Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force											**Date:** March 2014	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					**R-1 Program Element (Number/Name)** PE 0603260F *I Intelligence Advanced Development*							
COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	3.525	3.983	5.408	-	5.408	5.402	5.497	5.605	5.711	Continuing	Continuing
643479: *Advanced Sensor Exploitation*	-	0.366	0.552	-	-	-	-	-	-	-	Continuing	Continuing
643480: *Automated Imagery Exploitation*	-	2.236	1.575	-	-	-	-	-	-	0.001	Continuing	Continuing
643481: *Knowledge Based Tech For Intelligence*	-	0.493	0.790	-	-	-	-	-	-	-	Continuing	Continuing
643482: *Science & Tech Intelligence Methodology*	-	0.430	1.066	-	-	-	-	-	-	-	Continuing	Continuing
64536A: *INTELLIGENCE EXPLOITATION TOOLS (IET)*	-	-	-	4.298	-	4.298	4.285	4.363	4.450	4.533	Continuing	Continuing
64537A: *INTELLIGENCE ANALYSIS CAPABILITIES (IAC)*	-	-	-	1.110	-	1.110	1.117	1.134	1.155	1.177	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY 2015, Project Number 64537A, Intelligence Analysis Capabilities (IAC), efforts transferred from PE 0603260F (BA5), Intelligence Advanced Development (IAD), Project Number 652053, National Air Intelligence Center, in order to properly align efforts, increase management efficiency, and reduce administrative actions.

In FY 2015, Project Number 643479 (Advanced Sensor Exploitation), Project Number 643480 (Automated Imagery Exploitation), Project Number 643481 (Knowledge Based Tech for Intelligence), and Project Number 643482 (Science & Tech Intelligence Methodology), transferred to Project Number 64536A, IET, in order to increase management efficiency, reduce administrative actions, and minimize effort duplication.

A. Mission Description and Budget Item Justification

Intelligence Advanced Development (IAD) develops and demonstrates technology required to support warfighter needs for timely all source intelligence information. IAD supports global awareness, consistent battlespace knowledge, precision information, and the execution of time critical missions. IAD projects provide better on-time information to the warfighter using new and existing data sources, streamlining data analysis, reducing footprint required, and extending life of sensors in place and enhancing performance. The Air Force Research Lab, Rome Research Site, Information and Intelligence Exploitation Division (AFRL/RIE), develops prototype applications for evaluation in a realistic operating environment. The programs are oriented toward specific shortfalls and deficiencies as documented by the Major Commands (MAJCOMS), unified commands, and intelligence organizations in their mission and functional area plans. This PE expedites technology transition from the laboratory to operational users via rapid prototyping, focusing on technology insertion correcting AF intelligence deficiencies at the tactical and operational levels. This

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force	Date: March 2014
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603260F *I Intelligence Advanced Development*

PE bridges the technology transition from Advanced Technology Demonstrations (ATDs) and Integrated Technology Thrust Programs (ITTPs) to current/new systems, and also supports associated Defense Technology Objectives (DTOs). IAD may also reallocate existing resources to support out-of-cycle new/updated warfighter requirements.

Requirements for this PE are identified and prioritized by the Air Force Intelligence, Surveillance, and Reconnaissance Agency (AFISRA). Development of new/improved capabilities to meet these requirements is managed by AFRL/RIE. Prototype products, usually in the form of software, are provided to the users for operational environment evaluation.

This Program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P) because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

B. Program Change Summary ($ in Millions)

	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	3.866	3.983	4.352	-	4.352
Current President's Budget	3.525	3.983	5.408	-	5.408
Total Adjustments	-0.341	-	1.056	-	1.056
• Congressional General Reductions	-0.005	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.336	-	1.056	-	1.056

Change Summary Explanation

FY13: -$336K Sequestration Reduction.

FY15: +$1.11M, Project Number 64537A, Intelligence Analysis Capabilities (IAC), efforts transferred from PE 0603260F (BA5), Intelligence Advanced Development (IAD), Project Number 652053, National Air Intelligence Center, in order to properly align efforts, increase management efficiency, and reduce administrative actions.

FY15: -$54K for higher AF priorities.

Exhibit R-2A, **RDT&E Project Justification:** PB 2015 Air Force											**Date:** March 2014	
Appropriation/Budget Activity 3600 I 4				**R-1 Program Element (Number/Name)** PE 0603260F I *Intelligence Advanced Development*							**Project (Number/Name)** 643479 I *Advanced Sensor Exploitation*	
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO** #	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
643479: *Advanced Sensor Exploitation*	-	0.366	0.552	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

 # The FY 2015 OCO Request will be submitted at a later date.

Note

In FY 2015, Project Number 643479, Advanced Sensor Exploitation, efforts transferred to PE 0603260F, Intelligence Advanced Development (IAD), Project Number 64536A, Intelligence Exploitation Tools (IET), in order to increase management efficiency, reduce administrative actions, and minimize effort duplication.

A. Mission Description and Budget Item Justification

The project objectives are to develop, demonstrate and evaluate a near-real-time all source correlation/fusion capability by applying state-of-the-art data processing techniques for the receipt, correlation, templating, and analysis of battlefield information. Prototypes will be developed in an open systems architecture environment allowing for the greatest efficiency in terms of integrating or interfacing with other systems. There are Air Force, DoD, and Coalition requirements to correlate various sources of intelligence information [Communications Intelligence (COMINT), Electronic Intelligence (ELINT), Imagery Intelligence (IMINT) and Measurement and Signature Intelligence - (MASINT)] within seconds/minutes vs. hours/days with current manual and semi-automated methods. The project includes development of data correlation and predictive intelligence algorithms as well as target analysis and prioritization, air order of battle update, and tactical analysis techniques. This computerized approach will speed up the correlation of data from diverse sources of intelligence information, including COMINT, ELINT, IMINT and MASINT, providing faster situational awareness and threat assessment, and replacing manual systems with automated capabilities. Activities also include studies and analysis to support both current program planning and execution and future program planning.

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015**
Title: Smart Target Folders	0.366	-	-
Description: Develops capability to automatically and continuously develop target folders, a cohesive picture of adversaries and their intent, in order to provide actionable intel to operations component.			
FY 2013 Accomplishments: Completed prototype development and refinement.			
FY 2014 Plans: N/A			
FY 2015 Plans:			

