

**UNCLASSIFIED**

PE NUMBER: 0603850F

PE TITLE: Integrated Broadcast Service (DEM/VAL)

<b>Exhibit R-2, RDT&amp;E Budget Item Justification</b>	DATE <b>February 2007</b>
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<b>BUDGET ACTIVITY</b> <b>04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>PE NUMBER AND TITLE</b> <b>0603850F Integrated Broadcast Service (DEM/VAL)</b>
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Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	15.930	20.471	21.192	21.372	21.684	21.946	22.369	22.823	Continuing	TBD
4778 Integrated Broadcast Service	15.930	20.471	21.192	21.372	21.684	21.946	22.369	22.823	Continuing	TBD

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

The Integrated Broadcast Service (IBS) fulfills the warfighter's requirements for threat warning and situational awareness information with timely dissemination of intelligence and information. It also provides target tracking data to support threat avoidance, targeting, force protection, and situational awareness. This information is continually refined by data provided by strategic, operational and tactical sensors. This request funds the IBS system as described below.

- A Common Interactive Broadcast (CIB) on UHF satellite channel using a Common Message Format (CMF) and a MIL-STD Demand Assigned Multiple Access (DAMA) compliant waveform and Line of Sight (LOS) using the Wideband Networking Waveform (WNW) and Joint Tactical Radio System (JTRS).
- IBS includes a Global IBS Network Server (GINS), a Co-GINS, and four (4) Theater Interface Nodes (TINs) to support the geographic Combatant Commanders; all built to validated warfighter requirements.
- A centralized GINS and Co-GINS that receives data from each theater and then integrates this data into a worldwide picture available to all network/broadcast users.
- 4 regional TINs, where out-of-theater (and local) users not directly receiving the broadcast can receive the information broadcast on the CIB. Additionally, the TIN will receive and inject data into the CIB for producers without access to the theater CIB.
- An XML Based Common Message Format (CMF) Data Element Dictionary (DED) that defines IBS messages for broadcast of IBS information over available communications paths including the CIB and other Global Information Grid (GIG) networks.
- A Modular Advanced TRanslation Interchange with XML (MATRIX) Reformatter that provides a modular, platform-independent, multi-use translator to both support migration with legacy radios and to provide a long term solution for IBS FOC radio users.

This program is in budget activity 4 because it includes demonstrating and validating the use of technologies to create an operational integrated broadcast service.

Exhibit R-2, RDT&E Budget Item Justification

DATE

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BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0603850F Integrated Broadcast Service (DEM/VAL)

(U) B. Program Change Summary (\$ in Millions)

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	15.063	20.592	21.809	21.248
(U) Current PBR/President's Budget	15.930	20.471	21.192	21.372
(U) Total Adjustments	0.867	-0.121		
(U) Congressional Program Reductions		-0.043		
Congressional Rescissions		-0.078		
Congressional Increases				
Reprogrammings	0.867			
SBIR/STTR Transfer				
(U) <u>Significant Program Changes:</u>				

**Exhibit R-2a, RDT&E Project Justification**

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BUDGET ACTIVITY <b>04 Advanced Component Development and Prototypes (ACD&amp;P)</b>				PE NUMBER AND TITLE <b>0603850F Integrated Broadcast Service (DEM/VAL)</b>			PROJECT NUMBER AND TITLE <b>4778 Integrated Broadcast Service</b>			
Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4778 Integrated Broadcast Service	15.930	20.471	21.192	21.372	21.684	21.946	22.369	22.823	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

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

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This program is in budget activity 4 because it includes demonstrating and validating the use of technologies to create an operational integrated broadcast service.

**(U) B. Accomplishments/Planned Program (\$ in Millions)**

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Continue systems engineering, including development of architectures, system of systems management through the Joint Broadcast Configuration Control Board (JBCCB), and risk reduction studies using Simulation Based Acquisition (SBA) tools	2.408	0.911	2.019	2.089
(U) Continue the Phase II/Engineering, Manufacturing, and Development of the GINS and TINs	9.457	13.946	12.944	13.784
(U) Common Message Formant (CMF) Development	0.901			
(U) Satellite Communications (SATCOM) Broadcast Waveform Development	0.250			
(U) Continue Test & Evaluation	0.565	0.988	1.248	1.298
(U) Maintain a Program Management Office, including program supervision, finance and acquisition strategy execution	1.814	1.926	2.153	2.224

