submitted directly to ATI.

Any applicable Contract Data Requirements Lists (CDRLs), Data Item Descriptions (DIDs) or other report guidance for this Initiative may be included at the end of this attachment.

ATI, in addition to the AOR, must receive a copy of the Quarterly Technical and Business Status Reports, the Annual Technical Report, the Final Technical Report and the Final Business Status report. All other deliverables may be submitted to the AOR only, but ATI must be notified that the deliverable has been submitted to the AOR. The AOR will provide ATI a completed Sign-off Memorandum as evidence the milestone deliverable was received and deemed acceptable.

A. ANNUAL REPORT

The Recipient shall submit or otherwise provide a quarterly report in the format as shown in this attachment on the 20th day of the month of the calendar year. The report will have two (2) major sections.

- I. Technical Status Report.** The technical status report is prepared and submitted by the Recipient to provide a comprehensive assessment of initiative activities and future plans on a quarterly basis. The Recipient's Technical Status Report will, at a minimum, address the following: Comments on Technical/Cost/Schedule Performance, Initiative Quad Chart, Technical Achievements (to include the current approved Milestone Payment Status Chart marked with the percentage complete), Technical Readiness Level Status and Technology Transfer Information, Problems Encountered and Actions Taken, Nontraditional Defense Contractor Participation, and Plans for Next Quarter.
- II. Business Status Report.** The business status report shall provide summarized details of the resource status of this Agreement, including the status of resources expended by each subcontractor versus planned expenditure. Any significant deviations of effort and/or resources required shall be explained along with discussions of any adjustment action(s) proposed.

B. PAYABLE MILESTONES/DELIVERABLES

The Recipient shall submit to the Agreements Officer Representative and NVEC CMF Representative documentation describing the extent of accomplishment of Payable Milestones and Deliverables.

- I. Submission of Payable Milestones/Deliverables.** The Recipient is required to submit all deliverables identified as Payable Milestones, as shown in the Payable Milestone Schedule

(Section 6.0 of the Statement of Work) as well as any other deliverables/reports listed in the Statement of Work.

- II. Sign-off Memorandum.** The Sign-off Memorandum as shown in this attachment shall accompany all submissions indicated in section B.I. The Agreements Officer Representative shall provide written approval using the Sign-off Memorandum to the NWECC Consortium Management Firm. The Sign-off Memorandum will be used to verify that all submissions are technically acceptable. It will also be used to substantiate invoice payment for firm fixed price agreements.

C. ANNUAL REPORTING

- I.** The Ordnance Technology Initiative Recipient shall prepare an Annual Technical Report for Ordnance Technology Initiatives whose periods of performances are greater than one year in accordance with the terms and conditions of the Ordnance Technology Base Agreement.
- II.** The Ordnance Technology Initiative Recipient is required to complete an annual invention (patent) report in accordance with the terms and conditions of the Ordnance Technology Base Agreement. The Ordnance Technology Initiative Recipient is required to submit one original and one copy of the patent report to the NWECC CMF using the DD Form 882 found at the site below:

<http://www.dtic.mil/whs/directives/infomgt/forms/eforms/dd0882.pdf>

D. FINAL TECHNICAL REPORT

A Final Technical Report shall be submitted to the NWECC CMF within thirty (30) calendar days of the completion of each Ordnance Technology Initiative awarded. This report will provide a comprehensive, cumulative, and substantive summary of the progress and significant accomplishments achieved during the total period of the Ordnance Technology Initiative effort. Each of the topics described above shall be addressed as appropriate for the effort performed. In addition, include the current Technology Readiness Level (TRL) and technology transfer information for the prototype development effort.

Upon receipt, the AOR will review and provide any comments within 30 days. If necessary, the Ordnance Technology Initiative Recipient will update the Final Technical Report within 30 days of receipt of AOR's comments. Once the NWECC CMF has informed the Ordnance Technology Initiative Recipient that the Final Technical Report has been approved by the AOR, the Ordnance Technology Initiative Recipient shall forward a copy of the Final Technical Report to the Defense Technical Information Center, Attn. DTIC-O, 8725 John J. Kingman Road, Suite 0944, Fort Belvoir, VA 22060-6218 or via email at tr@dtic.mil.

The cover and title page shall be Standard Form (SF) 298, Report Documentation Page. Item 13 of the form should contain a 100 to 200 word abstract summarizing technical progress during the reporting period. Style should be third person singular using past tense. Jargon, special symbols

or notations, subscripts, mathematical symbols or foreign alphabet letters are not permitted. All pages should be prepared for acquisition and distribution by the Defense Technical Information Center (DTIC). All pages should be good quality for copying purposes. The report shall be prepared in accordance with American National Standards Institute (ANSI) document Z39.18-1987, "Scientific and Technical Reports: Organization, Preparation, and Production, " which may be obtained from American National Standards Institute Incorporated, 1430 Broadway, New York, NY, 10018. The Final Technical Report front page shall be marked a conspicuous place with a distribution statement to denote the extent of its availability for distribution, release, and disclosure without additional approvals or authorizations. Some example distribution statements are below. If these statements do not meet the needs of a particular deliverable, contact the AOR to discuss alternatives:

- Distribution is unlimited.
- Distribution authorized to DoD & DoD Contractors only.

E. FINAL BUSINESS STATUS REPORT

At the completion of the Ordnance Technology Initiative Agreement, the Ordnance Technology Initiative Recipient will submit a Final Business Status Report. The Final Business Status Report shall provide summarized details of the resource status of the Ordnance Technology Initiative Agreement, including the status of the contributions by all participants. This report will include a final accounting of cumulative expenditures.

