

CLASSIFICATION:

**UNCLASSIFIED**

BUDGET ITEM JUSTIFICATION SHEET P-40							DATE: FEBRUARY 2004				
APPROPRIATION/BUDGET ACTIVITY <b>OTHER PROCUREMENT, NAVY/BA-4 Ordnance Support Equipment</b>							P-1 ITEM NOMENCLATURE <b>SSN Combat Control System BLI: 542000 SBHD: H4VB</b>				
Program Element for Code B Items:							Other Related Program Elements				
	Prior Years	ID Code	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY2009	Total
QUANTITY											
COST (In Millions)			<b>\$38.4</b>	<b>\$61.7</b>	<b>\$69.5</b>	<b>\$147.5</b>	<b>\$148.1</b>	<b>\$110.3</b>	<b>\$122.0</b>	<b>\$125.4</b>	<b>CONT.</b>
SPARES COST (In Millions)											
<p>COMBAT SYSTEMS TECHNOLOGY REFRESH / LEGACY INTEGRATION (VB011)                      Procures tactical control hardware upgrades to SSN688, SSN688I and SSBN for legacy combat control systems. These updates provide accelerated delivery of tactical capability to the fleet and bridge the gap between legacy combat control systems and AN/BYG-1. Procures Engineering Changes (EC) and Ordnance Alterations (ORDALT) to correct fleet reported problems with legacy Combat Control System software and hardware.</p> <p>SUBMARINE COMBAT CONTROL SYSTEM MODERNIZATION PROGRAM (VB034)                      Nomenclature used in the PB04 budget submit (CCS MK2) has been changed to reflect the newly acquired AN/BYG-1 nomenclature. This nomenclature was changed in FY05 and out to incorporate the addition of Virginia Class Combat Control System to a common acquisition and development strategy. This allows for AN/BYG-1 to be the common combat control system nomenclature across all submarine platforms. The BYG-1 nomenclature, with bi-annual technology insertion designation (i.e. BYG-1 (TI04)), replaces CCS Mk2 Block 1C ECP4 nomenclature.                      This cost code procures hardware and software upgrades for the AN/BYG-1 system for installation on all submarine platforms. The AN/BYG-1 is the combat control system common across all submarine platforms which incorporates tactical control, weapon control and Tactical Local Area Network (TacLAN) functions into a single procurement program. AN/BYG-1 allows the submarine Navy to rapidly update the ship safety tactical picture, integrates the common tactical picture into the battlegroup, improves torpedo interfaces and provides tactical TOMAHAWK (TOMAHAWK Block IV) capability.                      AN/BYG-1 systems will be continuously updated with hardware enhancements to address COTS obsolescence and capability improvements as defined by the APB process. These updates are referred to as Tech Insertion (TI) kits and are differentiated by year of development (i.e. TI00, TI04, etc). The TI upgrades provide the baseline for all future AN/BYG-1 procurements. In addition, this budget also provides tech insertion "kits" to update existing AN/BYG-1 platforms.</p> <p>The TOMAHAWK Breakout Box provides electrical access to the vertical launch system. This facilitates the insertion of simulation signals for the end-to-end calibration, testing and training. The Tactical Weapons Simulator Upgrade expands the capability of the hardware to allow test of all weapon launchers at the same time. The procurement and installation of these two items are shown separately in FY02-FY04 and become integrated into the AN/BYG-1 baseline FY05 and out. These additions, coupled with the addition of TacLAN hardware, account for procurement unit price fluctuations between FY04 (CCS Mk2) and FY05 (AN/BYG-1).</p>											

P-1 SHOPPING LIST

CLASSIFICATION:

**UNCLASSIFIED**

**BUDGET ITEM JUSTIFICATION SHEET  
P-40 CONTINUATION**

DATE:

**FEBRUARY 2004**

APPROPRIATION/BUDGET ACTIVITY

**OTHER PROCUREMENT, NAVY/BA-4 Ordnance Support Equipment**

P-1 ITEM NOMENCLATURE

**SSN Combat Control System BLI: 542000 SBHD: H4VB**

**PRODUCTION / ENGINEERING SUPPORT (VB500)**

This is a new cost code beginning in FY05 combining production support and logistics support cost codes into one common support code.

**PRODUCTION SUPPORT (VB033)**

This account procures technical data, mock-ups, demonstrations and testing products directly for the SSN Combat System Obsolete Equipment Replacement (OER) program. Also procured are services required to support production engineering, quality assurance, product improvement and acceptance testing for production line items. Technical on-site support at shipyards and depots for hardware related problems is also included.

**LOGISTIC SUPPORT REQUIREMENTS (VB983)**

This account procures integrated logistics products directly for the SSN Combat System Obsolete Equipment Replacement (OER) program. Also procured are logistics engineering services which perform essential documentation updates related to major hardware revisions.

**INITIAL TRAINING (VB995)**

This provides initial training curriculum development, training management materials, exercise control group development, pilot services to the Fleet.

**CONSULTING SERVICES (VB900)**

This account provides assistance for asset management, cost analyses, preparation of contract specifications, monitoring of contract deliverables, prime contractor cost, schedule and performance monitoring, ILS planning and GFI coordination.

**EQUIPMENT INSTALLATION (VB5NS)**

Funds are for the installation of Combat Control System equipments included in the Fleet Modernization Program.

**NON-FMP INSTALLATION (VB6NS)**

Funds are for the installation of Combat Control System equipments not included in the Fleet Modernization Program.

**OTHER INFORMATION**

Developmental efforts are funded by Program Element 64562N within the SSN Combat Control System Improvement Program F0236.

P-1 SHOPPING LIST

CLASSIFICATION:

**UNCLASSIFIED**

CLASSIFICATION:

