

DEFENSE MAPPING AGENCY

FY 1997 BUDGET ESTIMATE SUBMISSION

RDT&E, DEFENSE-WIDE

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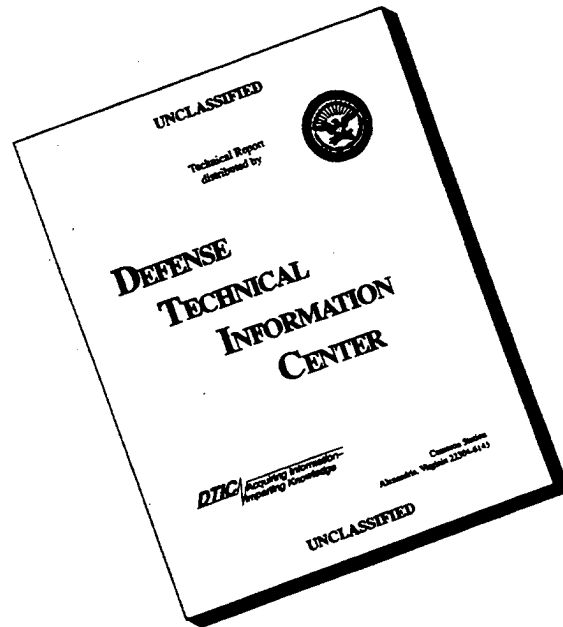


MARCH 1996

DEFENSE MAPPING AGENCY
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**DEFENSE MAPPING AGENCY
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE
FY 1997 BUDGET ESTIMATES**

(\$ In Thousands)

SECUR CLASS	BUDGET	RESEARCH	PROGRAM	TITLE	FY 1995 TOA	FY 1996 TOA	FY 1997 TOA
(U)	7			Operational Systems Development	76,228	71,932	100,997
(U)	7	6.6		Operational Systems Development (Other)	76,228	71,932	100,997
(U)	7	6.6	0305139B	DMA MC&G Production System Improvement	60,478	71,932	100,997
(U)	7	6.6	0305159B	Defense Reconnaissance Support Activities	15,750	0	0
Total RDT&E - Direct					76,228	71,932	100,997
Reimbursements					10	850	850
TOTAL PROGRAM					76,238	72,782	101,847

Note: Beginning in FY 1996, Defense Reconnaissance Support Activities (DRSA) (PE 0305159B) was merged into DMA MC&G Production System Improvement (PE 0305139B) because the activities contained in DRSA evolved into enhancements to the overall DMA MC&G production system.

This budget is included in the Joint Military Intelligence Program (JMIP) Congressional Justification Book.

EXHIBIT R-1

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DEFENSE MAPPING AGENCY
FY 1997 BUDGET ESTIMATE SUBMISSION
RDT&E, DEFENSE-WIDE

PROGRAM ELEMENT COMPARISON SUMMARY
INTRODUCTION AND EXPLANATION OF CONTENTS

PROGRAM ELEMENT

REMARKS

Budget Activity 7: Operational
Systems Development

0305139B DMA MC&G Production
System Improvement

FY 95 program reflects a \$3,798 thousand reprogramming from 0305159B Defense Reconnaissance Support Activities and a \$83 thousand internal DoD reduction as adjustments to the FY 1996/1997 President's Budget Submission.

Beginning in FY 1996, 0305159B Defense Reconnaissance Support Activities (DRSA) merges into 0305139B DMA MC&G Production System Improvement because the activities contained in DRSA have evolved into enhancements to the overall MC&G production system and therefore are more appropriately justified in 0305139B DMA MC&G Production System Improvement.

0305159B Defense Reconnaissance
Support Activities

FY 95 program reflects a \$3,798 thousand reprogramming to 0305139B MC&G Production System Improvement.

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Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature
Program Element (PE): DMA MC&G Production System Improvement/0305139B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Total Program Element (PE) Cost	60,478	71,932	100,997	70,135	103,090	115,777	71,045	Cont	Cont
Project 100 New Products	28,294	15,967	14,566	13,789	16,030	18,996	18,422	Cont	Cont
Project 200 New Processes	20,986	38,808	70,110	41,366	64,160	78,269	32,583	Cont	Cont
Project 300 New Concepts	11,198	17,157	16,321	14,980	22,900	18,512	20,040	Cont	Cont

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

This program element includes RDT&E costs associated with modifying, upgrading, or improving the Defense Mapping Agency (DMA) production system and any related Mapping, Charting and Geodesy (MC&G) development activities that: (1) foster new DMA products; (2) introduce, improve, or adapt DMA operational processes to enhance interfaces or functionality; and (3) use new technology in the development of concepts that enhance processes and products, including the evolution of the MC&G production system to provide global geospatial information and services on-line electronically to military customers world-wide.

MC&G Production System Improvement (PE 0305139B) is found in Budget Activity 7 (Operational Systems Development) because the effort funded under this element supports the DMA MC&G production system. Beginning in FY 1996, Defense Reconnaissance Support Activities (DRSA) (PE 0305159B) was merged into this PE because the activities contained in DRSA evolved into enhancements to the overall DMA MC&G production system.

B. (U) Program Change Summary

	FY 1995	FY 1996	FY 1997	Total Cost
FY 1996/1997 President's Budget	56,763	80,131	83,932	Cont
Adjustments to Appropriated Value				
Program Decision Memorandum I increase for exploitation of the Enhanced Imagery System and migration of the MC&G Production System			20,300	
Reprogrammed from Defense Reconnaissance Support Activities (PE 0305159B)	3,798			
Congressional Reduction		-6,838		
Inflation Adjustment		-1,361	-3,235	
OSD Management Adjustment	-83			

Current Budget Submit/President's Budget

60,478 71,932 100,997 Cont

Change Summary Explanation:

The increases in FY 1996 and FY 1997 to MC&G Production System Improvement (PE 0305139B) reflect the transfer of funds previously identified under Defense Reconnaissance Support Activities (PE 0305159B). The FY 1997 increase also reflects a Program Decision Memorandum increase to develop the capability to exploit the Enhanced Imagery System which is replacing DMA's existing primary imagery source, and to migrate the DMA MC&G production system to an open-systems, standards-based architecture that relies on commercial-off-the-shelf products and is designed for easy insertion of new technology and system expansion.

