

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force **Date:** February 2020

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0301017F / <i>Global Sensor Integrated on Network (GSIN)</i>
--	---

COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	-	3.468	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
675368: <i>GSIN (Global Integrated Sensor Network)</i>	-	3.468	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note
 In FY 2020, PE 0301017F, Global Sensor Integrated on Network (GSIN), Project 675368, GSIN (Global Integrated Sensor Network, efforts were transferred to PE 1201017F, Global Sensor Integrated on Network (GSIN), Project Project 675368, GSIN (Global Integrated Sensor Network, for more accurate classification of work.

A. Mission Description and Budget Item Justification
 The mission of USSTRATCOM is to establish and provide full-spectrum, global strike, coordinated space and information operations capabilities to meet both deterrent and decisive national security objectives and to provide operational space support, integrated missile defense, Global Command Control, Communications, and Computers Intelligence Surveillance and Reconnaissance (C4ISR), and specialized planning expertise to the joint warfighter.

The Nation's strategic C2 sensors, and mission planning programs cannot rapidly exchange information across multiple missions creating ambiguity that delays time critical national C2 decision making processes. GSIN developed and established a unified schema that integrates disparate Missile Warning/Missile Defense (MW/MD) data into a single exposed data set providing redundant and unambiguous MW/MD data to national leadership. GSIN also enables existing radars and sensors to provide data in net-centric formats consumable by other authorized systems and mission areas, thus reducing the need to acquire more systems. Activities also include studies and analysis to support current program planning, execution, and future program planning.

GSIN directly supports USSTRATCOM and other COCOMs and MAJCOM mission sets. GSIN meshes together selected systems and sensors (from tactical to strategic), including the Nation's most modern and capable assets, taking advantage of their larger numbers, improved algorithms, mobility, and forward deployment to provide earlier cross-cueing and expanded decision space when every second counts. Repurposing these traditionally stove-piped systems and sensors, GSIN enables the warfighter in several ways. GSIN enables creation of a User Defined Operating Picture (UDOP) to provide a single, unambiguous missile event picture allowing real-time collaboration for nuclear C2 and improved senior leader situational awareness (SA) for effective decision-making. GSIN also improves Space Situational Awareness (SSA) by tapping additional sensor capability and provides this data for the larger space order of battle capabilities. GSIN dramatically improves the ingestion of non-traditional, but readily available, non-US government and commercial data to the Air Force Space Command (AFSPC) catalog managed by the 18SPCC at Vandenberg AFB. GSIN addresses NORTHCOM/STRATCOM's signed Joint Emergent Operational Need (JEON) ST-0010 request for uninterrupted traditional and non-traditional sensor data integration and the Global Threat Characterization Assessment (GTCA) Operational Planning Team report. GSIN provides critical and unique data to the large AFSPC SSA data repositories to facilitate the Space Battle Management Command and Control (BMC2) suite of capabilities/programs. Finally, GSIN provides Machine Learner and Data Analysis functions to optimize and operate situational awareness in the field.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force	Date: February 2020
--	----------------------------

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0301017F / <i>Global Sensor Integrated on Network (GSIN)</i>
--	---

This program element may include necessary civilian pay expenses required to manage, execute, and deliver <insert program name> weapon system capability. 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, and 0605898F.

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.

B. Program Change Summary (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	3.579	0.000	0.000	0.000	0.000
Current President's Budget	3.468	0.000	0.000	0.000	0.000
Total Adjustments	-0.111	0.000	0.000	0.000	0.000
• 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	-0.111	0.000	0.000	0.000	0.000

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
<p>Title: Radar, sensor, technical intelligence (TI), and Allied Systems</p> <p>Description: Radar, sensor, technical intelligence and Allied Systems: Designs, develops, exposes and integrates data from radar, sensors and technical intelligence systems in regions of the world where potential GSIN users currently do not have coverage. Provide real time data from systems that previously reported in hours or days after critical events. Conduct studies/ surveys/meetings as necessary to continually identify systems meeting GSIN user data exposure needs. Space Situational Awareness (SSA): Designs, develops, tests, exposes, and integrates SSA data from previously untapped systems into space production systems and the Global Information Grid (GIG). Develop implementation plans to mature data exposure capabilities.</p> <p>FY 2020 Plans: N/A</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: N/A</p>	1.907	0.000	-
Title: Data Services, Net Centric Integration and Configuration Control, and program outreach	1.561	0.000	-

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0301017F / <i>Global Sensor Integrated on Network (GSIN)</i>	

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
<p>Description: Develop common XML net-enabled data schemas and configuration management processes and procedures for Missile Warning, Missile Defense, Space, MASINT/Technical Intelligence, and Sensor data to manage the XML schema and associated XML messaging and services. Develop technical outreach for potential new GSIN data consumers and providers who require GSIN sensor data. Upgrade GSIN capabilities as DISA Enterprise Services evolve. Continue modifications to data services. Support integration of GSIN sensor data into appropriate registries/catalogs. Continue development of GSIN data services to enable visualization in a common operating picture. Conduct studies and demonstrations of SSA capabilities, data correlation, and assessment services for risk reduction evaluations.</p> <p>FY 2020 Plans: N/A</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: N/A</p>			
Accomplishments/Planned Programs Subtotals	3.468	0.000	-

D. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u> <u>Base</u>	<u>FY 2021</u> <u>OCO</u>	<u>FY 2021</u> <u>Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• N/A: N/A	-	-	-	-	-	-	-	-	-	0.000	0.000