**Exhibit R-2a, RDT&E Project Justification**

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<b>BUDGET ACTIVITY</b> <b>04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>PE NUMBER AND TITLE</b> <b>0603850F Integrated Broadcast Service (DEM/VAL)</b>	<b>PROJECT NUMBER AND TITLE</b> <b>4778 Integrated Broadcast Service</b>
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(U) <b><u>B. Accomplishments/Planned Program (\$ in Millions)</u></b>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Joint Tactical Radio System (JTRS) Modular Advanced TRanslation and Interchange with XML (MATRIX) Reformatter	0.535	1.900	2.100	1.220
(U) Enterprise Systems Engineering/CMF Integration/CIB Integration/IBS CMF Data Base (ICDB)	0.000	0.800	0.728	0.757
(U) Total Cost	15.930	20.471	21.192	21.372

(U) <b><u>C. Other Program Funding Summary (\$ in Millions)</u></b>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							
(U) OPAF/PE 0305179F	11.006	11.889	18.257	18.560	12.755	13.016	13.302	13.595	Continuing	TBD
(U) O&M/PE 0305179F	15.648	10.344	18.566	17.847	18.548	18.518	18.621	19.055	Continuing	TBD

(U) **D. Acquisition Strategy**

IBS used an evolutionary acquisition approach with a Program Definition/Risk Reduction phase (Spiral 1), followed by a full and open competition award to BTG/Titan/L-3Comm to complete the Engineering, Manufacturing and Development (EMD) phase (Spiral 2-5).

MATRIX used an initial requirements definition phase followed by evolutionary acquisition approach for the development contract by means of a Sole-Source contract award to L3-Comm IS.

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**Exhibit R-3, RDT&E Project Cost Analysis**

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<b>BUDGET ACTIVITY</b> <b>04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>PE NUMBER AND TITLE</b> <b>0603850F Integrated Broadcast Service (DEM/VAL)</b>	<b>PROJECT NUMBER AND TITLE</b> <b>4778 Integrated Broadcast Service</b>
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(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total Prior to FY 2006 Cost</u>	<u>FY 2006</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2009</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
				<u>Cost</u>	<u>Award Date</u>									
(U) <u>Product Development</u> Phase 2 Spiral II - V	C/CPAF	BTG, Inc./Titan/L-3 Comm (Reston, VA)		9.457	Jan-06	13.946	Jan-07	12.944	Jan-08	13.784	Jan-09	Continuing	TBD	TBD
CMF Systems Engineering and Format Development	C/FFP	SAIC (Columbia, MD)		0.901	Jan-06							0.000	0.901	TBD
SATCOM Broadcast Waveform Development	MIPR	SPAWAR Systems (San Diego, CA)		0.250	Jun-06							0.000	0.250	TBD
JTRS MATRIX Reformatter	C/FFP	L-3 Comm, IS (Greenville, TX)		0.535	Jun-06	1.900	Mar-07	2.100	Mar-08	1.220	Mar-09	Continuing	TBD	TBD
IBS CMF Data Base	MIPR	SPAWAR Systems (San Diego, CA)				0.100	Jan-07					0.000	0.100	TBD
Subtotal Product Development			0.000	11.143		15.946		15.044		15.004		Continuing	TBD	TBD
Remarks:														
(U) <u>Support</u>													0.000	0.000
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) <u>Test &amp; Evaluation</u> Interoperability and Developmental Testing	MIPR/Project Order	JITC (Ft Huachuca, AZ) & 46th OSS (Eglin AFB, FL)		0.565	Jan-06	0.988	Jan-07	1.248	Jan-08	1.298	Jan-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.565		0.988		1.248		1.298		Continuing	TBD	TBD
Remarks:														
(U) <u>Management</u> SPO/ITSP	Various	Local Area (Bedford, MA)/Washington DC Area		1.814	Mar-06	1.926	Mar-07	2.153	Mar-08	2.224	Mar-09	Continuing	TBD	TBD

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Exhibit R-3 (PE 0603850F)

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**Exhibit R-3, RDT&E Project Cost Analysis**

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BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT NUMBER AND TITLE					
<b>04 Advanced Component Development and Prototypes (ACD&amp;P)</b>				<b>0603850F Integrated Broadcast Service (DEM/VAL)</b>				<b>4778 Integrated Broadcast Service</b>					
MITRE	SS/CPFF (FFRDC)	Bedford, MA	2.408	Oct-05	0.911	Mar-07	2.019	Oct-07	2.089	Oct-08	Continuing	TBD	TBD
Enterprise Engineering/CMF Integration/CIB Integration	SS/CPFF	L-3 Comm, IS (Greenville, TX)			0.700	Mar-07	0.728	Mar-08	0.757	Mar-09		2.185	
Subtotal Management			0.000	4.222		3.537		4.900		5.070	Continuing	TBD	TBD
Remarks:													
(U) Total Cost			0.000	15.930		20.471		21.192		21.372	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

