FAAXX704: Automatic Dependent Surveillance-Broadcast (ADS-B) Exhibit 300: Part I: Summary Information and Justification (All Capital

Assets)

I.A. Overview

1. Date of Submission:	9/1/2006
2. Agency:	Department of Transportation
3. Bureau:	Federal Aviation Administration
4. Name of this Capital Asset:	FAAXX704: Automatic Dependent Surveillance- Broadcast (ADS-B)
5. Unique Project (Investment) Identifier: (For IT investment only, see section 53. For all other, use agency ID system.)	021-12-01-20-01-1230-00
6. What kind of investment will this be in FY2008? (Please NOTE: Investments moving to O&M ONLY in FY2008, with Planning/Acquisition activities prior to FY2008 should not select O&M. These investments should indicate their current status.)	Mixed Life Cycle
7. What was the first budget year this investment was submitted to OMB?	FY2007

8. Provide a brief summary and justification for this investment, including a brief description of how this closes in part or in whole an identified agency performance gap:

The Surveillance and Broadcast Services (SBS) program office is responsible for the Automatic Dependent Surveillance Broadcast (ADS-B) NAS-wide implementation. With constantly increasing air travel, the FAA recognizes the need for well-planned and well-managed air traffic solutions to continue to provide the safest and most efficient air traffic services in the world into the future. With the SBS program we can deliver integrated services, more scalable and cost-effective than existing systems, with improved capacity, efficiency, and safety. The SBS program meets a large performance gap in the capability of pilots to receive situational awareness information, thus providing for safety in ways legacy systems cannot by delivering services through cockpit avionics: 1) Airport surface maps along with traffic information. These maps improve situational awareness to minimize the likelihood of runway incursions. 2) Enhanced see-and-avoid capabilities which will assist pilots in preventing mid-air collisions. 3) Air traffic control (ATC) services in non-radar airspace. 4) Weather information, helping to reduce incidences of onboard injuries caused by turbulence. SBS Segment #1, FY07-FY11, will establish a performance-based acquisition (contract award scheduled for July 2007) capable of fully implementing the first step in the SBS plan: building the national ground infrastructure to support future surveillance and broadcast services, In Segment 1, the SBS program office will also develop and manage a rulemaking project request, and begin developing a notice of proposed rulemaking (NPRM) as part of the process to propose universal broadcast services avionics equipment in aircraft. The final architecture will be used as the cost basis in the Segment #2 business case for the National Airspace System-wide broadcast services deployment. We will maintain the prototype test bed through FY08 and the broadcast services capability will be expanded across parts of the NAS, with operational status planned for FY08. The SBS program office will also develop interfaces with four unique FAA automation platforms (MEARTS, HOST, STARS, CARTS) to support an In Service Decision. A Joint Resources Council is scheduled for Feb. 2007 covering Segment 2, FY09-FY13, which will include NAS-wide deployment and the remaining three automation platforms that serve the NAS. By FY2008 the SBS program will be in the Control and Evaluate CPIC Phases.

9. Did the Agency's	
Executive/Investment Committee	
approve this request?	

a. If "yes," what was the date of this approval?	6/7/2006
10. Did the Project Manager review this Exhibit?	Yes
11. Contact information of Project Manage	r?
Name	
Phone Number	
Email	
12. Has the agency developed and/or promoted cost effective, energy efficient and environmentally sustainable techniques or practices for this project.	Yes
a. Will this investment include electronic assets (including computers)?	Yes
b. Is this investment for new construction or major retrofit of a Federal building or facility? (answer applicable to non-IT assets only)	No
1. If "yes," is an ESPC or UESC being used to help fund this investment?	
2. If "yes," will this investment meet sustainable design principles?	
3. If "yes," is it designed to be 30% more energy efficient than relevant code?	
13. Does this investment support one of the PMA initiatives?	No
If "yes," check all that apply:	
13a. Briefly describe how this asset directly supports the identified initiative(s)?	
14. Does this investment support a program assessed using the Program Assessment Rating Tool (PART)? (For more information about the PART, visit www.whitehouse.gov/omb/part.)	Yes
a. If "yes," does this investment address a weakness found during the PART review?	Yes
b. If "yes," what is the name of the PART program assessed by OMB's Program Assessment Rating Tool?	FAA Air Traffic Services
c. If "yes," what PART rating did it receive?	Adequate
15. Is this investment for information technology?	Yes

If the answer to Question: "Is this investment for information technology?" was "Yes," complete this sub-section. If the answer is "No," do not answer this sub-section.