**UNCLASSIFIED**

WEAPONS SYSTEM COST ANALYSIS				Weapon System									FEBRUARY 2004					
P-5				ID Code	P-1 ITEM NOMENCLATURE/SUBHEAD													
APPROPRIATION/BUDGET ACTIVITY				SSN COMBAT CONTROL SYSTEM BLI: 542000 SBHD: H4VB														
Other Procurement, Navy																		
BA-4 Ordnance Support Equipment																		
COST CODE	ELEMENT OF COST	ID Code	TOTAL COST IN THOUSANDS OF DOLLARS															
			Prior Years	FY2002			FY 2003			FY2004			FY2005					
			Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost			
	<b><u>N77 SUBMARINES</u></b>																	
VB011	<b><u>Combat System Tech Refresh / Legacy Integration</u></b>	A							24,752				1,869					14,164
	ECP/Auxiliary Equipment / Integration								695				125					250
	AN/BYG-1 EDMs								9,100				0					0
	Legacy Integration								0				324	1	200			200
	AN/BSG-1 Weapon Launching System						13	453	5,890									
	TIDS Tech Refresh *								9,067				1,420					13,714
VB034	<b><u>Submarine Combat Control System Modernization Program</u></b>								15,139				29,554					69,722
	CCS MK2 Block 1C Baseline Upgrade Kits	B																
	CCS MK2 Block 1C ECP4 Upgrade Kits	B					5	2,448	12,240		7	2,596	18,174	0	0		0	0
	MultiTube Weapon Simulator (MTWS)	A					0	0	0		20	420	8,397	0	0		0	0
	TMHVK Break Box	A					7	414	2,899		7	426	2,983	0	0		0	0
	AN/BYG-1 Systems	B												12	4,371			52,452
	SSN688 Class													4	4,205			16,820
	SSBN Class													2	3,617			7,234
	SSGN Class													2	3,884			7,768
	SSN21 Class													2	7,532			15,064
	SSN774 Class													2	2,783			5,566
	Technology Insertion (TI00/TI02 Baseline)													5	3,454			17,270
	SSN688 Class													5	3,454			17,270
VB500	PRODUCTION/ENGINEERING SUPPORT																	7,462
VB033	PRODUCTION SUPPORT										1,915		1,478					0
VB900	CONSULTING SERVICES										1,194		601					616
VB983	LOGISTICS SUPPORT										2,042		450					0
VB995	INITIAL TRAINING										1,230		1,329					1,362
	<b>PROCUREMENT TOTAL</b>								<b>46,272</b>				<b>35,281</b>					<b>93,326</b>
VB5NS	EQUIP INSTALLATION (FMP)										11,084		26,941					45,435
VB6NS	NON-FMP EQUIP INSTALLATION										4,296		7,291					8,720
	* FY05 Funds non-recurring engineering cost associated with integration of Tech Refresh to TIDS Phase I/II systems currently installed on SSN688 and SSGN Class submarines. This Tech Refresh establishes the TacLAN baseline for AN/BYG-1.																	
									0				61,652					69,513
																		147,481

CLASSIFICATION:

**UNCLASSIFIED**

BUDGET PROCUREMENT HISTORY AND PLANNING EXHIBIT (P-5A)					Weapon System			A. DATE			
B. APPROPRIATION/BUDGET ACTIVITY					C. P-1 ITEM NOMENCLATURE				SUBHEAD		
Other Procurement, Navy BA-4 Ordnance Support Equipment					SSN Combat Control System BLI: 542000				H4VB		
Cost Element/ FISCAL YEAR	QUANTITY	UNIT COST (000)	LOCATION OF PCO	RFP ISSUE DATE	CONTRACT METHOD & TYPE	CONTRACTOR AND LOCATION	AWARD DATE	DATE OF FIRST DELIVERY	SPECS AVAILABLE NOW	DATE REVISIONS AVAILABLE	
<u>CCS MK2 OER</u>											
<b>FISCAL YEAR 03</b>											
BLOCK 1C ECP4 UPGRADE UPGRADES (FY03)	5	\$2,448	NAVSEA		C/FP	LOCKHEED MARTIN, NE&SS	12/02	12/03	YES		
BREAKOUT BOX	7	\$414	NUWC NEWPORT		N/A	NUWC NEWPORT	01/03	07/03	YES		
<b>FISCAL YEAR 04</b>											
BLOCK 1C ECP4 UPGRADE UPGRADES (FY04)	7	\$2,596	NAVSEA		C/FP	LOCKHEED MARTIN, NE&SS	12/03	12/04	YES		
BREAKOUT BOX	7	\$426	NUWC NEWPORT		N/A	NUWC NEWPORT	01/04	07/04	YES		
MTWS	20	\$420	NAVSEA		SS/FP	PROGENY	12/03	07/04	YES		
<b>FISCAL YEAR 05</b>											
AN/BYG-1	12	\$4,371	NAVSEA		C/Various	Various	12/04	12/05	YES		
D. REMARKS											
<p>FY04 CCS MK2 Block 1C ECP4 unit costs increase due to the addition of 16 Tube Weapon Simulator (STWS).</p> <p>FY04 and out ECP4 equipment cost increase due to addition of 16 tube simulator into ECP4 configuration. Additional 20 STWS units required in FY04 to backfit prior year procurements.</p> <p>FY05 AN/BYG-1 Hardware will be procured from multiple competitively awarded contracts.</p> <p>FY05 AN/BYG-1 Hardware costs increased due to inclusion of TacLAN equipment previously procured under a different budget line.</p>											

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: CCS to Mk2 Block 1C ECP4 (SSN688) TYPE MODIFICATION: UPGRADE MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

DESCRIPTION/JUSTIFICATION:

Through introduction of common COTS hardware, upgrade all SSN Combat Control Systems to a common baseline which includes TACTOM capability. FY04 and out equipment cost increase due to addition of 16 tube simulator into ECP4 configuration. Additional 20 STWS units required in FY04 to backfit prior year procurements.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: TECHEVAL/OPEVAL 02/03; RELEASE TO FLEET (RTF) 09/03

	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		TC		TOTAL			
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$		
<u>FINANCIAL PLAN (IN MILLIONS)</u>																						
<u>RDT&amp;E</u>																				0	0.0	
<u>PROCUREMENT</u>																				0	0.0	
INSTALLATION KITS																				0	0.0	
INSTALLATION KITS - UNIT COST																				0	0.0	
INSTALLATION KITS NONRECURRING																				0	0.0	
EQUIPMENT	12	19.9		5	12.2	5	12.3	0	0.0											22	44.4	
EQUIPMENT NONRECURRING (MTWS)						20	8.4	0	0.0												20	8.4
ENGINEERING CHANGE ORDERS																					0	0.0
TRAINING/SUPPORT EQUIPMENT	2	3.5		0	0.0																2	3.5
OTHER																					0	0.0
INTERIM CONTRACTOR SUPPORT																					0	0.0
OTHER (DSA)		1.6			0.9		0.4		1.8												0	4.7
OTHER (Legacy Integration DSA)							0.3		0.0												0	0.3
OTHER (Non-FMP Installation)	4	2.4		5	4.3	9	7.3	4	2.2												22	16.2
OTHER (MTWS/Legacy Int Non-FMP Installation)								20	4.3	0	0.0	0	0.0	0	0.0	0	0.0				20	4.3
INSTALL COST	4	6.0		5	7.4	9	22.8	4	9.6												22	45.8
OTHER INSTALL (MTWS / Legacy Integration)						10	0.9	35	6.2	15	5.2	0	0.0	0	0.0						60	12.3
TOTAL PROCUREMENT	14	23.4		5	12.2	25	20.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		44	56.3

