ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

February 2003

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0305204A - Tactical Unmanned Aerial Vehicles

	COST (In Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	35213	67435	60493	66730	42262	38260	27496	28250	Continuing	Continuing
114	TACTICAL UNMANNED AERIAL VEHICLE (TUAV) (JMIP)	23105	44276	11741	13426	13451	7766	7666	7920	0	163056
11A	ADVANCED PAYLOAD DEVELOP & SPT (JMIP)	9820	20896	17614	11523	970	968	971	981	Continuing	Continuing
11B	DTSP DEVELOPMENT (JMIP)	0	0	5771	5898	19714	21409	10906	11302	0	75000
123	JOINT TECHNOLOGY CENTER SYSTEM INTEGRATION (JMIP)	2288	2263	2258	2254	2244	2238	2065	2162	0	20037
D09	EXTENDED RANGE UAV (JMIP)	0	0	23109	33629	5883	5879	5888	5885	0	80273

A. Mission Description and Budget Item Justification: The Tactical Unmanned Aerial Vehicle (TUAV) provides the Army with dedicated day/night reconnaissance, surveillance and target acquisition (RSTA) and intelligence. TUAV provides the tactical warfighting commander with critical battlefield information in the rapid cycle time required for success at the tactical level. The TUAV system consists of multiple air vehicles, each configured with an electro-optic (EO)/infrared (IR) sensor payload, ground control equipment (including communications equipment, launch and recovery equipment), remote video terminal, and High Mobility Multipurpose Wheeled Vehicles with trailer(s). Each system is supported by a Maintenance Section-Multifunctional (MSM) as well as a divisional Mobile Maintenance Facility (MMF) capable of supporting up to four TUAV systems. The Advanced Payload Development & Support efforts will establish the infrastructure to evaluate the maturity of the technology efforts and transition an employable TUAV capability. Development and fielding of the TRADOC System Manager (TSM) UAV's top 5 priorities include Synthetic Aperture Radio/Moving Target Indicator, Communication Relay Payload, Laser Designation, and Objective EO/IR. To support these efforts, a modeling and simulation capability/process is being developed to assess the operational benefit of these advanced technologies. Future initiatives will focus on the transition of technologies that directly support the Army's Objective Force, such as the development and fielding of countermine, counter camouflage, NBC and other specialty payloads as appropriate. DTSP is a UAV mounted SIGINT/EW sensor that detects enemy and gray radio frequency (RF) emitters. DTSP will provide the Land Commander with a deep looking SIGINT/EW system capable of detecting, identifying, locating and geo-locating RF emitters throughout the Area of Operation (AO). The DTSP electronic emitter information will be fused with other sensors. The Joint Technology Center/System Integration Lab (JTC/SIL) is a joint integration center that develops simulations of tactical UAVs and strategic reconnaissance and imagery. It also utilizes the Modernized Imagery Exploitation System (MIES), the Enhanced Tactical Radar Correlator (ETRAC), and a variety of C4I systems and interfaces, like the Tactical Control System. The Multiple Unified Simulation Environment (MUSE) system provides for the development of real-time, interoperable hardware and operator in-the-loop simulations of multiple intelligence systems, that may be integrated with larger simulations in support of Service exercises. MUSE development provides a realistic operational environment supporting a wide range of information efforts.

TUAV was provided a supplemental fund called Defense Emergency Response Fund (DERF), as a non-add, for $10.0M in FY 02 for TCDL Shadow integration.

This system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP). The TUAV is an Objective Force System.

B. Program Change Summary	FY 2002	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2003)	37880	46479	35260	51357
Current Budget (FY 2004/2005 PB)	35213	67435	60493	66730
Total Adjustments	-2667	20956	25233	15373
Congressional program reductions				
Congressional rescissions	-2668	-753		
Congressional increases		22100		
Reprogrammings	1	-391		
SBIR/STTR Transfer				
Adjustments to Budget Years			25233	15373

FY03 funding was increased for Hunter Ground Control Station Development and to obtain an I-GNAT system.

FY 04 & 05 funding was increased for Extended Range and Objective Capability for Shadow to meet payload and range requirements.

Schedule Profile Detail (R-4a Exhibit)

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0305204A - Tactical Unmanned Aerial Vehicles**	**0305204A**

Schedule Detail: Not applicable for this item.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0305204A - Tactical Unmanned Aerial Vehicles**	**114**

	COST (In Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
114	TACTICAL UNMANNED AERIAL VEHICLE (TUAV) (JMIP)	23105	44276	11741	13426	13451	7766	7666	7920	0	163056

A. Mission Description and Budget Item Justification: The Tactical Unmanned Aerial Vehicle (TUAV), provides the Army with dedicated day/night reconnaissance, surveillance and target acquisition (RSTA) and intelligence. TUAV provides the tactical warfighting commander with critical battlefield information in the rapid cycle time required for success at the tactical level. The TUAV system consists of multiple air vehicles, each configured with an electro-optic (EO)/infrared (IR) sensor payload, ground control equipment, (including communications equipment, and launch and recovery equipment), remote video terminal, and High Mobility Multipurpose Wheeled Vehicles with trailer(s). Each system is supported by a Maintenance Section-Multifunctional, as well as a divisional Mobile Maintenance Facility capable of supporting up to four TUAV systems. This system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP). The TUAV is an Objective Force system.