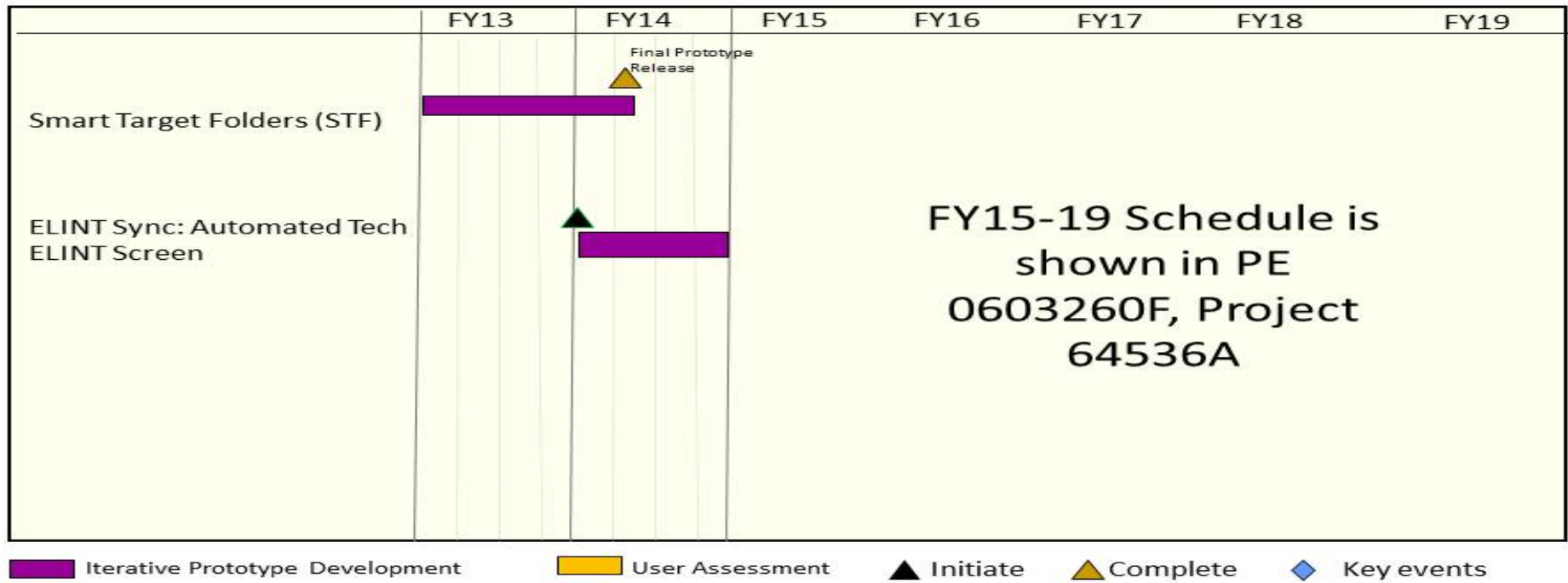| **Exhibit R-2A**, **RDT&E Project Justification:** PB 2015 Air Force		**Date:** March 2014
Appropriation/Budget Activity 3600 / 4	**R-1 Program Element (Number/Name)** PE 0603260F / *Intelligence Advanced Development*	**Project (Number/Name)** 643479 / *Advanced Sensor Exploitation*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015**
N/A			
Title: ELINT Synchronization	-	0.552	-
Description: Risk reduction development initiative which automates analysis and screening of large volumes of collected but unscreened technical ELINT data. Effort will further development of applications in signals characterization and database matching algorithms. *FY 2013 Accomplishments:* N/A *FY 2014 Plans:* Initiating prototype development of a software capability providing automated screening of technical ELINT data through further development of applications in signals characterization and database matching algorithms. *FY 2015 Plans:* N/A			
Accomplishments/Planned Programs Subtotals	0.366	0.552	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• None: *N/A*	-	-	-	-	-	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

Requirements for new advanced sensor exploitation technologies are identified and prioritized by the Air Force Intelligence, Surveillance, and Reconnaissance Agency (AFISRA). Development of new/improved capabilities to meet these requirements is managed by AF Research Laboratory (Rome Research Site). Prototype products (usually software), once evaluated by the users, are transitioned from the laboratory to operational community in spirals. All contracts within this project are awarded after full and open competition.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-4, **RDT&E Schedule Profile:** PB 2015 Air Force		**Date:** March 2014
Appropriation/Budget Activity 3600 **I** 4	**R-1 Program Element (Number/Name)** PE 0603260F **I** *Intelligence Advanced Development*	**Project (Number/Name)** 643479 **I** *Advanced Sensor Exploitation*

Intelligence Advanced Development (IAD), PE 0603260F Project Number 643479

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force		Date: March 2014

Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0603260F / Intelligence Advanced Development	Project (Number/Name) 643480 / Automated Imagery Exploitation

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
643480: Automated Imagery Exploitation	-	2.236	1.575	-	-	-	-	-	-	0.001	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

\# The FY 2015 OCO Request will be submitted at a later date.

Note

In FY 2015, Project Number 643480, Automated Imagery Exploitation, efforts transferred to PE 0603260F, Intelligence Advanced Development (IAD), Project Number 64536A, Intelligence Exploitation Tools (IET), in order to increase management efficiency, reduce administrative actions, and minimize effort duplication.

A. Mission Description and Budget Item Justification

This project demonstrates and validates the capability to more accurately and quickly interpret digital imagery and video by developing/evaluating computer-assisted techniques to manipulate and overlay imagery, cartographic data, signals intelligence (SIGINT), and on-line intelligence data. The result of this effort will provide the operator precise target locations and identifications, precise target reference scenes, and more accurate damage assessments, which were developed for easy supportability on low-cost, commercially-available computer workstations. Activities also include studies and analysis to support both current program planning and execution and future program planning.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Persistent Surveillance (PS) **Description:** Integrates emerging technologies to seamlessly mesh and optimize various ISR sources to achieve persistent surveillance over the battlefield. **FY 2013 Accomplishments:** Completed PS prototype 1.2 to users for evaluation in realistic operating environment; incorporated user feedback into final prototype. **FY 2014 Plans:** N/A **FY 2015 Plans:** N/A	0.750	-	-
Title: Digital Library Input Processing System (DLIPS)	0.687	0.760	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force		**Date:** March 2014
Appropriation/Budget Activity 3600 *I* 4	**R-1 Program Element (Number/Name)** PE 0603260F *I Intelligence Advanced Development*	**Project (Number/Name)** 643480 *I Automated Imagery Exploitation*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015**
Description: Updates current DLIPS configuration (Text-to-Text translation only) to process foreign language audio or video input into English in support of open-source analysts. *FY 2013 Accomplishments:* Released DLIPS prototype 1.1 and conducted user evaluation. *FY 2014 Plans:* Releasing DLIPS prototype 1.2, conducting user evaluation; incorporating user feedback and completing development of final prototype. *FY 2015 Plans:* N/A			
Title: Emitter Location Systems Modeling (ELSM) *Description:* Initiates enhancement of modeling capability of next generation US, Allied, and adversary RF emitters on the battlefield to allow for enhanced EW performance and vulnerability assessments. *FY 2013 Accomplishments:* Released ELSM prototype 1.0 and conducted user evaluation in realistic operating environment. *FY 2014 Plans:* Releasing ELSM prototype 1.1 to users for evaluation in realistic operating envirnnoment; incorporating user feedback and completing development of final prototype. *FY 2015 Plans:* N/A	0.499	0.300	-
Title: Rapid Electronic Attack Assessment For Protection, Exploitation, and Reprogramming (REAAPER) *Description:* Initiates capability to provide rapid assessment of adversary Electronic Attack (EA) signals, which supports pilot training and the development of EA protection and countermeasures systems. *FY 2013 Accomplishments:* Releasing REAAPER prototype 1.0 and conducting user evaluation. *FY 2014 Plans:*	0.300	0.300	-

Exhibit R-2A, **RDT&E Project Justification:** PB 2015 Air Force		**Date:** March 2014
Appropriation/Budget Activity 3600 *I* 4	**R-1 Program Element (Number/Name)** PE 0603260F *I Intelligence Advanced Development*	**Project (Number/Name)** 643480 *I Automated Imagery Exploitation*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015**
Releasing REAAPER prototype 1.1 to users for evaluation in realistic operating environment; incorporating user feedback and completing development of final prototype. *FY 2015 Plans:* N/A			
Title: Electronics Exploitation *Description:* Develop a capability to enable the detection, geo-location, and tracking of complex wideband and low probability of intercept emitters; improve reporting timeliness and accuracy of worldwide Electronics Intelligence (ELINT) intercept data. *FY 2013 Accomplishments:* N/A *FY 2014 Plans:* Initiating prototype development of a capability to enable the detection, geo-location, and tracking of complex wideband and low probability of intercept emitters; improving reporting timeliness and accuracy of worldwide Electronics Intelligence (ELINT) intercept data. *FY 2015 Plans:* N/A	-	0.215	-
Accomplishments/Planned Programs Subtotals	2.236	1.575	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• None: *N/A*	-	-	-	-	-	-	-	-	-	-	-