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued)	<b>INDIVIDUAL MODIFICATION (Continued)</b>																			
MODELS OF SYSTEMS AFFECTED:	CCS to Mk2 Block 1C ECP4 (SSN688)										MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS									
INSTALLATION INFORMATION:																				
METHOD OF IMPLEMENTATION:	AIT																			
ADMINISTRATIVE LEADTIME:																				
CONTRACT DATES:	FY 2002: Dec-01				FY 2003: Dec-02				FY 2004: Dec-03				FY 2005: N/A							
DELIVERY DATE:	FY 2002: Dec-02				FY 2003: Dec-03				FY 2004: Dec-04				FY 2005: N/A							
(\$ in Millions)																				

Cost:	Prior Year		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS	4	6.0	2	3.0															6	9.0
FY 2002 EQUIPMENT			3	4.4															3	4.4
FY 2003 EQUIPMENT					9	22.8													9	22.8
FY 2004 EQUIPMENT							4	9.6											4	9.6
FY 2005 EQUIPMENT									0	0.0									0	0.0
FY 2006 EQUIPMENT											0	0.0							0	0.0
FY 2007 EQUIPMENT													0	0.0					0	0.0
FY 2008 EQUIPMENT															0	0.0			0	0.0
FY 2009 EQUIPMENT																	0	0.0	0	0.0
TO COMPLETE																			0	0.0

INSTALLATION SCHEDULE:

	FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				TC	TOTAL				
		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						
In	4	0	3	2	0	2	3	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
Out	4	0	2	1	2	2	2	3	2	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22

P-3A

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: CCS to Mk2 Block 1C ECP4 (SSBN) TYPE MODIFICATION: UPGRADE MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

DESCRIPTION/JUSTIFICATION:  
 Through introduction of common COTS hardware, upgrade all SSN Combat Control Systems to a common baseline.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: TECHEVAL/OPEVAL 02/03; RELEASE TO FLEET (RTF) 09/03

	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		TC		TOTAL			
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$		
<u>FINANCIAL PLAN (IN MILLIONS)</u>																						
<u>RDT&amp;E</u>																				0	0.0	
<u>PROCUREMENT</u>																				0	0.0	
INSTALLATION KITS																				0	0.0	
INSTALLATION KITS - UNIT COST																				0	0.0	
INSTALLATION KITS NONRECURRING																				0	0.0	
EQUIPMENT					1	3.0														1	3.0	
EQUIPMENT NONRECURRING																				0	0.0	
ENGINEERING CHANGE ORDERS																				0	0.0	
DATA																				0	0.0	
TRAINING EQUIPMENT																				0	0.0	
SUPPORT EQUIPMENT																				0	0.0	
OTHER																				0	0.0	
INTERIM CONTRACTOR SUPPORT																				0	0.0	
OTHER (DSA)						0.1		0.0												0	0.1	
OTHER (Non-FMP Installation)							3	1.3												3	1.3	
INSTALL COST					0	0.0	3	14.4												3	14.4	
TOTAL PROCUREMENT	0	0.0			0	0.0	1	3.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	3.0

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued)	<b>INDIVIDUAL MODIFICATION (Continued)</b>									
MODELS OF SYSTEMS AFFECTED:	CCS to Mk2 Block 1C ECP4 (SSBN)					MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS				
INSTALLATION INFORMATION:										
METHOD OF IMPLEMENTATION:	AIT									
ADMINISTRATIVE LEADTIME:										
CONTRACT DATES:	FY 2002: N/A	FY 2003: N/A	FY 2004: Dec-03	FY 2005: N/A						
DELIVERY DATE:	FY 2002: N/A	FY 2003: N/A	FY 2004: Dec-04	FY 2005: N/A						
(\$ in Millions)										

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS	0	0.0																	0	0.0
FY 2002 EQUIPMENT			0	0.0															0	0.0
FY 2003 EQUIPMENT					0	0.0													0	0.0
FY 2004 EQUIPMENT							3	14.4											3	14.4
FY 2005 EQUIPMENT									0	0.0									0	0.0
FY 2006 EQUIPMENT											0	0.0							0	0.0
FY 2007 EQUIPMENT													0	0.0					0	0.0
FY 2008 EQUIPMENT															0	0.0			0	0.0
FY 2009 EQUIPMENT																	0	0.0	0	0.0
TO COMPLETE																			0	0.0

INSTALLATION SCHEDULE:

	FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				TC	TOTAL
		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		
In	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Out	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

P-3A

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: BREAKOUT BOX TYPE MODIFICATION: UPGRADE MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

DESCRIPTION/JUSTIFICATION:  
 The TOMAHAWK Breakout Box provides electrical access to the vertical launch system. This facilitates the insertion of simulation signals for end-to-end calibration and test.  
 Note: 4 units procured in FY00 using funds from a different BLI. The 4 shipsets are installed under this BLI for a total quantity of 19.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		TC		TOTAL				
	\$		QTY	\$	QTY	\$	QTY	\$	QTY	\$													
<u>FINANCIAL PLAN (IN MILLIONS)</u>																							
<u>RDT&amp;E</u>																				0	0.0		
<u>PROCUREMENT</u>																				0	0.0		
INSTALLATION KITS																				0	0.0		
INSTALLATION KITS - UNIT COST																				0	0.0		
INSTALLATION KITS NONRECURRING																				0	0.0		
EQUIPMENT	1	0.4			7	2.9	7	3.0	0	0.0										15	6.3		
EQUIPMENT NONRECURRING																					0	0.0	
ENGINEERING CHANGE ORDERS																					0	0.0	
DATA																					0	0.0	
TRAINING EQUIPMENT																					0	0.0	
SUPPORT EQUIPMENT																					0	0.0	
OTHER																					0	0.0	
INTERIM CONTRACTOR SUPPORT																					0	0.0	
OTHER (DSA)		1.6				0.5		0.3		0.0											0	2.4	
OTHER (Non-FMP Installation)																					0	0.0	
INSTALL COST	5	1.5			7	2.3	7	2.2	0	0.0											19	6.0	
TOTAL PROCUREMENT	1	0.4	0	0.0	7	2.9	7	3.0	0	0.0	0	0.0	0	0.0							\$0.0	15	6.3

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: BREAKOUT BOX MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

INSTALLATION INFORMATION:  
 METHOD OF IMPLEMENTATION: AIT  
 ADMINISTRATIVE LEADTIME: \_\_\_\_\_ PRODUCTION LEADTIME: 6 Months  
 CONTRACT DATES: FY 2002: Jan-01 FY 2003: Jan-02 FY2003: Jan-03 FY2004: Jan-04 FY 2005: N/A  
 DELIVERY DATE: FY 2002: Jul-01 FY 2003: Jul-02 FY2003: Jul-03 FY2004: Jul-04 FY 2005: N/A