Accomplishments/Planned Program	FY 2002	FY 2003	FY 2004	FY 2005
Program Management Support	3632	3117	2285	2268
Objective Capability Development / C4I	1044	0	0	0
Development Testing / Risk Reduction Testing / ST&E	2850	1452	2300	2000
Digital Data Link development efforts (TCDL)	0	4700	0	0
Complete TUAV LRIP EMD Program	7841	0	0	0
Corrective action efforts and associated engineering support	7738	5090	0	0
MILES Development	0	0	1100	0
Joint Technical Architecture Army Compliance, DITSCAP, Autonomy, etc.	0	0	800	800
Future Combat Systems / Objective Force Requirements	0	0	800	800
C4I Maintenance / Improvements (ABCS 4.3, 6.2, ...)	0	0	1000	1000
UAV Joint Interoperability Standards	0	0	600	1100
TAFT System Support	0	0	900	800
BIT/BITE Improvements / System Enhancements	0	0	700	758
Total Ownership Cost - Reduction Initatives (System Design Improvements)	0	0	600	800
Survivability Enhancements	0	0	656	600
Engineering Support - Extended Range	0	2000	0	0

Accomplishments/Planned Program (continued)	FY 2002	FY 2003	FY 2004	FY 2005
Survey to evaluate non-developmental airframe candidates that meet extended range endurance requirements and downselect to two vendors.	0	1900	0	0
Hardware cost for Ground Control Stations (2) and Take-Off and Landing System (2) to be integrated into the air vehicles selected for the extended range requirement. Begin integration effort.	0	2500	0	0
Target Location Error/ATCR	0	2000	0	0
I-GNAT	0	9709	0	0
Ground Control Station and Trailers	0	11808	0	0
P3I / TCDL LUT	0	0	0	2500
Totals	23105	44276	11741	13426

B. Other Program Funding Summary	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
TUAV Procurement (BA0330)	56352	99036	73764	57704	8578	8573	10230	9382	Continuing	Continuing
Initial Spares - TUAV (BS9738)	0	14752	15069	9841	14780	14742	14712	9247	Continuing	Continuing
TUAV - Extended Range/ Multi-purpose (B00305)	0	0	0	0	65166	79869	134082	162769	Continuing	Continuing

Note: Other related Navy dollars fund the development of Tactical Control System software for integration into the TUAV under this project.

C. Acquisition Strategy: A System Capability Demonstration (SCD) was conducted with four contractors. The results from the SCD in conjunction with proposal evaluations resulted in the competitive down select of a Best Value TUAV system. A successful Milestone II ASARC was conducted on 21 December 1999, and a TUAV LRIP contract was awarded to the AAI Corporation on 27 December 1999. In order to accelerate fielding of the TUAV system, a second LRIP for four systems was awarded on 30 March 2001 following a successful OPTEMPO test. In order to maintain accelerated fielding and continue ramp up to full rate production, a third LRIP was awarded in March 2002. A successful LRIP program led to a MS III decision on 25 September 2002 and award of a full rate production contract on 27 December 2002. Continued development of the selected TUAV system will be accomplished through a series of upgrades to incorporate improvements such as extended range and endurance, increased payload weight space and power capability, TCS, Tactical Control Data Link and advanced sensor payloads as they mature and are operationally proven.

ARMY RDT&E COST ANALYSIS(R-3)

February 2003

BUDGET ACTIVITY
7 - Operational system development

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0305204A - Tactical Unmanned Aerial Vehicles

PROJECT
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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . TUAV LRIP Program	Comp / FPIF	AAI Corporation, MD	63941	0		0		0		0	63941	63676
b . Improved EO/IR Payload Modification/Integration Assessment for Demo on Hunter	Comp/Opt	AMCOM RDEC Redstone, AL	200	0		0		0		0	200	200
c . MILES Development	MIPR	Various	0	0		1100	1-3Q	0		0	1100	0
d . TUAV Source Selection/System Capabilities Demo	MIPR/PWD	Various	7200	0		0		0		0	7200	7200
e . Digital Data Link (TCDL)	CPFF	Various	342	4700	1-3Q	0		0		0	5042	0
f . Army Apache/UAV Interoperability Demonstration	MIPR	AMCOM RDEC Redstone, AL	350	0		0		0		0	350	350
g . Corrective Actions/Engineering Support	CPFF / PWD	Various	7714	5090	2Q	0		0		0	12804	7714
h . Hunter UAV non-recurring support	SS/FPIF	TRW, Sierra Vista, AZ	4140	0		0		0		0	4140	4140
i . Hardware cost for GCS's (2) and TALS (2) to be integrated into the selected AV's for the ER req.	CPFF	AAI Corporation, MD	0	2500	1-3Q	0		0		0	2500	0

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BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0305204A - Tactical Unmanned Aerial Vehicles