Exhibit R-2

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**Defense Mapping Agency FY 1997 Budget Estimates
 RDT&E Budget Item Justification Sheet (R-2 Exhibit)**

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7	R-1 Item Nomenclature					Total			
	Program Element (PE): DMA MC&G Production System Improvement/0305139B								
Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Complete	Cost to
Project 100 New Products	28,294	15,967	14,566	13,789	16,030	18,996	18,422	Cont	Cont

(U) Project Justification Narrative:

- (U) As a combat support agency, DMA is responsible for development and production of new Mapping, Charting, and Geodesy (MC&G) products to meet evolving customer requirements. Key product initiatives include:
 - The Digital Products Data Base (DPDB) which will interface with current and emerging digital systems and will be the primary repository for DMA's digital products.
 - The Master Seafloor Digital Data Base (MSDDB) which is a cooperative effort between Navy, the National Oceanographic and Atmospheric Administration (NOAA), and DMA and will provide these agencies the capability to process and fuse hydrographic/bathymetric and marine geophysical source data holdings to satisfy future hydrographic charting needs and database accessibility.
 - Development of a suite of digital thematically-layered vector products, such as Urban Vector Map (UVMAP), Littoral Supplemental Layer, and Tactical Terrain Data (TTD), designed to support analytical functions of Military Geographic Information Systems currently being integrated into Electronic Battlefield architectures. UVMAP will support evacuation plans and intelligence operations; Littoral Supplemental Layer will support beach assaults/operations; and TTD will support cross-country movement analysis.
 - The Point Positioning Production System (PPPS) which supports the warrior in deriving accurate coordinates for identifiable features within a supported geographical area. PPPS will be used primarily for targeting and mission planning.
 - The Digital Flight Information Publications which will support the Services' mission planning, advanced cockpit and simulator graphics, in-flight operations, and air traffic control by replacing existing paper products.
 - New Product Implementation which modifies the MC&G Production System to allow implementation of future products more effectively and efficiently.
 - Controlled Image Base (CIB) which will support mission planning and theater battle management systems, mission profile development, and medium-accuracy point targeting.
 - Joint Mapping Toolkit (JMTK) which addresses the mapping requirements identified for the Global Command and Control System (GCCS). As the Executive Agent for Mapping, Charting, Geodesy, and Imagery (MCG&I) in GCCS, DMA is developing standard interoperable MCG&I exploitation software which will provide the warfighter with a fused, real-time true picture of the battlefield.
 - Terrain Modeling and Simulation activities which respond to emerging customer requirements for accurate, timely representations of the terrain in support of modeling, simulation, mission planning/rehearsal and combat operations. As the DoD Modeling and Simulation Executive Agent for Terrain, DMA is prototyping MC&G terrain products/data sets.

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Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

- (U) FY 1995: Continued design and development of the Master Seafloor Digital Data Base (MSDDB) (\$12,382); continued design of the Digital Products Data Base (DPDB) (\$2,028); continued development of new image-based products such as Controlled Image Base (CIB) (\$1,849); continued development of multi-resolution, data-layered, vector products with Urban Vector Map (UVMAP), Littoral Supplemental Layer, and Tactical Terrain Data (TTD) (\$9,484); commenced standard establishment of Digital Text Standards and developed a prototype Digital Sailing Directions for evaluation (\$495); completed delivery and began production on the Point Positioning Production System (PPPS) (\$1,324); began design of a Digital Flight Information Publication (DFLIP) production capability (\$205); and performed other MC&G new product activities (\$527).
- (U) FY 1996: Continue development of the MSDDB (\$2,000); incorporate the DPDB into the production system (\$2,500); continue development of multi-resolution, data-layered, vector products (\$6,326); begin development of the Joint Mapping Toolkit for GCCS (\$3,500); continue prototype development and evaluation of Digital Text Standards with Automated Notice to Mariners, List of Lights, and Digital Fleet Guides (\$500); and perform other MC&G new product activities (\$1,141).
- (U) FY 1997: Deliver the MSDDB production system (\$2,000); complete the development of multi-resolution, data-layered, vector products (\$1,350); develop the New Product Implementation (\$2,500); complete the DPDB (\$3,600); complete prototype development and evaluation of Digital Text Standards with Flight Planning Guides (\$500); complete prototyping and evaluation of Digital Flight Information Publication (DFLIP) (\$500); continue development of the Joint Mapping Toolkit for GCCS (\$3,300); develop a capability for rapid terrain data generation and exploitation (\$716); and perform other MC&G new product activities (\$100).

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Defense Mapping Agency FY 1997 Budget Estimates
 RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7

R-1 Item Nomenclature
 Program Element (PE): DMA MC&G Production System Improvement/0305139B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Project 100 New Products	28,294	15,967	14,566	13,789	16,030	18,996	18,422	Cont	Cont

C. (U) Other Program Funding Summary

	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Procurement:	5,183	2,321	4,100 ¹	1,845 ¹	2,800 ¹	3,501 ¹	4,434 ¹	Cont	Cont

D. (U) Schedule Profile

	FY 1995		FY 1996			FY 1997			Total Cost
	1	2	3	4	1	2	3	4	
Image-based Products									
Master Seafloor Digital Data Base (MSDDB)			D		C				D
Point Positioning Production System (PPPS)	D	C							
Vector Formatted Products - Interim Terrain Data (ITD), Urban Vector Map (UVMAP), Tactical Terrain Data (TTD), Littoral Supplemental Layer		D		D			C		
Digital Products Data Base (DPDB)			AOC						C
Digital Text Standards			D		D				D
Digital Flight Information Publications (DFLIP)			AOC		D		D		D
Joint Mapping Toolkit							AOC		
Terrain Modeling/Simulation								AOC	

AOC-Award of Contract
 D-Delivery
 C-Completion

¹Funds identified in FY 1997-FY 2001 have been transferred to the Operations and Maintenance appropriation in accordance with expense/investment criteria policy change.

