Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force	DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305221F: *Network Centric Collaborative Targeting*

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	8.783	8.160	7.267	6.100	13.367	7.372	7.559	7.671	7.781	Continuing	Continuing
675197: *Core Technology*	8.783	8.160	7.267	6.100	13.367	7.372	7.559	7.671	7.781	Continuing	Continuing

Note

FY 2011 funding totals include $6.1M for the Overseas Contigency Operations (OCO) Supplemental Request to develop a Network Centric Collaborative Targeting (NCCT) Core Technology Ground Moving Target Indicator (GMTI) / Signals Intelligence (SIGINT) Correlator. A GMTI / SIGINT correlator for the NCCT fusion engine supports OCO real-time and forensic operations, accelerates High-Side (classified) message architecture to network OCO relevant sensor systems, and directly supports tactics, techniques and procedures (TTP) development for rapid operator use.

A. Mission Description and Budget Item Justification

Network Centric Collaborative Targeting (NCCT) is the Air Force program of record for net-centric collaborative intelligence, surveillance and reconnaissance (ISR) operations. NCCT is a networked application that uses machine-to-machine interfaces and Internet Protocol (IP) connectivity to horizontally integrate Battle Management (BM) / Command and Control (C2) / ISR assets and systems to provide timely detection, identification, and geo-location of time-sensitive and high priority targets to combatant commanders and their forces. NCCT develops and deploys the capability to automatically or manually cross-cue similar and dissimilar BM / C2 / ISR assets generating multi-source, multi-INT sensor-level data through coordinated sensor activity. This data is then rapidly correlated or fused and the results shared among the BM / C2 / ISR assets, systems and decision-making nodes. NCCT develops and refreshes software and hardware required for net-centric operations. NCCT supports Joint participant program offices with development and fielding of BM / C2 / ISR asset, system and decision-making node interfaces.

Core Technology develops the hardware and software to horizontally integrate Joint and Coalition dissimilar BM / C2 / ISR assets and systems to include, but is not limited to RC-135 RIVET JOINT, C-130 SENIOR SCOUT, EC-130H COMPASS CALL, E-8C Joint Surveillance and Target Attack Radar System (JSTARS), U-2 / ASIP / Distributive Common Ground System (DCGS), Falconer Air and Space Operations Center (AOC), and national systems. Core Technology includes, but is not limited to, network management software, operator interfaces, standard network messages and formats, correlation software and data rules of interaction, NCCT multi-level security hardware and software items, and platform specific Platform Interface Modules (PIMs). Core Technology supports the Systems Integration Lab (SIL) used to test NCCT development, modification and PIM integration.

This program is categorized as Budget Activity 7 because it provides for development of technologies in support of operational system development.

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force	DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	PE 0305221F: *Network Centric Collaborative Targeting*

B. Program Change Summary ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	8.783	8.160	0.000	6.100	6.100
Current President's Budget	8.783	8.160	7.267	6.100	13.367
Total Adjustments	0.000	0.000	7.267	0.000	7.267
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	7.267	0.000	7.267

Change Summary Explanation

FY 2011 funding totals include $6.1M for Overseas Contingency Operations (OCO) Supplemental Request to develop a Core Technology GMTI SIGINT Correlator.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force		DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305221F: *Network Centric Collaborative Targeting*	PROJECT 675197: *Core Technology*

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
675197: *Core Technology*	8.783	8.160	7.267	6.100	13.367	7.372	7.559	7.671	7.781	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY 2011 OCO the funding totals include $6.1M for the development of a Core Technology GMTI SIGINT Correlator. A GMTI SIGINT Correlator will enhance on going efforts to address current GMTI operational needs.

A. Mission Description and Budget Item Justification

NCCT Core Technology develops the hardware and software to horizontally integrate Joint and Coalition dissimilar BM / C2 / ISR assets and systems to include, but is not limited to, RC-135 RIVET JOINT, C-130 SENIOR SCOUT, EC-130H COMPASS CALL, E-8C Joint Surveillance and Target Attack Radar System (JSTARS), U-2 / ASIP / Distributive Common Ground System (DCGS), Falconer Air and Space Operations Center (AOC), and national systems. NCCT Core Technology includes, but is not limited to, network management software, operator interfaces, standard network messages and formats, correlation software and data rules of interaction, NCCT multi-level security hardware and software items, and platform specific Platform Interface Modules (PIMs). Core technology supports the Systems Integration Lab (SIL) used to test NCCT development, modification and PIMs.