PROJECT
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I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
j . UAV Joint Interoperability Standards	MIPR / PWD	Various	0	0		600	1-3Q	1100	1-3Q	0	1700	0
k . TAFT System Support	MIPR / PWD	Various	0	0		900	1-3Q	800	1-3Q	0	1700	0
l . C4I Maintenance / Improvements	MIPR / PWD	Various	0	0		1000	1-3Q	1000	1-3Q	0	2000	0
m . Survey to evaluate non-development airframe canidates that meet extended range and endurance req.	CPFF	Various	0	1900	1-3Q	0		0		0	1900	0
n . Ground Control Station and Trailers	Unknown	AAI Corporation, MD & TRW, AZ	0	11808	2-3Q	0		0		0	11808	0
o . Joint Technical Architecture Army Compliance, DITSCAP, Autonomy, etc.	MIPR / PWD	Various	0	0		800	1-3Q	800	1-3Q	0	1600	0
p . I-GNAT	Unknown	General Atomics	0	9709	2-3Q	0		0		0	9709	0
q . Target Location Error / ATCR	CPFF	AAI Corporation, MD	0	2000	2Q	0		0		0	2000	0

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BUDGET ACTIVITY
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I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
r . Total Ownership Cost - Reduction Iniatives (System Design Improvements)	MIPR / PWD	Various	0	0		600	1-3Q	800	1-3Q	0	1400	0
s . Survivability Enhancements	MIPR / PWD	Various	0	0		656	1-3Q	600	1-3Q	0	1256	0
t . Government Furnished Equipment	MIPR	Various	2036	0		0		0		0	2036	2036
u . SIL/MUSE	MIPR	Sys Integration Lab, AMCOM Redstone, AL	1500	0		0		0		0	1500	1500
v . BIT/BITE Improvements	MIPR / PWD	Various	0	0		700	1-3Q	758	1-3Q	0	1458	0
w . Advanced Payload Development/Modification/ Integration	MIPR	PM UAV Payloads, Huntsville, AL	4118	0		0		0		0	4118	4118
x . Tactical Control System	PWD	AMCOM RDEC Redstone, AL	700	0		0		0		0	700	700
y . Objective Capability Assessment/Development / C4I	Comp/FPIF	AAI Corporation, MD	3044	0		0		0		Continue	Continue	Continue
z . TUAV Ground Control Station Architecture	MIPR	Sys Integration Lab, AMCOM Redstone, AL	7275	0		0		0		0	7275	7275

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BUDGET ACTIVITY
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I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
aa. Institutional Mission Simulator	MIPR	Sys Integration Lab, AMCOM Redstone, AL	2910	0		0		0		0	2910	2910
bb. Outrider Advance Concept Technology Demonstration Bridge Contract	SS/FPIF	Alliant Techsystems, Hopkins, MN	10600	0		0		0		0	10600	10600
cc. Future Combat Systems / Objective Force Requirements	MIPR / PWD	Various	0	0		800	1-3Q	800	1-3Q	0	1600	0
Subtotal:			116070	37707		7156		6658		Continue	Continue	Continue

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II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Contractor Engineering Support	CPFF	Various	5015	1543	2Q	784	1Q	800		Continue	8142	Continue
b . Government Engineering Support	PWD	AMCOM Redstone, AL	3950	808	1-2Q	850	1Q	850		Continue	6458	Continue
c . Contractor Engineering Support - Extended Range	CPFF	Various	0	2000	2Q	0		0		0	2000	0
Subtotal:			8965	4351		1634		1650		Continue	16600	Continue

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Risk Reduction Testing/ST&E	MIPR	Various	13531	0		0		0		0	13531	13531
b . Development Testing/ OPTEMPO Testing / Risk Reduction Testing / ST&E	MIPR	Various	2850	1452	2Q	2300	1Q	4500	1Q	Continue	11102	Continue
c . C4I Testing	MIPR	Various	1980	0		0		0		0	1980	1980

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III. Test and Evaluation (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
d . OPTEMPO Demo	MIPR	Various	1000	0		0		0		0	1000	1000
e . Data Acquisition System (DAS) Instrumentation Van	MIPR	Redstone Technical Test Center, AL	810	0		0		0		0	810	810
f . IOT&E Preparation and Support/Travel	MIPR	ATEC/PM/OGA Ft. Hood, TX	750	0		0		0		0	750	750
Subtotal:			20921	1452		2300		4500		Continue	29173	Continue

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Mgt Personnel	MIPR	PM UAV Redstone, AL	6030	766	1Q	651	1Q	618	1Q	Continue	8065	Continue
Subtotal:			6030	766		651		618		Continue	8065	Continue
Project Total Cost:			151986	44276		11741		13426		Continue	Continue	Continue

Schedule Profile Detail (R-4a Exhibit)

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0305204A - Tactical Unmanned Aerial Vehicles**	**114**

Schedule Detail	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
OPTEMPO Demonstration	1Q							
Special In-Process Review / LRIP II/ III Decision	1Q							
IOT&E Preparation and IOT&E	3Q							
Field IOT&E LRIP System to IOT&E User	4Q							
Milestone III / Production Decision	4Q							
Award Full Rate Production		1Q						
C4I Maintenance/ Improvements (ABCS 4.3, 6.2, ...)	1-4Q	1-4Q	1-4Q	1-4Q				

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0305204A - Tactical Unmanned Aerial Vehicles**	**11A**

	COST (In Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
11A	ADVANCED PAYLOAD DEVELOP & SPT (JMIP)	9820	20896	17614	11523	970	968	971	981	Continuing	Continuing