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Defense Mapping Agency FY 1997 Budget Estimates

RD7&E Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RD7&E, Defense-Wide/7 R-1 Item Nomenclature
 Program Element (PE): DMA MC&G Production System Improvement/0305139B

A. Project Cost Breakdown (\$ in Thousands)

	EY 1995	EY 1996	EY 1997
Project 100-New Products			
Project Cost Categories:			
Primary Hardware Development			
Ancillary Hardware Development			
Development Support Equipment			
Acquisition	2,094	734	
Research Support Equipment			5
Acquisition	28	559	2,687
Software Development	4,942	2,977	187
Licenses	1,386	367	3,146
Systems Engineering	4,867	2,651	350
Training Development	1,103	287	345
Integrated Logistics Support	283	287	248
Quality Assurance	425	64	
Reliability, Maintainability, and Availability	28	48	131
Configuration Management	1,358	1,038	670
Technical Data	509	399	612
Developmental Test and Evaluation	2,650	998	218
Operational Test and Evaluation	1,103	607	1,434
Contractor Engineering Support	3,622	2,044	1,894
Government Engineering Support	1,811	1,645	1,515
Program Management Support	1,188	655	641
Program Management Personnel	226	160	87
Travel	538	367	350
Research Personnel	113	80	46
Miscellaneous	20		
TOTAL	28,294	15,967	14,566

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Defense Mapping Agency FY 1997 Budget Estimates

NDT&E Program Element/Project Cost Breakdown (R-3) Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature Program Element (PE): DNA MC&G Production System Improvement/0305132B

B. Budget Acquisition History and Planning Information

Contractor or Government Performing Activity	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations										
Project 100 New Products										
Point Positioning E-Systems	C/CPAF/MIPR	Sep-92	9,833	9,833	8,413	1,324	96	0	0	9,833
Vector Product Intergraph	SS/CPIF/Reqn	Oct-94	17,258	17,258	10,111	3,980	2,767	400	0	17,258
Tactical Terrain Data (TTD) Various	SS/CPAF/Reqn	Dec-94	7,199	7,199	244	4,155	2,600	200	0	7,199
Product Definition Various	C/CPIF/Reqn	Jul-95	2,885	2,885	0	1,176	959	750	0	2,885
Master Seafloor Digital E-Systems	C/CPAF/Reqn	Sep-94	25,430	25,430	2,548	12,382	2,000	2,000	6,500	25,430
Controlled Image Base Hughes	SS/CPFF/Reqn	Sep-94	3,106	3,106	712	1,849	445	100	0	3,106
Digital Gazetteer on Intergraph	C/CPAF/Reqn	Mar-95	270	270	0	170	100	0	0	270
Digital Products Various	C/CPAF/Reqn	Jun-95	8,766	8,766	638	2,028	2,500	3,600	0	8,766
New Product Various	C/CPAF/Reqn	Feb-97	Cont	Cont	0	0	0	2,500	Cont	Cont
Joint Mapping Various	MIPR	Mar-96	Cont	Cont	0	0	3,500	3,300	Cont	Cont
Terrain Modeling/Unknown	MIPR	Jun-97	Cont	Cont	0	0	0	716	Cont	Cont
Miscellaneous Various	Various	Various	5,306	5,306	2,076	1,230	1,000	1,000	0	5,306
Product Development Support and Management	Various	Various	Cont	Cont	24,742	28,294	15,967	14,566	Cont	Cont
Test and Evaluation Government Furnished Property	Various	Various	0	0	0	0	0	0	0	0
Test and Evaluation Government Furnished Property	Various	Various	0	0	0	0	0	0	0	0
Government Furnished Property	Various	Various	0	0	0	0	0	0	0	0

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Defense Mapping Agency FY 1997 Budget Estimates

NDT&E Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature
 Program Element (PEL): DMA M&KG Production System Improvement/0105139B

B. Budget Acquisition History and Planning Information (Continued)

Item Description	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Delivery Date	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations									
Project_100_New_Products									
Product Development Property Total									
Support and Management Property Total									
Test and Evaluation Property Total									
Subtotal Product Development									
Subtotal Support and Management									
Subtotal Test and Evaluation									
Total Project:									
				24,742	28,294	15,967	14,566	Cont	Cont
				0	0	0	0	0	0
				0	0	0	0	0	0
				0	0	0	0	0	0
				24,742	28,294	15,967	14,566	Cont	Cont
				0	0	0	0	0	0
				0	0	0	0	0	0
				24,742	28,294	15,967	14,566	Cont	Cont

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Defense Mapping Agency FY 1997 Budget Estimates
 RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature
 Program Element (PE): DMA MC&G Production System Improvement/0305139B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Total	
								Complete	Cost
Project 200 New Processes	20,986	38,808	70,110	41,366	64,160	78,269	32,583	Cont	Cont

(U) Project Justification Narrative:

