

UNCLASSIFIED

PE NUMBER: 0603742F

PE TITLE: Combat Identification Technology

Exhibit R-2, RDT&E Budget Item Justification									DATE May 2009	
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)					PE NUMBER AND TITLE 0603742F Combat Identification Technology					
Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	25.170	29.300	27.252	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
2597 Noncooperative Identification Subsystems	19.586	20.320	23.642	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
2599 Cooperative Identification Techniques	5.584	8.980	3.610	0.000	0.000	0.000	0.000	0.000	0.000	56.165

(U) A. Mission Description and Budget Item Justification

The Combat Identification (CID) Technology program element analyzes, develops, and demonstrates promising target identification technologies for transition into System Development and Demonstration (SDD). Numerous joint needs statements, operational documents, lessons learned, and NATO requirements state the need for positive CID. High confidence CID increases combat effectiveness and prevents fratricide. It also enables combatant commanders to effectively command and control their forces in all weather, day or night. This program element focuses on the cooperative and non-cooperative technologies that have the capability to positively identify surface and air targets in both air-to-surface and air-to-air engagements.

In order to rapidly transition promising CID technologies, the program element funds design studies, engineering analysis, non-recurring engineering, and other efforts associated with integration and modification of CID related technologies and systems on platforms. It also supports the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, Allied, and coalition interoperability.

Non-cooperative CID employs a number of sensing technologies and signal processing techniques. The results are compared against a database of known objects to identify surface or air threats from air platforms. These technologies include: (1) Laser Vision, an electro-optical imaging system that significantly increases ID ranges and includes (a) the Laser Target Imaging Program (LTIP) which will consist of exploiting synergies between non-cooperative and cooperative ID systems (radio, millimeter wave, infrared, and laser), combat mode improvements, laser vibration development, and studies to support decisions on future work and (b) the Advanced (3D) Laser Sensing (ALS)/Aided Target Recognition (ATR) Combat ID program which includes advanced laser vibration, 3-dimensional laser detection and ranging, laser radar, synthetic aperture laser (SAL) radar, aided/automatic target recognition, and image fusion; (2) Radar Vision, an air-to-ground radar imaging technique to identify stationary and moving targets using their radar signatures; (3) Signature Database, a project focused on real and synthetic signature collection, generation, processing, testing, and standardization techniques that will greatly reduce the cost of supporting fielded and future non-cooperative systems; (4) Fusion Vision, a fusion of sensor data from multiple sources to create a higher confidence in CID of surface or air targets; and (5) X-Patch, a validated set of prediction codes and analysis tools that use the shooting-and-bouncing ray (SBR) method to predict realistic far-field radar signatures from 3D target models in order to predict 1D and/or 2D data. X-Patch is vital to the mission of database production centers which support Joint Sensors Signature Database (JSSD) pathfinders.

Cooperative CID requires systems that rapidly identify friendly platforms. Utilizing a challenge and response system, platforms in the air-to-air or air-to-surface setting emit a directed electromagnetic challenge to achieve a reaction positively identifying another platform as a friendly. This program element funds growth to Mark XIIA, the next generation Identification Friend or Foe (IFF) standard for the DoD and NATO. Mark XIIA represents a substantial enhancement to the Mark XII IFF system.

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Exhibit R-2, RDT&E Budget Item Justification

DATE

May 2009

BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0603742F Combat Identification Technology

It is expected to achieve joint initial operational capability in 2014. The "A" denotes the addition of Mode 5 (an encrypted challenge-and-reply mode) to the other Mark XII system modes (Modes 1, 2, 3/A, C, S, and 4). The Mode 5 secure IFF program is a DoD-wide, Navy-led development and acquisition program. The development funded by this program element ensures availability of an upgrade path for implementing platforms across the Air Force fleet.

This program is in Budget Activity 4 - Advanced Component Development and Prototypes because it transitions technologies from laboratory to operational use.