Remarks

None

D. Acquisition Strategy

Requirements for new computer assisted techniques for interpretation of digital imagery and video are identified and prioritized by the Air Force Intelligence, Surveillance, and Reconnaissance Agency (AFISRA). Development of new/improved capabilities to meet these requirements is managed by AF Research Laboratory (Rome Research Site). The prototype products (usually software), once evaluated by the users, are transitioned from the laboratory to operational community in spirals. All major contracts within this project are awarded after full and open competition.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force		**Date:** March 2014
Appropriation/Budget Activity 3600 *I* 4	**R-1 Program Element (Number/Name)** PE 0603260F *I Intelligence Advanced Development*	**Project (Number/Name)** 643480 *I Automated Imagery Exploitation*

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-4, **RDT&E Schedule Profile:** PB 2015 Air Force		**Date:** March 2014
Appropriation/Budget Activity 3600 *I* 4	**R-1 Program Element (Number/Name)** PE 0603260F *I Intelligence Advanced Development*	**Project (Number/Name)** 643480 *I Automated Imagery Exploitation*

Intelligence Advanced Development (IAD), PE 0603260F Project Number 643480

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force											Date: March 2014	
Appropriation/Budget Activity 3600 / 4				**R-1 Program Element (Number/Name)** PE 0603260F / *Intelligence Advanced Development*							**Project (Number/Name)** 643481 / *Knowledge Based Tech For Intelligence*	
COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
643481: *Knowledge Based Tech For Intelligence*	-	0.493	0.790	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY 2015, Project Number 643481, Knowledge Based Tech For Intelligence, efforts transferred to PE 0603260F, Intelligence Advanced Development (IAD), Project Number 64536A, Intelligence Exploitation Tools (IET), in order to increase management efficiency, reduce administrative actions, and minimize effort duplication.

A. Mission Description and Budget Item Justification

This project improves global awareness, dynamic planning, and execution by providing information repositories and inference engines (computer program) to exploit collected data for nine major commands and Air Force intelligence organizations. Development of analytical aids is based on artificial intelligence techniques. Increased timeliness, efficiency and effectiveness will provide enhanced warning time and accuracy, allowing national/military authorities a greater range of options to avert, diminish or control a crisis. Activities also include studies and analysis to support both current program planning and execution and future program planning.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Dynamic ISR for Non-Traditional Adversarial Methods (DINTAM) *Description:* Continues integration of emerging technologies to dynamically allocate, monitor, and task all ISR assets to combat non-traditional warfare methods within an urban environment *FY 2013 Accomplishments:* Released prototype to users for evaluation in realistic operating environment; incorporated user feedback and completed development of final prototype. *FY 2014 Plans:* N/A N/A *FY 2015 Plans:* N/A	0.493	-	-
Title: Multi-Source, Multi-Modal, Analytical Collect, Process, Exploit and Disseminate (MMACPED) System	-	0.485	-

Exhibit R-2A, **RDT&E Project Justification:** PB 2015 Air Force		**Date:** March 2014
Appropriation/Budget Activity 3600 / 4	**R-1 Program Element (Number/Name)** PE 0603260F / *Intelligence Advanced Development*	**Project (Number/Name)** 643481 / *Knowledge Based Tech For Intelligence*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015**
Description: Develop a framework designed to expose media tools, data, products, workflow and analytical services to the DoD and IC. *FY 2013 Accomplishments:* N/A *FY 2014 Plans:* Initiating prototype development of MMACPED system. N/A *FY 2015 Plans:* N/A			
Title: C2 Surrogate System Build Spec *Description:* Develop software to perform high fidelity analysis of threat designs and potential alternatives in the command and control of an Integrated Air Defense Systems (IADS), providing critical insight into the synergistic effects of combined systems and their vulnerabilities. *FY 2013 Accomplishments:* N/A *FY 2014 Plans:* Initiating prototype development of software to perform high fidelity analysis of threat designs and potential alternatives in the command and control of an Integrated Air Defense Systems (IADS), providing critical insight into the synergistic effects of combined systems and their vulnerabilities. N/A *FY 2015 Plans:* N/A	-	0.305	-
Accomplishments/Planned Programs Subtotals	0.493	0.790	-

Exhibit R-2A, **RDT&E Project Justification:** PB 2015 Air Force		**Date:** March 2014
Appropriation/Budget Activity 3600 *I* 4	**R-1 Program Element (Number/Name)** PE 0603260F *I Intelligence Advanced Development*	**Project (Number/Name)** 643481 *I Knowledge Based Tech For Intelligence*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• None: *N/A*	-	-	-	-	-	-	-	-	-	-	-

Remarks
 None

D. Acquisition Strategy

 Requirements for new/improved analytical aids to exploit collected intelligence data are identified and prioritized by the Air Force Intelligence, Surveillance and Reconnaissance Agency (AFISRA). Development of new/improved capabilities to meet these requirements is managed by AF Research Laboratory (Rome Research Site). Prototype products (usually software), once evaluated by the users, are transitioned from the laboratory to operational community in spirals. All major contracts within this project are awarded after full and open competition.

E. Performance Metrics

 Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

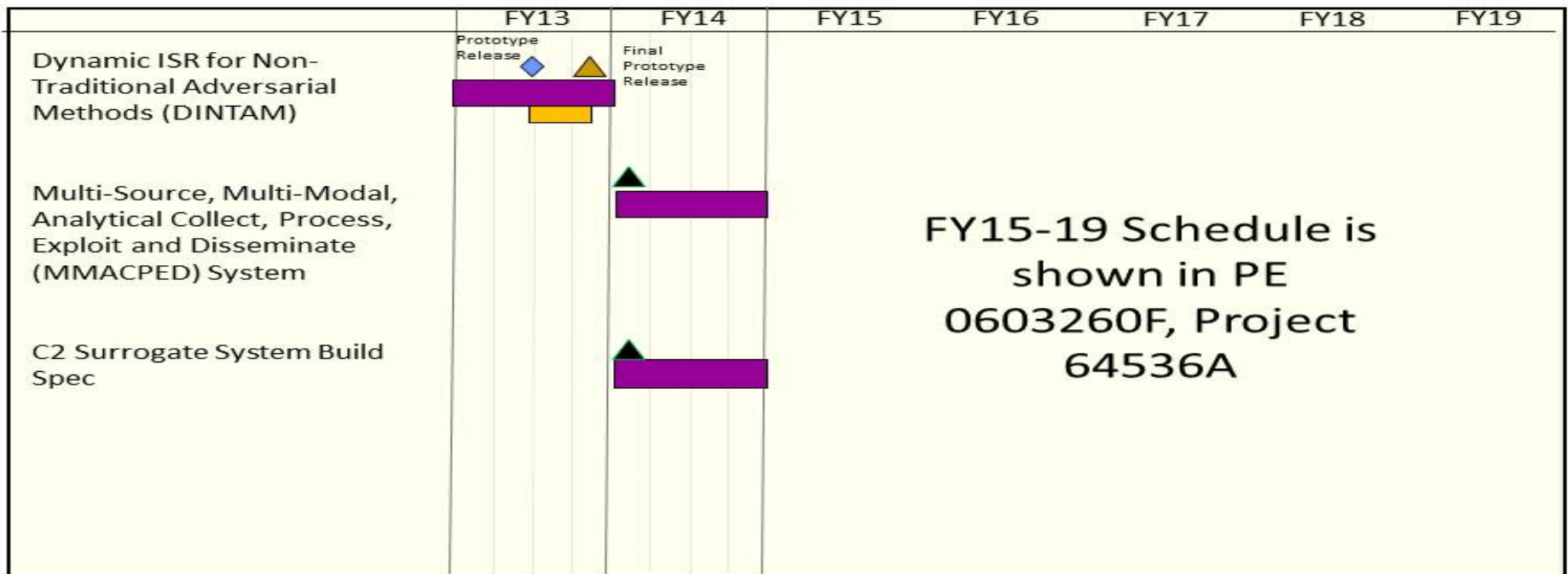| **Exhibit R-4**, **RDT&E Schedule Profile:** PB 2015 Air Force		**Date:** March 2014
Appropriation/Budget Activity 3600 / 4	**R-1 Program Element (Number/Name)** PE 0603260F / Intelligence Advanced Development	**Project (Number/Name)** 643481 / Knowledge Based Tech For Intelligence