Final Technical Status Report

For

Special Purpose Systems

Initiative No. DOTC-14-01-INIT302

Reporting Period: 03-20-14 to 01-30-17

Ordnance Technology Initiative Team

Initiative Lead: SAIC

Other Initiative Team Member(s):

Timeline Technical Services, LLC.

Paragon Force, Inc.

Resodyn Acoustic Mixers

Initiative Team Technical POC

Shawn Frederick

SAIC

14064 E. Westgate Ct.

Crane, IN 47522

812-863-3114

shawn.l.frederick@saic.com

Submitted: <1/30/2017>

Special Purpose Systems

Special Purpose Systems	
Goals & Objectives	Initiative Information
• Assist Customer with analyzing their countermeasure systems for performance standards. • Develop new Non-traditional Contractors to produce advanced machining techniques that are required by the SPS group. • Provide acquisition support for reducing time for acquiring prototype parts against traditional procurement methods. • Utilize in-house green technology to produce packaging needs and new prototype systems.	Initiative Lead: SAIC Team Members: Timeline Technical Services, LLC. Paragon Force, Inc. Resodyn Acoustic Mixers Period of Performance: 3/3/2014 – 1/30/2017 Funding: Total Funded: \$4,378,543
Milestones & Technical Achievements	Implementation & Payoff

3/3/2015 Receive FA parts from Lewis Engineering – MJU-53 rework 3/13/2015 Receive FQ parts from Marian – MJU-53 rework 4/13/2015 Receive FQ parts from Tobar – MJU-53 rework 5/11/2015 Receive FQ parts from All-Foils – MJU-53 rework 5/24/2015 Rework B366 Plumbing – Deem, Inc. 6/29/2015 Rework B366 Valves – Intellimotion 6/29/2015 Rework B366 Electrical – JWM Building Solutions 7/31/2015 Receive FQ parts from Guardian Technology – MJU-53 rework 8/11/2015 Procured and Delivered the Knee Mill and Lathe from ACI. Task 122 8/12/2015 Placed on order the CMM from Omni-Tech. Task 122 8/13/2015 BAE Systems on Intent of Contract to supply Crane with a countermeasure test system. Task JBU 8/22/2015 Placed on Contract Paragon Force to supply aid in the removal and installation/wiring of the Band Saw/Knee Mill/Lathe. Task 122 8/26/2015 Receive FQ parts from Lewis Engineering – MJU-53 rework 8/31/2015 Placed Order with MACHI for 600 lbs. of 3M FC-2175 Dense Highly Fluorinated Elastomer. (Fluorel) Task MJU 9/1/2015 Placed Order with RCFastner for 11K pan head screws. Task MJU 9/2/2015 Procured and Delivered a National Instruments cDAQ and components. Task 366 9/4/2015 Placed Solvay Specialty Products on purchase request to supply the Algoflon G10 product. Task MJU 9/5/2015 Placed Order with Magnesium Electron for GRAN 16, 200/235, -325 Mag. Task MJU 9/8/2015 Placed DEEM on contract to support with the Air System upgrade to Bld. 3087. Task 366	Schedule: 01/30/2017 Status: Completed
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9/15/2015 Placed Intellimotion on contract to support the wind stream system in Bld. 3087. Task 366 9/15/2015 Placed order with Fastenal for 1k pan head screws, needed ASAP for production. Task MJU 9/16/2015 Procured and Delivered the Swivel Band saw and components from WELLSA. Task 122 9/17/2015 Placed Lewis Engineering on Contract to produce 5000 MJU53A/B thick walled cases, drawing number 201416429 minus note 3. Task MJU 9/17/2015 Placed order with Paragon Force to produce 300 spacer Disks. Task MJU 9/18/2015 Placed on Order from Timeline LLC. , External Gage assy. For MJU-53A/B. Drawing 201416456 (Sept. 23 2015) ver. Task MJU 9/21/2015 Procured Shipping charges for the Mix batches that were performed at Resodyn. Task MJU 9/25/2015 Delivered 10,000 FQ squib cups for inspection from Guardian Technology. Task CAA 10/21/2015 Added additional funding with Intellimotion to support the wind stream system in Bld. 3087. 10/20/2015 Placed Fowler and Associates on a PR to supply the Algoflon G10 product. 10/09/2015 Procured Shipping charges for the Mix batches that were performed at Resodyn. 10/09/2015 Placed on Order from Timeline LLC. , External Gage assy. For MJU-53A/B. 10/22/2015 Received Services from Paragon force for 850 sets of FS15-067 Spacer Disks DEV14307-7 10/26/2015 Ordered Qty 3300 Plunger Springs from W.B. Jones Spring Co. Inc. 10/27/2015 Received Services from Paragon Force for Can/Crate foam for the DEV15145 and DEV12068 drawings.	SAIC's analysis of technology trends helped SPS systems prioritize what technologies they should implement in their upgrades by their technical maturity, availability, functionality, affordability, and to deliver prototype parts that support the programs while aligning with their requirements.
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10/29/2015	Placed Guardian Technology on contract to provide Qty 300 of each of the following, DEV07184 NotascREW and DEV07185 Modified Plunger hardware items.	
10/27/2015	Placed order with JoAnn Fabrics for Silk Dupioni	
10/28/2015	Received Services from Paragon Force to supply I8 Foam.	
10/28/2015	Ordered Qty 3000 Steel ball bearings from McMaster Carr.	
11/17/2015	Added additional funding with Intellimotion to support the wind stream system in Bld. 3087. They added programming and Engineering time.	
11/11/2015	Purchased electrical hardware from Kirby Risk to aid in the wind stream system support for Bld. 3087.	
11/2/2015	Placed Order with Laurel Products LLC. For Marzon CM-200 to support the MJU-53A/B Product Improvement Program (PIP).	
11/10/2015	Ordered Qty. 12 MJU53A/B floating rams and Qty. 12 MJU61A/B floating rams from TimeLine Technical Services LLC.	
11/05/2015	Received Services from Paragon force for 1650 sets of 20 layers of Spacer Disks DEV14307-4	
11/30/2015	Placed the order for the New RAM 5 Resonant Acoustic Mixer and supporting hardware items.	
12/29/2015	Order confirmed for the New RAM 5 Resonant Acoustic Mixer and supporting hardware items.	
01/08/2016	Order confirmed for Green Mountain Research and supporting hardware items.	
01/27/2016	Purchased electrical hardware from Kirby Risk to aid in the wind stream system support for Bld. 3087.	
01/27/2016	Purchased electrical hardware from Grainger to aid in the wind stream system support for Bld. 3087.	