(U) **B. Program Change Summary (\$ in Millions)**

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Previous President's Budget	25.875	29.400	27.841
(U) Current PBR/President's Budget	25.170	29.300	27.252
(U) Total Adjustments	-0.705	-0.100	
(U) Congressional Program Reductions		-0.021	
Congressional Rescissions		-0.079	
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer	-0.705		

(U) **Significant Program Changes:**

Funding for X-Patch was moved into the Combat ID program element for FY09 and beyond, and previously resided in PE 63203F. Within PE 63742F, money for X-Patch was placed in BPAC 642599 (Cooperative) for FY09 and BPAC 642597 (Non-cooperative) for FY10.

Exhibit R-2a, RDT&E Project Justification								DATE May 2009		
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)					PE NUMBER AND TITLE 0603742F Combat Identification Technology			PROJECT NUMBER AND TITLE 2597 Noncooperative Identification Subsystems		
Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
2597 Noncooperative Identification Subsystems	19.586	20.320	23.642	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) **A. Mission Description and Budget Item Justification**

Non-cooperative CID employs a number of sensing technologies and signal processing techniques. The results are compared against a database of known objects to identify surface or air threats from air platforms. These technologies include: (1) Laser Vision, an electro-optical imaging system that significantly increases ID ranges and includes (a) the Laser Target Imaging Program (LTIP) which will consist of exploiting synergies between non-cooperative and cooperative ID systems (radio, millimeter wave, infrared, and laser), combat mode improvements, laser vibration development, and studies to support decisions on future work and (b) the Advanced (3D) Laser Sensing (ALS)/Aided Target Recognition (ATR) Combat ID program which includes advanced laser vibration, 3-dimensional laser detection and ranging, laser radar, synthetic aperture laser (SAL) radar, aided/automatic target recognition, and image fusion; (2) Radar Vision, an air-to-ground radar imaging technique to identify stationary and moving targetets using their radar signatures; (3) Database, a project focused on real and synthetic signature collection, generation, processing, testing and standardization techniques that will greatly reduce the cost of supporting fielded and future non-cooperative systems; (4) Fusion Vision, a fusion of sensor data from multiple sources to create a higher confidence in CID of surface or air targets; and (5) X-Patch; a validated set of prediction codes and analysis tools that use the shooting-and-bouncing ray (SBR) method to predict realistic far-field radar signatures from 3D target models in order to predict 1D and/or 2D data. X-Patch is vital to the mission of database production centers which support Joint Sensors Signature Database (JSSD) pathfinders.

CID will support Boldquest 09 with more advanced LTIP targeting pods and RBCI (Radio Based Combat ID) in a pod. FY10 development will begin to join cooperative and non-cooperative systems in the Fusion Vision Program to gain a higher confidence combat identification will be the CID project of the future. This program is in Budget Activity 4 - Advanced Component Development and Prototypes because it transitions technologies from laboratory to operational use.

(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Transition / convert the High Range Resolution (HRR) synthetic target database developed in conjunction with National Air and Space Intelligence Center (NASIC) to the Target Signature Data Base for use on multiple platforms. NASIC is in the process of assuming responsibility for the target database development.	0.070	0.000	0.000
(U) Establish and develop the Target Signature (multispectral) Database Development Program. A robust database program of surface and air targets from various countries populated from multiple sources. Incorporate the analysis and database developed in prior years by the HRR program.	4.448	0.610	0.259
(U) The Laser Vision (LV) project provides the demonstration and evaluation data necessary to make well informed transition decisions on promising CID technologies for both air-to-air and air-to-surface ID that will enhance mission performance and reduce battle space fratricide. The LV project is focused on emerging technologies that could be installed into platforms like targeting pods and UAVs. Future LV candidate projects include the development and testing of enhanced 2D laser imaging, radio based combat identification, hyper-spectral, low light imaging,	2.992	5.372	3.816