- (U) As a combat support agency, DMA is responsible for establishing and maintaining the production processes required to support Service and Command Mapping, Charting, and Geodetic (MC&G) requirements. DMA's digital data are a critical requirement of modern precision guided weapons and analytical systems. The focus of DMA's new process initiatives is to enhance the Agency's capability and capacity to produce and deliver digital data to the warfighter instantly and anywhere needed around the globe. Key initiatives within this project include:
 - Crisis support enhancements which will increase the flexibility of the digital production system to provide rapid responses to CINC and Service crisis requirements.
 - Operability improvements which will enhance the flexibility and effectiveness of the DMA production system and increase responsiveness to the warfighter; i.e., improve DMA's ability to extract MC&G information from source materials, improve automated algorithms to increase finishing throughput, and improve speed and accuracy in source analysis processes. These will allow the Agency to sustain productivity with a reduced workforce.
 - Migration of the DMA MC&G production system which will allow transition to an open-systems, standards-based architecture that relies on commercial-off-the-shelf products and is designed for easy insertion of new technology and system expansion. Without migration, system aging and inability to leverage off technology advancements will degrade DMA's ability to support deployment of weapon systems and C4I systems, potentially endangering military operations.
 - Exploitation of Enhanced Imagery System (EIS) provides for the mandatory replacement of DMA's existing primary imagery source and results in an enhancement to the current capability; i.e., the exploitation of hybrid radar which provides an all-weather, day-night data collection source.
 - GGI&S Data Warehouse which will provide a digital repository of Global Geospatial Information globally accessible to DMA customers.
 - Global transmission of Global Geospatial Information to military forces via satellite link and high speed fiber optic networks.
 - The Hydrographic Source Assessment System (HYSAS) which is a cooperative effort between Navy, NOAA, and DMA, related to MSDDDB, which provides the capability to acquire and manage hydrographic/bathymetric source data and provide the Navy and other users the ability to produce digital navigation products.
 - The Modernized Catalog System (MCS) which provides for the basic generation of both soft copy and hard copy catalogs for the CINCS and Services with the capability to update soft copy catalogs via electronic connections.

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Exhibit R-2

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Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

- Implementation of an interface from the Defense Intelligence Agency (DIA) Migration Integrated Data Base (MIDB) to the DMA production system which will enhance the utilization of the data in DMA production processes as well as providing data to support population of the MIDB.
- Migration of the Source Acquisition System architecture to a centralized operation which provides for improved access and responsiveness to DMA production operations.
- The Navigation Safety System which will allow DMA to integrate text and feature-based processes to support Navy, Coast Guard, foreign, and civilian (maritime) users.
- Beginning in FY 1996, this project also includes initiatives previously identified under Defense Reconnaissance Support Activities (PE 0305159B) to implement MC&G data exploitation from commercial systems (e.g., LANDSAT, SPOT and emerging one- and three-meter commercial systems), Synthetic Aperture Radar, and foreign national sources. Developments address data extraction algorithms and operational scenarios and include development of capabilities to process, integrate, and archive commercial image source into the existing DMA production system and increase crisis response capability.
- (U) FY 1995: Performed operability improvements on the delivered Digital Production System (DPS) to improve performance (\$7,015); performed crisis support enhancements (\$2,904); continued modernization of the Gravity & Geodesy portion of the DMA MC&G production system (\$1,359); began engineering development of the Hydrographic Source Assessment System (HYSAS) (\$2,700); continued reconfiguration of mainframe computer architecture (\$1,916); began development of an externally mandated new interface to the Defense Intelligence Agency (DIA) Migration Integrated Data Base (MIDB) (\$279); completed upgrade of the Source Acquisition Segment interfaces (\$258); completed development of the Modernized Catalog System (MCS) (\$1,534); began development of the Navigation Safety System (\$729); and performed other MC&G new process activities (\$2,292).
- (U) FY 1996: Continue operability improvements on the delivered DPS to improve performance consistent with and in support of the planned migration of the DMA MC&G production system (\$11,445); continue crisis support enhancements (\$3,318); continue development of modifications begun in PE 0305159B (as described in the Joint Military Intelligence Programs (JMIP) Congressional Justification Book) to DMA's production system which will change processes to allow the exploitation of alternative commercial imagery sources (e.g., LANDSAT, SPOT and emerging one- and three-meter commercial systems), Synthetic Aperture Radar, and foreign national sources to enhance primary data gathering capability (\$9,354); continue modernization of the Gravity & Geodesy portion of the DMA MC&G production system (\$650); begin initial design and development for implementation of the process for global transmission of Global Geospatial Information (\$300); continue engineering development of HYSAS (\$5,364); continue reconfiguration of mainframe computer architecture (\$2,313); begin design of new interfaces to the MCS (\$1,198); continue development of the Navigation Safety System (\$2,325); and perform other MC&G new process activities (\$2,541).
- (U) FY 1997: Continue operability improvements on the delivered DPS to improve performance (\$4,251); continue crisis support enhancements (\$3,500); continue development and begin delivery of modifications which will change processes to allow the exploitation of alternative commercial and foreign imagery sources (\$13,765); continue modernization of the Gravity & Geodesy portion of the DMA MC&G production system (\$650); continue engineering development of HYSAS (\$9,850); continue design and begin delivery of new interfaces to the MCS (\$816); continue development of the Navigation Safety System (\$3,153); begin migration of the DMA MC&G production system (\$10,000); begin development of the capability to exploit imagery from the Enhanced Imagery System (EIS) (\$24,100); and perform other MC&G new process activities (\$25).

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Defense Mapping Agency FY 1997 Budget Estimates
 RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7

R-1 Item Nomenclature
 Program Element (PE): DMA MC&G Production System Improvement/0305139B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Project 200 New Processes	20,986	38,808	70,110	41,366	64,160	78,269	32,583	Cont	Cont

C. (U) Other Program Funding Summary

	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Procurement:	20,901	9,605	15,945 ¹	17,242 ¹	15,550 ¹	14,643 ¹	14,840 ¹	Cont	Cont
Related RDT&E Program Element 0305159B, Defense Reconnaissance Support Activities	10,000							Cont	Cont

D. (U) Schedule Profile

	FY 1995				FY 1996				FY 1997			
	1	2	3	4	1	2	3	4	1	2	3	4
Hydrographic Source Assessment System (HYSAS)												D
Mainframe Computer Reconfiguration			AOC		D			D				
Modernized Catalog System (MCS)				C								
Crisis Support Enhancements				AOC				D				
Military Intelligence Integrated Data System/Integrated Data Base (MIIDS/IDB)						D			C			
Alternative Commercial Source Exploitation										D	D	
Transmission of Global Geospatial Mapping Information							AOC				D	
Digital Production System (DPS)	AOC			D	AOC	D		D	AOC	D		D
Operability Improvements												D
Navigation Safety System							AOC					
Migration of MC&G Production System											AOC	
Enhanced Imagery System (EIS)									AOC			

AOC-Award of Contract
 D-Delivery
 C-Completion

¹Funds identified in FY 1997-FY 2001 have been transferred to the Operations and Maintenance appropriation in accordance with expense/investment criteria policy change.