01/27/2016	Placed Deem on contract to provide a 12 second actuator for an 8" Valve and the labor to replace and exchange the valve in building 3087.	
01/28/2016	Purchased valve gaskets from Harrison Plastics for their 6" raised flange #150 air pipes used in Bld. 3087.	
01/28/2016	Purchased an income system from Intercoms Online.com to be used in the communication between working spaces in Bld. 3087.	
01/28/2016	Purchased a 12" x 20' PVC SCH 80 pipe from Menards to be utilized in Bld. 3087 construction.	
01/28/2016	Purchased Gigabit switches from Zones to be used in the linking of pressure transducers in Bld. 3087.	
01/27/2016	Purchased from NI test equipment that will be utilized in the testing and monitoring of future products in Bld. 3087.	
02/23/2016	Purchased a Vistal Hydraulic elevating cart to incorporate in the wind steam support system.	
02/23/2016	Purchased from Handtrucks2Go a PME Van Line Dolly to support in the fabrication of the wind stream support system.	
02/23/2016	Purchased from Tool Fetch a Tank Holder bracket to support in the fabrication of the wind stream support system.	
02/23/2016	Purchased Stainless steel rod from EMJMETALS to fabricate a support bracket for the wind stream support.	
02/23/2016	Purchased electrical hardware from Kirby Risk to aid in the wind stream system support for Bld. 3087.	
03/07/2016	Purchased Stainless steel rod from EMJMETALS to fabricate a support bracket for the wind stream support system.	
03/08/2016	Purchased from Grainger stainless steel compression fittings to support in the fabrication of the wind stream support system.	

03/08/2016	Purchased from Black Box Ethernet cables in support of the Windstream fabrication.	
03/09/2016	Purchased from Allied Wire and Cable 230' of 20AWG. 32 conductor cable in support of the Wind steam support system.	
03/10/2016	Purchased Allen Bradley electrical hardware from Kirby Risk to aid in the wind stream system support for Bld. 3087.	
03/16/2016	Purchased Dual Volt Magnalock from Taylor Security and Lock in support for the WindStream Task 366	
03/16/2016	Purchased Micro800 Expansion Module End cap from Kirby Risk in support of the Windstream fabrication, Task 366	
03/17/2016	Purchased Conduit hardware and Couplings in support of the Windstream fabrication effort, Task 366	
03/27/2016	Purchased Multi-Conductor Cables from Allied Electronics in support of the Windstream fabrication effort, Task 366	
04/05/2016	Purchased Linesman Pliers from Grainger in support of the Windstream fabrication effort, Task 366	
04/13/2016	Purchased Hardware items form Kirby risk in support of the WindStream Task 366	
04/13/2016	Purchased Hardware items from McMaster Carr in support of the Windstream fabrication.	
04/13/2016	Purchased Signaling components from Walker Industrial in support of the Windstream Task 366.	
04/14/2016	Purchased Hardware items from OMNI-TECH in support of the CMM machine.	
04/13/2016	Purchased the services of Paragon Force to waterjet Compression pads in support of the MJU 53/AB countermeasures.	

05/19/2016	Purchased Hardware items from Newark in support of the WindStream Task 366	
05/19/2016	Purchased Hardware items from Platt Electric Supply in support of the Windstream fabrication.	
05/19/2016	Purchased Wind Measuring hardware from Dwyer Instruments in support of the Windstream Task 366.	
05/23/2016	Placed an PO with Intellimotion for Software changes in support of the WindStream Task 366	
05/26/2016	Purchased Tooling items from KC Tool in support of the WindStream.	
05/26/2016	Purchased Hardware items from MSC Industrial Direct in support of the WindStream Task 366	
05/26/2016	Purchased Hardware items from L-Com in support of Task 366	
05/26/2016	Purchased Hardware items from Digi-Key in support of the WindStream.	
06/01/2016	Purchased Hardware replacement items from Taylor Security in support of the WindStream.	
05/26/2016	Purchased the services of Vacuum Atmospheres to service the Nitrogen Glove boxes in Bld. 145 and Bld. 198 in support of the MJU 53/AB countermeasures.	
06/06/2016	Purchased Material from GABRIEL in support of MJU 53/AB countermeasures.	
06/13/2016	Purchased Coaxial Bend protectors for RG58 Hardware items from L-Com in support of the WindStream Task 366.	
06/14/2016	Purchased cDAQ Ethernet Chassis Hardware items from National Instruments in support of the Windstream in Building 3087 Task 366.	
06/21/2016	Purchased Limit Switches and Rare Earth Magnets from Newark in support of the Windstream Task 366.	