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS	5	1.5																	5	1.5
FY 2002 EQUIPMENT																			0	0.0
FY 2003 EQUIPMENT			7	2.3															7	2.3
FY 2004 EQUIPMENT					7	2.2													7	2.2
FY 2005 EQUIPMENT							0	0.0											0	0.0
FY 2006 EQUIPMENT									0	0.0									0	0.0
FY 2007 EQUIPMENT											0	0.0							0	0.0
FY 2008 EQUIPMENT													0	0.0					0	0.0
FY 2009 EQUIPMENT															0	0.0			0	0.0
TO COMPLETE																			0	0.0

INSTALLATION SCHEDULE:

	FY 2001 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				TC	TOTAL
		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		
In	5	1	2	2	2	2	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Out	5	1	2	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19

P-3A

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**  
 MODELS OF SYSTEM AFFECTED: AN/BYG-1 (SSN688) TYPE MODIFICATION: UPGRADE MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

DESCRIPTION/JUSTIFICATION:

This program will provide submarine combat control systems with COTS-based upgrades to combat control and tactical control hardware and software. Milestone Decision Authority (MDA) Production Reviews are held on an annual basis.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Development Completed 9/04; DT/FOT&E 8/05-2/06

	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		TC		TOTAL			
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$		
<u>FINANCIAL PLAN (IN MILLIONS)</u>																						
<u>RDT&amp;E</u>																				0	0.0	
<u>PROCUREMENT</u>																				0	0.0	
INSTALLATION KITS																				0	0.0	
INSTALLATION KITS - UNIT COST																				0	0.0	
INSTALLATION KITS NONRECURRING																				0	0.0	
EQUIPMENT							4	16.8	1	4.3	4	17.5	7	30.5	3	12.6	0	0.0		19	81.7	
OTHER EQUIPMENT (Legacy Integration)							1	0.2	0	0.0	0	0.0	0	0.0	0	0.0				1	0.2	
ENGINEERING CHANGE ORDERS																				0	0.0	
DATA																				0	0.0	
TRAINING EQUIPMENT																				0	0.0	
SUPPORT EQUIPMENT																				0	0.0	
OTHER (TIDS Tech Refresh / ECP/Aux Equip)								14.0		3.6		0.0		0.0		0.0				0	17.6	
INTERIM CONTRACTOR SUPPORT																				0	0.0	
OTHER (DSA)								0.0		1.4		1.4		2.3		4.7		1.6		0	11.4	
OTHER (NON-FMP INSTALL)							0	0.0	4	4.0	1	0.9	4	3.6	7	5.8	3	2.5		19	16.8	
OTHER (Other NON-FMP INSTALL)								0.0		0.1		0.4		0.6		0.8				0	1.9	
INSTALL COST							0	0.0	4	22.0	1	5.0	4	21.3	7	34.3	3	12.9		19	95.5	
OTHER INSTALL COST							0	2.6	1	0.3	0	0.0	1	0.4	0	0.0	0	0.0		2	3.3	
TOTAL PROCUREMENT							0	\$0.0	5	\$31.0	1	\$7.9	4	\$17.5	7	\$30.5	3	\$12.6	0	\$0.0	20	99.5

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: AN/BYG-1 (SSN688) MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

INSTALLATION INFORMATION:  
 METHOD OF IMPLEMENTATION: \_\_\_\_\_  
 ADMINISTRATIVE LEADTIME: \_\_\_\_\_ PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2002: N/A FY 2003: N/A FY 2004: N/A FY2005: Dec-04  
 DELIVERY DATE: FY 2002: N/A FY 2003: N/A FY 2004: N/A FY2005: Dec-05

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS																			0	0.0	
FY 2002 EQUIPMENT																			0	0.0	
FY 2003 EQUIPMENT						0	0.0												0	0.0	
FY 2004 EQUIPMENT								0	0.0										0	0.0	
FY 2005 EQUIPMENT										4	22.0								4	22.0	
FY 2006 EQUIPMENT												1	5.0						1	5.0	
FY 2007 EQUIPMENT														4	21.3				4	21.3	
FY 2008 EQUIPMENT																7	34.3		7	34.3	
FY 2009 EQUIPMENT																		3	12.9	3	12.9
TO COMPLETE																			0	0.0	

INSTALLATION SCHEDULE:

	FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				TC	TOTAL
		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		
In	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	1	1	1	1	1	2	2	2	3	19
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	1	1	1	1	1	2	2	2	3	19

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: AN/BYG-1 (SSBN) TYPE MODIFICATION: UPGRADE MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

DESCRIPTION/JUSTIFICATION:

This program will provide submarine combat control systems with COTS based upgrades to combat control and tactical control hardware and software. Milestone Decision Authority (MDA) Production Reviews are held on an annual basis.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Development Completed 9/04; DT/FOT&E 8/05-2/06

	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		TC		TOTAL			
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$		
<u>FINANCIAL PLAN (IN MILLIONS)</u>																						
<u>RDT&amp;E</u>																				0	0.0	
<u>PROCUREMENT</u>																				0	0.0	
INSTALLATION KITS																				0	0.0	
INSTALLATION KITS - UNIT COST																				0	0.0	
INSTALLATION KITS NONRECURRING																				0	0.0	
EQUIPMENT							2	7.2	2	7.4	2	7.5	2	7.7	2	7.8	0	0.0	10	37.6		
OTHER EQUIPMENT																				0	0.0	
ENGINEERING CHANGE ORDERS																				0	0.0	
DATA																				0	0.0	
TRAINING EQUIPMENT																				0	0.0	
SUPPORT EQUIPMENT																				0	0.0	
OTHER																				0	0.0	
INTERIM CONTRACTOR SUPPORT																				0	0.0	
OTHER (DSA)							0	0.0	0	1.0	0	1.2	0	1.3	0	1.2	0	1.1	0	5.7		
OTHER (NON-FMP INSTALL)							0	0.0	2	1.5	2	1.6	2	1.6	2	1.6			8	6.3		
INSTALL COST							0	0.0	2	10.5	2	11.9	2	12.5	2	11.5	2	10.8	10	57.2		
OTHER INSTALL COST																				0	0.0	
TOTAL PROCUREMENT							0	\$0.0	2	\$7.2	2	\$7.4	2	\$7.5	2	\$7.7	2	\$7.8	0	\$0.0	10	37.6

CLASSIFICATION: UNCLASSIFIED

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: AN/BYG-1 (SSBN) MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: \_\_\_\_\_