Intelligence Advanced Development (IAD), PE 0603260F Project Number 643481

FY15 PB

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force										Date: March 2014	
Appropriation/Budget Activity 3600 / 4				**R-1 Program Element (Number/Name)** PE 0603260F / *Intelligence Advanced Development*					**Project (Number/Name)** 643482 / *Science & Tech Intelligence Methodology*		

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
643482: *Science & Tech Intelligence Methodology*	-	0.430	1.066	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

\# The FY 2015 OCO Request will be submitted at a later date.

Note

In FY 2015, Project Number 643482, Science & Tech Intelligence Methodology, efforts transferred to PE 0603260F, Intelligence Advanced Development (IAD), Project Number 64536A, Intelligence Exploitation Tools (IET), in order to increase management efficiency, reduce administrative actions, and minimize effort duplication.

A. Mission Description and Budget Item Justification

The project demonstrates and validates intelligence methodologies and techniques for operational employment of simulation models in support of Air Force Intelligence, Surveillance, and Reconnaisance Agency (AFISRA), formerly the Air Intelligence Agency, requirements. The methods and techniques help AFISRA improve analysis of current and future foreign weapon systems and prevent technological surprises to our warfighters with regard to the capabilities of these systems. Activities also include studies and analysis to support both current program planning and execution and future program planning.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Real Time Intelligence Situational Awareness (RTISA) **Description:** Continues effort to provide machine "learning" capability, which simulates a real-time interactive enviornment that results in an heightened sense of intel awareness. **FY 2013 Accomplishments:** Released prototype to users in realistic operating environment; incorporated user feedback and completed development of final prototype. **FY 2014 Plans:** N/A N/A **FY 2015 Plans:** N/A	0.430	-	-
Title: Enabling Discovery through Automated Content Extraction (EDACE)	-	1.066	-

PE 0603260F: *Intelligence Advanced Development*
Air Force

R-1 Line #27

Exhibit R-2A, **RDT&E Project Justification:** PB 2015 Air Force		**Date:** March 2014
Appropriation/Budget Activity 3600 *I* 4	**R-1 Program Element (Number/Name)** PE 0603260F *I Intelligence Advanced Development*	**Project (Number/Name)** 643482 *I Science & Tech Intelligence Methodology*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015**
Description: Develop automated methods that aid in the systematic, continuous, and comprehensive assessment of technical concepts using information found in the published scientific, technical, and patent literature, message traffic, gray literature, and conference papers. ***FY 2013 Accomplishments:*** N/A ***FY 2014 Plans:*** Initiating prototype development of automated methods that aid in the systematic, continuous, and comprehensive assessment of technical topic, concepts and emergence using information found in the published scientific, technical, and patent literature, message traffic, gray literature, and conference papers. N/A ***FY 2015 Plans:*** N/A			
Accomplishments/Planned Programs Subtotals	0.430	1.066	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• None: *N/A*	-	-	-	-	-	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

Requirements for new/improved techniques for operational employment of simulation models are identified and prioritized by the Air Force Intelligence, Surveillance, and Reconnaissance Agency (AFISRA). Development of the new/improved capabilities to meet these requirements is managed by AF Research Laboratory (Rome Research Site). Prototype products (usually software), once evaluated by the users, are transitioned from the laboratory to operational community in spirals. All major contracts within this project are awarded after full and open competition.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

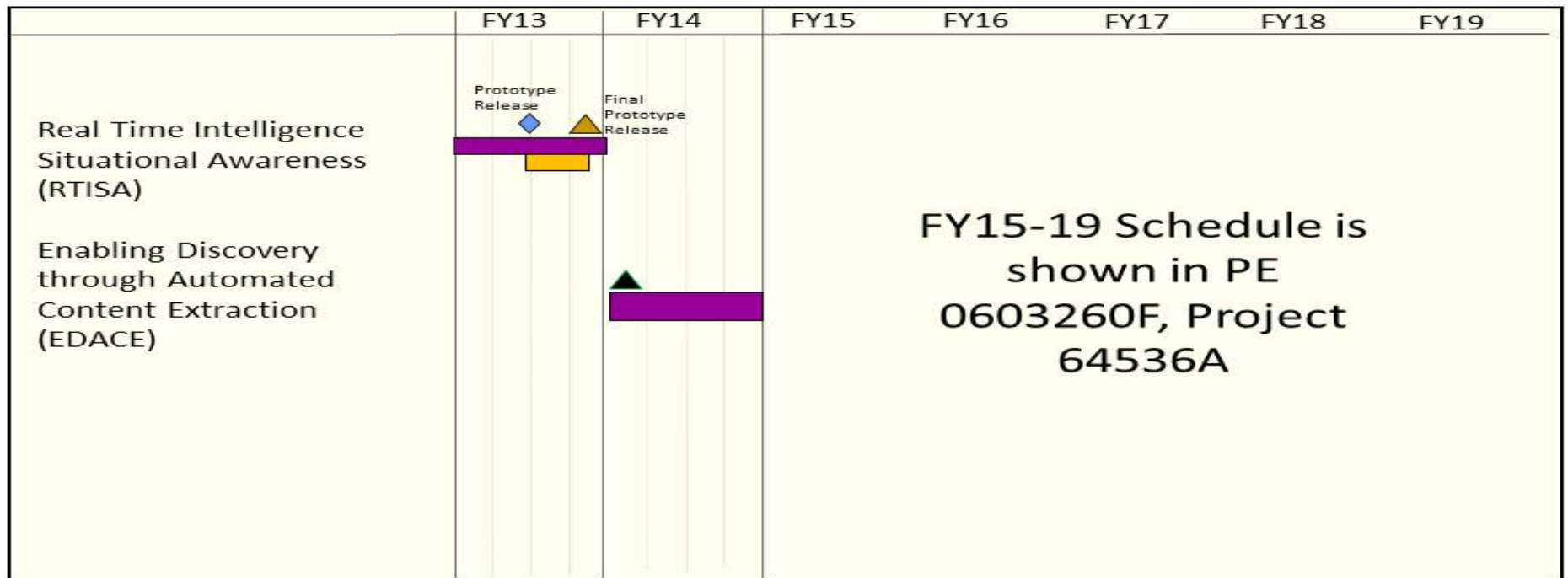| **Exhibit R-4**, **RDT&E Schedule Profile:** PB 2015 Air Force		**Date:** March 2014
Appropriation/Budget Activity 3600 / 4	**R-1 Program Element (Number/Name)** PE 0603260F / *Intelligence Advanced Development*	**Project (Number/Name)** 643482 / *Science & Tech Intelligence Methodology*