06/28/2016	Purchased Epon Resin from Hexion in support of the Special Projects, Task MJU.	
06/29/2016	Purchased 10 Gig Termination equipment from Allied Electronics in support of the Windstream Task 366.	
06/29/2016	Purchased Cat6a Ethernet Cable from Warehouse cables in support of the Windstream Task 366.	
07/13/2016	Purchased Mil Spec connectors and back shell Hardware items from Mouser in support of the WindStream Task 366	
07/13/2016	Purchased Mil Spec connectors and electric contacts from Interstate Connecting Components in support of the Windstream Task 366.	
07/14/2016	Purchased 2000' of Cat 6a cable from Warehouse Cables in support of the Windstream Task 366.	
07/28/2016	Purchased 3M 4011 mounting tape from ULINE in support of the Windstream Task 366.	
07/28/2016	Purchased Electronic components from Digi-key in support of the Windstream Task 366.	
08/01/2016	Purchased ½" Drive Impact drill and socket sets from Amazon in support of the Windstream Task 366.	
08/01/2016	Purchased Electronic enclosure from Factorymation in support of the Windstream Task 366.	
08/02/2016	Purchased ESD containers from ESD Plastic Containers in support of the Windstream Task 366.	
08/01/2016	Procured samples of ULTRAFILON MP-20, MARZON X-55, and MARZON 110 from LAUREL in support of the Special Projects, Task MJU.	
08/1/2016	Purchased Tough prime, RF60550RF from Rosco in support of the Windstream Task 366.	

08/11/2016	Purchased MDA2 Signal Conditioner from Interface Advanced Force Measurement in support of the WindStream Task 366.	
08/22/2016	Purchased Concrete Drill bits, Star bits, Caliburn Concrete Screws from Decks Direct in support of the fabrication of the WindStream Task 366.	
08/22/2016	Purchased Electrical Hardware from McMaster Carr in support of the Windstream fabrication Task 366.	
08/22/2016	Purchased Black Spray paint from Grainger in support of the Windstream fabrication Task 366.	
08/22/2016	Purchased Electrical conduit from Kirby Risk in support of the fabrication of the Windstream Task 366.	
08/25/2016	Purchased Electrical couplers from Digi-Key in support of the Windstream Task 366.	
08/29/2016	Purchased Concrete screws, bits from Amazon in support of the Windstream Task 366.	
08/31/2016	Purchased LED outdoor light from E-conolight in support of the Windstream Task 366.	
09/1/2016	Purchased Outdoor Electrical Boxes from FactoryMation in support of the Windstream Task 366.	
09/21/2016	Purchased 50Kg of Marzon X-55 from Laurel Products in Support of Task MJU.	
09/22/2016	Purchased 200lbs. of -325 Magnesium from Magnesium Electron in Support of Task MJU.	
09/27/2016	Purchased four Apple iPad Pro's from Apple in support of the Flare Display Case for Task JBU.	
10/06/2016	Purchased a Carriage Assembly for a MakerBot from MakerBot in Support of Task MJU.	
01/12/2017	Purchased Network Switch from BlackBox in support of the 366 Tasking.	

10/18/2016 Purchased three days of mix testing at the Resodyn facility in Butte Montana. 01/11/2017 Purchased Tooling and Molded Parts from CSP Technologies in support of Task MJU. 01/17/2017 Purchased Foam Packaging Materials from Exemplary Foam LLC. In support of Task MJU. 01/18/2017 Purchased Hardware from PHRONTIER Technologies for prototyping in support of the MJU Tasking. 01/18/2017 Purchased Hardware items from McMaster Carr to support the prototyping efforts in support of the 366 Tasking. 01/26/2017 Purchased Temperature Chamber from THERMOTRON in support of the MJU task. 01/26/2017 Purchased a purge unit for the glove boxes from NEFF Engineering in support of the MJU tasking. 01/26/2017 Purchased a IR detector from Teledyne in support of the 366 DOTC Tasking. 01/26/2017 Purchased a Current Pre-Amplifier from DL Instruments in support of the DOTC Tasking 366.	
Current Status: Technical = Green/Yellow/Red (⇒) Schedule = Green/Yellow/Red (⇒) Cost = Green/Yellow/Red (⇒)	

Current Status Legend: Green = Good/On Budget Yellow = Minor Weakness/Known Risk Red = Major Weakness/Critical
Delta: ↑ = upgrade from last assessment; ↓ = downgrade from last assessment; ⇒ = no change

2. Supplemental Information

In order to improve the usefulness of the quad charts and provide DOTC with sufficient initiative information, the Quarterly Report must be supplemented with data described below.

3.1 Technical Achievements

This section should provide additional detail to support technical achievements listed in the lower left quadrant of the quad chart that have already occurred. Information presented should be easy to understand by those unfamiliar with the specific initiative or technology.

For each technical achievement cited for the quarter, provide the following supporting information:

- Reduction in procurement time verses traditional procurement methods.
- Advancing machining technologies for repeatable surface finishes
- Finishes were achieved during first article acceptance testing
- The surface finishes are specific to the application.

Repeat the above for all significant technical achievements, being sure to define all acronyms.

Milestone Status:

Milestone Number	Deliverable Description	Due Date	Invoice Period Percent Complete	Cumulative Percent Complete
1	Program Kickoff Mtg.	4/1/2014	100%	100%
2	Place all components on order – Task 8	6/1/2014	100%	100%
3	Receive FA parts from nontraditional contractors – Task 8	8/12/2014	100%	100%
4	Receive FQ parts from nontraditional contractors – Task 8	10/20/2014	100%	100%
5	Receive Press Tooling from Timeline Technical Services – MJU-53 rework	1/1/2015	100%	100%
6	Complete B366 Valve control system upgrades	1/16/2015	100%	100%
7	Receive FQ parts from Myco Plastics	1/20/2015	100%	100%
8	Receive LabRAM II H from Resodyn Acoustic Mixers – MJU-53 rework	2/25/2015	100%	100%