Remarks

E. Acquisition Strategy

GSIN uses existing government contract vehicles (from agencies such as Missile Defense Agency (MDA) or Air Force Life Cycle Management Center (AFLCMC)); to develop and modernize the combined SSA/MW/MD/MASINT/TI data exposure architecture and solution. The contracts are managed by the relevant organizations contracting office. GSIN does not award or manage any contracts. The AFLCMC at Hanscom AFB (AFLCMC/HB) and SMC at the Los Angeles AFB provide necessary program management, financial management, and other support as may be applicable for GSIN.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force												Date: February 2020			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
3600 / 7				PE 0301017F / Global Sensor Integrated on Network (GSIN)				675368 / GSIN (Global Integrated Sensor Network)							
Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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
Product Development	C/CPAF	Not specified : TBD	-	-		-		-		-		-	Continuing	Continuing	-
GSIN OPSCAP Status Capability	C/CPAF	Northrop Grumman : Omaha, NE	-	-		-		-		-		-	Continuing	Continuing	-
GSIN Non-traditional Space Situational Awareness Data Exposure	C/CPAF	Harris Group : Colorado Springs, CO	-	-		-		-		-		-	Continuing	Continuing	-
GSIN Net-centric Command and Control Data Exposure	C/CPAF	LM : Huntsville, AL	-	-		-		-		-		-	Continuing	Continuing	-
GSIN Space Situational Awareness Data Exposure - Project 2	C/CPAF	Raytheon : Boston, MA	-	-		-		-		-		-	Continuing	Continuing	-
GSIN Space Situational Awareness Data Exposure - Project 3	C/CPAF	Raytheon : Colorado Springs, CO	-	0.800	Jul 2019	-		-		-		-	Continuing	Continuing	-
GSIN Space Situational Awareness Data Exposure - Radar/Sensor/TI Project 4	C/CPAF	Raytheon : Colorado Springs, CO	-	1.649	Dec 2018	-		-		-		-	Continuing	Continuing	-
GSIN Space Situational Awareness Data Exposure - Radar/Sensor/TI Project 5	C/CPAF	Raytheon : Colorado Springs, CO	-	-		-		-		-		-	Continuing	Continuing	-
GSIN Space Situational Awareness Data Exposure - Radar/Sensor/TI Project 6	TBD	Raytheon : Boston, MA	-	-		-		-		-		-	Continuing	Continuing	-
GSIN Space Situational Awareness Data Exposure - Radar/Sensor/TI Project 7	TBD	Raytheon : Colorado Springs, CO	-	-		-		-		-		-	Continuing	Continuing	-
Publisher/Recorder	C/CPAF	Northrop Grumman : Omaha, NE	-	-		-		-		-		-	Continuing	Continuing	-

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force												Date: February 2020			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
3600 / 7				PE 0301017F / Global Sensor Integrated on Network (GSIN)				675368 / GSIN (Global Integrated Sensor Network)							
Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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
Strategic Study	C/CPAF	KBR Wyle : Omaha, ND	-	0.500	Nov 2018	-		-		-		-	Continuing	Continuing	-
Subtotal			-	2.949		-		-		-		-	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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
Management Services	C/CPAF	Not specified. : TBD	-	-		-		-		-		-	Continuing	Continuing	-
GSIN Program Management Administration	C/FFP	Various : Omaha, NE	-	0.519	Oct 2018	-		-		-		-	Continuing	Continuing	-
Subtotal			-	0.519		-		-		-		-	Continuing	Continuing	N/A
Project Cost Totals			-	3.468		0.000		-		-		-	Continuing	Continuing	N/A
Remarks															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0301017F / <i>Global Sensor Integrated on Network (GSIN)</i>	Project (Number/Name) 675368 / <i>GSIN (Global Integrated Sensor Network)</i>

	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	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
GSIN Data Exposure																												
GSIN Data Exposure (NC2) Operational	■																											
GSIN Data Exposure (MASINT 2) Operational	■																											
GSIN Data Exposure (MASINT 3) Production/Fielding	■																											
GSIN Data Exposure (MASINT 3) Integration and Testing		■																										
GSIN Data Exposure (MASINT 3) Operational			■																									
GSIN Data Exposure (MASINT 4) Concept Design			■	■																								
GSIN Data Exposure (MASINT 4) Design and Development				■																								
GSIN OPSCAP Status Integration and Testing	■																											
GSIN OPSCAP Status Operational		■																										

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0301017F / <i>Global Sensor Integrated on Network (GSIN)</i>	Project (Number/Name) 675368 / <i>GSIN (Global Integrated Sensor Network)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
GSIN Data Exposure				
GSIN Data Exposure (NC2) Operational	1	2019	1	2019
GSIN Data Exposure (MASINT 2) Operational	1	2019	1	2019
GSIN Data Exposure (MASINT 3) Production/Fielding	1	2019	1	2019
GSIN Data Exposure (MASINT 3) Integration and Testing	2	2019	2	2019
GSIN Data Exposure (MASINT 3) Operational	3	2019	3	2019
GSIN Data Exposure (MASINT 4) Concept Design	2	2019	4	2019
GSIN Data Exposure (MASINT 4) Design and Development	4	2019	4	2019
GSIN OPSCAP Status Integration and Testing	1	2019	1	2019
GSIN OPSCAP Status Operational	2	2019	2	2019