For information technology investments or	nly:
16. What is the level of the IT Project? (per CIO Council PM Guidance)	Level 3
17. What project management qualifications does the Project Manager have? (per CIO Council PM Guidance):	(1) Project manager has been validated as qualified for this investment
18. Is this investment identified as "high risk" on the Q4 - FY 2006 agency high risk report (per OMB's "high risk" memo)?	No
19. Is this a financial management system?	No
a. If "yes," does this investment address a FFMIA compliance area?	
1. If "yes," which compliance area:	
2. If "no," what does it address?	

b. If "yes," please identify the system name(s) and system acronym(s) as reported in the most recent financial systems inventory update required by Circular A-11 section 52

20. What is the percentage breakout for the total FY2008 funding request for the following? (This should total 100%)

Hardware	5.000000
Software	15.000000
Services	60.000000
Other	20.000000
21. If this project produces information dissemination products for the public, are these products published to the Internet in conformance with OMB Memorandum 05-04 and included in your agency inventory, schedules and priorities?	Yes

22. Contact information of individual responsible for privacy related questions:

Name

Phone Number	
Title	
E-mail	
23. Are the records produced by this investment appropriately scheduled with the National Archives and Records Administration's approval?	Yes

I.B. Summary of Funding

Provide the total estimated life-cycle cost for this investment by completing the following table. All amounts represent budget authority in millions, and are rounded

to three decimal places. Federal personnel costs should be included only in the row designated "Government FTE Cost," and should be excluded from the amounts shown for "Planning," "Full Acquisition," and "Operation/Maintenance." The total estimated annual cost of the investment is the sum of costs for "Planning," "Full Acquisition," and "Operation/Maintenance." For Federal buildings and facilities, life-cycle costs should include long term energy, environmental, decommissioning, and/or restoration costs. The costs associated with the entire life-cycle of the investment should be included in this report.

Table 1: SUMMARY OF SPENDING FOR PROJECT PHASES (REPORTED IN MILLIONS) (Estimates for BY+1 and beyond are for planning purposes only and do not represent budget decisions)									
	PY - 1 and Earlier	РҮ 2006	CY 2007	BY 2008	BY + 1 2009	BY + 2 2010	BY + 3 2011	BY + 4 and Beyond	Total
Planning									
Budgetary Resources	0	9.9	4.27	0	0	0	0	0	0
Acquisition									
Budgetary Resources	0	0	76.227	86.091	0	0	0	0	0
Subtotal Planning & Acquisit	tion								
Budgetary Resources	0	9.9	80.497	86.091	0	0	0	0	0
Operations & Maintenance									
Budgetary Resources	0	0	0	0.15	0	0	0	0	0
TOTAL									
Budgetary Resources	0	9.9	80.497	86.241	0	0	0	0	0
Government FTE Costs									
Budgetary Resources	0	0.489	1.329	1.741	0	0	0	0	0
Number of FTE represented by Costs:	0	4	10.63	12.301	0	0	0	0	0

Note: For the cross-agency investments, this table should include all funding (both managing partner and partner agencies). Government FTE Costs should not be included as part of the TOTAL represented.

2. Will this project require the agency to hire additional FTE's?	Yes		
a. If "yes," How many and in what year?	6FTEs in FY2007, 6 FTEs in FY2009, and 1 FTE in 2011.		