ADMINISTRATIVE LEADTIME: \_\_\_\_\_

PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2002: N/A

FY 2003: N/A

FY 2004: N/A

FY2005: Dec-04

DELIVERY DATE: FY 2002: N/A

FY 2003: N/A

FY 2004: N/A

FY2005: Dec-05

(\$ in Millions)

Cost:	Prior Years		FY 2002		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		Total			
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$		
PRIOR YEARS																					0	0.0		
FY 2002 EQUIPMENT																						0	0.0	
FY 2003 EQUIPMENT							0	0.0														0	0.0	
FY 2004 EQUIPMENT									0	0.0												0	0.0	
FY 2005 EQUIPMENT											2	10.5										2	10.5	
FY 2006 EQUIPMENT													2	11.9								2	11.9	
FY 2007 EQUIPMENT															2	12.5						2	12.5	
FY 2008 EQUIPMENT																	2	11.5				2	11.5	
FY 2009 EQUIPMENT																					2	10.8	2	10.8
TO COMPLETE																						0	0.0	

INSTALLATION SCHEDULE:

	FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				TC	TOTAL				
		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						
In	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	2	10
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	2	10

P-3A

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: AN/BYG-1 (SSGN) TYPE MODIFICATION: UPGRADE MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

DESCRIPTION/JUSTIFICATION:

This program will provide submarine combat control systems with COTS based upgrades to combat control and tactical control hardware and software. Milestone Decision Authority (MDA) Production Reviews are held on an annual basis.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Development Completed 9/04; DT/FOT&E 8/05-2/06

	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		TC		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
<u>FINANCIAL PLAN (IN MILLIONS)</u>																					
<u>RDT&amp;E</u>																				0	0.0
<u>PROCUREMENT</u>																				0	0.0
INSTALLATION KITS																				0	0.0
INSTALLATION KITS - UNIT COST																				0	0.0
INSTALLATION KITS NONRECURRING																				0	0.0
EQUIPMENT							2	7.8	2	7.9	0	0.0	0	0.0	0	0.0	0	0.0	4	15.7	
EQUIPMENT NONRECURRING																				0	0.0
ENGINEERING CHANGE ORDERS																				0	0.0
DATA																				0	0.0
TRAINING EQUIPMENT																				0	0.0
SUPPORT EQUIPMENT																				0	0.0
OTHER																				0	0.0
INTERIM CONTRACTOR SUPPORT																				0	0.0
OTHER (DSA)							0	0.0	0	1.0	0	1.2	0	0.0	0	0.0		0.0	0	2.2	
OTHER (NON-FMP INSTALL)							0	0.0	2	1.5	2	1.6	0	0.0	0	0.0			4	3.1	
INSTALL COST							0	0.0	2	10.0	2	11.3	0	0.0	0	0.0	0	0.0	4	21.3	
OTHER INSTALL COST																				0	0.0
TOTAL PROCUREMENT							0	\$0.0	2	\$7.8	2	\$7.9	0	\$0.0	0	\$0.0	0	\$0.0	4	15.7	

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: AN/BYG-1 (SSGN) MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

INSTALLATION INFORMATION:  
 METHOD OF IMPLEMENTATION: \_\_\_\_\_  
 ADMINISTRATIVE LEADTIME: \_\_\_\_\_ PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2002: N/A FY 2003: N/A FY 2004: N/A FY2005: Dec 04  
 DELIVERY DATE: FY 2002: N/A FY 2003: N/A FY 2004: N/A FY2005: Dec 05

(\$ in Millions)

Cost:	Prior Years		FY 2002		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		Total		
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	
PRIOR YEARS																					0	0.0	
FY 2002 EQUIPMENT																					0	0.0	
FY 2003 EQUIPMENT							0	0.0													0	0.0	
FY 2004 EQUIPMENT									0	0.0											0	0.0	
FY 2005 EQUIPMENT											2	10.0									2	10.0	
FY 2006 EQUIPMENT													2	11.3							2	11.3	
FY 2007 EQUIPMENT															0	0.0					0	0.0	
FY 2008 EQUIPMENT																	0	0.0			0	0.0	
FY 2009 EQUIPMENT																			0	0.0	0	0.0	
TO COMPLETE																				0	0.0	0	0.0

INSTALLATION SCHEDULE:

	FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				TC	TOTAL				
		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						
In	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: AN/BYG-1 (SSN21) TYPE MODIFICATION: UPGRADE MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

DESCRIPTION/JUSTIFICATION:

This program will provide submarine combat control systems with COTS-based upgrades to combat control and tactical control hardware and software. Milestone Decision Authority (MDA) Production Reviews are held on an annual basis.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Development Completed 9/04; DT/FOT&E 8/05-2/06

	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		TC		TOTAL				
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$			
<u>FINANCIAL PLAN (IN MILLIONS)</u>																							
<u>RDT&amp;E</u>																				0	0.0		
<u>PROCUREMENT</u>																				0	0.0		
INSTALLATION KITS																				0	0.0		
INSTALLATION KITS - UNIT COST																				0	0.0		
INSTALLATION KITS NONRECURRING																				0	0.0		
EQUIPMENT					1	3.2	2	15.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	18.3	
EQUIPMENT NONRECURRING																				0	0.0		
ENGINEERING CHANGE ORDERS																				0	0.0		
DATA																				0	0.0		
TRAINING EQUIPMENT																				0	0.0		
SUPPORT EQUIPMENT																				0	0.0		
OTHER																				0	0.0		
INTERIM CONTRACTOR SUPPORT																				0	0.0		
OTHER (DSA)							0	0.0	0	1.0	0	0.0	0	0.0	0	0.0		0.0	0	0.0	0	1.0	
OTHER (NON-FMP INSTALL)							0	0.9	3	1.5	0	0.0	0	0.0	0	0.0			3	0.0	3	2.4	
INSTALL COST							1	7.6	2	15.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	23.1	
OTHER INSTALL COST																				0	0.0	0	0.0
TOTAL PROCUREMENT					1	\$3.2	2	\$15.1	0	\$0.0	0	\$0.0	0	\$0.0	0	\$0.0	0	\$0.0	0	\$0.0	3	18.3	

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: AN/BYG-1 (SEAWOLF) SSN21 MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

INSTALLATION INFORMATION:  
 METHOD OF IMPLEMENTATION: \_\_\_\_\_  
 ADMINISTRATIVE LEADTIME: \_\_\_\_\_ PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2002: N/A FY 2003: N/A FY 2004: Dec-03 FY2005: Dec-04  
 DELIVERY DATE: FY 2002: N/A FY 2003: N/A FY 2004: Dec-04 FY2005: Dec-05

