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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 2000	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/BA 4							R-1 ITEM NOMENCLATURE Humanitarian Demining PE 0603920D8Z		
COST(In Millions)	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	Cost to Complete	Total Cost
Total Program Element (PE) Cost	18.172	18.197	12.728	13.733	14.494	14.789	15.089	Continuing	Continuing
Humanitarian Demining/P920t	18.172	18.197	12.728	13.733	14.494	14.789	15.089	Continuing	Continuing

(U) **A. Mission Description and Budget Item Justification**

(U) **BRIEF DESCRIPTION OF ELEMENT**

(U) This Humanitarian Demining R&D program element focuses on the testing, demonstration and validation of equipment suitable for immediate use in various international humanitarian demining missions and environments. The goal is to provide the equipment to the international demining community so that they may assess the equipment's capabilities in actual demining conditions. This program focuses on R&D technology development that reduces the time and cost associated with demining while improving the overall safety of the operator. This is accomplished through the adaptation of commercial-off-the-shelf equipment, the integration of mature technologies, and the leveraging from past and current R&D project activity in the tactical countermine and unexploded ordnance clearance mission areas. The primary objectives this program aims to achieve in technological development are to improve existing mine detection technologies, overcome the heavy vegetation problems in specific environments, and provide improved protection for deminers. These areas of emphasis have been adopted as a direct result of the feedback received at the Humanitarian Demining Workshop held in April 1999. Additional technologies identified in these workshops will also be addressed. These include technologies that: detect individual mines/minefields; detect explosives in buried mines (biosensors); confirm the presence of mines (verification); mark and map mines/minefields; improve current wide area survey equipment; clear large areas faster and more efficiently with improved mechanical clearance equipment; improve post clearance quality assurance (QA) equipment; train deminers in mine awareness, and improve deminer hand tools.

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(U) **Project Number and Title: P920t Humanitarian Demining**

(U) **PROGRAM ACCOMPLISHMENTS AND PLANS**

(U) **FY1999 Accomplishments:**

(U) Successfully developed and demonstrated 19 technologies in mine/minefield detection, mine/vegetation clearance, individual tools, and individual protection equipment. Deployed and/or demonstrated demining technologies worldwide. Including the Floating Mine Blade to Guantanamo Bay, Cuba (December 1998-present), Enhanced Tele-operated Ordnance Disposal System (ETODS), Mini Mine Detectors and visors to Jordan (April 1999-present), Air Spade, LEXFOAM, Mine Marking Foam to Ecuador (July 1999-present), Mine Marking Foam to Peru (July 1999-present), Rotar demonstration in Namibia (August 1999), Commercial Flares/Mine Marking Foam to Kosovo (August 1999), ETODS to Egypt (September 1999). Planned/coordinated for future deployments of the following technologies: Survivable Demining Tractor (SDT), Liquid Explosive Foam (LEXFOAM) to Cambodia, RHINO to Jordan and Israel. Initiated international mine detector pilot project to test and evaluate 25 COTS metal detectors against known anti-personnel (AP) land mine threats and environmental conditions existing in three countries affected by landmines. Participants are the UK, Canada, The Netherlands and the EC. Performed Demining Support System (DSS) technical assessments, user feedback evaluations and Y2K updates in CONUS (Camp Pendleton, Ft. Leonard Wood, Ft. Bragg) and OCONUS (Jordan, Laos, New Zealand, Rwanda and Germany). Initiated program to identify capabilities and limitations of commercially available individual protection equipment and to provide more effective protection clothing to deminers worldwide. Conducted Lower Extremities Assessment Program (LEAP) to determine overall performance of commercially available protective footwear against AP mines. Initiated extension of effort to remainder of the body. (\$ 18.172 Million)

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**(U)      FY2000 Plans:**

(U) Complete development and demonstrations on the improvements of existing mine detection technologies to include detection to a depth of 27cm and a publication containing a `Consumer Report` type approach for outlining the results of the R&D findings on currently available and near term detection technologies. Complete development and demonstration of vegetation clearing devices and improved in-situ neutralization devices. Continue to develop and demonstrate improved protective equipment for deminer protection and comfort by focusing on the human factor issues in mine protective gear. Continue to leverage existing technology from the tactical countermine area to develop and demonstrate detection technologies used for discrimination and verification. Continue to develop mechanical clearance equipment suitable for large area reduction and QA operations. Continue to develop mine/minefield marking and mapping systems and large area survey equipment. Continue to develop and demonstrate mine awareness and training technologies to help the deminers in future priority countries.  
(\$ 18.197 Million)

**(U)      FY2001 Plans:**

(U) Continue to develop and demonstrate improved protective equipment for deminer protection and comfort by focusing on the human factor issues in mine protective gear. Continue to leverage existing technology from the tactical countermine area to develop and demonstrate detection technologies used for discrimination and verification. Continue to develop mechanical clearance equipment suitable for large area reduction and QA operations. Continue to develop mine/minefield marking and mapping systems and large area survey equipment. Continue to develop and demonstrate mine awareness and training technologies to help the deminers in future priority countries.  
(\$ 12.728 Million)

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(U) <b>B. <u>Program Change Summary</u></b>	<b><u>FY1999</u></b>	<b><u>FY2000</u></b>	<b><u>FY2001</u></b>	<b><u>Total Cost</u></b>
Previous President's Budget	18.498	15.847	14.819	Continuing
Appropriated Value	0.000	18.847	0.000	Continuing
Adjustments to Appropriated Value				
a. Congressionally Directed Undistributed Reduction	0.000	0.000	0.000	
b. Rescission/Below-threshold Reprogramming, Inflation Adjustment	(.326)	(.229)	(.091)	
c. Other	0.000	(.421)	(2.000)	
Current President's Budget	18.172	18.197	12.728	Continuing

**Change Summary Explanation:**

(U) **Funding:** FY 2000 reflects inflation savings and program revisions. FY2001 changes reflect inflation savings and the government wide rescission  
inflation

(U) **Schedule:** N/A

(U) **Technical:** N/A

(U) **C. OTHER PROGRAM FUNDING SUMMARY COST:** N/A

(U) **D. ACQUISITION STRATEGY:** N/A

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(U) E. SCHEDULE PROFILE: N/A

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<b>RDTE&amp;E BUDGET ELEMENT/PROJECT COST BREAKDOWN (R-3 Exhibit)</b>		DATE: February 2000
APPROPRIATION/BUDGET ACTIVITY: RDTE&E, Defense Wide / BA 4	R-1 ITEM NOMENCLATURE: Humanitarian Demining PE 0603920D	

A. Project Cost Breakdown (\$ in thousands)

	FY 1999	FY 2000	FY 2001
Project Cost Categories:			
Cost Categories			
a. Demonstrations & Validation	17.077	17.072	11.598
b. Program Management Support	1.095	1.125	1.130
<b>TOTAL</b>	<b>18.172</b>	<b>18.197</b>	<b>12.728</b>

B. Budget Acquisition History and Planning Information:

Performing Organizations:

Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity/EAC	Project Office EAC	Total Prior to FY 1999	Budget FY 1999	Budget FY 2000	Budget FY 2001	Budget to Complete	Total Program
Various	Various	Various	Various		0	18.172	18.197	12.728	Continuing	Continuing
<b>TOTAL PROJECT</b>					<b>0</b>	<b>18.172</b>	<b>18.197</b>	<b>12.728</b>	Continuing	Continuing

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