

Exhibit R-2, RDT&E Budget Item Justification							DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07				R-1 ITEM NOMENCLATURE Joint Spectrum Center (JSC) / PE 0303153K				
COST (in millions)	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09
Joint Spectrum Center/JS1	8.903	18.525	18.850	18.989	14.293	14.456	14.764	15.081

A. Mission Description and Budget Item Justification:

The Joint Spectrum Center's (JSC) mission is to ensure the Department of Defense's effective use of the electromagnetic spectrum in support of national security and military objectives. The JSC serves as the DOD center of excellence for electromagnetic (EM) spectrum management matters in support of the Unified Commands, Joint Staff, Assistant Secretary of Defense for Command, Control, Communications and Intelligence (ASD (C³I)), Military Departments, and Defense Agencies. The JSC supports the Electronic Protect missions of Information Warfare (IW) as they relate to spectrum supremacy. It is responsible for developing and maintaining DOD standard information systems that support DoD spectrum related activities and processes. Specifically, the Center designs, develops, and maintains DOD automated spectrum management systems, evaluation tools, and databases employed by the Unified Commands, Military Departments, and Defense Agencies. The JSC databases are the prime sources of information for DOD use of the EM spectrum. The JSC provides technical assistance to the Office of Assistant Secretary of Defense (OASD) C³I, the Joint Staff, DOD activities and the Unified Commands in support of spectrum policy decisions and ensuring the development, acquisition, and operational deployment of systems that are compatible with other spectrum dependent systems operating within the same electromagnetic environment. The Center is the DOD focal point for technical spectrum related support, Electromagnetic Environmental Effects (E³), and EM interference resolution assistance to operational units including deployable support to CINC Joint Task Forces. The JSC mission is integral to other vital activities such as Information Operations (IO), Command and Control (C2) Protect and other defensive IW activities as directed by the Joint Staff. This program element is under Budget Activity 07 because it supports operational systems development.

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<u>Accomplishments/Planned Program:</u>								
Subtotal Cost			<u>FY 02</u>	<u>FY 03</u>	<u>FY 04</u>	<u>FY 05</u>		
			\$1.343	\$0.176	\$0.179	\$0.180		
<p>Spectrum technical and analytical support - The JSC performs technical analyses of World Radio Conference (WRC) and International Telecommunications Union (ITU) Radiocommunication Sector Proposals; analyses of technical issues related to reallocation of DoD spectrum to civil users; international coordination of space-related frequency matters for United States Military Communications Electronics Board (USMCEB); and testing and analysis of Global Positioning System (GPS) electromagnetic compatibility (EMC) issues and development of EMC guidance. Starting in FY03 there is a planned reduction in consultative support for policy issues relating to spectrum management. Funding for consultative efforts has been reduced to support primarily the Joint Staff. Other activities requiring consultative support will now budget for it directly.</p>								
Subtotal Cost			<u>FY 02</u>	<u>FY 03</u>	<u>FY 04</u>	<u>FY 05</u>		
			\$5.996	\$7.067	\$7.191	\$7.245		
<p>Spectrum management and information systems support - Includes development and maintenance of DoD systems such as the Frequency Resource Record System (FRRS), the Spectrum Certification System (SCS), and the Spectrum Requirements System (SRS) which provide critical frequency assignment and equipment data that is necessary in predicting and avoiding spectrum conflicts. This area also includes development and maintenance of the SPECTRUM XXI, the joint standard DoD spectrum management system. This system ensures DoD has adequate spectrum access to accomplish its missions by addressing the regulatory requirements of host nation spectrum administrations and by ensuring that a common operating picture of the spectrum is available to the warfighter. SPECTRUM XXI Version 3.0 was released in FY02, and Version 4.0 is planned for FY03 with periodic releases thereafter.</p>								
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Subtotal Cost			<u>FY 02</u> \$1.564	<u>FY 03</u> \$1.648	<u>FY 04</u> \$1.677	<u>FY 05</u> \$1.689		
DoD Joint E3 Program - Encompasses functions such as Hazards of Electromagnetic Radiation to Ordnance (HERO) risk assessments for the combatant commands (COCOMs) and the Joint Task Force (JTF); evaluation and assessment of acquisition documents for the Milestone Decision Authority (MDA); reviewing and assessing test concepts and plans for DOT&E; developing E3 training; and participating in standardization activities.								
Subtotal Cost			<u>FY 02</u> \$0.000	<u>FY 03</u> \$9.634	<u>FY 04</u> \$9.803	<u>FY 05</u> \$9.875		
Technical analysis tools - Beginning in FY03, Joint Spectrum Center mission has been expanded to include the production of necessary tools for conducting technical analyses of next-generation technologies in support of efficient DoD use of the spectrum. Currently planned for FY03 - FY05 is the development of models, algorithms, and measurement tools for use in analyzing ultra-wideband technologies, software defined radios, and high-power and directed-energy weapons. In software defined radios, the parameters (frequency range, modulation type, or maximum power) can be altered by making a software modification without changing hardware components that can affect the radio frequency emissions. As for directed energy weapons, these systems will be evaluated with respect to E3, and measurements conducted to assist in modifying Military Standards and to ensure compatible coexistence of these systems with legacy systems.								