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Exhibit R-2a, RDT&E Project Justification							DATE May 2009				
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)				PE NUMBER AND TITLE 0603742F Combat Identification Technology		PROJECT NUMBER AND TITLE 2597 Noncooperative Identification Subsystems					
(U)	<u>B. Accomplishments/Planned Program (\$ in Millions)</u>						<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>		
	polarization, 1st generation electro-optical automatic target cueing / recognition, advanced 3D laser imaging, laser vibration, and insertion of mature, hardened camera technologies into alternate platforms.										
(U)	The Radar Vision technology applies Aided Target Recognition (ATR) algorithms to Radar Imagery and Radar Signature returns which puts target ID labels on the radar imagery and tracks using a common database of target signatures. Radar Vision is using spiral development to mature algorithms, add target signatures, and test/demonstrate. Future spirals will include hybrid algorithms, moving surface targets, advanced radar modes and frequencies, and exploitation of 3D characteristics.						8.499	8.903	10.037		
(U)	Continue funding the Fusion Vision program, a fusion of sensor data from multiple sources to create a high confidence in surface and air targets CID.						0.362	2.000	2.580		
(U)	Fund the Air Traffic Control Radar Beacon Systems Identification Friend or Foe Mark XII/XIIA System (AIMS) Program Office. The DoD International AIMS PO has system level interoperability management responsibilities for the present Mark XII system, development and integration of Mark XIIA (Mode 5) and transition to Mark XIIA Mode S Systems.						1.010	0.236	0.289		
(U)	Continue funding Combat Identification technology flight and other engineering support necessary for management of CID efforts.						2.122	2.599	2.727		
(U)	Conduct CID-related studies/demos and conferences. Execute Mode 5 IFF flight test preparations and demonstration to assess system operational capacity, interoperability, and equipment integration. Studies and demonstrations will include those directed by Joint Staff and OSD to research and evaluate a family of CID systems, linkage between airborne and ground-based non-cooperative CID technologies/systems, and quantify the relationship between CID and improved combat effectiveness.						0.083	0.600	0.504		
(U)	X-Patch consists of software code refinement based on feedback from the X-Patch user community. Priority is given to the needs of the JSSD Pathfinders and other signature production teams. It will also consist of configuration management, S/W protection, maintenance, and support. The JSSD Pathfinders 1 and 2 are heavily dependent on X-Patch for the predicting data on threat targets.						0.000	0.000	3.430		
(U)	Total Cost						19.586	20.320	23.642		
(U)	<u>C. Other Program Funding Summary (\$ in Millions)</u>										
	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost to</u>	<u>Total Cost</u>	
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>		
(U)	Not Applicable										

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Exhibit R-2a (PE 0603742F)