A. Mission Description and Budget Item Justification: Development of Payloads to support the Army's Extended Range/Multi-Purposes (ER/MP) Unmanned Air Vehicle (UAV) in accordance with the TRADOC UAV priorities. The Synthetic Aperture Radar/Moving Target Indicator (SAR/MTI) Payload will provide a wide area search capability with a built-in imaging sensor that provides essential all-weather capability. This will provide surveillance and increased situational awareness capability. SAR/MTI Payloads will be provided to the ER/MP UAV being procured by PM UAV Systems. Production deliveries will support ER/MP UAV deliveries and will support the Future Combat System and Objective Force. The Electro-Optic/Infrared (EO/IR) Payload will provide Reconnaissance Surveillance and Target Acquisition (RSTA) and intelligence at greater standoff ranges with increased targeting accuracies as well as providing the foundation for broader mission applications (e.g. Countermine, etc). The EO/IR sensor Payload is being provided for the ER/MP UAV. Future initiatives will continue to focus on the transition of technologies directly supporting emerging ER/MP requirements and the Army's Objective Force. These initiatives include the development and fielding of Laser Designator, 3-D mapping, Counter Camouflage (Hyperspectral) and other payloads when matured and assessed as operationally relevant for FCS/Objective Force. The Light Detection and Ranging (LIDAR) payload provides high-resolution elevation data for detailed mapping. Funding provides for up to four LIDAR payloads to be downsized for use on the Hunter UAV.

This system supports both the Interim and Objective Force transition paths of the Transformation Campaign Plan (TCP).

FY04/FY05 funds provide for the development of the SAR/MTI, EO/IR/LD and Miniaturized LIDAR payload development

Accomplishments/Planned Program	FY 2002	FY 2003	FY 2004	FY 2005
Program Management/Engineering Support.	2104	1867	2202	2100
Initiate SAR/MTI Development and Integration - includes Development Test (DT) start. SDD Test Articles will support DT and Operational Test (OT).	0	9000	9112	2680
Perform SAR/MTI military utility assessment.	2856	0	0	0
Conduct Advanced EO/IR Operational Capability Assessment in support of MS B decision.	2800	0	0	0
Initiate EO/IR Development and Integration for ER/MP UAV.	0	5879	3000	1600
Initiate miniaturized Light Detection and Ranging (LIDAR) sensor package development efforts.	0	3000	3000	2000

Accomplishments/Planned Program (continued)	FY 2002	FY 2003	FY 2004	FY 2005
Initiate Payload/Ground Station Integration, including plug-and-play architecture.	1700	950	0	0
Continue advanced payload modeling and simulation.	360	0	0	0
Procure payload test assets to support Development Test/Operational Test (DT/OT) for advanced payloads. (Includes one digital data link, one ground control station and aircraft/crew lease.)	0	0	0	1300
Conduct test support planning and execution.	0	200	300	1843
Totals	9820	20896	17614	11523

B. Other Program Funding Summary	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
Advanced TUAV Payloads (B00302)	0	0	0	0	11724	24429	18051	19618	0	73822
Tactical Unmanned Aerial Vehicles (375204/D09)	0	0	23109	33629	5883	5879	5888	5885	0	80273
Extended Range/Multi-Purpose (ER/MP): UAV (JMIP) (B00305)	0	0	0	0	65166	79869	134082	162769	0	441886

C. Acquisition Strategy: 1. The System Development and Demonstration (SDD) contract for the SAR/MTI Payload will be a competitive source selection for the design/modification and fabrication of SDD articles and will be awarded during 3Q FY-03. In FY-04 the program will complete design of repackaged SAR/MTI. In FY-05 system development testing will be conducted. In FY-06 Milestone C and Operational Testing will be completed. Upon successful completion, a contract option will be exercised. For production quantities, sole source procurements will be initiated.

2. EO/IR Payload will be pursued for the ER/MP in FY-03. Upon successful DT and MS C in FY06, a production option will be exercised for articles to support deliveries in FY-08. Follow on procurements will be awarded on a sole source basis. Upgrades/increased capabilities will be incorporated through a block upgrade approach (Laser designation, Countermine, etc) as the technology matures and is operationally proven and demonstrated.

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7 - Operational system development

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PROJECT
11A

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . SAR/MTI Program MUA		Various	2856	0		0		0		0	2856	2941
b . SAR/MTI System Development & Demonstration	COMP/CPFF	TBS	0	9000	3Q	9112	1Q	2680	1Q	0	20792	23294
c . Advanced EO/IR Operational Capabilities Assessment	MIPR	CECOM NVESD Ft. Belvoir, VA	2800	0		0		0		0	2800	2800
d . Payload plug-and-play	MIPR	NSWC, Crane, IN	300	0		0		0		0	300	300
e . Advanced Payload Modeling and Simulation	MIPR	WSMR/TBE	360	0		0		0		0	360	360
f . EO/IR Program for ER/MP	COMP/CPFF	TBS	0	5879	3Q	3000	1Q	1600	1Q	0	10479	13600
g . Miniaturized Light Detection and Ranging Sensor Package	MIPR	PO JPSD Fort Belvoir, VA	0	3000	2Q	3000	1Q	2000	1Q	0	8000	0
h . Advanced Payload Development (Laser, Hyperspectral, Countermine)	TBS	TBS	0	0		0		0		2978	2978	2978
i . TUAV GCS integration	MIPR	PM UAVS, Huntsville, AL	1400	950	2Q	0		0		0	2350	2350