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Exhibit R-2

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Defense Mapping Agency FY 1997 Budget Estimates

RDTE&S Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RDTE&S, Defense-Wide/7 R-1 Item Nomenclature
 Program Element (PE): DMA MC&G Production System Improvement/03051398

A. Project Cost Breakdown (\$ in Thousands)

Project Cost Categories	EY_1995	EY_1996	EY_1997
Project_200_New_Processes			
Primary Hardware Development	97	2,375	5,399
Ancillary Hardware Development		8	
Development Support Equipment			
Acquisition	611	287	76
Research Support Equipment			
Acquisition	40	1,141	7
Software Development	4,664	7,366	14,020
Licenses	3,591	1,789	1,753
Systems Engineering	464	10,013	19,460
Training Development	615	644	1,713
Integrated Logistics Support	493	831	1,850
Quality Assurance		516	491
Reliability, Maintainability, and Availability	97	159	561
Configuration Management	1,127	1,560	2,174
Technical Data	837	893	1,262
Developmental Test and Evaluation	1,736	2,197	3,605
Operational Test and Evaluation	628	629	4,137
Contractor Engineering Support	2,340	3,431	5,539
Government Engineering Support	1,441	730	2,033
Program Management Support	1,037	1,704	2,244
Program Management Personnel	554	408	701
Travel	432	1,137	1,753
Research Personnel	80	62	210
Miscellaneous	537	928	1,122
TOTAL	20,986	38,808	70,110

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Exhibit R-3

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Defense Mapping Agency FY 1997 Budget Estimates

Date: March 1996

RDT&E Program Element/Project Cost Breakdown (R-3)

Appropriation/Budget Activity: RDT&E, Defense-wide/7 R-1 Item Nomenclature Program Element (PE) 1. DMA MC&G Production System Improvement/0305139B

B. Budget Acquisition History and Planning Information

Contractor or Government Performing Activity	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations										
Project_200_New_Processes										
Mainframe Architecture Various	SS/CPAF/MIPR	Various	5,405	5,405	5,156	0	249	0	0	5,405
UNISYS Reengineering and Modernization Various	C/CPAF/Regn	Dec-94	4,257	4,257	516	1,916	1,825	0	0	4,257
Alternative Commercial Source Exploitation Various	Various	Jul-95	28,119	28,119	0	0	9,354	13,765	5,000	28,119
New Product Processes into DPS Intergraph	SS/CPAF/Regn	Oct-94	3,919	3,919	1,240	2,566	113	0	0	3,919
Product and Extraction Data Base TASC	SS/CPAF/MIPR	Aug-94	2,454	2,454	1,268	807	379	0	0	2,454
Aeronautical Data Maintenance Intergraph	C/CPAF/Regn	Apr-95	Cont	Cont	220	300	300	0	Cont	Cont
Hydrographic Source Assessment System E-Systems	C/CPAF/Regn	Sep-94	29,400	29,400	3,586	2,700	5,364	9,850	7,900	29,400
Interface to DIA Systems Various	SS/CPAF/Regn	Jun-95	279	279	0	279	0	0	0	279
Crisis Support Capability Various	SS/CPAF/Regn	Jun-95	12,830	12,830	1,308	2,904	3,318	3,500	1,800	12,830
Modernized Catalog System Martin Marietta	C/CPFF/Regn	Jun-94	4,768	4,768	3,234	1,534	0	0	0	4,768
DPS Operability Requirements Various	Various	Various	Cont	Cont	0	0	11,445	3,251	Cont	Cont

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Defense Mapping Agency FY 1997 Budget Estimates

NDT&E Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature Program Element (PE): DMA MC&G Production System Improvement/0305139B

B. Budget Acquisition History and Planning Information (Continued)

Contractor or Government Performing Activity	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations										
<u>Project 200 New Processes</u>										
Modernized Catalog System Interfaces Martin Marietta	C/CPFF/Regn	Jun-96	2,514	2,514	0	0	1,198	816	500	2,514
Transmission of Digital Products Unknown	C/CPAF/Regn	Aug-95	Cont	Cont	0	0	300	0	Cont	Cont
Navigation Safety System Various	C/CPAF/Regn	Aug-95	11,207	11,207	0	729	2,325	3,153	5,000	11,207
System Operability Improvements Various	SS/CPAF/Regn	Various	8,111	8,111	6,170	141	800	1,000	0	8,111
Joint Engineering Team Actions Various	SS/CPAF/Regn	Various	2,539	2,539	2,193	346	0	0	0	2,539
Productivity Enhancements Unknown	C/CPAF/Regn	Dec-94	Cont	Cont	0	0	1,000	0	Cont	Cont
Migration of MC&G Production System Unknown	C/CPAF	Jun-97	Cont	Cont	0	0	0	10,000	Cont	Cont
Exploitation of Enhanced Imagery System Unknown	C/CPAF	Dec-96	78,900	78,900	0	0	0	24,100	54,800	78,900
Miscellaneous Various	Various	Various	Cont	Cont	12,721	6,764	838	675	Cont	Cont
Product Development Organizations Total			Cont	Cont	37,612	20,986	38,808	70,110	Cont	Cont
Support and Management Organizations Total			0	0	0	0	0	0	0	0
Test and Evaluation Organizations Total			0	0	0	0	0	0	0	0
Government Furnished Property Total			0	0	0	0	0	0	0	0

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Defense Mapping Agency FY 1997 Budget Estimates

RD&E Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RD&E, Defense-Wide/7 R-1 Item Nomenclature
 Program Element (PE): DMA MC&G Production System Improvement/0305139B