Exhibit R-2a, RDT&E Project Justification		DATE May 2009
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0603742F Combat Identification Technology	PROJECT NUMBER AND TITLE 2597 Noncooperative Identification Subsystems
(U) <u>D. Acquisition Strategy</u> Award multiple, competitive contract vehicles emphasizing off-the-shelf technology and maximizing the use of non-developmental items (NDIs).		
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Exhibit R-3, RDT&E Project Cost Analysis										DATE May 2009		
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)				PE NUMBER AND TITLE 0603742F Combat Identification Technology				PROJECT NUMBER AND TITLE 2597 Noncooperative Identification Subsystems				
(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2008 Cost</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>FY 2010 Cost</u>	<u>FY 2010 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u>												
Raytheon Company	C/CPFF	El Segundo, CA	21.483	0.356	Mar-08	2.538	Dec-08	2.747	Dec-09	Continuing	TBD	TBD
Northrop Grumman Corporation	C/CPFF	Linthicum Heights, MD	13.136	4.516	Oct-07	4.088	Nov-08	7.290	Nov-09	Continuing	TBD	TBD
Northrop Grumman Corporation	C/CPFF	Rowling Meadows, IL	8.385	1.591	Jun-08	2.763	Nov-08	1.715	Nov-09	Continuing	TBD	TBD
Science Applications Internation Corporation	SS/CPFF	Dayton, OH	24.162	3.233	Nov-07	0.180	Nov-08	0.150	Nov-09	Continuing	TBD	TBD
AIMS Program Office	MIPR/PO	Warner Robins, GA	4.936	1.010	Oct-07	0.236	Oct-08	0.290	Oct-09	Continuing	TBD	TBD
General Dynamics (formerly Veridian)	C/CPFF	Buffalo, NY	2.330	0.225	Nov-07					Continuing	TBD	TBD
General Dynamcis	C/CPFF	Beavercreek, OH	0.276	0.901	Feb-08	0.980	Dec-08	0.569	Dec-09	Continuing	TBD	TBD
Sverdrup Technology	C/CPFF	Ft Walton Beach, FL	3.061	1.207	Nov-07	0.850	Nov-08	0.180	Nov-09	Continuing	TBD	TBD
SIREN & Litening Study	POs	SAF/FMBIB	0.794	0.170	Dec-07	1.100	Dec-08	2.200	Dec-09		4.264	
Systems Research & Applications Corp	C/CPFF	Fairfax, VA	1.781	0.383	Nov-07						2.164	
DOE - Sandia National Labs	MIPR	Albuquerque, NM	1.460	0.684	Jan-08	0.667	Dec-08	1.205	Dec-09	Continuing	TBD	TBD
Studies	PO	WPAFB, OH	0.082	0.083	Jan-08	0.450	Dec-08	0.349	Dec-09	Continuing	TBD	TBD
Big Safari	BTR	WPAFB, OH	0.000	0.930	Aug-08					Continuing	TBD	TBD
X-Patch	AF616	WPAFB, OH						3.430	Nov-09	Continuing	TBD	TBD
Lockheed	C/CPFF	Eglin, AFB, FL				0.900	Jun-09			Continuing	0.900	
Subtotal Product Development			81.886	15.289		14.752		20.125		Continuing	TBD	TBD
Remarks:												
(U) <u>Support</u>												
SPO support	Various	Hanscom	12.369	2.130	Oct-07	2.599	Oct-08	2.727	Oct-09	Continuing	TBD	TBD
Air Force Research Laboratory	MIPR	WPAFB, OH	3.553	0.311	Oct-07	0.330	Oct-08	0.340	Oct-09	Continuing	TBD	TBD
Subtotal Support			15.922	2.441		2.929		3.067		Continuing	TBD	TBD
Remarks:												
(U) <u>Test & Evaluation</u>												
46th Test Wing	MIPR/PO	Eglin AFB, FL	5.702	0.309	Jun-08	0.500	Jun-09	0.225	Jun-10	Continuing	TBD	TBD
Test Wings	MIPR/PO	Edwards AFB, CA	1.377	0.526	Aug-08	1.079	Jun-09	0.225	Jun-10	Continuing	TBD	TBD
Aberdeen Proving Ground	MIPR	Aberdeen Proving Ground, MD	0.100	0.030	Aug-08	0.017	Jan-09				0.147	0.100
DIA & TSMO	MIPR	Redstone Arsenal, AL	0.135	0.245	Feb-08	0.468	Apr-09			Continuing	TBD	TBD
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Exhibit R-3 (PE 0603742F)

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Exhibit R-3, RDT&E Project Cost Analysis

DATE

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BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

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Technology

PROJECT NUMBER AND TITLE

2597 Noncooperative Identification
Subsystems

ACTD JFCOM	MIPR	Norfolk, VA	0.344	May-08			0.344	0.344
Redstone Technical Test Center	MIPR	Redstone	0.402	Sep-08			0.402	
		Arsenal, AL						
		WPAFB, OH						
NASIC					0.375	May-09	0.375	
Yuma					0.200	Apr-09	0.200	
Subtotal Test & Evaluation			7.314	1.856	2.639	0.450	Continuing	TBD
Remarks:								
(U) <u>Management</u>								
							0.000	
Subtotal Management			0.000	0.000	0.000	0.000	0.000	0.000
Remarks:								
(U) Total Cost			105.122	19.586	20.320	23.642	Continuing	TBD

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Exhibit R-3 (PE 0603742F)