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force											**Date:** March 2014

Appropriation/Budget Activity 3600 I 4	R-1 Program Element (Number/Name) PE 0603260F I Intelligence Advanced Development	Project (Number/Name) 64536A I INTELLIGENCE EXPLOITATION TOOLS (IET)

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
64536A: *INTELLIGENCE EXPLOITATION TOOLS (IET)*	-	-	-	4.298	-	4.298	4.285	4.363	4.450	4.533	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY 2015, Project Number 64536A, Intelligence Exploitation Tools (IET), transferred from PE 0603260F [Intelligence Advanced Development (IAD)], Project Number 643479 (Advanced Sensor Exploitation), Project Number 643480 (Automated Imagery Exploitation), Project Number 643481 (Knowledge Based Tech for Intelligence), and Project Number 643482 (Science & Tech Intelligence Methodology), in order to increase management efficiency, reduce administrative actions, and minimize activity duplication.

In FY2015, Project Number 64536A, Intelligence Exploitation Tools (IET), includes four new start efforts: Private Assistant for Individual Relegation (PAIR), Feature and Pattern Recognition and Parsing to Text- Foreign Audio Video Operations (FAVOR) II, Increased SIGINT On-Board Analysis (ISOBA), and Global Architecture for Mission Reporting and Analysis (GAMRA).

A. Mission Description and Budget Item Justification

Intelligence Exploitation Tools (IET) prototyping encompasses several areas of intelligence exploitation including the advancement of all source correlation and fusion prototypes for the intelligence analyst, thus enhancing the overall situational awareness for Air Force, DoD, and Coalition groups which have requirements to correlate various sources of intelligence information, including COMINT, ELINT, IMINT, GEOINT, MASINT, MOVINT and others, in a timely manner.

This project also addresses the accurate and timely interpretation of digital imagery and video by developing and evaluating techniques to manipulate and overlay imagery, cartographic data, SIGINT, and digital intelligence data. Analytical cross domain tools, which provide enhanced warning and accuracy and allow national and military authorities a greater range of options to avert, diminish or control a crisis, are also developed in this project.

In addition, methods to improve analysis of current and future foreign weapon systems, thus preventing technological surprise to our warfighters, are explored in this project.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: ELINT Synchronization	-	-	0.300
Description: Risk reduction development initiative which automates analysis and screening of large volumes of collected but unscreened technical ELINT data. Effort will further development of applications in signals characterization and database matching algorithms.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 I 4	R-1 Program Element (Number/Name) PE 0603260F I *Intelligence Advanced Development*	Project (Number/Name) 64536A I *INTELLIGENCE EXPLOITATION TOOLS (IET)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
FY14 funding in Project 643479. *FY 2013 Accomplishments:* N/A *FY 2014 Plans:* N/A *FY 2015 Plans:* Will start prototype development of a software prototype that provides automated screening of technical ELINT data through further development of applications in signals characterization and database matching algorithms.			
Title: Private Assistant for Individual Relegation (PAIR) *Description:* Develops software focused on improving the way computers and application services supports intelligence analysts through the use of cognitive systems. *FY 2013 Accomplishments:* N/A *FY 2014 Plans:* N/A *FY 2015 Plans:* Will start development of PAIR prototype.	-	-	0.480
Title: Electronics Exploitation *Description:* Develop a capability to enable the detection, geo-location, and tracking of complex wideband and low probability of intercept emitters; improve reporting timeliness and accuracy of worldwide Electronics Intelligence (ELINT) intercept data. FY14 funding in Project 643480. *FY 2013 Accomplishments:* N/A *FY 2014 Plans:*	-	-	0.385

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 I 4	**R-1 Program Element (Number/Name)** PE 0603260F I *Intelligence Advanced Development*	**Project (Number/Name)** 64536A I *INTELLIGENCE EXPLOITATION TOOLS (IET)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
N/A ***FY 2015 Plans:*** Will deliver 1st Electronics Exploitation prototype.			
Title: Feature and Pattern Recognition and Parsing to Text-Foreign Audio Video Operations (FAVOR) II ***Description:*** Develops capability to enable the intelligence analyst to conduct search and discovery either by visual pattern recognition/feature extraction or text-based using queries. This effort will create structured content from the recognition of objects, features and patterns contained within images/video. ***FY 2013 Accomplishments:*** N/A ***FY 2014 Plans:*** N/A ***FY 2015 Plans:*** Will start the development of the FAVOR II prototype.	-	-	0.535
Title: Increased SIGINT On-board Analysis (ISOBA) ***Description:*** Expands software currently deployed on RIVET JOINT processor to enable collecting current and future SIGINT metadata. ***FY 2013 Accomplishments:*** N/A ***FY 2014 Plans:*** N/A ***FY 2015 Plans:*** Will start development of ISOBA prototype.	-	-	0.400
Title: Multi-Source, Multi-Modal, Analytical Collect, Process, Exploit and Disseminate (MMACPED) System ***Description:*** Develop a framework designed to expose media tools, data, products, workflow and analytical services to the DoD and IC. FY14 funding in Project 643481.	-	-	0.525

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 I 4	**R-1 Program Element (Number/Name)** PE 0603260F I *Intelligence Advanced Development*	**Project (Number/Name)** 64536A I *INTELLIGENCE EXPLOITATION TOOLS (IET)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: N/A *FY 2014 Plans:* N/A *FY 2015 Plans:* Will deliver first prototype of MMACPED prototype.			
Title: Global Architecture for Mission Reporting and Analysis (GAMRA) *Description:* Develops capability for qualitative mission assessment and lays a framework for integrating future ISR and combat mission capabilities into the assessment framework. *FY 2013 Accomplishments:* N/A *FY 2014 Plans:* N/A *FY 2015 Plans:* Will start development of GAMRA prototype.	-	-	0.425
Title: C2 Surrogate System Build Spec *Description:* Develop software to perform high fidelity analysis of threat designs and potential alternatives in the command and control of an Integrated Air Defense Systems (IADS), providing critical insight into the synergistic effects of combined systems and their vulnerabilities. FY14 funding in Project 643481. *FY 2013 Accomplishments:* N/A *FY 2014 Plans:* N/A *FY 2015 Plans:*	-	-	0.345

Exhibit R-2A, **RDT&E Project Justification:** PB 2015 Air Force		**Date:** March 2014
Appropriation/Budget Activity 3600 *I* 4	**R-1 Program Element (Number/Name)** PE 0603260F *I Intelligence Advanced Development*	**Project (Number/Name)** 64536A *I INTELLIGENCE EXPLOITATION TOOLS (IET)*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015**
Will deliver the first prototype.			
Title: Enabling Discovery through Automated Content Extraction (EDACE)	-	-	0.903
Description: Develop automated methods that aid in the systematic, continuous, and comprehensive assessment of technical topic, concepts and emergence using information found in the published scientific, technical, and patent literature, message traffic, gray literature, conference papers, etc. FY14 funding in Project 643482. *FY 2013 Accomplishments:* N/A *FY 2014 Plans:* N/A *FY 2015 Plans:* Will deliver first prototype of EDACE prototype.			
Accomplishments/Planned Programs Subtotals	-	-	4.298

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• RDTE: BA4: PE 0603260F: *Intelligence Advanced Development*	3.525	3.983	-	-	-	-	-	-	-	-	-

Remarks

In FY 2015, Project Number 64536A, Intelligence Exploitation Tools (IET), transferred from PE 0603260F [Intelligence Advanced Development (IAD)], Project Number 643479 (Advanced Sensor Exploitation), Project Number 643480 (Automated Imagery Exploitation), Project Number 643481 (Knowledge Based Tech for Intelligence), and Project Number 643482 (Science & Tech Intelligence Methodology), in order to increase management efficiency, reduce administrative actions, and minimize activity duplication.

