PE NUMBER: 0208021F
PE TITLE: Information Warfare Support

Exhibit R-2, RDT&E Budget Item Justification							DATE **February 2006**		

BUDGET ACTIVITY 07 Operational System Development					PE NUMBER AND TITLE 0208021F Information Warfare Support				
Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	10.066	14.973	24.758	26.498	26.944	27.909	28.426	Continuing	TBD
0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt	10.066	7.142	16.542	18.089	18.428	18.960	19.312	Continuing	TBD
4871 Information Operations Technology	0.000	7.831	8.216	8.409	8.516	8.949	9.114	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This Program Element funds research and development of information operations (IO), electronic support, and intelligence capabilities required to execute counterspace and information operations in support of combatant commanders. As directed by SECAF and approved by OSD, programs that are supported include the Information Operations Planning Capability-Joint (IOPC-J), the Information Warfare Planning Capability (IWPC), the Counter Communications System (CCS) and the Rapid Attack Identification Detection and Reporting System (RAIDRS), and Counter Space Electronic Support.

IWPC is a full-spectrum, offensive and defensive, planning capability. IWPC is an Air and Space Operations Center (AOC) weapon system component which will enable operators to develop IO strategic and kinetic courses of action for the Joint Forces Air Component Commander (JFACC) and nominate IO "targets" for inclusion into the Master Air Attack Plan and the Joint Integrated Prioritized Target List (JIPTL).   In FY08, IWPC will spiral into IOPC-J to begin the development of a Joint IO planning system. AF specific AOC planning functions may continue under requirements being explored by the C2ISR center during JEFX-06 that will include kinetic and IO effects.

IOPC-J, is a follow on capability to IWPC that is scoped to develop IO courses of action for the Joint and National IO community. The AF is about to assume the joint requirements definitions and procurement for this capability following JROC approval.   The on-going development provided by the Air Force's IWPC tool provides commonality with a joint program's planning requirement.   Studies and software interface documentation has already been completed that will accommodate joint IO applications in subsequent software versions of IWPC. These IO planning tools are scheduled to become baseline capabilities in the Air Operations Center (AOC) Weapon System and National Intel fusion centers. As part of the AOC, IWPC will participate in each Joint Expeditionary Force Experiment (JEFX) as part of the overall IWPC software development and integration.

CCS provides ground-based deployable capabilities for denying satellite communications to our adversaries.

RAIDRS provides a family of ground-based systems that rapidly detect, locate, characterize, identify and report attacks against DoD-used space assets.

The Counterspace effort will provide Electronic Support (ES) for key find, fix, track, target, engage, and assess (F2T2EA) requirements supporting counterspace activities and also performs developmental intelligence collection to support new capability acquisition and development. This project funds transportable intelligence collection and analysis capabilities that are modular (plug-and-play), and can keep pace with technological advances and emerging threats. It also supports phased threat system analysis and studies (A&S), test support, lab equipment, and Material Acquisition and Exploitation (MAE) for system development and

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006

BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208021F Information Warfare Support

vulnerability/susceptibility assessments to support tactics, techniques and procedures (TTP) development, and future threat technology studies necessary for mission area success and achievement of space superiority.

This PE funds development of and continued research to identify existing military and commercial efforts which can satisfy unfulfilled operational requirements for an IO planning and integration tool.

This program is in Budget Activity 7, Operational System Development, because it studies, develops, and fields IO tools.

(U) **B. Program Change Summary ($ in Millions)**

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	7.147	15.204	15.191
(U)	Current PBR/President's Budget	10.066	14.973	24.758
(U)	Total Adjustments	2.919	-0.231	
(U)	Congressional Program Reductions	-0.023	-0.015	
	Congressional Rescissions	-0.069	-0.216	
	Congressional Increases			
	Reprogrammings	3.188		
	SBIR/STTR Transfer	-0.177		

(U) Significant Program Changes:

In FY05, the Air Force reprogrammed $3.2M into this Program Element for information operations capability demonstrations. An additional $2.0M was also reprogrammed in early FY06, but is not reflected in FY05 current PBR/President's Budget top line number shown above.

In FY-06, this program also received funding from OSD to begin the requirements definition and program acquisition of the Joint IO planning tools IOPC-J and the Joint Inter Agency Planning Capability (JIAPC). These joint capabilities are pre-planned program improvements to the baseline IWPC program to be activated following the Air Forces decision to become the executive agent for IO planning.