This program is categorized as Budget Activity 7 because it provides for development of technologies in support of operational system development.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Accomplishments and planned efforts include development and update of NCCT Core Technology software; technical support to users, and management activities *FY 2009 Accomplishments:* In FY 2009: Continue development efforts	8.783	8.160	7.267	6.100	13.367

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305221F: *Network Centric Collaborative Targeting*	PROJECT 675197: *Core Technology*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: In FY 2010: Continue development efforts *FY 2011 Base Plans:* In FY 2011: Continue development efforts *FY 2011 OCO Plans:* In FY 2011 OCO: N/A					
Accomplishments/Planned Programs Subtotals	8.783	8.160	7.267	6.100	13.367

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PE 0305221F: *NCCT, (O&M)*	7.266	19.763	15.140	0.000	15.140	6.735	6.176	6.849	6.616	0.000	0.000

D. Acquisition Strategy

The NCCT capability is maintained and baseline / incremental upgrades plus any quick reaction capabilities (QRC) developments are acquired through the 645th Aeronautical System Group (BIG SAFARI Program Office) in accordance with the BIG SAFARI Program Management Directive (PMD) and the BIG SAFARI Class Justification and Approval (J&A) document for acquisition of supplies and services using other than full and open competition criteria. The supplies and services procured by the 645th AESG under their J&A to satisfy National Security (FAR 6.302-6) or Unusual and Compelling Urgency (FAR 6.302-2) requirements are supported by the BIG SAFARI Life Cycle Management Plan (LCMP) across the full spectrum of system life cycle management from developmental engineering to system retirement ("craddle to grave" support). Due to the rapidly changing threat environment encountered during our prolonged commitment to Overseas Contingency Operations (OCO), the acquisition program manager has the authority to redirect funding as necessary to meet current stated and emerging Combatant Commander requirements.

645th Aeronautical Systems Group (645 AESG) at Wright Patterson AFB OH, manages the Cost Plus Fixed Fee contract used to develop the NCCT Core Technology. 645th AESG will provide NCCT software and common hardware to systems and platforms designated to field this ISR capability. Individual program management offices may contract directly with their prime contractors or through the 645th AESG for integration of this ISR capability on their respective systems and platforms

Exhibit R-2A, **RDT&E Project Justification:** PB 2011 Air Force		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305221F: *Network Centric Collaborative Targeting*	**PROJECT** 675197: *Core Technology*

(RC-135 RIVET JOINT, C-130 SENIOR SCOUT, EC-130 COMPASS CALL, AF DCGS, AOC, EP-3E, P-3C, Gorgon Stare / Wide Area Airborne Surveillance (WAAS), MC-12W Liberty Project Aircraft, Vehicle and Dismounted Exploitation Radar (VADER), national systems, and any potential systems in the future).

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-3, RDT&E Project Cost Analysis: PB 2011 Air Force		DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305221F: *Network Centric Collaborative Targeting*	PROJECT 675197: *Core Technology*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Core Technology	SS/CPFF	Software and hardware development L3 ComCept Rockwall TX	6.307	5.799	Jan 2010	5.431	Dec 2010	6.100	Dec 2010	11.531	Continuing	Continuing	Continuing
Subtotal			6.307	5.799		5.431		6.100		11.531			

Remarks

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Security Certification	Various/ Various	Technical support Various	1.276	1.181	Jan 2010	1.000	Dec 2010	0.000		1.000	Continuing	Continuing	Continuing
Subtotal			1.276	1.181		1.000		0.000		1.000			

Remarks

Air Force

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305221F: *Network Centric Collaborative Targeting*	**PROJECT** 675197: *Core Technology*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office	Various/ Various	Management activities 645 AESG Wright-Patterson AFB OH	1.200	1.180	Jan 2010	0.836	Dec 2010	0.000		0.836	Continuing	Continuing	Continuing
Subtotal			1.200	1.180		0.836		0.000		0.836			

Remarks

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	8.783	8.160	7.267	6.100	13.367			

Remarks

Total Prior Years Cost may include only FY 2009 data.