D. Acquisition Strategy

Requirements for new/improved techniques for operational employment of simulation models are identified and prioritized by the Air Force Intelligence, Surveillance, and Reconnaissance Agency (AFISRA), formerly the Air Intelligence Agency. Development of the new/improved capabilities to meet these requirements is managed by AF Research Laboratory (Rome Research Site). Prototype products (usually software), once evaluated by the users, are transitioned from the laboratory to operational community in spirals. All major contracts within this project are awarded after full and open competition.

Exhibit R-2A, **RDT&E Project Justification:** PB 2015 Air Force		**Date:** March 2014
Appropriation/Budget Activity 3600 *I* 4	**R-1 Program Element (Number/Name)** PE 0603260F *I Intelligence Advanced Development*	**Project (Number/Name)** 64536A *I INTELLIGENCE EXPLOITATION TOOLS (IET)*

E. Performance Metrics

 Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

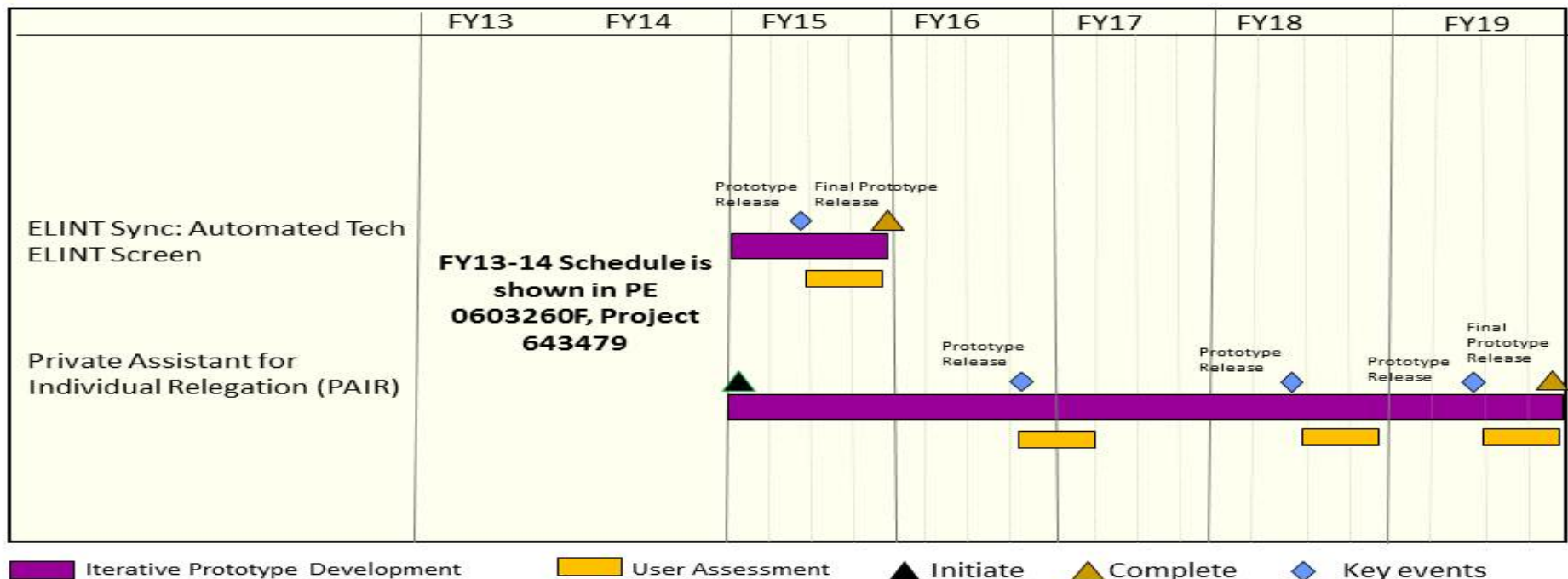| **Exhibit R-4**, **RDT&E Schedule Profile:** PB 2015 Air Force		**Date:** March 2014
Appropriation/Budget Activity 3600 I 4	**R-1 Program Element (Number/Name)** PE 0603260F I *Intelligence Advanced Development*	**Project (Number/Name)** 64536A I *INTELLIGENCE EXPLOITATION TOOLS (IET)*