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PE NUMBER AND TITLE
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PROJECT
11A

I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			7716	18829		15112		6280		2978	50915	48623

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Engineering Support	CPFF	Various	1857	1617	1Q	2002	1Q	1900	1Q	Continue	7376	Continue
Subtotal:			1857	1617		2002		1900		Continue	7376	Continue

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Test Assets/Data Link/Ground Display/Lease/Engineering Support	MIPR	PM UAV Systems, Huntsville, AL	0	0		0		1300	1Q	0	1300	1300
b . Payload DT Support	MIPR	DTC, Aberdeen Proving Grounds, MD	0	100	1-4Q	150	1-4Q	0	1-4Q	0	250	550

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0305204A - Tactical Unmanned Aerial Vehicles

PROJECT
11A

III. Test and Evaluation (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
c . Payload OT Support	MIPR	IEWTD, Ft. Huachuca, AZ	0	100	1-4Q	150	1-4Q	1843	1-4Q	990	3083	1540
Subtotal:			0	200		300		3143		990	4633	3390

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Mgt Personnel	In House	PM RUS, Ft. Monmouth, NJ	247	250	1-4Q	200	1-4Q	200	1-4Q	Continue	Continue	Continue
Subtotal:			247	250		200		200		Continue	Continue	Continue
Project Total Cost:			9820	20896		17614		11523		Continue	Continue	Continue

Schedule Profile Detail (R-4a Exhibit)

February 2003

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0305204A - Tactical Unmanned Aerial Vehicles

PROJECT
11A

Schedule Detail	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Perform SAR/MTI Military Utility Assessment		1-2Q						
Develop Miniaturized Light Detection and Ranging (LIDAR) Sensor Package		1-4Q	1-4Q	1-4Q				
FCS Milestone B for SAR/MTI and EO/IR		3Q						
Award SAR/MTI SDD Contract		3Q						
Continue SAR/MTI Development and DT preparation.			1-4Q					
DT Test Article Deliveries and Testing				1-2Q				
OT for SAR/MTI					2Q			
MS C for SAR/MTI					3Q			
Award FRP Option for SAR/MTI					3Q			
SAR/MTI FRP Deliveries							1Q	
Conduct Operational Capabilities Assessment for Advanced EO/IR	4Q	1Q						
MS B for EO/IR		3Q						
Contract Award for EO/IR SDD		3Q						
Complete DT for EO/IR				1Q				
OT for EO/IR					2Q			
MS C for EO/IR					4Q			
EO/IR FRP Option Award						1Q		
EO/IR FRP Deliveries							1Q	
Initiate Miniaturized LIDAR		2Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0305204A - Tactical Unmanned Aerial Vehicles**	**11B**

COST (In Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
11B DTSP DEVELOPMENT (JMIP)	0	0	5771	5898	19714	21409	10906	11302	0	75000

A. Mission Description and Budget Item Justification: DTSP has been renamed Tactical SIGINT Payload (TSP). TSP is a UAV mounted SIGINT/Electronic Warfare (EW) sensor that detects enemy and gray radio frequency (RF) emitters. TSP will provide the Unit of Action/Unit of Employment (UA/UE) Land Commander with a overwatch and a penetrating SIGINT/EW system capable of detecting, identifying, locating, and providing geo-location targeting information on RF emitters throughout the Area of Operations (AO). The UA/UE commander will deploy TSP to provide sensor coverage where Future Combat System (FCS) vehicles cannot perform the SIGINT/EW mission due to radio line of sight blockage. TSP is initially developing sensors for UA applications to detect low-power radio emitters and provide directed Electronic Attack (EA). The SIGINT [Communications Intelligence (COMINT) and Electronic Intelligence (ELINT)] and EA payloads are scalable and designed to provide maximum flexibility for the UA/UE mission profile and the UAV selected to transport the sensors. TSP will provide this information to the Distributed Common Ground System-Army (DCGS-A) where the data will be analyzed and translated into near real time (NRT) actionable intelligence that can immediately be used in the commanders' decision cycle. The TSP electronic emitter information will be correlated with data from other systems, e.g. Prophet and Aerial Common Sensor (ACS) to provide precise targeting information for immediate engagement. The TSP sensors are critical to providing full coverage Intelligence, Surveillance and Reconnaissance (ISR) information for Objective Force capabilities Future Combat Systems and contributing to the Joint Intelligence, Surveillance and Reconnaissance (ISR) net.

This project supports the Objective transition path of the Transformation Campaign Plan (TCP).

FY04/FY05 funding supports the System Development and Demostration (SDD) of the TSP program using the SIGINT technologies that satisfy the UA/UE requirement.