9	Receive FA parts from Lewis Engineering – MJU-53 rework	3/3/2015	100%	100%
10	Receive FQ parts from Lewis Engineering – MJU-53 rework	8/26/2015	100%	100%
11	Receive FA parts from Guardian Technology – MJU-53 rework	1/30/2015	100%	100%
12	Receive FQ parts from Guardian Technology – MJU-53 rework	7/31/2015	100%	100%
13	Receive FQ parts from Marian – MJU-53 rework	3/13/2015	100%	100%
14	Receive FQ parts from Tobar – MJU-53 rework	4/13/2015	100%	100%
15	Receive FQ parts from All-Foils – MJU-53 rework	5/11/2015	100%	100%
16	Rework B366 Valves – Intellimotion	6/29/2015	100%	100%
17	Rework B366 Plumbing – Deem, Inc.	5/24/2015	100%	100%
18	Rework B366 Electrical – JWM Building Solutions	6/29/2015	100%	100%
19	Procured and Delivered a National Instruments cDAQ and components. Task 366	9/2/2015	100%	100%
20	Placed DEEM on contract to support with the Air System upgrade to Bld. 3087. Task 366	9/08/2015	100%	100%
21	Placed Intellimotion on contract to support the wind stream system in Bld. 3087. Task 366	9/15/2015	100%	100%
22	Placed Order with Magnesium Electron for GRAN 16, 200/235, -325 Mag. Task MJU	9/05/2015	100%	100%
23	Placed Order with RCFastner for 11K pan head screws. Task MJU	9/01/2015	100%	100%
24	Placed Order with MACHI for 600 lbs. of 3M FC-2175 Dense Highly Fluorinated Elastomer. (Fluorel) Task MJU	8/31/2015	100%	100%
25	Placed Lewis Engineering on Contract to produce 5000 MJU53A/B thick walled cases, drawing number 201416429 minus note 3. Task MJU	9/17/2015	100%	100%
26	Placed order with Fastenal for 1k pan head screws, needed ASAP for production. Task MJU	9/15/2015	100%	100%
27	Placed Solvay Specialty Products on purchase request to supply the Algoflon G10 product. Task MJU	9/04/2015	100%	100%
28	Placed order with Paragon Force to produce 300 spacer Disks. Task MJU	9/17/2015	100%	100%

29	Procured Shipping charges for the Mix batches that were performed at Resodyn. Task MJU	9/21/2015	100%	100%
30	Placed on Order from Timeline LLC. , External Gage assy. For MJU-53A/B. Drawing 201416456 (Sept. 23 2015) ver. Task MJU	9/18/2015	100%	100%
31	Delivered 10,000 FQ squib cups for inspection from Guardian Technology. Task CAA	9/25/2015	100%	100%
32	Procured and Delivered the Swivel Band saw and components from WELLSA. Task 122	9/16/2015	100%	100%
33	Procured and Delivered the Knee Mill and Lathe from ACI. Task 122	8/11/2015	100%	100%
34	Placed on order the CMM from Omni-Tech. Task 122	8/12/2015	100%	100%
35	Placed on Contract Paragon Force to supply aid in the removal and installation/wiring of the Band Saw/Knee Mill/Lathe. Task 122	8/22/2015	100%	100%
36	BAE Systems on Intent of Contract to supply Crane with a countermeasure test system. Task JBU	8/13/2015	100%	100%
37	Added additional funding with Intellimotion to support the wind stream system in Bld. 3087.	10/21/2015	100%	100%
38	Placed Fowler and Associates on a PR to supply the Algoflon G10 product.	10/20/2015	100%	100%
39	Procured Shipping charges for the Mix batches that were performed at Resodyn.	10/09/2015	100%	100%
40	Placed on Order from Timeline LLC. , External Gage assy. For MJU-53A/B.	10/09/2015	100%	100%
41	Received Services from Paragon force for 850 sets of FS15-067 Spacer Disks DEV14307-7	10/22/2015	100%	100%
42	Ordered Qty 3300 Plunger Springs from W.B. Jones Spring Co. Inc.	10/26/2015	100%	100%
43	Received Services from Paragon Force for Can/Crate foam for the DEV15145 and DEV12068 drawings.	10/27/2015	100%	100%
44	Placed Guardian Technology on contract to provide Qty 300 of each of the following, DEV07184 NotascREW and DEV07185 Modified Plunger hardware items.	10/29/2015	100%	100%
45	Placed order with JoAnn Fabrics for Silk Dupioni	10/27/2015	100%	100%
46	Received Services from Paragon Force to supply I8 Foam.	10/28/2015	100%	100%

47	Ordered Qty 3000 Steel ball bearings from McMaster Carr.	10/28/2015	100%	100%
48	Added additional funding with Intellimotion to support the wind stream system in Bld. 3087. They added programming and Engineering time.	11/17/2015	100%	100%
49	Purchased electrical hardware from Kirby Risk to aid in the wind stream system support for Bld. 3087.	11/11/2015	100%	100%
50	Placed Order with Laurel Products LLC. For Marzon CM-200 to support the MJU-53A/B Product Improvement Program (PIP).	11/2/2015	100%	100%
51	Ordered Qty. 12 MJU53A/B floating rams and Qty. 12 MJU61A/B floating rams from TimeLine Technical Services LLC.	11/10/2015	100%	100%
52	Received Services from Paragon force for 1650 sets of 20 layers of Spacer Disks DEV14307-4	11/05/2015	100%	100%
53	Placed the order for the New RAM 5 Resonant Acoustic Mixer and supporting hardware items.	11/30/2015	100%	100%
54	Purchased a Sensaphone 400 Monitoring System with (2) Spot Water Detect sensors to aid in the wind stream system support for Bld. 366.	12/15/2015	100%	100%
55	Order confirmed for the New RAM 5 Resonant Acoustic Mixer and supporting hardware items.	12/29/2015	100%	100%
56	Order confirmed for Green Mountain Research and supporting hardware items.	01/08/2015	100%	100%
57	Purchased electrical hardware from Kirby Risk to aid in the wind stream system support for Bld. 3087.	01/27/2016	100%	100%
58	Purchased electrical hardware from Grainger to aid in the wind stream system support for Bld. 3087.	01/27/2016	100%	100%
59	Placed Deem on contract to provide a 12 second actuator for an 8" Valve and the labor to replace and exchange the valve in building 3087.	01/27/2016	100%	100%
60	Purchased valve gaskets from Harrison Plastics for their 6" raised flange #150 air pipes used in Bld. 3087.	01/28/2016	100%	100%
61	Purchased an income system from Intercoms Online.com to be used in the communication between working spaces in Bld. 3087.	01/28/2016	100%	100%
62	Purchased a 12" x 20' PVC SCH 80 pipe from Menards to be utilized in Bld. 3087 construction.	01/28/2016	100%	100%