Intelligence Advanced Development (IAD), PE 0603260F, Project Number 64536A

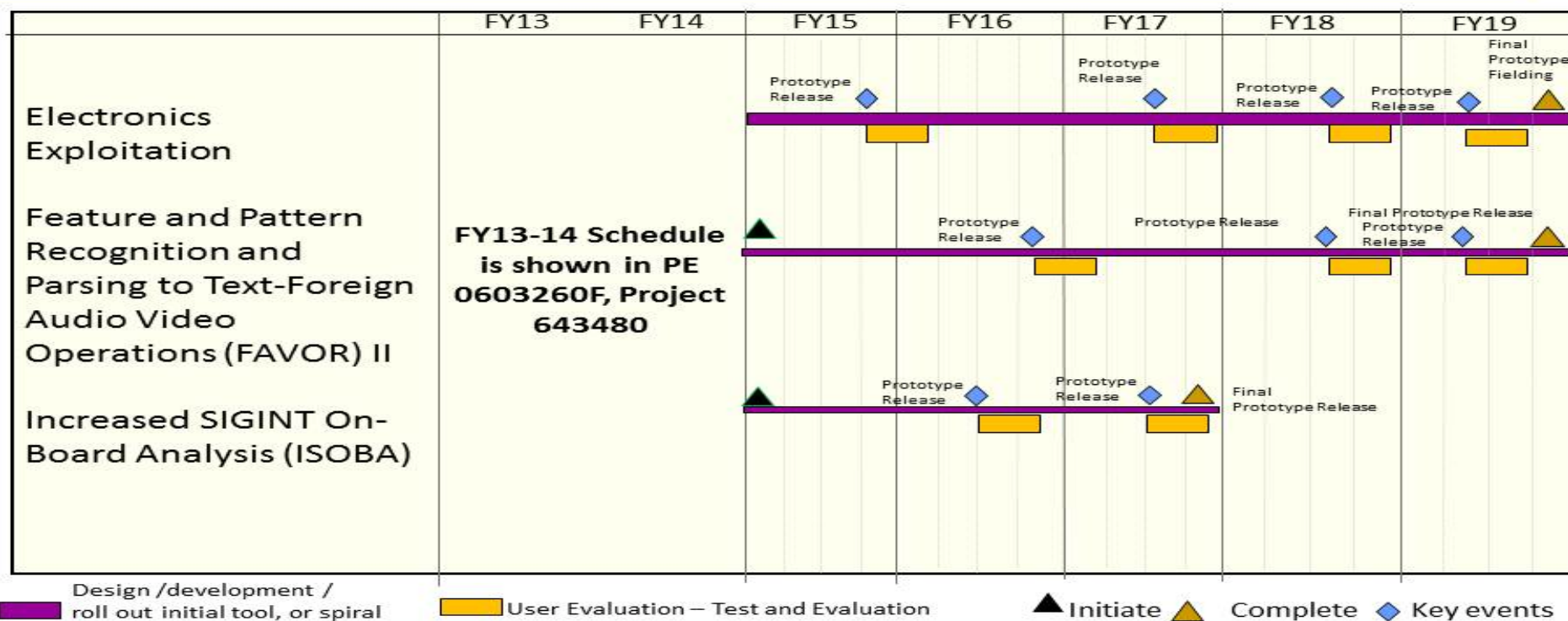| **Exhibit R-4**, **RDT&E Schedule Profile:** PB 2015 Air Force		**Date:** March 2014
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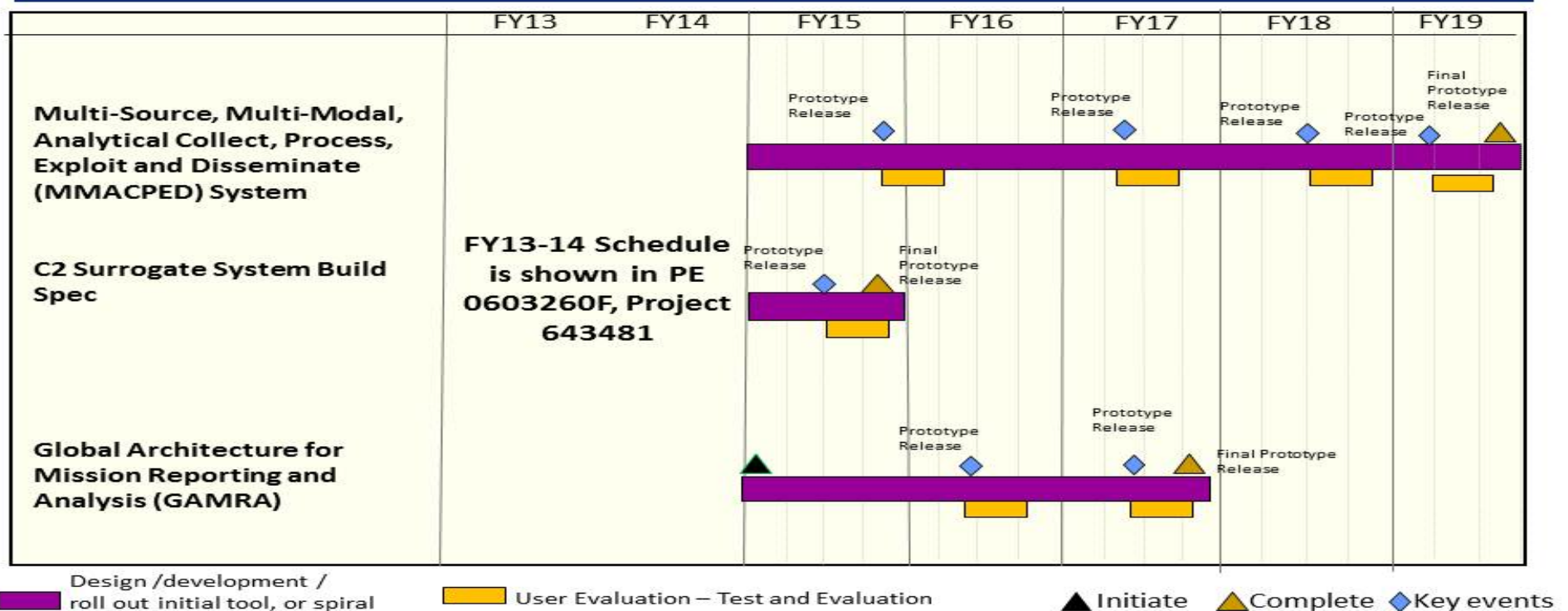| **Exhibit R-4**, **RDT&E Schedule Profile:** PB 2015 Air Force		**Date:** March 2014	
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Intelligence Advanced Development (IAD), PE 0603260F, Project Number 64536A

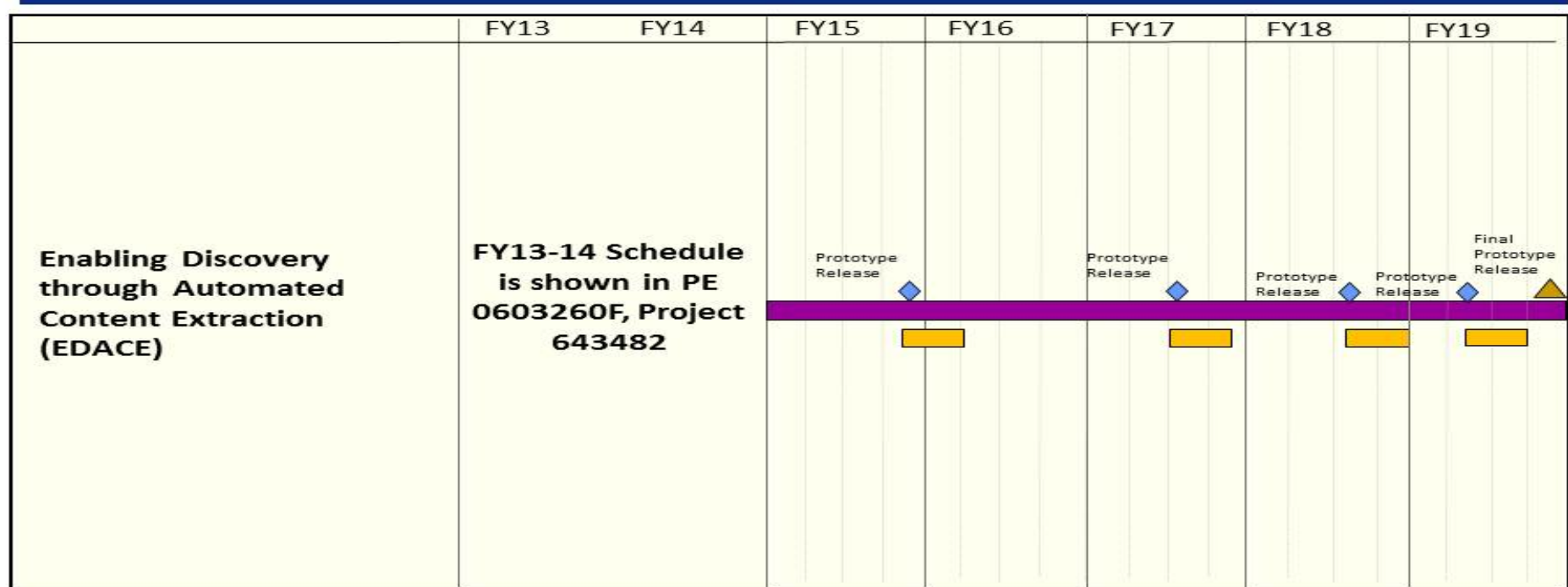| **Exhibit R-4**, **RDT&E Schedule Profile:** PB 2015 Air Force		**Date:** March 2014
Appropriation/Budget Activity 3600 / 4	**R-1 Program Element (Number/Name)** PE 0603260F / *Intelligence Advanced Development*	**Project (Number/Name)** 64536A / *INTELLIGENCE EXPLOITATION TOOLS (IET)*

Intelligence Advanced Development (IAD), PE 0603260F, Project Number 64536A

Enabling Discovery through Automated Content Extraction (EDACE)

FY13-14 Schedule is shown in PE 0603260F, Project 643482

| | FY13 | FY14 | FY15 | FY16 | FY17 | FY18 | FY19 |

Prototype Release — Prototype Release — Prototype Release — Prototype Release — Final Prototype Release

Design /development / roll out initial tool, or spiral ◼ User Evaluation – Test and Evaluation ◻ ▲ Initiate ▲ Complete ◆ Key events

FY15 PB

Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force										Date: March 2014	

| Appropriation/Budget Activity
3600 I 4 | | | | R-1 Program Element (Number/Name)
PE 0603260F I Intelligence Advanced
Development | | | | | | Project (Number/Name)
64537A I INTELLIGENCE ANALYSIS
CAPABILITIES (IAC) | |

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
64537A: INTELLIGENCE ANALYSIS CAPABILITIES (IAC)	-	-	-	1.110	-	1.110	1.117	1.134	1.155	1.177	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY2015, Project Number 64537A, Intelligence Analysis Capabilities (IAC), efforts were transferred from PE 0603260F, Intelligence Advanced Development (IAD), Project Number 652053, National Air Intel Center, in order to increase management efficiency, reduce administrative actions, and minimize activity duplication.

