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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE June 2001		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-wide BA2 Applied Research					R-1 ITEM NOMENCLATURE Integrated Command and Control Technology PE 0602708E, R-1 #19					
COST (<i>In Millions</i>)	FY 2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	Cost To Complete	Total Cost
Total Program Element (PE) Cost	37.218	38.406	0.000	0.000	0.000	0.000	0.000	0.000	0.000	N/A
Integrated Command and Control Technology IC-03	37.218	38.406	0.000	0.000	0.000	0.000	0.000	0.000	0.000	N/A

(U) Mission Description:

(U) This program element is budgeted in the Applied Research Budget Activity because it develops the technologies for high definition displays that are important for virtually all DoD applications that involve visual and graphic information. Major components of this program include: projection, head mounted and direct view displays based on multiple technologies; development of equipment and components required to manufacture advanced display technologies; and prototyping of display systems for system evaluation. These efforts will establish a domestic technical capability for the manufacture of components necessary for military systems that capture, process, store, distribute and display high-resolution images. This project completes in FY 2001.

(U) Program Accomplishments and Plans:

(U) FY 2000 Accomplishments:

- High Definition Systems. (\$ 18.891 Million)
 - Developed flexible, rugged displays based on organic electroluminescence and zero-power reflective technology.
 - Developed active matrix backplanes on flexible substrates for high performance/low power rugged displays.
 - Developed enhanced maturing technologies (organic electroluminescence, field emission and flexible field substrates) to performance capabilities required for DoD applications.
 - Demonstrated/inserted display technology into DoD systems to evaluate display technology.
- Flat Panel Displays. (\$ 6.808 Million)
 - Continued Flat Panel Display manufacturing equipment and materials.

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- Flexible Emissive Displays. (\$ 11.519 Million)
 - Developed higher temperature plastic substrates compatible with display manufacturing.
 - Developed light emitting materials.
 - Demonstrated emissive monochrome display.

(U) FY 2001 Plans:

- Flexible Emissive Displays. (\$ 15.888 Million)
 - Complete development of reduced water and oxygen substrate permeability.
 - Complete development of active matrix backplane transistors.
- High Definition Systems. (\$ 15.567 Million)
 - Integrate organic light emitting diodes on flexible, active matrix backplanes for increased brightness and reduced power. Integrate Field Emission and Phosphor Display Technologies.
 - Complete evaluation of new display concepts for large, high-resolution displays.
 - Demonstrate/insert display technology into DoD systems for display evaluation.
- Flat Panel Displays. (\$ 6.951 Million)
 - Complete Flat Panel Display manufacturing equipment and materials.

(U) FY 2002 Plans:

- Not Applicable.

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(U)	<u>Program Change Summary:</u> <i>(In Millions)</i>	<u>FY2000</u>	<u>FY 2001</u>	<u>FY 2002</u>
	Previous President's Budget	38.126	31.761	0.000
	Current Budget	37.218	38.406	0.000

(U) **Change Summary Explanation:**

FY 2000 Decrease reflects minor repricing and SBIR reprogramming.
 FY 2001 Increase reflects congressional add for Flat Panel Displays.

(U) **Other Program Funding Summary Cost:**

- Not Applicable.

(U) **Schedule Profile:**

- Not Applicable.