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Exhibit R-3 Cost Analysis											DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT					PROJECT NAME AND NUMBER					
RDT&E, Defense-Wide/07		Joint Spectrum Center/PE 0303153K					Joint Spectrum Center/JS1					
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering/Technical Spt	C/CPAF	IIT Research Inst Annapolis, MD	13.408							0	13.408	13.408
GFE	C/CPAF	IIT Research Inst Annapolis, MD	.800							0	.800	.800
Engineering/Technical Support	MIPR	Various	1.730	.100	Various	.100	Various	.100	Various	0	2.030	2.030
Contractor Engineering/Technical Spt	C/CPFF	Various	1.619							0	1.619	1.619
Contractor Engineering/Technical Spt	C/CPAF	IIT Research Inst Annapolis, MD	14.676	17.555	Various	17.880	10/03	18.019	10/04	0	68.130	68.130
GFE	C/CPAF	IIT Research Inst Annapolis, MD	1.829	.870	10/02	.870	10/03	.870	10/04	0	4.439	4.439
Subtotal Test & Evaluation			34.062	18.525		18.850		18.989				
Total			34.062	18.525		18.850		18.989				
Remarks:												
Previous contract expired on 30 September 2000. Follow-on contract was competitive acquisition and began on 24 August 2000 (2 year basic with 3 option years).												

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Exhibit R-4 Schedule Profile														Date: February 2003																											
Appropriation/Budget Activity RDT&E, Defense-Wide/07														Program Element Number and Name Joint Spectrum Center/PE 0303153K														Project Number and Name Joint Spectrum Center/JS1													
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009												
	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	1	2	3	4									
Spectrum XXI Version 3.0 Released	△																																								
Contract Option Year 1 Award				△																																					
Spectrum XXI Version 4.0 Development and Testing		△	△	△																																					
Spectrum XXI Version 4.0 Release				△																																					
Contract Option Year 2 Award								△																																	
Contract Option Year 3 Award																△																									

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Exhibit R-4 Schedule Profile														Date: February 2003																											
Appropriation/Budget Activity RDT&E, Defense -Wide/07														Program Element Number and Name Joint Spectrum Center/PE 0303153K														Project Number and Name Joint Spectrum Center/JS1													
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009												
	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	1	2	3	4									
Recompete Current Engineering Support Services Contract (ESSC)												△																													
New ESSC Contract Award																△																									
Spectrum XXI Version 5.0 Development and Testing							△	△	△																																
Spectrum XXI Version 5.0 Release											△																														
Spectrum XXI Versions 6.0, 7.0, 8.0 Develop and Test										△	△	△				△	△	△	△				△	△	△																
Spectrum XXI Versions 6.0, 7.0, 8.0 Released												△							△							△															

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Exhibit R-4a Schedule Detail							DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT					PROJECT NAME AND NUMBER			
RDT&E, Defense-Wide/07	Joint Spectrum Center PE 0303153K					Joint Spectrum Center / JS1			
<u>Schedule Profile</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	
Spectrum XXI Version 3.0 Released	1Q								
Contract Option Year 1 Award	4Q								
Spectrum XXI Version 4.0 Development and Testing	2-4Q								
Spectrum XXI Version 4.0 Release		1Q							
Contract Option Year 2 Award		4Q							
Contract Option Year 3 Award			4Q						
Recompete Current Engineering Support Services Contract (ESSC)			4Q						

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Exhibit R-4a Schedule Detail							DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT				PROJECT NAME AND NUMBER			
RDT&E, Defense-Wide/07	Joint Spectrum Center PE 0303153K				Joint Spectrum Center / JS1			
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
New ESSC Contract Award				4Q				
SPECTRUM XXI Version 5.0 Development and Testing		4Q	1-2Q					
SPECTRUM XXI Version 5.0 Release			3Q					
SPECTRUM XXI Versions 6.0, 7.0, 8.0 Development and Testing			3-4Q	1Q 4Q	1-2Q	2-4Q		
SPECTRUM XXI Versions 6.0, 7.0, 8.0 Released				1Q	3Q		1Q	

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