B. Budget Acquisition History and Planning Information (Continued)

Item Description	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Delivery Date	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations									
Project 200 New Processes									
Product Development Property Total				0	0	0	0	0	0
Support and Management Property Total				0	0	0	0	0	0
Test and Evaluation Property Total				0	0	0	0	0	0
Subtotal Product Development				37,612	20,986	38,808	70,110	Cont	Cont
Subtotal Support and Management				0	0	0	0	0	0
Subtotal Test and Evaluation				0	0	0	0	0	0
Total Project:				37,612	20,986	38,808	70,110	Cont	Cont

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**Defense Mapping Agency FY 1997 Budget Estimates
 RDT&E Budget Item Justification Sheet (R-2 Exhibit)**

Date: March 1996

Appropriation/Budget Activity:	R-1 Item Nomenclature Program Element (PE): DMA MC&G Production System Improvement/0305139B						Total Cost		
	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000			
Project 300 New Concepts	11,198	17,157	16,321	14,980	22,900	18,512	20,040	Cont	Cont
Cost (in \$ Thousands)								Cost to Complete	

(U) Project Justification Narrative:

- (U) As the DoD lead for Mapping, Charting and Geodesy (MC&G), DMA is responsible for advancing the state-of-the-art in MC&G production and exploitation technology; addressing Global Geospatial Information issues embedded in DoD Science and Technology thrust areas identified by OSD/Director, Defense Research and Engineering; and participating in national and international MC&G standards initiatives. Concept initiatives in support of this mission include:
 - The Enhanced Product Prototyping Environment (EPPE) which provides a rapid product development and system prototyping capability to support emerging Service requirements for digital information and products.
 - The MC&G Utility Software Environment (MUSE) which is a joint program with the military service labs to develop and distribute verified and validated standard MC&G utility software to users throughout the DoD.
 - Support to national and international standards organizations to develop national and international MC&G standards in cooperation with other MC&G producing organizations such as the National Science Foundation, the North Atlantic Treaty Organization, and the International Hydrographic Organization.
 - The Interoperable Map Software project which will develop/reengineer joint mapping software for use throughout DoD, resulting in interoperable C4I systems.
- Beginning in FY 1996, this project also includes initiatives previously identified under Defense Reconnaissance Support Activities (PE 0305159B) including evaluation of developing or planned advanced systems with potential for MC&G data exploitation. Developments address data extraction algorithms, accuracy initiatives, and operational scenarios.
- (U) FY 1995: Performed concept investigation and began development of Global Geospatial Information and Services (GGI&S) data warehouse and related concepts (\$3,260); continued MC&G Utility Software Environment (MUSE) development and implementation (\$2,000); continued technical support to national and international standards organizations (\$1,248); continued technology studies (\$1,530); performed DPS migration studies (\$682); supported prototyping efforts and concept studies with the Enhanced Product Prototyping Environment (EPPE) (\$950); and performed other activities supporting new concepts (\$1,628).
- (U) FY 1996: Continue technology studies related to migration (\$1,675); continue development of GGI&S data warehouse and related concepts (\$2,555); continue MUSE development and implementation (\$1,600); continue technical support to national and international standards organizations (\$800); continue development of concepts begun in PE 0305159B which include initiatives to continue primary source activities to improve accuracy and quality control processes (\$2,160) and begin requirements development for supporting source assessment and accuracy evaluation operations capabilities (\$857); perform DPS migration studies (\$4,000); develop concept for exploitation of advanced sensors; e.g., hyper-spectral investigation (\$2,500); continue support to EPPE (\$500); and perform other activities supporting new concepts (\$510).

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**Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)**

Date: March 1996

• (U) FY 1997: Continue technology studies (\$1,800); complete initial development and begin preplanned process improvements of GGI&S data warehouse and related concepts (\$2,250); continue MUSE development and implementations (\$2,000); continue technical support to national and international standards organizations (\$1,100); continue investigations of advanced sensor sources, e.g., hyper-spectral investigation (\$1,800); continue to improve accuracy and quality control processes (\$3,321); continue requirements development for supporting source assessment and accuracy evaluation operations capabilities (\$700); continue support to EPPE (\$500); begin development of Interoperable Map Software (\$2,800); and perform other activities supporting new concepts (\$50).

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Defense Mapping Agency FY 1997 Budget Estimates

RDT&E Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature Program Element (PE) i DNA MC&G Production System Improvement/0305139B

A. Project Cost Breakdown (\$ in Thousands)

	FY 1995	FY 1996	FY 1997
Project 100 New Concepts			
Project Cost Categories:			
Primary Hardware Development		1,253	212
Ancillary Hardware Development			
Development Support Equipment			
Acquisition	77	69	83
Research Support Equipment			
Acquisition			
Software Development	588	1,704	1,483
Licenses	78	69	100
Systems Engineering	3,561	3,792	3,560
Training Development		121	16
Integrated Logistics Support		121	16
Quality Assurance		36	18
Reliability, Maintainability, and Availability	45		
Configuration Management	22	17	5
Technical Data	806	69	20
Developmental Test and Evaluation	354	824	590
Operational Test and Evaluation	22	1,561	607
Contractor Engineering Support	3,192	1,326	215
Government Engineering Support	1,949	4,187	6,251
Program Management Support	482	1,596	2,609
Program Management Personnel		395	507
Travel	22	17	29
Research Personnel			
Miscellaneous			
TOTAL	11,198	17,157	16,321

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Defense Mapping Agency FY 1997 Budget Estimates

Date: March 1996

RDT&E Program Element/Project Cost Breakdown (R-3)

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature Program Element (PE): DMA M&G Production System Improvement/0305139B