Accomplishments/Planned Program	FY 2002	FY 2003	FY 2004	FY 2005
Initiate System Demonstration and Development (SDD)Source Selection Evaluation Process (SSEB)/ Conduct SSEB for SDD	0	0	1771	0
Award SDD Contract	0	0	3250	5400
Demonstrate potential Unit of Action/Unit of Employment (UA/UE) payloads	0	0	750	498
Totals	0	0	5771	5898

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0305204A - Tactical Unmanned Aerial Vehicles**	**11B**

B. Other Program Funding Summary	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
RDTE PE 0603774 131 Night Vision Systems Advanced Development - (TSP only)	10662	11170	5283	5227	5368	5352	3532	2681	0	49275
OPA SSN BZ9761 Tactical SIGINT Payload: TSP	0	0	0	0	0	0	16247	28027	Continuing	Continuing

FY04 and subsequent funding for the TSP program was established under 0305204 11B. The program was previously funded as part of 63774 131.

C. Acquisition Strategy: TSP CAD activities are designed to demonstrate SIGINT payloads/technologies and evaluate their ability to meet operational requirements. A competitive solicitation was issued and awards made to three contractors in FY01 for the CAD Phase. The contracts contain options for flight demonstrations that can be exercised in FY03 following successful demonstrations. The SDD phase beginning in FY04 will be a full and open competitive solicitation.

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BUDGET ACTIVITY
7 - Operational system development

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0305204A - Tactical Unmanned Aerial Vehicles

PROJECT
11B

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . UA/UE Payloads Demonstration	CPFF	TBS	0	0		400	1Q	400	1Q	Continue	Continue	0
b . SDD Contract	CPIF	TBS	0	0		2312	3Q	2798	1Q	Continue	Continue	0
Subtotal:			0	0		2712		3198		Continue	Continue	0

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Engineering Support	FFP	MITRE, McLean, VA	0	0		300	1Q	300	1Q	Continue	Continue	0
b . Matrix Support	MIPR	CECOM, Fort Monmouth NJ	0	0		809	1Q	900	1Q	Continue	Continue	0
c . Engineering Support	FFP	CACI, Eatontown, NJ	0	0		1050	1Q	600	1Q	Continue	Continue	0
Subtotal:			0	0		2159		1800		Continue	Continue	0

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BUDGET ACTIVITY
7 - Operational system development

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III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Ongoing UA/UE Payload Demo Assessment	MIPR	AEC/EPG, Ft Huachuca, AZ	0	0		450	2Q	450	1Q	0	900	0
Subtotal:			0	0		450		450		0	900	0

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program Management	In House support	PM, Signals Warfare, Fort Monmouth, NJ	0	0		450	1-4Q	450	1-4Q	Continue	Continue	0
Subtotal:			0	0		450		450		Continue	Continue	0
Project Total Cost:			0	0		5771		5898		Continue	Continue	0

Schedule Profile Detail (R-4a Exhibit)

February 2003

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0305204A - Tactical Unmanned Aerial Vehicles

PROJECT
11B

Schedule Detail	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
FCS Milestone B for Block I		3Q						
CAD Phase II Flight Demos		1-3Q						
Conduct IPR for TSP/FCS Development Alignment		2Q						
IPR for Flight Demo Results			1Q					
SDD Source Selection			1-3Q					
SDD Contract Award			3Q					
SDD System to Spt FCS BL I EUT #1 & #2				1-4Q	1-4Q			
FCS Milestone B for Block II					2Q			
DT/IOTE for TSP						1-3Q		
MS C TSP Decision Review						4Q		
TSP Production Contract							1Q	
Decision Review for CAD ELINT/EA							1Q	
ELINT/EA CAD							2-4Q	1-3Q
ELINT/EA Milestone B								4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0305204A - Tactical Unmanned Aerial Vehicles**	**123**

COST (In Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
123	JOINT TECHNOLOGY CENTER SYSTEM INTEGRATION (JMIP)	2288	2263	2258	2254	2244	2238	2065	2162	0	20037

A. Mission Description and Budget Item Justification: The Joint Technology Center/System Integration Laboratory (JTC/SIL) is a joint facility that develops, integrates and supports the enhancement of its Multiple Unified Simulation Environment (MUSE) capability for Army systems and operational concepts. The JTC/SIL conducts prototype hardware and software development (i.e. TUAV Tactical Unmanned Control System (TUCS), TUAV Institutional Mission Simulation (IMS) Trainer, TUAV C4I module), modeling and simulation support. The MUSE develops real-time, operator in-the-loop simulations that are capable of tactical Hardware-In-the-Loop (HWIL) interoperability for multiple intelligence systems, that may be integrated with larger simulations in support of Service training and exercises. MUSE provides a realistic operational environment, supporting a wide range of C4I applications. This project funds the management of the JTC/SIL and MUSE enhancements.