63	Purchased Gigabit switches from Zones to be used in the linking of pressure transducers in Bld. 3087.	01/28/2016	100%	100%
64	Purchased from NI test equipment that will be utilized in the testing and monitoring of future products in Bld. 3087.	01/27/2016	100%	100%
65	Purchased a Vistal Hydraulic elevating cart to incorporate in the wind steam support system.	02/23/2016	100%	100%
66	Purchased from Handtrucks2Go a PME Van Line Dolly to support in the fabrication of the wind stream support system.	02/23/2016	100%	100%
67	Purchased from Tool Fetch a Tank Holder bracket to support in the fabrication of the wind stream support system.	02/23/2016	100%	100%
68	Purchased Stainless steel rod from EMJMETALS to fabricate a support bracket for the wind stream support system.	02/23/2016	100%	100%
69	Purchased electrical hardware from Kirby Risk to aid in the wind stream system support for Bld. 3087.	02/23/2016	100%	100%
70	Purchased Allen Bradley electrical hardware from Kirby Risk to aid in the wind stream system support for Bld. 3087.	03/10/2016	100%	100%
71	Purchased Stainless steel rod from EMJMETALS to fabricate a support bracket for the wind stream support system.	03/07/2016	100%	100%
72	Purchased from Grainger stainless steel compression fittings to support in the fabrication of the wind stream support system.	03/08/2016	100%	100%
73	Purchased from Black Box Ethernet cables in support of the Windstream fabrication.	03/08/2016	100%	100%
74	Purchased Allen Bradley electrical hardware from Kirby Risk to aid in the wind stream system support for Bld. 3087.	03/10/2016	100%	100%
75	Purchased from Allied Wire and Cable 230' of 20AWG. 32 conductor cable in support of the Wind steam support system.	03/09/2016	100%	100%
76	Purchased Dual Volt Magnalock from Taylor Security and Lock in support for the WindStream Task 366	03/16/2016	100%	100%
77	Purchased Micro800 Expansion Module End cap from Kirby Risk in support of the Windstream fabrication, Task 366	03/16/2016	100%	100%

78	Purchased Conduit hardware and Couplings in support of the Windstream fabrication effort, Task 366	03/17/2016	100%	100%
79	Purchased Multi-Conductor Cables from Allied Electronics in support of the Windstream fabrication effort, Task 366	03/27/2016	100%	100%
80	Purchased Linesman Pliers from Grainger in support of the Windstream fabrication effort, Task 366	04/05/2016	100%	100%
81	Purchased Hardware items form Kirby risk in support of the WindStream Task 366	04/13/2016	100%	100%
82	Purchased Hardware items from McMaster Carr in support of the Windstream fabrication.	04/13/2016	100%	100%
83	Purchased Signaling components from Walker Industrial in support of the Windstream Task 366.	04/132016	100%	100%
84	Purchased Hardware items from OMNI-TECH in support of the CMM machine.	04/14/2016	100%	100%
85	Purchased the services of Paragon Force to waterjet Compression pads in support of the MJU 53/AB countermeasures.	04/13/2016	100%	100%
86	Purchased Hardware items from Newark in support of the WindStream Task 366	05/19/2016	100%	100%
87	Purchased Hardware items from Platt Electric Supply in support of the Windstream fabrication.	05/19/2016	100%	100%
88	Purchased Wind Measuring hardware from Dwyer Instruments in support of the Windstream Task 366.	05/19/2016	100%	100%
89	Placed an PO with Intellimotion for Software changes in support of the WindStream Task 366	05/23/2016	100%	100%
90	Purchased Tooling items from KC Tool in support of the WindStream.	05/26/2016	100%	100%
91	Purchased Hardware items from MSC Industrial Direct in support of the WindStream Task 366	05/26/2016	100%	100%
92	Purchased Hardware items from L-Com in support of Task 366	05/26/2016	100%	100%