In FY07 the program received additional funding as a SECAF directed, effort to provide required electronic support and intelligence capabilities in support of counterspace operations.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006

BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208021F Information Warfare Support	PROJECT NUMBER AND TITLE 0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
0374	Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt	10.066	7.142	16.542	18.089	18.428	18.960	19.312	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Information Warfare Planning Capability (IWPC) is a full-spectrum, offensive and defensive, planning capability. IWPC is an Air and Space Operations Center (AOC) weapon system component which will enable operators to develop IO strategic and kinetic courses of action for the Joint Forces Air Component Commander (JFACC) and nominate IO "targets" for inclusion into the Master Air Attack Plan and the Joint Integrated Prioritized Target List (JIPTL).

This project funds the development of an evolving suite of interoperable IO planning and decision support capabilities comprised of, software, hardware, and communications products. This project will identify and implement an open, scalable system architecture that will accommodate the expansive growth in the IO mission area. The project builds functional software modules that are designed to be interoperable with baseline C2 systems such as the Theater Battle Management Control System (TBMCS) and other AOC tools. IWPC will participate in the Joint Expeditionary Force Experiment (JEFX) as part of the overall IWPC software development and integration effort into the AOC. An IWPC increment will be released approximately every 12 - 18 months. The IWPC Spiral Development Integrated Process Team (IWPC SD IPT), chaired by ACC will define requirements for each incremental release.   Integration efforts will capitalize on the synergy between evolving technologies and on-going system program modifications to maximize the return on investment.

The Counterspace effort will provide Electronic Support (ES) for key find, fix, track, target, engage, and assess (F2T2EA) requirements supporting counterspace activities and also performs developmental intelligence collection to support new capability acquisition and development. This project funds transportable intelligence collection and analysis capabilities that are modular (plug-and-play), and can keep pace with technological advances and emerging threats. It also supports phased threat system analysis and studies (A&S), test support, lab equipment, and Material Acquisition and Exploitation (MAE) for system development and vulnerability/susceptibility assessments to support tactics, techniques and procedures (TTP) development, and future threat technology studies necessary for mission area success and achievement of space superiority.

This project is in Budget Activity 7, Operational System Development, because it studies, develops, and demonstrates IO prototypes.   It identifies existing military and commercial research and development efforts which can satisfy unfulfilled operational requirements for an IO planning and integration tool.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) IWPC Software Development and Integration	6.252	2.291	0.178
(U) AOC Integration	1.464	2.275	4.198
(U) IWPC Software Testing and Evaluation	0.680	0.541	0.560
(U) JEFX System integration	1.670	2.035	2.080

Exhibit R-2a, RDT&E Project Justification	DATE February 2006

BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0208021F Information Warfare Support**	PROJECT NUMBER AND TITLE **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

(U)   <u>**B. Accomplishments/Planned Program ($ in Millions)**</u>

	FY 2005	FY 2006	FY 2007
(U) Counterspace Electronic Support/Intelligence	0.000	0.000	9.526
(U) Total Cost	10.066	7.142	16.542

(U)   <u>**C. Other Program Funding Summary ($ in Millions)**</u>

	FY 2005 <u>Actual</u>	FY 2006 <u>Estimate</u>	FY 2007 <u>Estimate</u>	FY 2008 <u>Estimate</u>	FY 2009 <u>Estimate</u>	FY 2010 <u>Estimate</u>	FY 2011 <u>Estimate</u>	Cost to <u>Complete</u>	Total Cost
(U) IWPC Operations & Maintenance, AF (3400) PE 35193F	1.061	1.210	1.154	1.176	1.198			Continuing	TBD
(U) Counterspace Electronic Support and Intelligence Operations and Maintenance (3400) PE 28021F	0.000	0.000	12.330	12.603	12.739	12.954	13.173	Continuing	TBD

(U)   <u>**D. Acquisition Strategy**</u>

These efforts will use an evolutionary acquisition strategy using contracts awarded after full and open competition.

Project 0374   R-1 Shopping List - Item No. 163-4 of 163-11   Exhibit R-2a (PE 0208021F)