I.C. Acquisition/Contract Strategy

2. If earned value is not required or will not be a contract requirement for any of the contracts or task orders above, explain why:

The achievement of cost, schedule, and performance goals will be tracked and monitored through FAA best practices and established EVM processes defined by the FAA. Monthly program reviews, detailed schedule and EVM reporting will be applied in accordance with the FAA EVM Policy. Future contract(s) will include all EVM requirements established by the FAA and will be compliant with ANSI-EIA-748A standards, the NDIA Intent Guide, and the OMB A-11 guidance. Monthly program reviews, detailed schedule and EVM reporting will be included in all new contracts that are awarded as a part of this acquisition. Control account managers from both the FAA and the contractors will have responsibility for ensuring that the EVM plan, processes, and procedures are followed. Monthly Control Account Manager Reviews with the program management team will be conducted to ensure that the program is monitoring program performance measures and using all tools necessary to make the appropriate decisions with regards to technical scope, cost and schedule to allow the program to remain on track for program execution in

accordance with its approved baselines. For contracts that don't include a requirement to provide EVM; the program office will receive reports, required by those contracts, on actual costs, schedules and management metrics by charge number and work package. The program office will collect the data and enter it into their EVMS database for reporting purposes, according to FAA standards. The program office intends to make use of a performance based specification and acquisition to implement SBS. Surveillance will be defined as critical level service and will be bid to vendors to deploy in defined areas of coverage based on specifications that require levels of service rather than specific system design. Broadcast Services will be bid as separate specifications and will be defined as essential services. Contracts will be competed in full and open competition and will be awarded in accordance with the FAA Acquisition. By foregoing a traditional acquisition, where the FAA owns and maintains systems, it is believed costs can be reduced and vendors will be provided with the opportunity to develop innovative and transformational solutions. While the contract has yet to be awarded, a firm fixed price contract will be among the available options for contract award.

3. Do the contracts ensure Section 508 compliance?	Yes
a. Explain why:	The air traffic controllers must meet strict medical qualifications under OPM Qualification Standards, GS-2152, Air Traffic Control Series, as stated in FAA Order 3930.3A, Air Traffic Control Specialist Health Program. The GS-2152 require controllers to meet strict qualifications with respect to vision, hearing and other physical abilities that preclude the need for application of the 508 standards described at 1194 for this equipment.
4. Is there an acquisition plan which has been approved in accordance with agency requirements?	Yes
a. If "yes," what is the date?	6/7/2006
b. If "no," will an acquisition plan be developed?	

1. If "no," briefly explain why:

I.D. Performance Information

In order to successfully address this area of the exhibit 300, performance goals must be provided for the agency and be linked to the annual performance plan. The investment must discuss the agency's mission and strategic goals, and performance measures must be provided. These goals need to map to the gap in the agency's strategic goals and objectives this investment is designed to fill. They are the internal and external performance benefits this investment is expected to deliver to the agency (e.g., improve efficiency by 60 percent, increase citizen participation by 300 percent a year to achieve an overall citizen participation rate of 75 percent by FY 2xxx, etc.). The goals must be clearly measurable investment outcomes, and if applicable, investment outputs. They do not include the completion date of the module, milestones, or investment, or general goals, such as, significant, better, improved that do not have a quantitative or qualitative measure.

Agencies must use Table 1 below for reporting performance goals and measures for all non-IT investments and for existing IT investments that were initiated prior to FY 2005. The table can be extended to include measures for years beyond FY 2006.

	Performance Information Table 1:							
Fiscal Year	Strategic Goal(s) Supported	Performance Measure	Actual/baseline (from Previous Year)	Planned Performance Metric (Target)	Performance Metric Results (Actual)			

All new IT investments initiated for FY 2005 and beyond must use Table 2 and are required to use the Federal Enterprise Architecture (FEA) Performance Reference Model (PRM). Please use Table 2 and the PRM to identify the performance information pertaining to this major IT investment. Map all Measurement Indicators to the corresponding "Measurement Area" and "Measurement Grouping" identified in the PRM. There should be at least one Measurement Indicator for at least four different Measurement Areas (for each fiscal year). The PRM is available at www.egov.gov.

