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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force										Date: February 2018		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0207610F I Battlefield Abn Comm Node (BACN)							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	0.000	42.349	42.349	0.000	0.000	4.964	11.916	Continuing	Continuing
671201: E-11 Development*	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.964	11.916	Continuing	Continuing
675383: BATTLEFIELD AIRBORNE COMM NODE (BACN)	-	0.000	0.000	0.000	42.349	42.349	0.000	0.000	0.000	0.000	Continuing	Continuing

*This project's R-2a exhibit has been suppressed due to funding not beginning until after FY 2019

Note

This program, BA 7, PE 0207610F, project 675383, Military GPS, E-11A & Deployable Program Control Element (PCE), is a new start.

A. Mission Description and Budget Item Justification

Battlefield Airborne Communications Node (BACN) enables tactical edge Joint and Coalition information interoperability via air, space, and surface systems; Backbone Network for high capacity data transfer.

Military GPS is required for BACN fleet to fly in increasingly contested AORs. Safety of flight considerations, including performance, integrity, availability, and continuity of service requirements for long range reference, local area reference, and landing/terminal reference, are directly affected by how GPS sensors are used. This effort will include an Engineering Change Proposal (ECP) that will develop and integrate Military GPS on the E-11A BACN platform.

Deployable Program Control Elements (PCEs) are required to provide agile deployment support to establish remote and full ground control locations in a timely manner to shorten the kill-chain.

This effort will include an Engineering Change Proposal (ECP) that will develop a Deployable PCE.

Protected Tactical Waveform (PTW) is a waveform designed to mitigate the effects of advanced jamming in Anti-Access/Area Denial environments. PTW provides worldwide, beyond line of sight, Anti-Jam (AJ), Low Probability of Intercept communications, via military and commercial satellite systems for tactical users in all Services. This effort funds PTW modem development and aperture development on suitable platforms. PTW provides communication path diversity by increasing SATCOM resilience through satellite, spectral, and waveform diversity.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver BACN capabilities. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, 0605898F, and 0605833F.

BA7- This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development		PE 0207610F I Battlefield Abn Comm Node (BACN)			
B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	0.000	42.349	42.349
Total Adjustments	0.000	0.000	0.000	42.349	42.349
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	0.000	42.349	42.349
Change Summary Explanation					
This effort will include an Engineering Change Proposal (ECP) that will develop and integrate Military GPS on the E-11A BACN platform.					
This effort will include an Engineering Change Proposal (ECP) that will develop a Deployable PCE.					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Air Force										Date: February 2018		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0207610F / Battlefield Abn Comm Node (BACN)				Project (Number/Name) 675383 / BATTLEFIELD AIRBORNE COMM NODE (BACN)			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
675383: BATTLEFIELD AIRBORNE COMM NODE (BACN)	-	0.000	0.000	0.000	42.349	42.349	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This program, BA 7, PE 0207610F, project 675383, Military GPS, E-11A & Deployable Program Control Element (PCE), is a new start.

A. Mission Description and Budget Item Justification

Battlefield Airborne Communications Node (BACN) enables tactical edge Joint and Coalition information interoperability via air, space, and surface systems; Backbone Network for high capacity data transfer.

Military GPS is required for BACN fleet to fly in increasingly contested AORs. Safety of flight considerations, including performance, integrity, availability, and continuity of service requirements for long range reference, local area reference, and landing/terminal reference, are directly affected by how GPS sensors are used.

This effort will include an Engineering Change Proposal (ECP) that will develop and integrate Military GPS on the E-11A BACN platform.

Deployable Program Control Elements (PCEs) are required to provide agile deployment support to establish remote and full ground control locations in a timely manner to shorten the kill-chain.