This system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2002	FY 2003	FY 2004	FY 2005
Develop and integrate Tactical Common Data Link into MUSE in support TUAV ORD	150	0	0	0
Incorporate new technology sensors and platforms into the MUSE	0	200	200	150
Develop and upgrade Terrain and Target databases	240	290	234	230
Initial effects-based fixed target behavior model	0	0	190	0
Initial VTUAV/UCARS Vehicle models	0	0	165	0
Initial ATARS and TARPS simulation model	0	0	235	0
Link Fixed Target Database with DIA MIDB	0	0	207	0
Integrate Weapon Employment Capabilities into MUSE	0	125	0	0
MUSE Remote Support Capability	175	0	0	0
Upgrade HLA Certification and DITSCAP	120	120	120	175
Evaluate and integrate New Visualization Technologies into MUSE	0	105	0	0
Technical support of MUSE integration with IEWTPT	50	50	0	0
Initiate MUSE TUAV Flight Performance Model Verification and Validation Process	190	120	0	0
Provide MUSE Configuration Management and Help Desk Services	300	240	240	240

Accomplishments/Planned Program (continued)	FY 2002	FY 2003	FY 2004	FY 2005
MUSE Equipment	785	720	300	300
JTC/SIL Management	278	293	367	329
Initial development of Multi-Spectral and Hyper-Spectral simulations	0	0	0	245
Prototype FIA interfaces and capabilities	0	0	0	120
Imagery generation upgrade conversion	0	0	0	160
Enhance IR abd SAR model sets	0	0	0	90
Update interfaces to DoD models	0	0	0	215
Totals	2288	2263	2258	2254

B. Other Program Funding Summary	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
PE 0305204N Navy	1700	1700	1700	1700	1700	1700	0	0	0	10200
PE 0305205F Air Force	2000	2000	2000	2000	2000	2000	0	0	0	12000

C. Acquisition Strategy: Continued MUSE development will be accomplished through a combination of Government in-house functional directorate support and contractor support using a variety of existing RDEC contract vehicles and the OMNIBUS 2000 contract.

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7 - Operational system development

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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Initiate MTI/FTI Sensor Sim Develop/Upgrade SAR	SS/CPFF	AMC/AMCOM/AMRDEC/SED/Redstone Arsenal, AL	143	0		0		0		0	143	143
b . MUSE Remote Support Capability	SS/CPFF	GDIS/Arlington, VA	415	0		0		0		0	415	415
c . Develop MUSE Fixed Target Damage Site Visualization	SS/CPFF	GDIS/Arlington, VA	235	0		0		0		0	235	235
d . Upgrade HLA Certification and DITSCAP	SS/CPFF	AMC/AMCOM/AMRDEC/SED/Redstone Arsenal, AL	239	120	1Q	120	1Q	175	1Q	318	972	677
e . MUSE Equipment	C/FFP	Various	1059	570	1Q	100	1Q	100	1Q	1611	3440	3278
f . MUSE Hardware Consolidation into Single PC-Based Platform	SS/CPFF	GDIS/Arlington, VA	237	0		0		0		0	237	237
g . Develop & Integrate TCDL into MUSE in Support of TUAV ORD	SS/CPFF	GDIS/Arlington, VA	150	0		0		0		0	150	150
h . Develop & Upgrade Terrain & Target Databases	SS/CPFF	Quality Research Institute/HSV, AL	323	290	1Q	196	1Q	230	1Q	768	1807	1381

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PROJECT
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I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
i . Incorporate New Technology Sensors & Platforms into the MUSE	SS/CPFF	GDIS/Arlington, VA	0	100	1Q	100	1Q	75	1Q	1324	1599	1424
j . Integrate Weapon Employment Capabilities into MUSE	C/FFP	TBD	0	125	1Q	0		0		596	721	721
k . Evaluate and Integrate New Visualization Technologies into MUSE	C/FFP	TBD	0	105	1Q	0		0		530	635	635
l . Link Fixed Target Database with DIA MIDB	SS/CPFF	TBD	0	0		245	1Q	0		0	245	0
m . Initial VTUAV/UCARS Vehicle models	SS/CPFF	TBD	0	0		165	1Q	0		0	165	0
n . Initial ATARS & TARPS Simulation model	SS/CPFF	SAIC/HSV, AL.	0	0		235	1Q	0		0	235	0
o . Initial effects-based fixed target behavior model	SS/CPFF	SAIC/HSV, AL.	0	0		190	1Q	0		0	190	0
p . Initial development of Multi-spectral & Hyper-spectral simulation	SS/CPFF	GDIS/Arlington, VA	0	0		0		206	1Q	0	206	0

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BUDGET ACTIVITY
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PROJECT
123

I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
q . Prototype FIA interfaces & capabilities			0	0		0		120	1Q	0	120	0
r . Imagery generation upgrade conversion	SS/CPFF	GDIS/Arlington, VA	0	0		0		160	1Q	0	160	0
s . Enhance IR & SAR model sets	SS/CPFF	GDIS/Arlington, VA	0	0		0		90	1Q	0	90	0
Subtotal:			2801	1310		1351		1156		5147	11765	9296

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Provide Direct JSTARS CGS Interface	SS/CPFF	GDIS/Arlington, VA	75	0		0		0		0	75	75
b . Technical Support of MUSE Integration with IEWTPT	C/CPFF	GDIS/Arlington, VA	125	50	1Q	0		0		132	307	307
c . Initiate MUSE TUAV Flight Performance Model Verification & Validation Process	C/CPFF	Dynetics/Huntsville, AL	345	120	1Q	0		0		530	995	995