	Performance Information Table 2:							
Fiscal Year	Measurement Area	Measurement Category	Measurement Grouping	Measurement Indicator	Baseline	Planned Improvement to the Baseline	Actual Results	
2006	Customer Results	Customer Benefit	Customer Impact or Burden	Develop and Validate performance baseline and metrics for Segment 1	Develop and Validate Baseline. Starting BY07	Percent Improvement being developed. Starting BY07	06/2007	
2006	Mission and Business Results	Transportation	Air Transportation	Develop and Validate performance baseline and metrics for Segment 1	Develop and Validate Baseline. Starting BY07	Percent Improvement being developed. Starting BY07	06/2007	
2006	Processes and Activities	Productivity and Efficiency	Efficiency	Develop and Validate performance baseline and metrics for Segment 1	Develop and Validate Baseline. Starting BY07	Percent Improvement being developed. Starting BY07	06/2007	
2006	Technology	Efficiency	Accessibility	Develop and Validate performance baseline and metrics for Segment 1	Develop and Validate Baseline. Starting BY07	Percent Improvement being developed. Starting BY07	06/2007	
2006	Technology	Information and Data	Data Reliability and Quality	Develop and Validate performance baseline and metrics for Segment 1	Develop and Validate Baseline. Starting BY07	Percent Improvement being developed. Starting BY07	06/2007	
2006	Technology	Reliability and Availability	Availability	Develop and Validate performance baseline and metrics for Segment 1	Develop and Validate Baseline. Starting BY07	Percent Improvement being developed. Starting BY07	06/2007	
2007	Customer Results	Customer Benefit	Customer Impact or Burden	Expansion of Broadcast Services: Controlled Flight into Terrain Accident Costs from fatalities, injuries, and aircraft damage for UAT equipped GA fleet	Projected to be \$616M based on prototype system coverage to be replaced by National System Coverage in FY09.	because of little equipage (+/- tolerance band that converges	6/2009 because of lag in NTSB data	

2007	Customer Results		Customer Impact or Burden	Expansion of Broadcast Services: Weather-related Accident Costs from fatalities, injuries, and aircraft damage for UAT equipped GA fleet	Projected to be \$315.5M based on prototype system coverage to be replaced by National System Coverage in FY09.	Minimal improvement because of little equipage (+/- tolerance band that converges on measure over time)	6/2009 because of lag in NTSB data
2007	Customer Results	Customer Benefit	Customer Impact or Burden	Expansion of Broadcast Services: Mid-Air Collision Accident Costs from fatalities, injuries, and aircraft damage for UAT equipped GA fleet	coverage to be replaced by	improvement	6/2009 because of lag in NTSB data
2007	Mission and Business Results		Air Transportation	Expansion of Broadcast Services: Mid-Air Collision Rate for equipped UAT fleet	2.7X10 ⁻¹⁶ mid-air collisions per operation 1989- 2003, based on prototype system coverage to be replaced by National System Coverage in FY09.		6/2009 because of lag in NTSB Data
2007	Mission and Business Results	Transportation	Air Transportation	Expansion of Broadcast Services: Weather-related Accident Rate for equipped UAT equipped GA fleet	5.7 Weather- related accidents per million operations in total GA fleet 1989-2003, based on prototype system coverage to be replaced by National System Coverage in FY09.	in Weather- related accident rate for GA fleet equipped with UAT multi- function display in coverage area when FIS-B service available (+/- tolerance band that	6/2009 because of lag in NTSB data
2007	Processes and Activities	Productivity and Efficiency	Efficiency	Time for aircrew to acquire proximate traffic information. Technical Performance Measures modeling results	TBD – 9/07 See and avoid	TBD – TIS- B/ADS-B (+/- tolerance band that converges on measure over time)	1/2008