This effort will include an Engineering Change Proposal (ECP) that will develop a Deployable PCE.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver BACN capabilities. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, 0605898F, and 0605833F.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Military GPS, E-11A & Deployable Program Control Element (PCE)	-	0.000	0.000	42.349	42.349
Description: Battlefield Airborne Communications Node (BACN) enables tactical edge Joint and Coalition information interoperability via air, space, and surface systems; Backbone Network for high capacity data transfer.					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Air Force				Date: February 2018		
Appropriation/Budget Activity 3600 / 7		R-1 Program Element (Number/Name) PE 0207610F / <i>Battlefield Abn Comm Node (BACN)</i>		Project (Number/Name) 675383 / <i>BATTLEFIELD AIRBORNE COMM NODE (BACN)</i>		
B. Accomplishments/Planned Programs (\$ in Millions)						
		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
<p>Military GPS is required for BACN fleet to fly in increasingly contested AORs. Safety of flight considerations, including performance, integrity, availability, and continuity of service requirements for long range reference, local area reference, and landing/terminal reference, are directly affected by how GPS sensors are used.</p> <p>This effort will include an Engineering Change Proposal (ECP) that will develop and integrate Military GPS on the E-11A BACN platform.</p> <p>Deployable Program Control Elements (PCEs) are required to provide agile deployment support to establish remote and full ground control locations in a timely manner to shorten the kill-chain.</p> <p>This effort will include an Engineering Change Proposal (ECP) that will develop a Deployable PCE.</p> <p>FY 2018 Plans: N/A</p> <p>FY 2019 Base Plans: N/A</p> <p>FY 2019 OCO Plans: Will conduct an Engineering Change Proposal (ECP) that will develop and integrate Military GPS on the E-11A BACN platform.</p> <p>Will conduct an Engineering Change Proposal (ECP) that will develop a Deployable PCE.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase due to FY19 new start</p>						
Accomplishments/Planned Programs Subtotals		-	0.000	0.000	42.349	42.349
C. Other Program Funding Summary (\$ in Millions)						
N/A						
Remarks						

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Air Force		Date: February 2018
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207610F / Battlefield Abn Comm Node (BACN)	Project (Number/Name) 675383 / BATTLEFIELD AIRBORNE COMM NODE (BACN)

D. Acquisition Strategy

BACN, a JUON directed program and currently fielded system, has provided quick reaction capability for the last decade. The Communication Systems Quick Reaction Capability Branch (AFLCMC/HNAA) will utilize all contracting options available to develop and integrate Military GPS on the E-11A in addition to developing the Deployable Program Control Element (PCE) as expeditiously as possible.

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force												Date: February 2018			
Appropriation/Budget Activity						R-1 Program Element (Number/Name)				Project (Number/Name)					
3600 / 7						PE 0207610F / Battlefield Abn Comm Node (BACN)				675383 / BATTLEFIELD AIRBORNE COMM NODE (BACN)					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Military GPS, E-11A	C/CPFF	AFLCMC/HNA : Hanscom AFB, MA	-	-		-		0.000		32.557	Apr 2019	32.557	Continuing	Continuing	-
Deployable Program Control Element (PCE)	SS/CPFF	AFLCMC/HNA : Hanscom AFB, MA	-	-		-		0.000		8.606	Apr 2019	8.606	Continuing	Continuing	-
Subtotal			-	-		-		0.000		41.163		41.163	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MilGPS PM, Eng A&AS	Various	Not specified. : TBD	-	-		-		0.000		0.595	Apr 2019	0.595	Continuing	Continuing	-
MilGPS Travel	Various	Not specified. : TBD	-	-		-		0.000		0.027	Apr 2019	0.027	Continuing	Continuing	-
Rapidly Deployable PCE A&AS	Various	Not specified. : TBD	-	-		-		0.000		0.531	Apr 2019	0.531	Continuing	Continuing	-
Rapidly Deployable PCE Travel	Various	Not specified. : TBD	-	-		-		0.000		0.033	Apr 2019	0.033	Continuing	Continuing	-
Subtotal			-	-		-		0.000		1.186		1.186	Continuing	Continuing	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		0.000		0.000		42.349		42.349	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force										Date: February 2018																			
Appropriation/Budget Activity 3600 / 7										R-1 Program Element (Number/Name) PE 0207610F / Battlefield Abn Comm Node (BACN)										Project (Number/Name) 675383 / BATTLEFIELD AIRBORNE COMM NODE (BACN)									

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Battlefield Airborne Comm Node (BACN)																												
Military GPS, E-11A																												
Deployable Program Control Element (PCE)																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Air Force			Date: February 2018
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207610F / <i>Battlefield Abn Comm Node (BACN)</i>	Project (Number/Name) 675383 / <i>BATTLEFIELD AIRBORNE COMM NODE (BACN)</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Battlefield Airborne Comm Node (BACN)</i>				
Military GPS, E-11A	1	2019	4	2019
Deployable Program Control Element (PCE)	1	2019	1	2020