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II. Support Cost (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
d . Provide MUSE Configuration Mgt and Help Desk Services	C/CPFF	GDIS, Arlington, VA	460	240	1Q	240	1Q	240	1Q	795	1975	1495
e . JTC/SIL Management	C/CPFF	TBD	60	60	1-4Q	80	1-4Q	80	1-4Q	238	518	358
f . MUSE Equipment	C/CPFF	AMC/AMCOM/AMRDEC/SED/Redstone Arsenal, AL	268	150	1Q	200	1Q	200	1Q	424	1242	842
g . Incorporate New Technology Sensors & Platforms into the MUSE	C/CPFF	SAIC/Huntsville, AL	0	100	1Q	100	1Q	75	1Q	530	805	630
h . Update interfaces to DoD models	C/CPFF	GDIS/Arlington, VA	0	0		0		215	1Q	0	215	0
Subtotal:			1333	720		620		810		2649	6132	4702

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III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Product Evaluation	TBD	TBD	0	0		0		0		132	132	132
Subtotal:			0	0		0		0		132	132	132

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . JTC/SIL Management Personnel	In House	JTC/SIL/Redstone Arsenal, AL	419	233	1-4Q	287	1-4Q	288	1-4Q	1324	2551	1999
Subtotal:			419	233		287		288		1324	2551	1999

Project Total Cost:			4553	2263		2258		2254		9252	20580	16129

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2003

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0305204A - Tactical Unmanned Aerial Vehicles**	**D09**

COST (In Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
D09	EXTENDED RANGE UAV (JMIP)	0	0	23109	33629	5883	5879	5888	5885	0	80273

A. Mission Description and Budget Item Justification: The U.S. Army has a requirement for UAV systems that will provide near real time reconnaissance, surveillance, and target acquisition information to Army maneuver commanders. JROCM 030-99 encourages a path that obtains the 200 kilometer range objective and permits a single UAV system to meet Army requirements. Realizing that Shadow 200 air vehicle does not meet all payload requirements and 200km range, TRADOC has initiated Extended Range/Multipurpose UAV requirement definition. Utilizing Shadow ground equipment with an extended range air vehicle will permit the Army to meet ORD requirements with a single UAV system. This system supports the Interim and Objective transition paths of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2002	FY 2003	FY 2004	FY 2005
Hardware to be provided to selected Vendors for integration (GCS's, TALS, and HWIL)	0	0	3400	0
Software mod to accept Vendor data link ($300K/Vendor)	0	0	600	0
Program Management	0	0	2350	3421
Prime System Integrator	0	0	7150	8990
ER/MP AV Vendor cost ($4M/Vender)	0	0	8000	0
Risk Reduction	0	0	1609	2418
Vender Flyoff Fee ($500K/Vender)	0	0	0	1000
AV Vender Integration Cost(TALS, GCS, etc.)	0	0	0	9000
Trailer Development	0	0	0	3000
Development Test and Range Cost	0	0	0	3600
Range cost and instrumentation for System Capability Demonstration (SCD)	0	0	0	2200
Totals	0	0	23109	33629

B. Other Program Funding Summary: Not applicable for this item.

C. Acquisition Strategy: Development/Integration of an extended range air vehicle would include a two phased effort. Phase I involves a competition and downselect to qualified airframe vendors. Phase II involves integration and test of the air vehicles to existing Shadow ground control equipment, followed by a final downselect to a single vendor. Initial activities would include Requirements Analysis and preparation of a Request for Proposal. In addition, TUAV equipment required for phase II would be ordered to be available in support of Phase II efforts.

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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Hardware to be provided to select Vendors for integration (GCSs, TALS, and HWIL)	TBD		0	0		3400	1-3Q	0		0	3400	0
b . Software MOD to accept Vender Data Link	TBD		0	0		600	1-3Q	0		0	600	0
c . Prime System Integrator	TBD		0	0		4150	1-3Q	6990	1-3Q	0	11140	0
d . ER/MP AV Vender cost ($4M/Vender)	TBD		0	0		8000	1-3Q	0		0	8000	0
e . Vender Flyoff Fee ($500K/Vender)	TBD		0	0		0		1000	1-3Q	0	1000	0
f . AV Vender Integration cost (TALS,GCS)	TBD		0	0		0		9000	1-3Q	0	9000	0
g . Trailer Development	TBD		0	0		0		3000	1-3Q	0	3000	0
Subtotal:			0	0		16150		19990		0	36140	0

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II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Prime System Integrator	TBD		0	0		3000	1-3Q	2000	1-3Q	0	5000	0
Subtotal:			0	0		3000		2000		0	5000	0

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Risk Reduction	TBD		0	0		1609	1-3Q	2418	1-3Q	0	4027	0
b . Development Test and Range Cost	TBD		0	0		0		3600	1-3Q	0	3600	0
c . Range cost and instrumentation for System Capability Demonstration	TBD		0	0		0		2200	1-3Q	0	2200	0
Subtotal:			0	0		1609		8218		0	9827	0

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IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Program management	TBD		0	0		2350	1-3Q	3421	1-3Q	0	5771	0
Subtotal:			0	0		2350		3421		0	5771	0
Project Total Cost:			0	0		23109		33629		0	56738	0

Schedule Profile Detail (R-4a Exhibit)

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PROJECT
D09

Schedule Detail	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Paper Downselect to two Venders			1-4Q					
Downselect to one Vender				1-4Q				
Final Integration				1-4Q				
P3I					1-4Q	1-4Q	1-4Q	1-4Q