Exhibit R-4, RDT&E Schedule Profile

DATE

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BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

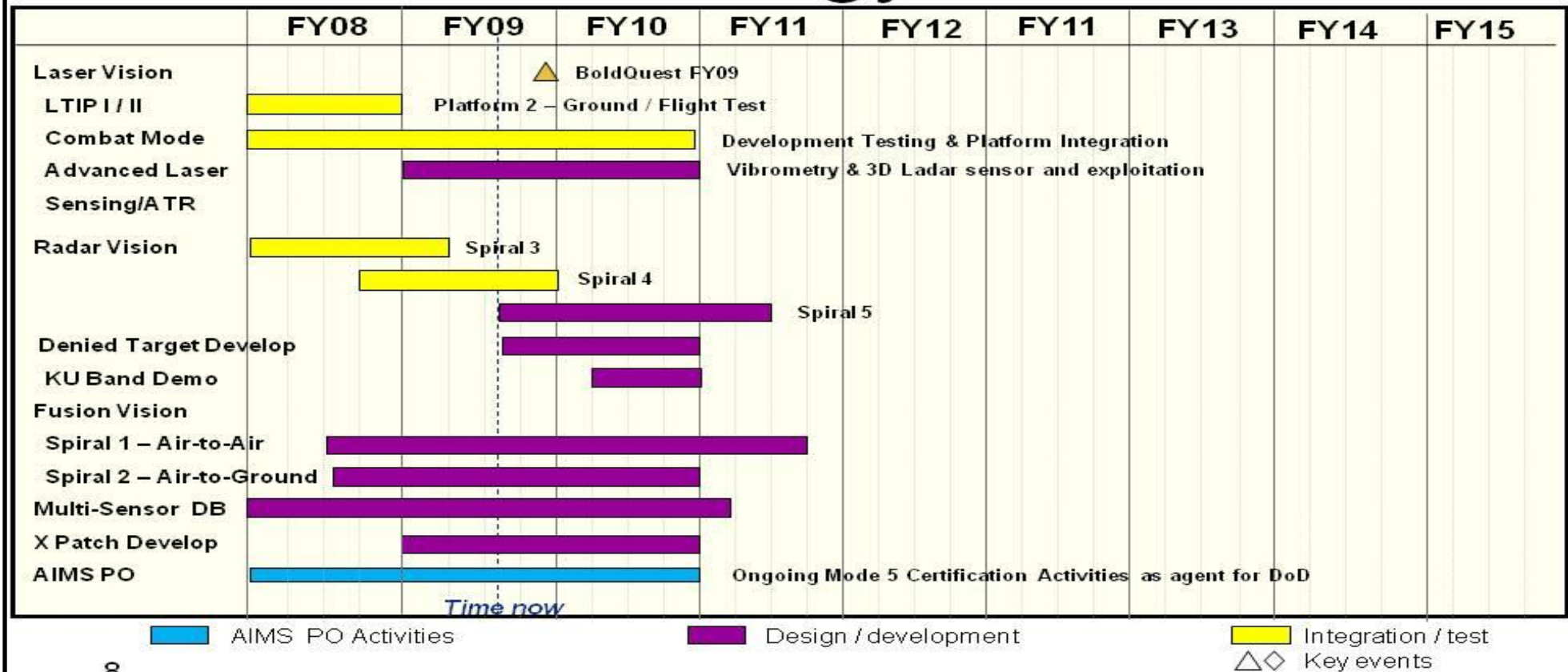
PE NUMBER AND TITLE

0603742F Combat Identification
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PROJECT NUMBER AND TITLE

2597 Noncooperative Identification
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Non-Cooperative CID Technology Schedule



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Exhibit R-4 (PE 0603742F)