Exhibit R-4, **RDT&E Schedule Profile:** PB 2011 Air Force		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305221F: *Network Centric Collaborative Targeting*	**PROJECT** 675197: *Core Technology*

Network Centric Collaborative Targeting Schedule

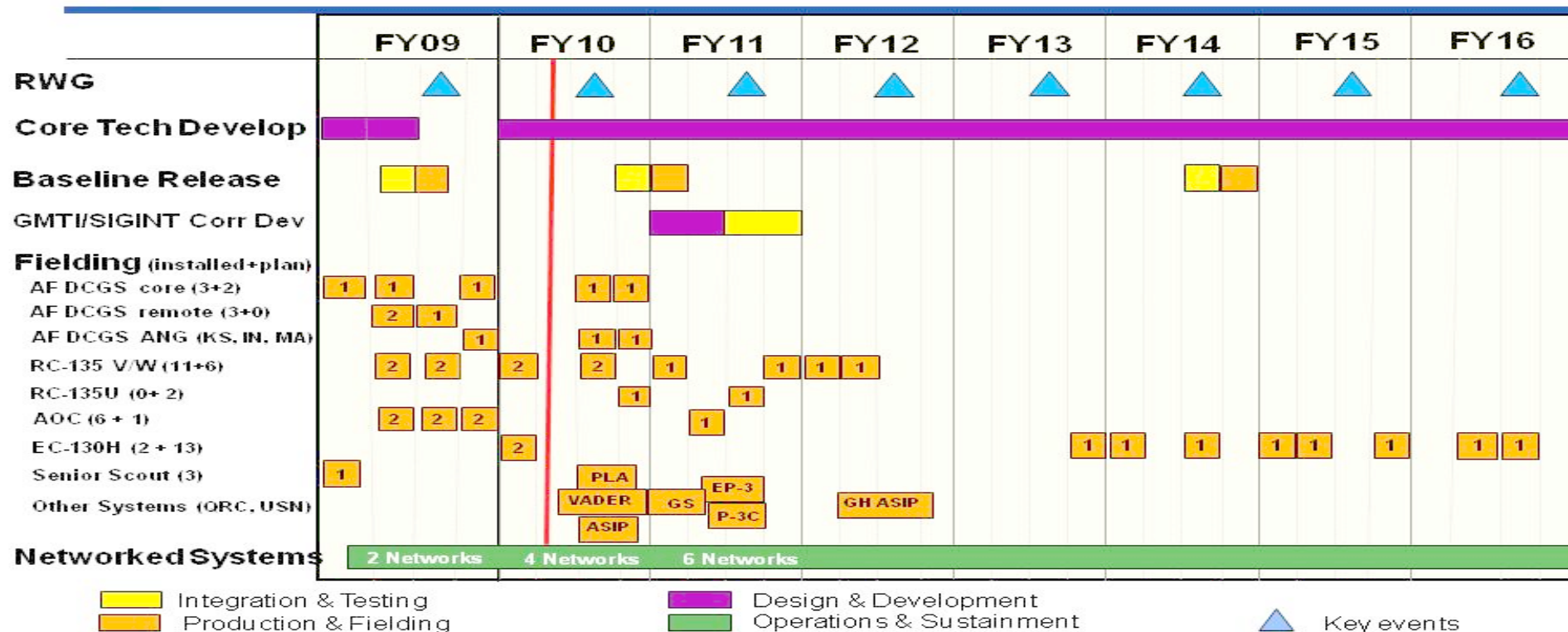| Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305221F: *Network Centric Collaborative Targeting*	**PROJECT** 675197: *Core Technology*

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Continued Core Technology Development and Refinement / Systems Integration Lab Operation	1	2009	4	2011
Network Controller and Operations Interface / Baseline Upgrade and Software Release	2	2009	1	2011
Platform Interface Module (PIM) Integration / Delivery	1	2009	4	2011
Core Technology Development and Integration of a GMTI SIGINT Correlator	1	2011	4	2011