				for 2007/2008			
				will further define additional TPMs for future years.			
	Processes and Activities	Productivity and Efficiency	Efficiency	Time for aircrew to acquire weather information. Technical Performance Measures modeling results for 2007/2008 will further define additional TPMs for future years.	TBD-9/07 average time of data through current process	TBD – access FIS-B (+/- tolerance band that converges on measure over time)	1/2008
2007	Technology	Efficiency	Accessibility	Expansion of Broadcast Services: Percent of GA NAS-wide operations inside FIS-B and TIS-B coverage areas		Coverage area contains 24% of NAS-wide GA Operations (+/- tolerance band that converges on measure over time)	1/2008
2007	Technology	Information and Data	Data Reliability and Quality	Expansion of Broadcast Services: FIS-B latency	No Transmission, based on prototype system coverage to be replaced by National System Coverage in FY09.	FIS-B latency < 10 sec per message (Time from receipt of external data to message transmission) (+/- tolerance band that converges on measure over time)	1/2008
2007	Technology	Information and Data	Data Reliability and Quality	Expansion of Broadcast Services: TIS-B latency	No Transmission, based on prototype system coverage to be replaced by National System Coverage in FY09.	TIS-B latency <= 6.0 sec (Time of measurement of source position data to aircraft display) (+/- tolerance band that converges on measure over time)	1/2008
2007	Technology	Information and Data	Data Reliability and Quality	Expansion of Broadcast Services: ADS-R latency	No ADS-R, based on prototype system coverage to be replaced by National System Coverage in FY09.	ADS-R latency <= 3.0 sec (Time of ADS-R message applicability until display on aircraft) (+/- tolerance band that converges on measure over time)	1/2008
2007	Technology	Information and Data	Data Reliability and Quality	Expansion of Broadcast	No ADS-B, based on	End-to-end ADS-B	1/2008

				Services: ADS-B latency	prototype system coverage to be replaced by National System Coverage in FY09.	surveillance latency <= 2.7 seconds for terminal operations, <= 3.3 seconds for en route operations. (+/- tolerance band that converges on measure over time)	
2007	Technology	Reliability and Availability	Availability	Expansion of Broadcast Services: Percent of FIS-B service availability	Does not exist, based on prototype system coverage to be replaced by National System Coverage in FY09.	FIS-B service availability >= 99.9% (+/- tolerance band that converges on measure over time)	1/2008
2007	Technology	Reliability and Availability	Availability	Expansion of Broadcast Services: Percent of TIS-B service availability	No TIS-B Availability, based on prototype system coverage to be replaced by National System	TIS-B service availability >= 99.9% (+/- tolerance band that converges on measure over time)	1/2008
2007	Technology	Reliability and Availability	Availability	Expansion of Broadcast Services: ADS-R service availability	No ADS-R, based on prototype system coverage to be replaced by National System Coverage in FY09.	ADS-R service availability >= 99.9% (+/- tolerance band that converges on measure over time)	1/2008
2008	Customer Results	Customer Benefit	Customer Impact or Burden	Expansion of Broadcast Services: Controlled Flight into Terrain Accident Costs from fatalities, injuries, and aircraft damage for UAT equipped GA fleet	Projected to be \$625M based on prototype system coverage to be replaced by National System Coverage in FY09.	Reduction in costs because of equipped aircraft of \$372K (+/- tolerance band that converges on measure over time)	of lag in
2008	Customer Results	Customer Benefit	Customer Impact or Burden	Expansion of Broadcast Services: Weather-related Accident Costs from fatalities, injuries, and aircraft damage for UAT equipped GA fleet	Projected to be \$320M based on prototype system coverage to be replaced by National System Coverage in FY09.	because of equipped aircraft of \$204K (+/- tolerance	6/2010 because of lag in NTSB data
2008	Customer Results	Customer Benefit	Customer Impact or Burden	Expansion of Broadcast Services: Mid-Air Collision Accident Costs from	Projected to be \$74M based on prototype system coverage to be	Reduction in yearly cost because of UAT- equipped aircraft of \$1800	6/2010 because of lag in NTSB data