In FY2015, Project Number 64537A, IAC, includes a new start effort: Activity Based Intelligence Indications & Warning.

A. Mission Description and Budget Item Justification

Intelligence Analysis Capabilities (IAC) provides continuing development and upgrades of threat analysis capabilities to produce integrated, predictive air and space intelligence to enable military operations, force modernization decisions, and policy making. Products from IAC allow the Intelligence Analyst to accelerate and increase the accuracy of threat estimates and system descriptions to deployed operational forces. IAC tools and algorithms provide NASIC and the 453rd EWS with the ability to produce accurate, predictive, relevant, and timely intelligence that supports client processes, operational planning, and mission execution. IAC develops new and upgraded analysis, modeling and simulation tools focused on intelligence production supporting AF operational and developmental all source analysis functions.

Each of the development projects within the IAC program portfolio transition technologies to the operational communities through the incremental release of upgraded versions over a period of years as development projects progress towards the final configuration. IAC may reallocate existing resources to support out-of-cycle new/ updated warfighter requirements.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: Space, Air, and Terrestrial Modeling & Simulation Initiative	-	-	0.340
Description: Initiates SATM&S to add a space communications modeling capability to the previously fielded terrestrial communications focused TEL-SCOPE tool. This effort will complete modeling of an adversary's total C4ISR system and assist nomination of terrestrial and space targets. FY14 funding in PE 0603260F (BA5), Project 652053. **FY 2013 Accomplishments:**			

Exhibit R-2A, **RDT&E Project Justification:** PB 2015 Air Force		**Date:** March 2014
Appropriation/Budget Activity 3600 I 4	**R-1 Program Element (Number/Name)** PE 0603260F I *Intelligence Advanced Development*	**Project (Number/Name)** 64537A I *INTELLIGENCE ANALYSIS CAPABILITIES (IAC)*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2013**	**FY 2014**	**FY 2015**
N/A ***FY 2014 Plans:*** N/A ***FY 2015 Plans:*** Will release first prototype and will initiate development of 2nd prototype.			
Title: Activity Based Intelligence Indication & Warning (ABI I&W) ***Description:*** Develop a robust prototype of an enterprise level solution (tools and procedures) that will allow the intelligence analyst to perform predictive intelligence analysis on new areas of interest. ***FY 2013 Accomplishments:*** N/A ***FY 2014 Plans:*** N/A ***FY 2015 Plans:*** Will start development of first prototype.	-	-	0.770
Accomplishments/Planned Programs Subtotals	-	-	1.110

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• RDTE: BA05: PE 0604750F: *Intelligence Equipment*	0.736	-	-	-	-	-	-	-	-	-	-
• RDTE: BA05: PE 0603260F: *Intelligence Advanced Development*	-	0.977	-	-	-	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

Requirements of new/upgraded intelligence analysis tools are identified and prioritized by the Air Force Intelligence, Surveillance and Reconnaissance Agency (AFISRA). Development of capabilities to meet these requirements is managed by the Air Force Research Laboratory (Rome Research Site). Prototype products (usually software), once evaluated by the users, are fielded in incremental capability spirals. All major contracts within this project are awarded after full and open competition.

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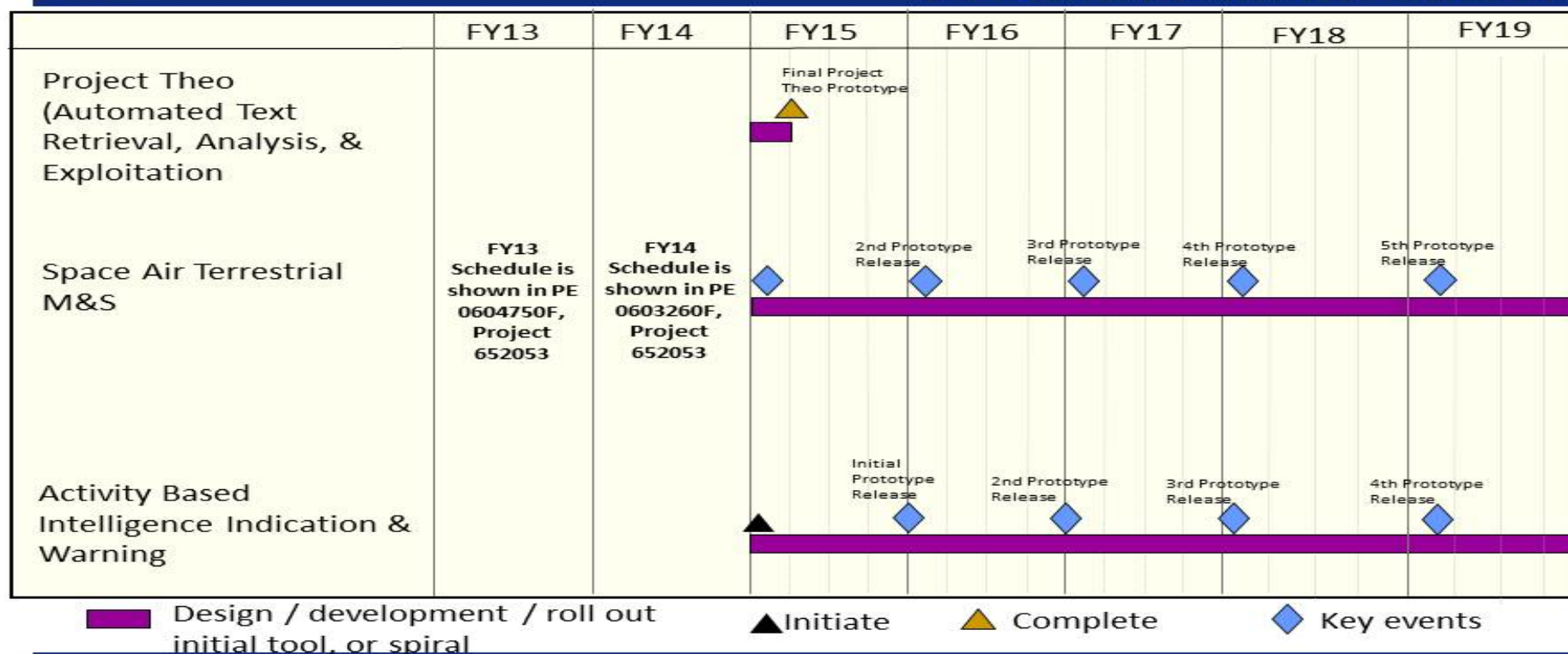| **Exhibit R-4**, **RDT&E Schedule Profile:** PB 2015 Air Force		**Date:** March 2014
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