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Exhibit R-4a, RDT&E Schedule Detail			DATE	
			May 2009	
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE		
04 Advanced Component Development and Prototypes (ACD&P)	0603742F Combat Identification Technology	2597 Noncooperative Identification Subsystems		
(U) <u>Schedule Profile</u>		<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) LASER VISION - LTIP I / LTIP II Platform 2 Ground / Flt Test		1-4Q		
(U) LASER VISION - Combat Mode Dev Test & Platform Integ		1-4Q	1-4Q	1-4Q
(U) LASER VISION - Advanced Laser Sensing/Aided Target Recognition			1-4Q	1-4Q
(U) RADAR VISION - Radar Vision Spiral 3		1-4Q	1Q	
(U) RADAR VISION - Radar Vision Spiral 4		4Q	1-4Q	
(U) RADAR VISION - Radar Vision Spiral 5			3-4Q	1-4Q
(U) RADAR VISION - Denied Target Development			3-4Q	1-4Q
(U) RADAR VISION - Ku-Band Demonstration				2-4Q
(U) FUSION VISION - Spiral 1 - Air-toAir		3-4Q	1-4Q	1-4Q
(U) FUSION VISION - Spiral 2 - Air-to-Ground		3-4Q	1-4Q	1-4Q
(U) MULTI-SENSOR CID DATABASE - Analysis & Development		1-4Q	1-4Q	1-4Q
(U) X-Patch Development			1-4Q	1-4Q
(U) AIMSPO - IFF Certification Activities		1-4Q	1-4Q	1-4Q

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Exhibit R-4a (PE 0603742F)

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Exhibit R-2a, RDT&E Project Justification									DATE May 2009	
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)					PE NUMBER AND TITLE 0603742F Combat Identification Technology			PROJECT NUMBER AND TITLE 2599 Cooperative Identification Techniques		
Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
2599 Cooperative Identification Techniques	5.584	8.980	3.610	0.000	0.000	0.000	0.000	0.000	0.000	56.165
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		
(U) <u>A. Mission Description and Budget Item Justification</u> Cooperative CID requires systems that rapidly identify friendly platforms. Utilizing a challenge and response system, platforms in the air-to-air or air-to-surface setting emit a directed electromagnetic challenge to achieve a reaction positively identifying another platform as a friendly. This program element funds growth to Mark XIIA, the next generation Identification Friend or Foe (IFF) standard for the DoD and NATO. Mark XIIA represents a substantial enhancement to the Mark XII IFF system. It is expected to achieve joint initial operational capability in 2014. The "A" denotes the addition of Mode 5 (an encrypted challenge-and-reply mode) to the other Mark XII system modes (Modes 1, 2, 3/A, C, S, and 4). The Mode 5 secure IFF program is a DoD-wide, Navy-led development and acquisition program. The development funded by this program element ensures availability of an upgrade path for implementing platforms across the Air Force fleet. This program is in Budget Activity 4 - Advanced Component Development and Prototypes because it transitions technologies from laboratory to operational use.										
(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>							<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	
(U) Continue the Mode 5 upgrade to the APX-119 transponder, the APX-114 interrogator, and the APX-113 Combined Interrogator/Transponder (CIT). Continue the Mode 5 upgrade to interrogators such as the UPX-40 interrogator on the AWACS. Provide systems engineering and program management to facilitate planned platform integrations, including interoperability testing.							4.350	4.324	2.169	
(U) Continue funding Combat Identification technology flight and other engineering support necessary for management of CID efforts.							0.734			
(U) Fund Air Traffic Control Radar Beacon Systems Identification Friend or Foe Mark XIIA System (AIMS) Program Office support of the Mark XIIA system to include current and next generation IFF equipment integration, including Mode 5 documentation and individual IFF system/box certification.							0.500	1.447	1.441	
(U) X-Patch consists of software code refinement based on feedback from the X-Patch user community. Priority is given to the needs of the JSSD Pathfinders and other signature production teams. It will also consist of configuration management, S/W protection, maintenance, and support. The JSSD Pathfinders 1 and 2 are heavily dependent on X-Patch for the predicting data on threat targets.								3.209	0.000	
(U) Total Cost							5.584	8.980	3.610	

Exhibit R-2a, RDT&E Project Justification

DATE

May 2009

BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0603742F Combat Identification
Technology

PROJECT NUMBER AND TITLE

2599 Cooperative Identification
Techniques(U) C. Other Program Funding Summary (\$ in Millions)

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) Not applicable										

(U) D. Acquisition Strategy

Award multiple, competitive contract vehicles emphasizing off-the-shelf technology and maximizing the use of non-developmental items (NDIs).