2008	Mission and Business Results	Transportation	Air Transportation	GA fleet Expansion of	replaced by National System Coverage in FY09. 7.3 CFIT accidents per million operations in total GA fleet 1989-2003, based on prototype system coverage to be replaced by National System Coverage in FY09.	(+/- tolerance band that converges on measure over time) 17% reduction in CFIT accident rate for GA fleet equipped with UAT multi- function display (+/- tolerance band that converges on measure over time)	6/2010 because of lag in NTSB data
2008	Mission and Business Results	Transportation	Air Transportation	Expansion of Broadcast Services: Mid-Air Collision Rate for equipped UAT fleet	2.7X10^-16 mid-air collisions per operation 1989- 2003, based on prototype system coverage to be replaced by National System Coverage in FY09.	71% reduction in mid-air collision rate for GA fleet equipped with UAT multi- function display in coverage area when TIS-B service available (+/- tolerance band that converges on measure over time) Actual totals to show incremental improvement.	6/2010 because of lag in NTSB data
2008	Mission and Business Results	Transportation	Air Transportation	Expansion of Broadcast Services: Weather-related Accident Rate for equipped UAT equipped GA fleet	5.7 Weather- related accidents per million operations in total GA fleet 1989-2003, based on prototype system coverage to be replaced by National System Coverage in FY09.	26% reduction in Weather- related accident rate for GA fleet equipped with UAT multi- function display in coverage area when FIS-B service available (+/- tolerance band that converges on measure over time) Actual totals to show incremental improvement.	6/2010 because of lag in NTSB data
2008	Processes and Activities	Productivity and Efficiency	Efficiency	Time for aircrew to acquire proximate traffic information. Technical Performance Measures modeling results for 2007/2008	TBD – 9/07 See and avoid	TBD â€" TIS- B/ADS-B (+/- tolerance band that converges on measure over time)	1/2009

				will further define additional TPMs for future years.			
2008	Processes and Activities	Productivity and Efficiency	Efficiency	Time for aircrew to acquire weather information. Technical Performance Measures modeling results for 2007/2008 will further define additional TPMs for future years.	TBD-9/07 average time of data through current process	TBD à€" access FIS-B (+/- tolerance band that converges on measure over time)	1/2009
2008	Technology	Efficiency	Accessibility	Expansion of Broadcast Services: Percent of GA NAS-wide operations inside FIS-B and TIS-B coverage areas		Coverage area contains 24% of NAS-wide GA Operations (+/- tolerance band that converges on measure over time)	1/2009
2008	Technology	Information and Data	Data Reliability and Quality	Expansion of Broadcast Services: FIS-B latency	No Transmission, based on prototype system coverage to be replaced by National System Coverage in FY09.	FIS-B latency < 10 sec per message (Time from receipt of external data to message transmission) (+/- tolerance band that converges on measure over time)	1/2009
2008	Technology	Information and Data	Data Reliability and Quality	Expansion of Broadcast Services: TIS-B latency	No Transmission, based on prototype system coverage to be replaced by National System Coverage in FY09.	<= 6.0 sec (Time of measurement of source position data to aircraft display) (+/-	1/2009
2008	Technology	Information and Data	Data Reliability and Quality	Expansion of Broadcast Services: ADS-R latency	No ASD-R, based on prototype system coverage to be replaced by National System Coverage in FY09.	ADS-R latency <= 3.0 sec (Time of ADS-R message applicability until display on aircraft) (+/- tolerance band that converges on measure over time)	1/2009
2008	Technology	Information and Data	Data Reliability and Quality	Expansion of Broadcast Services: ADS-B	No ADS-B, based on prototype	End-to-end ADS-B surveillance	1/2009