93	Purchased Hardware items from Digi-Key in support of the WindStream.	05/26/2016	100%	100%
94	Purchased Hardware replacement items from Taylor Security in support of the WindStream.	06/01/2016	100%	100%
95	Purchased the services of Vacuum Atmospheres to service the Nitrogen Glove boxes in Bld. 145 and Bld. 198 in support of the MJU 53/AB countermeasures.	05/26/2016	100%	100%
96	Purchased Material from GABRIEL in support of MJU 53/AB countermeasures.	06/06/2016	100%	100%
97	Purchased Coaxial Bend protectors for RG58 Hardware items from L-Com in support of the WindStream Task 366.	06/13/2016	100%	100%
98	Purchased cDAQ Ethernet Chassis Hardware items from National Instruments in support of the Windstream in Building 3087 Task 366.	06/14/2016	100%	100%
99	Purchased Limit Switches and Rare Earth Magnets from Newark in support of the Windstream Task 366.	06/21/2016	100%	100%
100	Purchased 10 Gig Termination equipment from Allied Electronics in support of the Windstream Task 366.	06/29/2016	100%	100%
101	Purchased Cat6a Ethernet Cable from Warehouse cables in support of the Windstream Task 366.	06/29/2016	100%	100%
102	Purchased Epon Resin from Hexion in support of the Special Projects, Task MJU.	06/28/2016	100%	100%
103	Purchased Mil Spec connectors and back shell Hardware items from Mouser in support of the WindStream Task 366	07/13/2016	100%	100%
104	Purchased Mil Spec connectors and electric contacts from Interstate Connecting Components in support of the Windstream Task 366.	07/13/2016	100%	100%
105	Purchased 2000' of Cat 6a cable from Warehouse Cables in support of the Windstream Task 366.	07/14/2016	100%	100%
106	Purchased 3M 4011 mounting tape from ULINE in support of the Windstream Task 366.	07/28/2016	100%	100%
107	Purchased Electronic components from Digi-key in support of the Windstream Task 366.	07/28/2016	100%	100%

108	Purchased ½” Drive Impact drill and socket sets from Amazon in support of the Windstream Task 366.	08/01/2016	100%	100%
109	Purchased Electronic enclosure from Factorymation in support of the Windstream Task 366.	08/01/2016	100%	100%
110	Purchased ESD containers from ESD Plastic Containers in support of the Windstream Task 366.	08/02/2016	100%	100%
111	Procured samples of ULTRAFLO MP-20, MARZON X-55, and MARZON 110 from LAUREL in support of the Special Projects, Task MJU.	08/01/2016	100%	100%
112	Purchased Tough prime, RF60550RF from Rosco in support of the Windstream Task 366.	08/1/2016	100%	100%
113	Purchased MDA2 Signal Conditioner from Interface Advanced Force Measurement in support of the WindStream Task 366.	08/11/2016	100%	100%
114	Purchased Concrete Drill bits, Star bits, Caliburn Concrete Screws from Decks Direct in support of the fabrication of the WindStream Task 366.	08/22/2016	100%	100%
115	Purchased Electrical Hardware from McMaster Carr in support of the Windstream fabrication Task 366.	08/22/2016	100%	100%
116	Purchased Black Spray paint from Grainger in support of the Windstream fabrication Task 366.	08/22/2016	100%	100%
117	Purchased Electrical conduit from Kirby Risk in support of the fabrication of the Windstream Task 366.	08/22/2016	100%	100%
118	Purchased Electrical couplers from Digi-Key in support of the Windstream Task 366.	08/25/2016	100%	100%
119	Purchased Concrete screws, bits from Amazon in support of the Windstream Task 366.	08/29/2016	100%	100%
120	Purchased LED outdoor light from E-conolight in support of the Windstream Task 366.	08/31/2016	100%	100%
121	Purchased Outdoor Electrical Boxes from FactoryMation in support of the Windstream Task 366.	09/1/2016	100%	100%
122	Purchased four Apple iPad Pro’s from Apple in support of the Flare Display Case for Task JBU.	09/27/2016	100%	100%
123	Purchased 50Kg of Marzon X-55 from Laurel Products in Support of Task MJU.	09/21/2016	100%	100%

124	Purchased 200lbs. of -325 Magnesium from Magnesium Electron in Support of Task MJU.	09/22/2016	100%	100%
125	Purchased a Carriage Assembly for a MakerBot from MakerBot in Support of Task MJU.	10/06/2016	100%	100%
126	Purchased three days of mix testing at the Resodyn facility in Butte Montana.	10/18/2016	100%	100%
127	Purchased Tooling and Molded Parts from CSP Technologies in support of Task MJU.	01/11/2017	100%	100%
128	Purchased Foam Packaging Materials from Exemplary Foam LLC. In support of Task MJU.	01/17/2017	100%	100%
129	Purchased Hardware from PHRONTIER Technologies for prototyping in support of the MJU Tasking.	01/18/2017	100%	100%
130	Purchased Hardware items from McMaster Carr to support the prototyping efforts in support of the 366 Tasking.	01/18/2017	100%	100%
131	Purchased Temperature Chamber from THERMOTRON in support of the MJU task.	01/26/2017	100%	100%
132	Purchased a purge unit for the glove boxes from NEFF Engineering in support of the MJU tasking.	01/26/2017	100%	100%
133	Purchased a IR detector from Teledyne in support of the 366 DOTC Tasking.	01/26/2017	100%	100%
134	Purchased a Current Pre-Amplifier from DL Instruments in support of the DOTC Tasking 366.	01/26/2017	100%	100%

3.2 Technical Readiness Level Status and Technology Transfer Information:

Please indicate the current Technology Readiness Level (TRL) and technology transfer information for the prototype development effort based on the information requested and definitions in the chart (Insert chart number) below.