B. Budget Acquisition History and Planning Information

Contractor or Government Performing Activity	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations										
Project 100 New Concepts										
Primary System Operations (S18)	MIPR	Various	Cont	Cont	0	0	857	700	Cont	Cont
SEG 18										
Primary Source Improvement Activities	SS/CPAF/Reqn	Various	Cont	Cont	0	0	2,160	3,321	Cont	Cont
Advanced Sensor Activities	MIPR	Various	Cont	Cont	0	0	1,500	1,800	Cont	Cont
Interferometric SAR	C/CPAF/Reqn	Jun-96	1,000	1,000	0	0	1,000	0	0	1,000
Technology Studies	Various	Various	Cont	Cont	1,497	1,530	675	800	Cont	Cont
Data Warehouse	C/CPAF/Reqn	Jun-95	Cont	Cont	500	3,260	2,555	2,250	Cont	Cont
Venture Technology	C/CPAF/Reqn	Dec-94	Cont	Cont	0	887	1,000	1,000	Cont	Cont
Support to M&G Standards	C/FP/Reqn	Jul-95	Cont	Cont	948	1,248	800	1,100	Cont	Cont
Unknown	SS/FP/MIPR/PO/Reqn									
M&G Utility Software Environment	SS/FP/MIPR	Jan-95	Cont	Cont	1,827	2,000	1,600	2,000	Cont	Cont
Interoperable Map Software	MIPR	Mar-97	Cont	Cont	0	0	0	2,800	Cont	Cont
DPS Migration Studies	Various	Feb-96	4,682	4,682	0	682	4,000	0	0	4,682
Miscellaneous	Various	Various	Cont	Cont	2,044	1,591	1,010	550	Cont	Cont
Product Development Organizations Total			Cont	Cont	6,816	11,198	17,157	16,321	Cont	Cont
Support and Management Organizations Total			0	0	0	0	0	0	0	0
Test and Evaluation Organizations Total			0	0	0	0	0	0	0	0
Government Furnished Property Total			0	0	0	0	0	0	0	0

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Defense Mapping Agency FY 1997 Budget Estimates

MDT&E Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature Program Element (PE): DMA MC&G Production System Improvement/03051398

B. Budget Acquisition History and Planning Information (Continued)

Item Description	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Delivery Date	Total Prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations									
Project_100_New_Concanta									
Product Development Property Total									
Support and Management Property Total									
Test and Evaluation Property Total									
Subtotal Product Development									
Subtotal Support and Management									
Subtotal Test and Evaluation									
Total Project:									
				6,816	11,198	17,157	16,321	Cont	Cont
				0	0	0	0	0	0
				0	0	0	0	0	0
				6,816	11,198	17,157	16,321	Cont	Cont

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Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7

R-1 Item Nomenclature
Program Element (PE): Defense Reconnaissance Support Activities/0305159B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Total Program Element (PE) Cost	15,750	See Note						Cont	Cont
Project 200 New Processes	10,000							Cont	Cont
Project 300 New Concepts	5,750							Cont	Cont

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

This program evaluates and implements commercial and developing or planned advanced systems for potential MC&G data exploitation. Developments address data extraction algorithms and operational scenarios. Additional activities include test and evaluation to ensure source material support of Mapping, Charting, and Geodesy (MC&G) requirements.

Program Element 0305159B is found in Budget Activity 7 (Operational Systems Development) because the effort funded under this element supports the DMA MC&G production system.

B. (U) Program Change Summary

	FY 1995	FY 1996	FY 1997	Total Cost
FY 1996/1997 President's Budget	19,548	000	000	Cont
Adjustments to Appropriated Value Reprogrammed to MC&G Production System Improvement (PE 0305139B)	-3,798			
Current Budget Submit	15,750	000	000	Cont

Change Summary Explanation:

Beginning in FY 1996, this Program Element merged into DMA MC&G Production System Improvement (PE 0305139B) because the activities contained evolved into enhancements to the overall DMA MC&G production system.

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Defense Mapping Agency FY 1997 Budget Estimates
 RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7	R-1 Item Nomenclature					Total			
	Program Element (PE): Defense Reconnaissance Support Activities/0305159B								
Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Complete	Cost to
Project 200 New Processes									Cont
									Cont
		10,000							Cost

(U) Project Justification Narrative:

- (U) As a Combat Support Agency, DMA is responsible for establishing and maintaining the production processes required to support Service and Command Mapping, Charting, and Geodesy (MC&G) requirements. The initiative within this project implements MC&G data exploitation from alternative commercial imagery systems (e.g., LANDSAT, SPOT and emerging one- and three-meter commercial systems), Synthetic Aperture Radar, and foreign national sources. Developments address data extraction algorithms and operational scenarios and include development of capabilities to process, integrate, and archive commercial image source into the existing DMA production system and increase crisis response capability.
- (U) FY 1995: Awarded contract and began development of modifications to DMA's production system which will allow the exploitation of alternative commercial/other imagery sources (\$10,000). These efforts are described in the JMIP Congressional Justification Book.
- (U) FY 1996: See DMA MC&G Production System Improvement (PE 0305139B).
- (U) FY 1997: See DMA MC&G Production System Improvement (PE 0305139B).

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Defense Mapping Agency FY 1997 Budget Estimates
 RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature
 Program Element (PE): Defense Reconnaissance Support Activities/0305159B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Complete	Cost to Total
Project 200 New Processes									10,000

C. (U) Other Program Funding Summary	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Complete	Cost to Total
Related RDT&E: Program Element 0305139B, DMA MC&G Production System Improvement									20,986

D. (U) Schedule Profile	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Complete	Cost to Total
Alternate Source Exploitation									
AOC-Award of Contract									

FY 1995			
1	2	3	4
			AOC

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Defense Mapping Agency FY 1997 Budget Estimates

RD7&E Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RD7&E, Defense-Wide/7

R-1 Item Nomenclature
Program Element (PE): Defense Reconnaissance Support Activities/030515