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS																			0	0.0
FY 2002 EQUIPMENT																			0	0.0
FY 2003 EQUIPMENT					0	0.0													0	0.0
FY 2004 EQUIPMENT							1	7.6											1	7.6
FY 2005 EQUIPMENT									2	15.5									2	15.5
FY 2006 EQUIPMENT											0	0.0							0	0.0
FY 2007 EQUIPMENT													0	0.0					0	0.0
FY 2008 EQUIPMENT															0	0.0			0	0.0
FY 2009 EQUIPMENT																	0	0.0	0	0.0
TO COMPLETE																			0	0.0

INSTALLATION SCHEDULE:

	FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				TC	TOTAL				
		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						
In	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Out	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**  
 MODELS OF SYSTEM AFFECTED: AN/BYG-1 (SSN774) TYPE MODIFICATION: UPGRADE MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

DESCRIPTION/JUSTIFICATION:  
 This program will provide upgrades for submarine combat systems with upgraded combat control and tactical control hardware and software. This program funds the procurement of the first two Virginia Class upgrade kits. The installation of these two upgrade kits and the procurement and installation of all subsequent Virginia Class AN/BYG-1 upgrade kits will be funded through the Virginia Class funding lines. Milestone Decision Authority (MDA) Production Reviews are held on an annual basis.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Development Completed 9/04; DT/FOT&E 8/05-2/06

	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		TC		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
<u>FINANCIAL PLAN (IN MILLIONS)</u>																					
<u>RDT&amp;E</u>																				0	0.0
<u>PROCUREMENT</u>																				0	0.0
INSTALLATION KITS																				0	0.0
INSTALLATION KITS - UNIT COST																				0	0.0
INSTALLATION KITS NONRECURRING																				0	0.0
EQUIPMENT							2	5.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	5.6	
EQUIPMENT NONRECURRING																				0	0.0
ENGINEERING CHANGE ORDERS																				0	0.0
DATA																				0	0.0
TRAINING EQUIPMENT																				0	0.0
SUPPORT EQUIPMENT																				0	0.0
OTHER																				0	0.0
INTERIM CONTRACTOR SUPPORT																				0	0.0
OTHER (DSA)							0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
OTHER (NON-FMP INSTALL)							1	0.8	0	0.0	0	0.0	0	0.0	0	0.0			1	0.8	
INSTALL COST							1	3.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	3.3	
OTHER INSTALL COST																				0	0.0
TOTAL PROCUREMENT							0	\$0.0	2	\$5.6	0	\$0.0	0	\$0.0	0	\$0.0	0	\$0.0	2	\$5.6	

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: AN/BYG-1 (VIRGINIA) (SSN774) MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

INSTALLATION INFORMATION:  
 METHOD OF IMPLEMENTATION: \_\_\_\_\_  
 ADMINISTRATIVE LEADTIME: \_\_\_\_\_ PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2002: N/A FY 2003: N/A FY 2004: Dec-03 FY2005: Dec-04  
 DELIVERY DATE: FY 2002: N/A FY 2003: N/A FY 2004: Dec-04 FY2005: Dec-05

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS																			0	0.0
FY 2002 EQUIPMENT																			0	0.0
FY 2003 EQUIPMENT					0	0.0													0	0.0
FY 2004 EQUIPMENT							1	3.3											1	3.3
FY 2005 EQUIPMENT									0	0.0									0	0.0
FY 2006 EQUIPMENT											0	0.0							0	0.0
FY 2007 EQUIPMENT													0	0.0					0	0.0
FY 2008 EQUIPMENT															0	0.0			0	0.0
FY 2009 EQUIPMENT																	0	0.0	0	0.0
TO COMPLETE																			0	0.0

INSTALLATION SCHEDULE:

	FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				TC	TOTAL
		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		
In	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Out	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

CLASSIFICATION: **UNCLASSIFIED**

P3A

**INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: Tech Insertion (T100/T102 Baseline) - SSN688 TYPE MODIFICATION: UPGRADE MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

**DESCRIPTION/JUSTIFICATION:**

This program will provide submarine combat control systems with COTS based upgrades to combat control and tactical control hardware and software. Milestone Decision Authority (MDA) Production Reviews are held on an annual basis.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Development Completed 9/04; DT/FOT&E 8/05-2/06

	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		TC		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
<u>FINANCIAL PLAN (IN MILLIONS)</u>																					
<u>RDT&amp;E</u>																				0	0.0
<u>PROCUREMENT</u>																				0	0.0
INSTALLATION KITS																				0	0.0
INSTALLATION KITS - UNIT COST																				0	0.0
INSTALLATION KITS NONRECURRING																				0	0.0
EQUIPMENT							5	17.3	5	17.3	4	13.8	1	3.7	0	0.0	0	0.0	15	52.1	
EQUIPMENT NONRECURRING																				0	0.0
ENGINEERING CHANGE ORDERS																				0	0.0
DATA																				0	0.0
TRAINING EQUIPMENT																				0	0.0
SUPPORT EQUIPMENT																				0	0.0
OTHER																				0	0.0
INTERIM CONTRACTOR SUPPORT																				0	0.0
OTHER (DSA)							0	0.0	0	3.1	0	3.3	0	2.6	0	0.5		0.0	0	9.6	
OTHER (NON-FMP INSTALL)							0	0.0	5	2.5	5	2.4	4	1.8	1	0.4			15	7.1	
INSTALL COST							0	0.0	5	16.4	5	18.4	4	14.3	1	3.1	0	0.0	15	52.2	
TOTAL PROCUREMENT							0	\$0.0	5	\$17.3	5	\$17.3	4	\$13.8	1	\$3.7	0	\$0.0	15	\$52.1	

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: Tech Insertion from (TI00/TI02 Baseline) - SSN688      MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: \_\_\_\_\_

ADMINISTRATIVE LEADTIME: \_\_\_\_\_

PRODUCTION LEADTIME: 12 Months

CONTRACT DATES:    FY 2002: N/A

FY 2003: N/A

FY 2004: N/A

FY2005: Dec-04

DELIVERY DATE:    FY 2002: N/A

FY 2003: N/A

FY 2004: N/A

FY2005: Dec-05

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS																			0	0.0
FY 2002 EQUIPMENT																			0	0.0
FY 2003 EQUIPMENT					0	0.0													0	0.0
FY 2004 EQUIPMENT							0	0.0											0	0.0
FY 2005 EQUIPMENT									5	16.4									5	16.4
FY 2006 EQUIPMENT											5	18.4							5	18.4
FY 2007 EQUIPMENT												4	14.3						4	14.3
FY 2008 EQUIPMENT														1	3.1				1	3.1
FY 2009 EQUIPMENT																	0	0.0	0	0.0
TO COMPLETE																			0	0.0

