

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2004

BUDGET ACTIVITY

4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE

0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev

COST (In Thousands)	FY 2003 Actual	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	2324	10147	6249	6199	8140	15060	8817	Continuing	Continuing
E78 TARGET DEFEATING SYS	2324	5771	0	0	0	0	0	0	8095
E79 SMOKE/OBSCURANT SYSTEM	0	4376	6249	6199	8140	15060	8817	Continuing	Continuing

A. Mission Description and Budget Item Justification: This program element supports the Component Advanced Development and System Integration developmental phases of high performance obscuration materials and systems to increase the survivability of the combined armed forces and to complement weapon systems. U.S. Forces must be able to defeat target acquisition, weapon guidance systems, and surveillance sensors across the electro-optical spectrum. These programs develop systems to provide large area and projected obscuration across the spectrum from visual through infrared and millimeter wavelength radar. The technologies supported by this program enhance obscuration systems as combat multipliers.

Systems developed support the Current-to-Future transition path of the Transformation Campaign Plan (TCP).

B. Program Change Summary	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2004)	2323	10262	12972
Current Budget (FY 2005 PB)	2324	10147	6249
Total Adjustments	1	-115	-6723
Congressional program reductions			
Congressional rescissions			
Congressional increases			
Reprogrammings	-42	-115	
SBIR/STTR Transfer	-67		
Adjustments to Budget Years	110		-6723

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FY2005 - Funds realigned (\$-6723K) to higher Army requirements.		

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

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0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev

PROJECT

E78

COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
E78 TARGET DEFEATING SYS	2324	5771	0	0	0	0	0	0	8095

A. Mission Description and Budget Item Justification: These program elements support the Component Advanced Development and System Integration developmental phases of high performance obscurant materials and systems to increase the survivability of the combined armed forces and to complement weapons systems.

U.S. Forces must be able to defeat target acquisition, weapon guidance systems, and surveillance sensors across the electro-optical spectrum. These programs develop systems to provide robotic obscurant platforms (ROP) and projected obscurant across the spectrum from visual through infrared and millimeter wavelength radar. The technologies supported by this program enhance obscurant systems as combat multipliers. Instead of traditional self-defense procedures, this technology will transfer the visibility defeating materials directly to the threat and remove soldiers from direct-fire risk. This system supports the Current-to-Future transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Program initiated by Common Robotic Kit (CRK) Milestone B for distant smoke or robotic obscurant systems.	100	0	0
Conduct contract execution for distant smoke or robotic obscurant systems.	500	3603	0
Design robotic obscurant platform (ROP) system.	1724	400	0
Fabricate and test ROP prototypes (3 at \$500,000).	0	1600	0
Small Business Innovative Research/Small Business Technology Transfer Programs.	0	168	0
Totals	2324	5771	0

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BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes				PE NUMBER AND TITLE 0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev				PROJECT E78	
<u>B. Other Program Funding Summary</u>	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
RDTE, A, Budget Activity 2, PE 0602622A, Project 552	3395	3540	3553	3713	3742	3830	3933	Continuing	Continuing
<p><u>C. Acquisition Strategy:</u>Project Smoke/Obscurant and Target Defeat: The Robotic Obscuration Platform (ROP) system, is a System Integration acquisition phase effort, utilizing full and open competition cost plus fixed fee (CPFF) contracting for engineering design and test of prototype systems mounted on the M56 Smoke Generator. Initial operational test and evaluation (IOTE) and production qualification (PQT) testing will require four systems each.</p>									

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
4 - Advanced Component Development and Prototypes					0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev					E78		
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 . ROP - Supports robotic hardware development	C/CPFF	Pearson Engineering Limited, England	0	1000	1Q	4057	1Q	0		0	5057	0
Subtotal:			0	1000		4057		0		0	5057	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 . ROP - Supports developmental testing	OGA	TBD	0	0	2Q	100	1Q	0		0	100	0
Subtotal:			0	0		100		0		0	100	0

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
4 - Advanced Component Development and Prototypes					0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev					E78		
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 . ROP - Conducts developmental tests	OGA	Fort Bragg, NC	0	0		0	1-2Q	0		0	0	0
Subtotal:			0	0		0		0		0	0	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 . ROP - Supports program management	In house	SBCCOM, APG, MD	0	1124	1Q	1291	1Q	0		0	2415	0
b . ROP - Conducts Milestone and Initiates contract planning	In house	SBCCOM, APG, MD	0	200	1-3Q	323		0		0	523	0
c . Small Business Innovative Research/Small Business Technology Transfer Programs			0	0	1Q	0		0		0	0	0
Subtotal:			0	1324		1614		0		0	2938	0