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Exhibit R-3, RDT&E Project Cost Analysis										DATE May 2009		
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)				PE NUMBER AND TITLE 0603742F Combat Identification Technology				PROJECT NUMBER AND TITLE 2599 Cooperative Identification Techniques				
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2008 Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) <u>Product Development</u>												
BAE	C/CPFF	Greenlawn, NY	9.340	1.736	Jan-08					Continuing	TBD	TBD
Boeing/Telephonics	C/CPFF	Farmingdale, NY	7.083							Continuing	TBD	TBD
Raytheon	C/CPFF	Baltimore, MD	11.531	2.525	Dec-07	3.268	Oct-08			Continuing	TBD	TBD
SAIC, X-Patch	SS/CPFF	San Diego, CA				3.209	Nov-08			Continuing	TBD	TBD
TBD Interrogators								2.169	Dec-09	Continuing	TBD	TBD
Subtotal Product Development			27.954	4.261		6.477		2.169		Continuing	TBD	TBD
Remarks:												
(U) <u>Support</u>												
SPO Support	Various	Various	1.685	0.735	Oct-07					Continuing	TBD	TBD
Subtotal Support			1.685	0.735		0.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) <u>Test & Evaluation</u>												
JFCOM	MIPR	Norfolk, VA	0.100							Continuing	TBD	TBD
46 Test Wing	PO	Eglin AFB, FL	0.069	0.030	Dec-07	0.025	Jul-09				0.124	
WR-ALC	AF616	Robins AFB, GA	0.038								0.038	
Navy, Pax River	MIPR	Pax River, MD		0.058	Mar-09						0.058	
General Dynamics	C/CPFF	Beavercreek, OH				0.200	Mar-09				0.200	
BAE	TBD	TBD				0.831	Jul-09				0.831	
Subtotal Test & Evaluation			0.207	0.088		1.056		0.000		Continuing	TBD	TBD
Remarks:												
(U) <u>Management</u>												
Systems Engineering/Program Management (AIMS PO)	AF616	Robins AFB, GA	0.644	0.500	Nov-07	1.447	Nov-08	1.441	Nov-09	Continuing	TBD	TBD
Subtotal Management			0.644	0.500		1.447		1.441		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			30.490	5.584		8.980		3.610		Continuing	TBD	TBD
R-1 Line Item No. 41												
Page-12 of 14												
Exhibit R-3 (PE 0603742F)												

R-1 Line Item No. 41

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Exhibit R-3 (PE 0603742F)