INSTALLATION SCHEDULE:

	FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				TC	TOTAL
		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		
In	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1	2	1	1	1	1	1	1	0	1	0	0	0	15
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1	1	2	1	1	1	1	1	0	0	1	0	0	15

P-3A

CLASSIFICATION: **UNCLASSIFIED**

P3A

**INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: Tech Insertion (TI04 Baseline) - SSN688 TYPE MODIFICATION: UPGRADE MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

**DESCRIPTION/JUSTIFICATION:**

This program will provide submarine combat control systems with COTS based upgrades to combat control and tactical control hardware and software. Milestone Decision Authority (MDA) Production Reviews are held on an annual basis.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Development Completed 3/06; DT/FOT&E 10/06-4/07

	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		TC		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
<u>FINANCIAL PLAN (IN MILLIONS)</u>																					
<u>RDT&amp;E</u>																				0	0.0
<u>PROCUREMENT</u>																				0	0.0
INSTALLATION KITS																				0	0.0
INSTALLATION KITS - UNIT COST																				0	0.0
INSTALLATION KITS NONRECURRING																				0	0.0
EQUIPMENT							0	0.0	0	0.0	1	0.8	9	6.2	8	3.7	0	0.0	18	10.7	
EQUIPMENT NONRECURRING																				0	0.0
ENGINEERING CHANGE ORDERS																				0	0.0
DATA																				0	0.0
TRAINING EQUIPMENT																				0	0.0
SUPPORT EQUIPMENT																				0	0.0
OTHER																				0	0.0
INTERIM CONTRACTOR SUPPORT																				0	0.0
OTHER (DSA)							0	0.0	0	0.0	0	0.0	0	0.0	0	5.0		0.0	0	5.0	
OTHER (NON-FMP INSTALL)							0	0.0	0	0.0	0	0.0	1	0.5	9	4.2			10	4.6	
INSTALL COST							0	0.0	0	0.0	0	0.0	1	1.4	9	11.8	8	9.4	18	22.5	
TOTAL PROCUREMENT							0	\$0.0	0	\$0.0	1	\$0.8	9	\$6.2	8	\$3.7	0	\$0.0	18	10.7	

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: Technology Insertion from (TI04 Baseline) - SSN688      MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

INSTALLATION INFORMATION:  
 METHOD OF IMPLEMENTATION: \_\_\_\_\_  
 ADMINISTRATIVE LEADTIME: \_\_\_\_\_ PRODUCTION LEADTIME: 12 Months

CONTRACT DATES:    FY 2002: N/A                      FY 2003: N/A                      FY 2004: N/A                      FY2005: N/A  
 DELIVERY DATE:    FY 2002: N/A                      FY 2003: N/A                      FY 2004: N/A                      FY2005: N/A

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS																			0	0.0
FY 2002 EQUIPMENT																			0	0.0
FY 2003 EQUIPMENT					0	0.0													0	0.0
FY 2004 EQUIPMENT							0	0.0											0	0.0
FY 2005 EQUIPMENT									0	0.0									0	0.0
FY 2006 EQUIPMENT											0	0.0							0	0.0
FY 2007 EQUIPMENT													1	1.4					1	1.4
FY 2008 EQUIPMENT															9	11.8			9	11.8
FY 2009 EQUIPMENT																	8	9.4	8	9.4
TO COMPLETE																			0	0.0

INSTALLATION SCHEDULE:

	FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				TC	TOTAL
		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		
In	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	2	3	2	8	18
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	3	3	8	18				

CLASSIFICATION: **UNCLASSIFIED**

P3A

**INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: Tech Insertion (T104 Baseline) - SSBN TYPE MODIFICATION: UPGRADE MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

**DESCRIPTION/JUSTIFICATION:**

This program will provide submarine combat control systems with COTS based upgrades to combat control and tactical control hardware and software. Milestone Decision Authority (MDA) Production Reviews are being held on an annual basis.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Development Completed 6/07; DT/FOT&E 1/08-10/08

	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		TC		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
<u>FINANCIAL PLAN (IN MILLIONS)</u>																					
<u>RDT&amp;E</u>																				0	0.0
<u>PROCUREMENT</u>																				0	0.0
INSTALLATION KITS																				0	0.0
INSTALLATION KITS - UNIT COST																				0	0.0
INSTALLATION KITS NONRECURRING																				0	0.0
EQUIPMENT							0	0.0	0	0.0	0	0.0	2	1.1	0	0.0	0	0.0		2	1.1
EQUIPMENT NONRECURRING																				0	0.0
ENGINEERING CHANGE ORDERS																				0	0.0
DATA																				0	0.0
TRAINING EQUIPMENT																				0	0.0
SUPPORT EQUIPMENT																				0	0.0
OTHER																				0	0.0
INTERIM CONTRACTOR SUPPORT																				0	0.0
OTHER (DSA)								0.0		0.0		0.0		0.0		1.3		0.0		0	1.3
OTHER (NON-FMP INSTALL)							0	0.0	0	0.0	0	0.0	0	0.0	2	0.9				2	0.9
INSTALL COST							0	0.0	0	0.0	0	0.0	0	0.0	2	2.9	0	0.0		2	2.9
TOTAL PROCUREMENT							0	\$0.0	0	\$0.0	0	\$0.0	2	\$1.1	0	\$0.0	0	\$0.0		2	1.1

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: Tech Insertion from (TI04 Baseline) - SSBN MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: \_\_\_\_\_

ADMINISTRATIVE LEADTIME: \_\_\_\_\_

PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2002: N/A

FY 2003: N/A

FY 2004: N/A

FY2005: N/A

DELIVERY DATE: FY 2002: N/A

FY 2003: N/A

FY 2004: N/A

FY2005: N/A

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS																			0	0.0
FY 2002 EQUIPMENT																			0	0.0
FY 2003 EQUIPMENT					0	0.0													0	0.0
FY 2004 EQUIPMENT							0	0.0											0	0.0
FY 2005 EQUIPMENT									0	0.0									0	0.0
FY 2006 EQUIPMENT											0	0.0							0	0.0
FY 2007 EQUIPMENT													0	0.0					0	0.0
FY 2008 EQUIPMENT															2	2.9			2	2.9
FY 2009 EQUIPMENT																	0	0.0	0	0.0
TO COMPLETE																			0	0.0

INSTALLATION SCHEDULE:

	FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				TC	TOTAL				
		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						
In	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2

P-3A

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: Tech Insertion (T104 Baseline) - SSGN TYPE MODIFICATION: UPGRADE MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