Exhibit R-3, RDT&E Project Cost Analysis	DATE February 2006

BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0208021F Information Warfare Support**	PROJECT NUMBER AND TITLE **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
JEFX - Various	Various	Lackland AFB TX/Moutain View CA		1.990	Oct-04	0.000	Oct-05	0.000	Oct-06	Continuing	TBD	TBD
Information Technologies Support Program II (ITSP II)	Various	Lackland AFB TX		0.740	Oct-04	0.679	Oct-05	0.679	Oct-06	Continuing	TBD	TBD
IWPC	Various	General Dynamics, Lackland AFB TX/Moutain View CA		6.289	Oct-04	5.199	Oct-05	4.909	Oct-06	Continuing	TBD	TBD
IWPC	T&M	MITRE, Lackland AFB TX		0.380	Oct-04	0.395	Oct-05	0.415	Oct-06	Continuing	TBD	TBD
Counterspace Electronic Support Intel R&D	TBD	TBD	0.000	0.000	N/A	0.000	N/A	9.526	Nov-06	Continuing	TBD	TBD
System Program Office Costs	Various	Lackland AFB TX		0.137	Oct-04	0.328	Oct-05	0.453	Oct-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	9.536		6.601		15.982		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Test	T&M	46th Test Squadron, Eglin AFB FL		0.530	Nov-04	0.541	Nov-05	0.560	Nov-06	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.530		0.541		0.560		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	10.066		7.142		16.542		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile	DATE
	February 2006

BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0208021F Information Warfare Support**	PROJECT NUMBER AND TITLE **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

IWPC Program Schedule

	FY05	FY06	FY07	FY08	FY09	FY10	FY11

IWPC v3.0
Field/Sustain

RRR
IWPC v4.0
DT/OT Cert   Field   Sustain

Delivery to SPO
IWPC v4.2
Design   DT/OT   Field/Sustain

AOC Integration

JEFX-06   JEFX-08   JEFX-10

IOPC-J Increment 1

** *Schedule information regarding the Counter Electronics Support/Intel R&D program is protected under a Special Access Classification*

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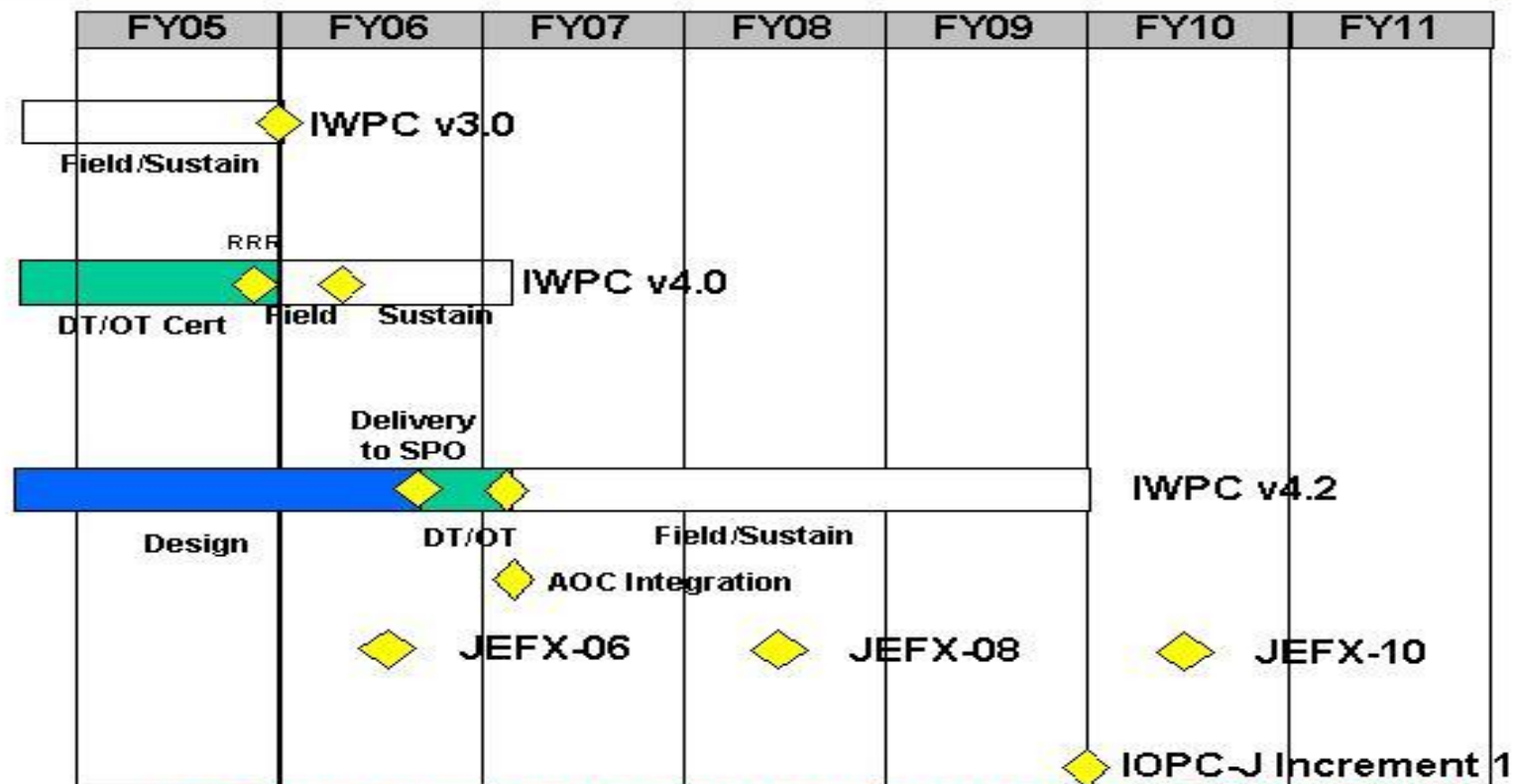| Exhibit R-4a, RDT&E Schedule Detail	DATE February 2006

BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208021F Information Warfare Support	PROJECT NUMBER AND TITLE 0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) JEFX 06 Main Exercise		3Q	
(U) IWPC v3.0 Field/Sustainment ends	4Q		
(U) IWPC v4.0 DT/OT ends	4Q		
(U) IWPC v4.2 Delivery to the SPO		3Q	
(U) IWPC v4.2 DT/OT begins		4Q	
(U) IWPC v4.2 AOC Integration			1Q

Exhibit R-2a, RDT&E Project Justification		DATE February 2006

BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0208021F Information Warfare Support**	PROJECT NUMBER AND TITLE **4871 Information Operations Technology**

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4871 Information Operations Technology	0.000	7.831	8.216	8.409	8.516	8.949	9.114	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Information Operations Planning Capability (IOPC-J) will be a suite of tools developed to a joint integrated baseline. It will leverage existing capabilities but will also require system and software development activities. The suite will be comprised of Joint IO planning capabilities and Service-unique applications based on shared access to Service/Agency/joint-provided data sources in support of the Joint Forces Commander's (JFC) overall campaign plan and across the spectrum of military and peacekeeping operations. Studies and software interface documentation has already been completed that will accommodate joint IO applications in subsequent version 4.2 of the AF Information Warfare Planning Capability (IWPC) IO planning tool. The IWPC v4.2 will serve as a joint users' initial capability, pathfinder for the first developmental version and as IOPC-J's baseline capabilities.

This project funds development of and continued research to identify existing military and commercial efforts which can satisfy unfulfilled operational requirements for an IO planning and integration tool.

This program is in Budget Activity 7, Operational System Development, because it studies, develops, and fields IO tools.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) IOPC-J Software Development and Integration	0.000	4.996	4.940
(U) (U) Site Integration	0.000	2.275	2.576
(U) (U) IOPC-J Software Testing and Evaluation	0.000	0.560	0.700
(U) Total Cost	0.000	7.831	8.216

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) IWPC Operations and maintenance, AF 3400 and PE 35193F	1.061	1.210	1.154	1.176	1.198	1.200	1.200	Continuing	TBD

(U) D. Acquisition Strategy

All major contracts will be awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis		DATE February 2006

BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208021F Information Warfare Support	PROJECT NUMBER AND TITLE 4871 Information Operations Technology

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
IOPC-J development	TBD	TBD				7.831	Apr-06	8.216	Apr-07	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		7.831		8.216		Continuing	TBD	TBD
Remarks: Specific WBS information will be available following JROC actions allowing the SPO to initiate programmatic detail												
(U) Support												
TBD										Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.000		0.000		Continuing	TBD	TBD
Remarks: Specific WBS information will be available following JROC actions allowing the SPO to initiate programmatic detail												
(U) Test & Evaluation												
TBD										Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		Continuing	TBD	TBD
Remarks: Specific WBS information will be available following JROC actions allowing the SPO to initiate programmatic detail												
(U) Management												
TBD										Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.000		0.000		Continuing	TBD	TBD
Remarks: Specific WBS information will be available following JROC actions allowing the SPO to initiate programmatic detail												
(U) Total Cost			0.000	0.000		7.831		8.216		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile	DATE February 2006