ARMY RDT&E COST ANALYSIS(R3)	February 2004
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BUDGET ACTIVITY	
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PE NUMBER AND TITLE	PROJECT
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PROJECT

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0

2324

5771

0

0

8095

0

Schedule Profile (R4 Exhibit)																				February 2004												
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes										PE NUMBER AND TITLE 0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev														PROJECT E78								
Event Name	FY 02				FY 03				FY 04				FY 05				FY 06				FY 07				FY 08				FY 09			
	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
(1) MS B: System Development & Demonstration - ROP								1																								
LUT: Limited User Test - ROP																																
LUT: Limited User Test																																
Redesign HW for PQT and IOTE																																
Fabricate PQT/IOTE Hardware																																

Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes			PE NUMBER AND TITLE 0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev			PROJECT E78	
<u>Schedule Detail</u>	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
ROP - Milestone B, Program and design initiation	3Q						
ROP - Fabricate ROP for Limited User Test (LUT)	4Q						
ROP - Conduct LUT		1Q					
ROP - Redesign hardware for PQT and IOTE		1-4Q					
ROP - Fabricate PQT/IOTE hardware		3-4Q					

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

February 2004

BUDGET ACTIVITY

4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE

0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev

PROJECT

E79

COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
E79 SMOKE/OBSCURANT SYSTEM	0	4376	6249	6199	8140	15060	8817	Continuing	Continuing

A. Mission Description and Budget Item Justification: These program elements support the Component Advanced Development and System Integration developmental phases of high performance obscuration materials and systems to increase the survivability of the combined armed forces and to complement weapons systems. These programs develop systems to provide large area obscuration across the spectrum from visual through infrared and millimeter wavelength radar. The technologies supported by this program enhance obscuration systems as combat multipliers.

U.S. Forces must be able to defeat target acquisition, weapon guidance systems, and surveillance sensors across the electro-optical spectrum.

This system supports the Current-to-Future transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program

	FY 2003	FY 2004	FY 2005
Initiate component advance development for a smoke grenade and smoke pot which will have the capability to obscure in the visible, infrared, and millimeter wave spectrums.	0	4154	0
Conduct initial Milestone B for the multispectral grenade and smoke pot.	0	94	0
Execute contract to build candidate smoke grenades and smoke pots with multi-spectral capability. (quantity or cost of each unknown at this time)	0	0	5453
Qualify and quantify test requirements for candidate grenades and pots.	0	0	600
Initiate environmental impact studies on candidates grenades and pots.	0	0	196
Small Business Innovative Research/Small Business Technology Transfer Programs.	0	128	0
Totals	0	4376	6249

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)	February 2004
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BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes	PE NUMBER AND TITLE 0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev	PROJECT E79
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B. Other Program Funding Summary	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
RDTE, A, Budget Activity 5, PE 0604609A, Project 200	7193	11628	3798	0	0	12634	11379	0	53925

C. Acquisition Strategy: This project supports development of a new fast-acting visual grenade, multispectral grenade and smokepot and distant large area obscuration capabilities. The Advanced Component Development effort acquisition strategy utilizes full and open competition, cost plus fixed fee (CPFF) contracting to test and build multispectral grenades and pots.

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BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes					PE NUMBER AND TITLE 0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev					PROJECT E79		
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 . Initial Program Planning and System Design	OGA	PMNBC, APG, MD	0	0		4154	1-4Q	0		0	4154	0
b . Developmental Contract	C/CPFF	TBS	0	0		0		5453	2Q	0	5453	0
Subtotal:			0	0		4154		5453		0	9607	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 . Environmental Studies	OGA	TBS	0	0		0		196	2Q	0	196	0
Subtotal:			0	0		0		196		0	196	0

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BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes					PE NUMBER AND TITLE 0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev					PROJECT E79		
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 & Evaluation	OGA	TBS	0	0		0		600	2Q	0	600	0
Subtotal:			0	0		0		600		0	600	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 . Conduct initial Milestone B	OGA	PMNBC, APG, MD	0	0		94	1Q	0		0	94	0
b . Small Business Innovative Research/Small Business Technology Transfer Programs.			0	0		128	1Q	0		0	128	0
Subtotal:			0	0		222		0		0	222	0
Project Total Cost:			0	0		4376		6249		0	10625	0

Schedule Profile (R4 Exhibit)																						February 2004											
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes												PE NUMBER AND TITLE 0603627A - Smoke, Obscurant and Target Defeating Sys-Adv Dev																PROJECT E79					
Event Name		FY 02				FY 03				FY 04				FY 05				FY 06				FY 07				FY 08				FY 09			
		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) MS B										▲1				▲2																			

Schedule Detail (R4a Exhibit)									
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PROJECT E79

<u>Schedule Detail</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>
Conduct Milestone B		3Q					
Award Contract			2Q				