Technology Transition Information

1. Technology or technologies being worked on: Passive Countermeasures
2. Is this technology an extension of a previous DOTC agreement or contract: No
3. System to which technology can transition: Special Purpose Systems
4. Commercial applications if applicable: N/A
5. Government organizations or DoD Armed Force Services interested in technology other than AOR's organization: N/A
6. DoD Armed force services or organizations that could benefit from technology (not mentioned above): Army, Navy, Air Force, Marine Corps
7. Initial Technology Readiness Level (TRL) of technology at the start of agreement: (Insert appropriate TRL – TRL's are from 1 through 9 and definitions are in chart below. Please consult with AOR to finalize)
8. Current Technology Readiness Level (TRL) of technology: 3
9. Final Technology Readiness Level (TRL) of technology expected at end of agreement: 7

10. Next step in technology transition process: DOTC Completed.

Technology Readiness Levels in the Department of Defense (DOD)
(Source: DOD (2006), *Defense Acquisition Guidebook*)

Technology Readiness Level	Description
1. Basic principles observed and reported	Lowest level of technology readiness. Scientific research begins to be translated into applied research and development. Example might include paper studies of a technology's basic properties.
2. Technology concept and/or application formulated	Invention begins. Once basic principles are observed, practical applications can be invented. The application is speculative and there is no proof or detailed analysis to support the assumption. Examples are still limited to paper studies.
3. Analytical and experimental critical function and/or characteristic proof of concept	Active research and development is initiated. This includes analytical studies and laboratory studies to physically validate analytical predictions of separate elements of the technology. Examples include components that are not yet integrated or representative.
4. Component and/or breadboard validation in laboratory environment	Basic technological components are integrated to establish that the pieces will work together. This is "low fidelity" compared to the eventual system. Examples include integration of 'ad hoc' hardware in a laboratory.
5. Component and/or breadboard validation in relevant environment	Fidelity of breadboard technology increases significantly. The basic technological components are integrated with reasonably realistic supporting elements so that the technology can be tested in a simulated environment. Examples include 'high fidelity' laboratory integration of components.
6. System/subsystem model or prototype demonstration in a relevant environment	Representative model or prototype system, which is well beyond the breadboard tested for TRL 5, is tested in a relevant environment. Represents a major step up in a technology's demonstrated readiness. Examples include testing a prototype in a high fidelity laboratory environment or in simulated operational environment.
7. System prototype demonstration in an operational environment	Prototype near or at planned operational system. Represents a major step up from TRL 6, requiring the demonstration of an actual system prototype in an operational environment, such as in an aircraft, vehicle or space. Examples include testing the prototype in a test bed aircraft.
8. Actual system completed and 'flight qualified' through test and demonstration	Technology has been proven to work in its final form and under expected conditions. In almost all cases, this TRL represents the end of true system development. Examples include developmental test and evaluation of the system in its intended weapon system to determine if it meets design specifications.

3.3 Problems Encountered and Action Taken

- None to report

3.4 Non-Traditional Defense Contractor Participation

Name of Nontraditional*	Planned Start Date	Actual Start Date	Reason for Deviation from Plan
Timeline Technical Services, LLC.	5/1/2014	5/13/2014	Paperwork needed completed in order to place on contract.
Paragon Force, Inc.	5/1/2014	-	Have not received requirements to participate
Resodyn Acoustic Mixers	5/1/2014	11/25/2014	Received requirement 10/29/2014

**For any nontraditional defense contractors listed that were not included in your final cost proposal, please provide Warranties and Representations (contact the NWECCMF for the form).*

3.5 Plans for Next Year

Continue support DOTC INIT's

Final Business Status Report

For

Special Purpose Systems

Initiative No. DOTC-14-01-INIT302

Reporting Period: 03-20-14 to 01-30-17

Ordnance Technology Initiative Team

Initiative Lead: SAIC

Other Initiative Team Member(s):

Timeline Technical Services, LLC.

Paragon Force, Inc.

Resodyn Acoustic Mixers

Initiative Team Technical POC

Shawn Frederick

SAIC

14064 E. Westgate Ct.

Crane, IN 47522

812-863-3114

shawn.l.frederick@saic.com

Submitted: <01/30/2017>

Total Initiative Cost (total ceiling excluding cost share):	\$ 4,378,543
Total Estimated Cost Share (ratio cost/cost share):	\$ (n/a)
Total Funds Obligated:	\$ 4,378,543
Total Funds Invoiced:	\$ 4,348,786
Date of Last Invoice:	March 10, 2017
Total Cost Share Reported:	\$ 0

Ordnance Technology Initiative Resource/Cost Information:

The following resources/costs are applicable to this initiative from the effective date through January 30, 2017:

Organization	Total Initiative Planned Cost (Ceiling)	Planned Cost to Date	Estimated Cost to Date	Comments (include significant deviations from plan.)
Resodyn Acoustic Mixers	\$1,163,471	\$664,924	\$664,924	Resodyn provided custom mixing support for new mixtures.
Timeline Technical Services, LLC.	\$319,600	\$223,872	\$223,872	None to report.
Paragon Force	\$660,144	\$17,538	\$17,538	None to report.
SAIC	\$2,235,328	\$3,438,602	\$3,438,602	
Total	\$4,378,543	\$4,344,936	\$4,344,936	

Problems Encountered and Action Taken

This section should discuss proposed actions to address any deviations described in the table above.

N/A

MEMORANDUM: Agreements Officer Representative Sign-Off

To: DOTC Agreements Officer Representative (AOR)
From: Shawn Frederick
Date: 3/20/2017
Reference: (a) Ordnance Technology Base Agreement between ATI and SAIC; Agreement No. 2009-616A
(b) Ordnance Technology Initiative Agreement No. DOTC-14-01-INIT302
Subject: Milestone Approval

The deliverable associated with All Milestones for reference (b) has been completed. The following deliverables associated with this milestone are attached:

- See Milestone Status chart above.

It is requested that verification of these accomplishments be provided to the NWECC Consortium Management Firm.

To: NWECC Consortium Management Firm

Date: _____

CERTIFICATION BY AGREEMENTS OFFICER REPRESENTATIVE:

The Ordnance Technology Initiative Agreement Recipient has (or has not) made satisfactory progress and provided the required deliverables associated with this milestone.

Other comments or concerns regarding this or future milestones:

[Note: For any non-satisfactory areas include a discussion of what was not acceptable, references to previous correspondence on the issue, and what corrective actions are needed to effect payment.]

Agreements Officer Representative

Copy to:
Initiative Technical and Contracting Points of Contact