DESCRIPTION/JUSTIFICATION:

This program will provide submarine combat control systems with COTS based upgrades to combat control and tactical control hardware and software. Milestone Decision Authority (MDA) Production Reviews are held on an annual basis.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Development Completed 6/07; DT/FOT&E 1/08-10/08

	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		TC		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
<u>FINANCIAL PLAN (IN MILLIONS)</u>																					
<u>RDT&amp;E</u>																				0	0.0
<u>PROCUREMENT</u>																				0	0.0
INSTALLATION KITS																				0	0.0
INSTALLATION KITS - UNIT COST																				0	0.0
INSTALLATION KITS NONRECURRING																				0	0.0
EQUIPMENT							0	0.0	0	0.0	0	0.0	0	0.0	4	1.8	0	0.0		4	1.8
EQUIPMENT NONRECURRING																				0	0.0
ENGINEERING CHANGE ORDERS																				0	0.0
DATA																				0	0.0
TRAINING EQUIPMENT																				0	0.0
SUPPORT EQUIPMENT																				0	0.0
OTHER																				0	0.0
INTERIM CONTRACTOR SUPPORT																				0	0.0
OTHER (DSA)								0.0		0.0		0.0		0.0		0.0		0.0		0	0.0
OTHER (NON-FMP INSTALL)							0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	1.9		4	1.9
INSTALL COST							0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	4.7		4	4.7
TOTAL PROCUREMENT							0	\$0.0	0	\$0.0	0	\$0.0	0	\$0.0	4	\$1.8	0	\$0.0		4	1.8

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: Tech Insertion from (TI04 Baseline) - SSGN MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

INSTALLATION INFORMATION:  
 METHOD OF IMPLEMENTATION: \_\_\_\_\_  
 ADMINISTRATIVE LEADTIME: \_\_\_\_\_ PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2002: N/A FY 2003: N/A FY 2004: Dec-03 FY2005: Dec-04  
 DELIVERY DATE: FY 2002: N/A FY 2003: N/A FY 2004: Dec-04 FY2005: Dec-05

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS																			0	0.0
FY 2002 EQUIPMENT																			0	0.0
FY 2003 EQUIPMENT						0	0.0												0	0.0
FY 2004 EQUIPMENT								0	0.0										0	0.0
FY 2005 EQUIPMENT									0	0.0									0	0.0
FY 2006 EQUIPMENT										0	0.0								0	0.0
FY 2007 EQUIPMENT											0	0.0							0	0.0
FY 2008 EQUIPMENT												0	0.0						0	0.0
FY 2009 EQUIPMENT														0	0.0				4	4.7
TO COMPLETE																			0	0.0

INSTALLATION SCHEDULE:

	FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				TC	TOTAL
		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		
In	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4

CLASSIFICATION: **UNCLASSIFIED**

P3A **INDIVIDUAL MODIFICATION**

MODELS OF SYSTEM AFFECTED: Tech Insertion (TI04 Baseline) - SSN21 TYPE MODIFICATION: UPGRADE MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

**DESCRIPTION/JUSTIFICATION:**

This program will provide upgrades for submarine combat systems with upgraded combat control and tactical control hardware and software. This program funds the program and installation of the first Virginia Class upgrade as well as the procurement of the second upgrade kit. The installation of the second upgrade kit and the procurement and installation of all subsequent Virginia Class AN/BYG-1 upgrade kits will be funded through the Virginia Class funding lines. Milestone Decision Authority (MDA) Production Reviews are being held on an annual basis.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES: Development Completed 6/07; DT/FOT&E 4/08-10/08

	FY 2002 & Prior		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		TC		TOTAL		
	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	QTY	\$	
<u>FINANCIAL PLAN (IN MILLIONS)</u>																					
<u>RDT&amp;E</u>																				0	0.0
<u>PROCUREMENT</u>																				0	0.0
INSTALLATION KITS																				0	0.0
INSTALLATION KITS - UNIT COST																				0	0.0
INSTALLATION KITS NONRECURRING																				0	0.0
EQUIPMENT							0	0.0	0	0.0	0	0.0	1	0.6	0	0.0	0	0.0	1	0.6	
EQUIPMENT NONRECURRING																				0	0.0
ENGINEERING CHANGE ORDERS																				0	0.0
DATA																				0	0.0
TRAINING EQUIPMENT																				0	0.0
SUPPORT EQUIPMENT																				0	0.0
OTHER																				0	0.0
INTERIM CONTRACTOR SUPPORT																				0	0.0
OTHER (DSA)								0.0		0.0		0.0		0.0		0.6		0.0	0	0.6	
OTHER (NON-FMP INSTALL)							0	0.0	0	0.0	0	0.0	0	0.0	1	0.4			1	0.4	
INSTALL COST							0	0.0	0	0.0	0	0.0	0	0.0	1	1.6	0	0.0	1	1.6	
TOTAL PROCUREMENT							0	\$0.0	0	\$0.0	0	\$0.0	1	\$0.6	0	\$0.0	0	\$0.0	1	0.6	

CLASSIFICATION: **UNCLASSIFIED**

P3A (Continued) **INDIVIDUAL MODIFICATION (Continued)**

MODELS OF SYSTEMS AFFECTED: Tech Insertion from (TI04 Baseline) - SSN21 MODIFICATION TITLE: SSN COMBAT CONTROL SYSTEMS

INSTALLATION INFORMATION:

METHOD OF IMPLEMENTATION: \_\_\_\_\_

ADMINISTRATIVE LEADTIME: \_\_\_\_\_

PRODUCTION LEADTIME: 12 Months

CONTRACT DATES: FY 2002: N/A

FY 2003: N/A

FY 2004: N/A

FY2005: N/A

DELIVERY DATE: FY 2002: N/A

FY 2003: N/A

FY 2004: N/A

FY2005: N/A

(\$ in Millions)

Cost:	Prior Years		FY 2003		FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		To Complete		Total	
	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$	Qty	\$
PRIOR YEARS																			0	0.0
FY 2002 EQUIPMENT																			0	0.0
FY 2003 EQUIPMENT					0	0.0													0	0.0
FY 2004 EQUIPMENT							0	0.0											0	0.0
FY 2005 EQUIPMENT									0	0.0									0	0.0
FY 2006 EQUIPMENT											0	0.0							0	0.0
FY 2007 EQUIPMENT													0	0.0					0	0.0
FY 2008 EQUIPMENT															1	1.6			1	1.6
FY 2009 EQUIPMENT																	0	0.0	0	0.0
TO COMPLETE																			0	0.0

INSTALLATION SCHEDULE:

	FY 2002 & Prior	FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009				TC	TOTAL
		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		
In	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1

P-3A