A. Project Cost Breakdown (\$ in Thousands)

	FY 1995	FY 1996	FY 1997
Project 200 New Processes			
Project Cost Categories:			
Primary Hardware Development	1,150		
Ancillary Hardware Development			
Development Support Equipment Acquisition			
Research Support Equipment Acquisition			
Software Development Licenses	2,950		
Systems Engineering Training Development	380		
Integrated Logistics Support Quality Assurance	4,230		
Reliability, Maintainability, and Availability	110		
Configuration Management Technical Data	110		
Developmental Test and Evaluation	150		
Operational Test and Evaluation			
Contractor Engineering Support	920		
Government Engineering Support			
Program Management Support			
Program Management Personnel Travel			
Research Personnel			
Miscellaneous			
TOTAL	10,000		

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Defense Mapping Agency FY 1997 Budget Estimates

Date: March 1996

MDT&E Program Element/Project Cost Breakdown (R-3)

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature Program Element (PE): Defense Reconnaissance Support Activities/030515

B. Budget Acquisition History and Planning Information

Contractor or Government Performing Activity	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations										
Project_200_New_Processes										
Alternate Commercial Source Various		Jul-95	Cont		4,488	10,000				Cont
Product Development Organizations Total										
Support and Management Organizations Total			Cont		4,488	10,000				Cont
Test and Evaluation Organizations Total			0	0	0	0	0	0	0	0
Government Furnished Property Total			0	0	0	0	0	0	0	0

Item Description	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Delivery Date	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Property Total									
Support and Management Property Total				0	0	0	0	0	0
Test and Evaluation Property Total				0	0	0	0	0	0
Subtotal Product Development									
Subtotal Support and Management				4,488	10,000				Cont
Subtotal Test and Evaluation				0	0	0	0	0	0
Total Project:				4,488	10,000				Cont

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Defense Mapping Agency FY 1997 Budget Estimates
 RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7	R-1 Item Nomenclature					Total			
	Program Element (PE): Defense Reconnaissance Support Activities/0305159B								
Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Complete	Cost to
Project 300 New Concepts									Cont
		5,750							Cont

(U) Project Justification Narrative:

- (U) As the DoD Program Manager for Mapping, Charting, and Geodesy (MC&G), DMA is responsible for advancing the state of the art in MC&G production and exploitation technology, and addressing the MC&G issues embedded in DoD Science and Technology thrust areas identified by OSD/Director, Defense Research and Engineering. Concept initiatives in support of this mission include evaluation of developing or planned advanced systems with potential for MC&G data exploitation. Developments address data extraction algorithms, accuracy initiatives, and operational scenarios.
- (U) FY 1995: Continued studies and requirements development for the design, integration, and exploitation of new national sensors into the DMA production system (\$1,040); analyzed and integrated new accuracy requirements into existing DMA processes (\$3,210); delivered a capability to interface with the Requirements Management System (\$1,500). These efforts are described in the JMIP Congressional Justification Book.
- (U) FY 1996: See DMA MC&G Production System Improvement (PE 0305139B).
- (U) FY 1997: See DMA MC&G Production System Improvement (PE 0305139B).

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Defense Mapping Agency FY 1997 Budget Estimates
 RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature
 Program Element (PE): Defense Reconnaissance Support Activities/0305159B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Project 300 New Concepts		5,750						Cont	Cont

C. (U) Other Program Funding Summary	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Procurement:			731					Cont	Cont
Related RDT&E Program Element 0305139B, MC&G Production System Improvement			11,198					Cont	Cont

D. (U) Schedule Profile

	FY 1995			
	1	2	3	4
Primary Source Improvement Activities	AOC		D	
Source Assessment System Upgrades	AOC	AOC	D	D
Primary Source Operations		D		AOC D

AOC-Award of Contract
 D-Delivery

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Defense Mapping Agency FY 1997 Budget Estimates

RDTE Program Element/Project Cost Breakdown (R-3)

Date: March 1996

Appropriation/Budget Activity: RDTE, Defense-Wide/7 R-1 Item Nomenclature Program Element (PE): Defense Reconnaissance Support Activities/010515

A. Project Cost Breakdown (\$ in Thousands)

	FY 1995	FY 1996	FY 1997
Project 300 New Concepts			
Project Cost Categories:			
Primary Hardware Development	302		
Ancillary Hardware Development			
Development Support Equipment			
Acquisition			
Research Support Equipment			
Acquisition			
Software Development	529		
Licenses	1		
Systems Engineering	552		
Training Development	30		
Integrated Logistics Support	30		
Quality Assurance	8		
Reliability, Maintainability, and Availability	8		
Configuration Management	15		
Technical Data	15		
Developmental Test and Evaluation	302		
Operational Test and Evaluation	302		
Contractor Engineering Support			
Government Engineering Support	3,090		
Program Management Support	566		
Program Management Personnel			
Travel			
Research Personnel			
Miscellaneous			
TOTAL	5,750		

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Defense Mapping Agency FY 1997 Budget Estimates

Date: March 1996

ADRA Program Element/Project Cost Breakdown (R-3)

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature Program Element (BE) 1. Defense Reconnaissance Support Activities/030515

B. Budget Acquisition History and Planning Information

Contractor or Government Performing Activity	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations										
Project_100_New_Concepts										
Primary System Operations (S18) SEG 18	MIPR	Various	Cont	Cont	4,247	1,500				Cont
Primary Source Improvement Activities Various	SS/CPAF/Regn	Various	Cont	Cont	12,321	3,210				Cont
Advanced Sensor Activities Various	MIPR	Various	Cont	Cont	2,127	1,040				Cont
Product Development Organizations Total			Cont	Cont	18,695	5,750				Cont
Support and Management Organizations Total			0	0	0	0				0
Test and Evaluation Organizations Total			0	0	0	0				0
Government Furnished Property Total			0	0	0	0				0

Item Description	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Delivery Date	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Property Total				0	0				0
Support and Management Property Total				0	0				0
Test and Evaluation Property Total				0	0				0
Subtotal Product Development				18,695	5,750				Cont
Subtotal Support and Management				0	0				0
Subtotal Test and Evaluation				0	0				0
Total Project:				18,695	5,750				Cont

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