

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)						February 2003					
BUDGET ACTIVITY 1 - Basic research				PE NUMBER AND TITLE 0601103A - University Research Sciences (H)				PROJECT D55			
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
D55	UNIVERSITY RESEARCH INITIATIVE			0	0	71642	77166	72366	68309	69861	71093
<p><u>A. Mission Description and Budget Item Justification:</u> In FY03 and prior years, the Office of the Secretary of Defense University Research Initiative (URI) PE 601103D8Z contained funds for several university research, education and infrastructure programs. Starting in FY04, a portion of these OSD funds will be transferred to the Army in support of the Multidisciplinary University Research Initiative (MURI) and the Defense University Research Instrumentation Program (DURIP). The MURI program supports basic research in a wide range of scientific and engineering disciplines pertinent to maintaining the U.S. land combat technology superiority. Army MURI efforts involve teams of researchers investigating high-priority, transformational topics that intersect more than one traditional technical discipline (e.g. Intelligent Luminescence for Communication, Display, and Identification). For many complex problems, this multidisciplinary approach serves to accelerate research progress and expedite transition of results to application. The DURIP provides funds to acquire major research equipment to augment current, or develop new, research capabilities in support of Army transformational research. This PE also supports Presidential Early Career Awards for Scientists and Engineers (PECASE). The PECASE program funds single-investigator research efforts performed by outstanding academic scientists and engineers early in their independent research careers. The cited work is consistent with the Army Science and Technology Master Plan, the Army Modernization Plan, and supports the Objective Force transition path of the Transformation Campaign Plan. There are no Defense Emergency Response Funds provided to this program or project.</p>											

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<u>Accomplishments/Planned Program</u>		FY 2002	FY 2003	FY 2004	FY 2005	
In FY04: Continue supporting the 43 MURI awards made in prior years. A few key continuing MURI research topics include: Fundamental Issues Underlying Infrared Detection; Ultrawide-band Communications; New Adaptive, Reconfigurable RF Radio/Sensor Concepts; Biological and Chemical Sensing at terahertz Frequency. Continue supporting those PECASE investigators begun in prior years. In FY05: Continue supporting the MURI awards made in prior years. A few key continuing MURI research topics include: Intergrated Control and Communication for Networked Systems; Mathematics of Failures in Complex Systems; Fundamental Theoretical/Experimental Molecular Science for Design of Fuel Cell Systems. Continue supporting those PECASE investigators begun in prior years.		0	0	42942	44966	
In FY04: Initiate approximately 14 new MURI awards. Topics for the FY04 MURI research competition will be selected in strategic basic research areas related to transformational and high-priority Army Force Operating Capabilities such as sensor fusion, beyond-line-of-sight lethality, countermeasure, deployability and survivability. Potential new multidisciplinary topics could include Control of Biologically Inspired Mobile Networks (swarms) of Autonomous and Semi-Autonomous Vehicles; or Modeling the Effects of Training on Performance and Readiness. Two new competitive awards will be made under the PECASE program. In FY05: Initiate approximately 18 new MURI awards. Topics for the FY05 MURI research competition will be selected in strategic basic research areas related to transformational and high-priority Army Force Operating Capabilities such as sensor fusion, beyond-line-of-sight lethality, countermeasure, deployability and survivability. Two new competitive awards will be made under the PECASE program.		0	0	14000	16700	
In FY04: Competitive grants will be awarded for the acquisition of research instrumentation. Emphasis is on instrumentation vital to the discovery of new science and the advancement of Army transformational technologies. Research instrumentation awards average approximately \$150K each. In FY05: Competitive grants will be awarded for the acquisition of research instrumentation. Emphasis is on instrumentation vital to the discovery of new science and the advancement of Army transformational technologies.		0	0	14700	15500	
Totals		0	0	71642	77166	

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<u>B. Program Change Summary</u>	FY 2002	FY 2003	FY 2004	FY 2005
Previous President's Budget	0	0	0	0
Current Budget (FY 2004/2005 PB)	0	0	71642	77166
Total Adjustments	0	0	71642	77166
Congressional program reductions				
Congressional rescissions				
Congressional increases				
Reprogrammings				
SBIR/STTR Transfer				
Adjustments to Budget Years			71642	77166

Significant Changes:

FY04 - PE devolved from OSD to Army; Funds investments in Multidisciplinary University Research Initiative (MURI) and the Defense University Research Instrumentation Program (DURIP).