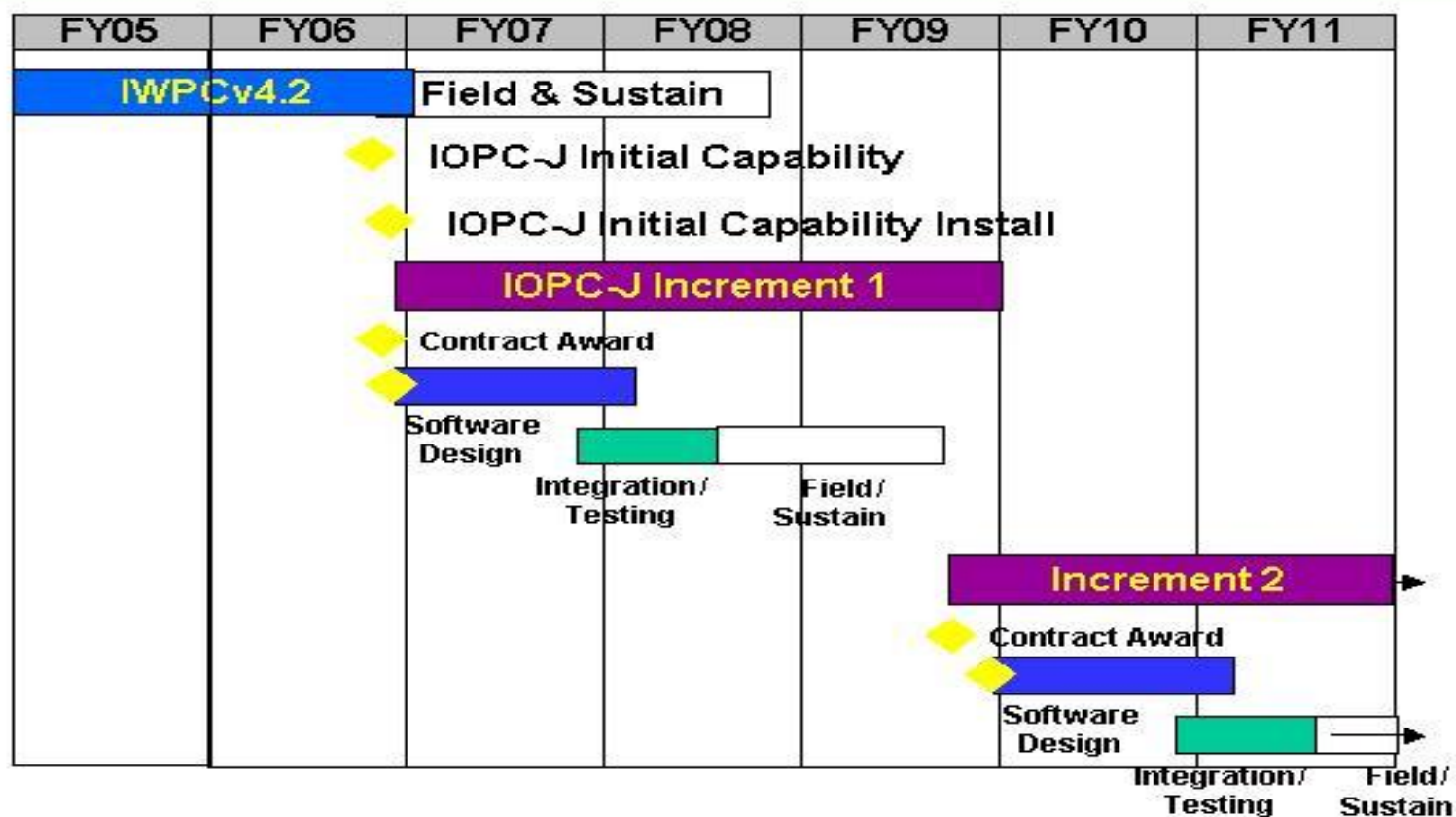| BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208021F Information Warfare Support	PROJECT NUMBER AND TITLE 4871 Information Operations Technology

IOPC/J Program Schedule

FY05	FY06	FY07	FY08	FY09	FY10	FY11

IWPCv4.2 — Field & Sustain

IOPC-J Initial Capability

IOPC-J Initial Capability Install

IOPC-J Increment 1

Contract Award

Software Design

Integration/Testing

Field/Sustain

Increment 2

Contract Award

Software Design

Integration/Testing

Field/Sustain

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Exhibit R-4a, RDT&E Schedule Detail	DATE February 2006

BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208021F Information Warfare Support	PROJECT NUMBER AND TITLE 4871 Information Operations Technology

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) IOPC-J Initial Capability (IWPC 4.2 + ION)		3-4Q	
(U) IOPC-J Initial Capability Install		4Q	
(U) (U) IOPC/J Increment 1 Contract Award		4Q	
(U) (U) IOPC/J Increment 1 Software Development		4Q	1-4Q
(U) (U) IOPC/J Increment 1 Software IntegrationTesting			4Q