DATE  
February 2007

BUDGET ACTIVITY  
04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE  
0603850F Integrated Broadcast Service (DEM/VAL)

PROJECT NUMBER AND TITLE  
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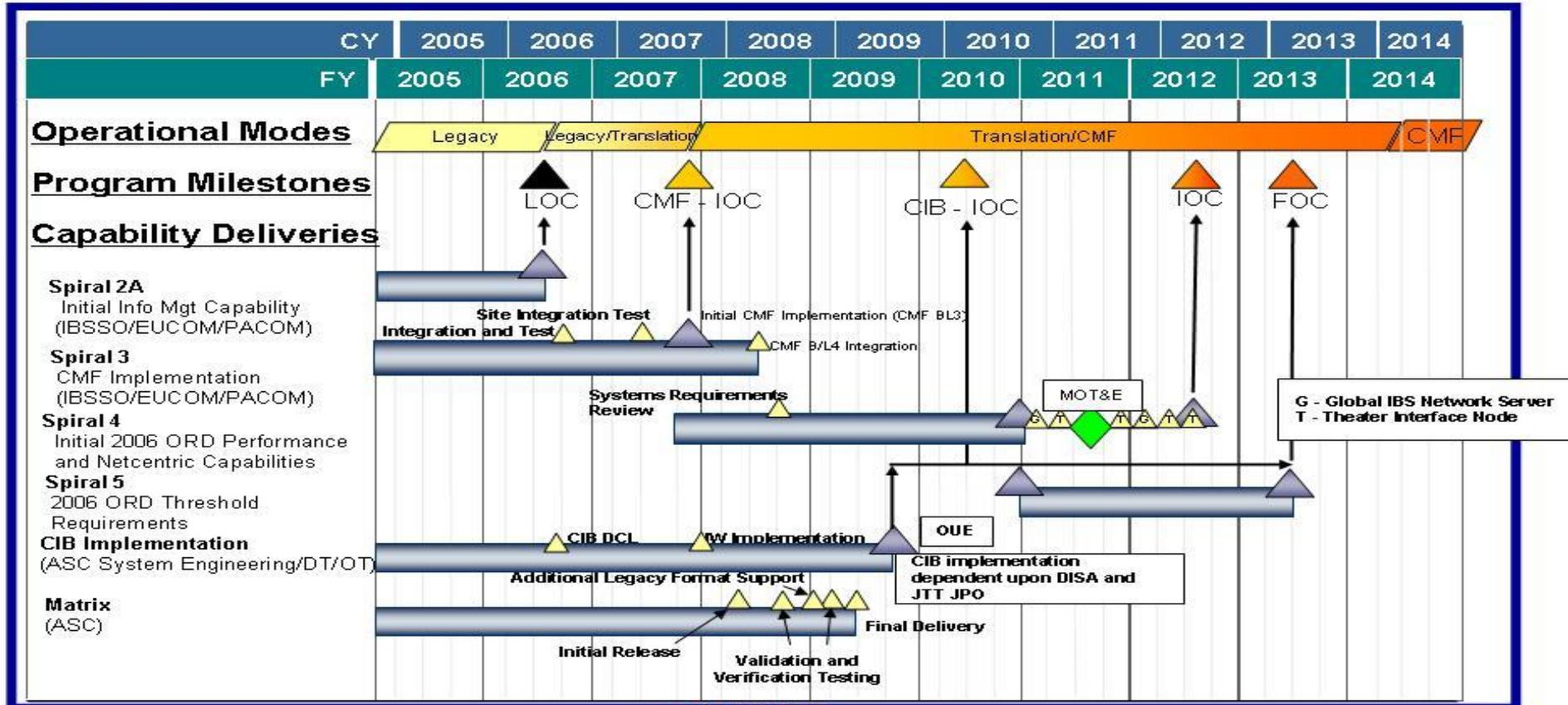


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# Acquisition Schedule

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<b>Exhibit R-4a, RDT&amp;E Schedule Detail</b>	DATE <b>February 2007</b>
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<b>BUDGET ACTIVITY</b> <b>04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>PE NUMBER AND TITLE</b> <b>0603850F Integrated Broadcast Service (DEM/VAL)</b>	<b>PROJECT NUMBER AND TITLE</b> <b>4778 Integrated Broadcast Service</b>
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<b>(U) <u>Schedule Profile</u></b>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Phase 2 Spiral III Development	1-4Q	1-4Q	1-2Q	
(U) Phase 2 Spiral III Fielding			2Q	
(U) Phase 2 Spiral IV System Requirements Review			4Q	
(U) MATRIX Development	1-4Q	1-4Q	1-4Q	1-2Q