Exhibit R-4, RDT&E Schedule Profile

DATE

May 2009

BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

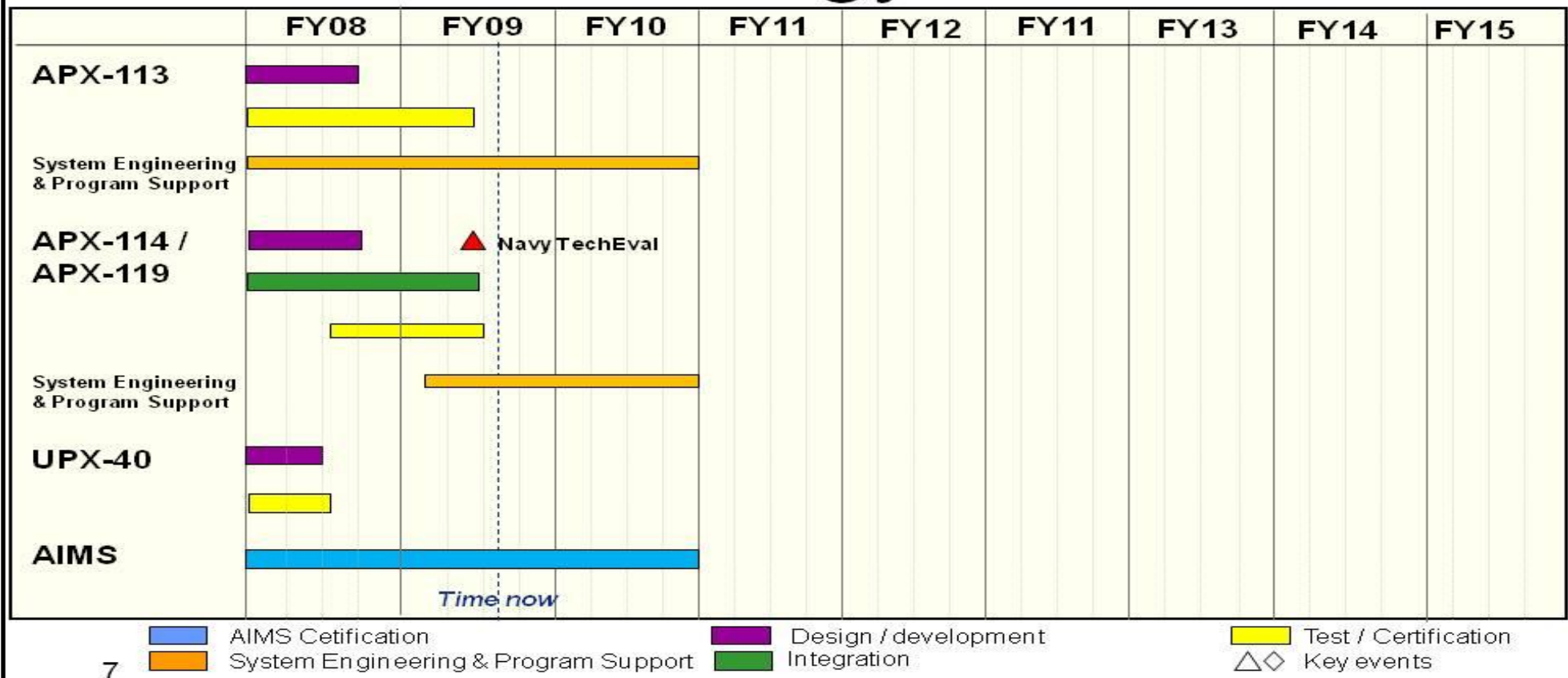
PE NUMBER AND TITLE

0603742F Combat Identification
Technology

PROJECT NUMBER AND TITLE

2599 Cooperative Identification
Techniques

Cooperative CID Technology Schedule



R-1 Line Item No. 41

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Project 2599

Exhibit R-4 (PE 0603742F)

UNCLASSIFIED

Exhibit R-4a, RDT&E Schedule Detail		DATE May 2009	
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE	
04 Advanced Component Development and Prototypes (ACD&P)	0603742F Combat Identification Technology	2599 Cooperative Identification Techniques	
(U) Schedule Profile		<u>FY 2008</u>	<u>FY 2009</u>
(U) APX-113 - Systems Development/Demonstration		1-3Q	
(U) APX-113 - Test and Evaluation - AIMS Certification		1-4Q	1-2Q
(U) APX-113 System Engineering & Program Support		1-4Q	1-4Q
(U) APX-114/APX-119 - Systems Development/Demonstration		1-3Q	
(U) APX-114/APX-119 - Systems Integration		1-4Q	1-3Q
(U) APX-114/APX-119 - Test and Evaluation - AIMS Certification		3-4Q	1-2Q
(U) APX-114 /APX-119 System Engineering & Program Support			1-4Q
(U) UPX-40 - Systems Development/Demonstration		1-2Q	
(U) UPX-40 - Test and Evaluation - AIMS Certification		1-3Q	
(U) AIMS Program Office Support		1-4Q	1-4Q

R-1 Line Item No. 41

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Exhibit R-4a (PE 0603742F)