				latency	system coverage to be replaced by National System Coverage in FY09.	latency <= 2.7 seconds for terminal operations, <=3.3 seconds for en route operations. (+/- tolerance band that converges on measure over time)	
2008	Technology	Reliability and Availability	Availability	Expansion of Broadcast Services: Percent of FIS-B service availability	Does not exist, based on prototype system coverage to be replaced by National System Coverage in FY09.	FIS-B service availability >= 99.9% (+/- tolerance band that converges on measure over time)	1/2009
2008	Technology	Reliability and Availability	Availability	Expansion of Broadcast Services: Percent of TIS-B service availability	No TIS-B Availability, based on prototype system coverage to be replaced by National System Coverage in FY09.	TIS-B service availability >= 99.9% (+/- tolerance band that converges on measure over time)	1/2009
2008	Technology	Reliability and Availability	Availability	Expansion of Broadcast Services: ADS-R service availability	No ADS-R, based on prototype system coverage to be replaced by National System Coverage in FY09.	ADS-R service availability >= 99.9% (+/- tolerance band that converges on measure over time)	1/2009
2009	Customer Results	Customer Benefit	Customer Impact or Burden	Expansion of Broadcast Services: Controlled Flight into Terrain Accident Costs from fatalities, injuries, and aircraft damage for UAT equipped GA fleet	Projected to be \$633M	Reduction in costs because of equipped aircraft of \$688K	of lag in
2009	Customer Results	Customer Benefit	Customer Impact or Burden	Expansion of Broadcast Services: Weather-related Accident Costs from fatalities, injuries, and aircraft damage for UAT equipped GA fleet	Projected to be \$324M	Reduction in yearly cost because of equipped aircraft of \$634K	
2009	Customer Results	Customer Benefit	Customer Impact or Burden	Expansion of Broadcast Services: Mid-Air Collision Accident	Projected to be \$76M	Reduction in yearly cost because of UAT- equipped	6/2011 because of lag in NTSB

			Costs from fatalities, injuries, and aircraft damage for UAT equipped GA fleet		aircraft of \$3200	data
Customer Results	Customer Benefit	Customer Impact or Burden	CDTI carrier operations: Airborne delay of equipped flights at Louisville International Airport during marginal visual instrument conditions	2006-2008 baseline airborne delay for equipped arrivals into Louisville during marginal visual conditions	75% reduction in difference between airborne delay during MVMC and VMC conditions for equipped aircraft. Estimated savings of 20 hrs.	6/2010
Mission and Business Results	Transportation	Transportation	Expansion of Broadcast Services: Controlled Flight into Terrain Accident Rate for UAT equipped GA and Air Taxi fleet	7.3 CFIT accidents per million operations in total GA fleet		6/2011 because of lag in NTSB data
Mission and Business Results	Transportation	Air Transportation	Expansion of Broadcast Services: Weather-related Accident Rate for equipped UAT equipped GA and Air Taxi fleet	5.7 Weather- related accidents per million operations in total GA fleet	26% reduction in Weather- related accident rate for GA fleet equipped with UAT multi- function display in coverage area when FIS-B service available. Actual totals will be reported showing incremental improvement.	6/2011 because of lag in NTSB data
Mission and Business Results	Transportation	Air Transportation	Expansion of Broadcast Services: Mid-Air Collision Rate for equipped UAT fleet	2.7X10^-16 mid-air collisions per operation	71% reduction in mid-air collision rate for GA fleet equipped with UAT multi- function display in coverage area when TIS-B service available. Actual totals will be reported showing incremental improvement.	6/2011 because of lag in NTSB data
Mission and Business Results	Transportation	Air Transportation	CDTI carrier operations: Airborne delay of	2006-2008 baseline airborne delay	75% reduction in difference between	6/2010

				equipped flights at Louisville International Airport during marginal visual instrument conditions	for equipped arrivals into Louisville during marginal visual conditions	airborne delay during MVMC and VMC conditions for equipped aircraft. Estimated savings of 20 hrs. Actual totals will be reported showing incremental improvement.	
2009	Processes and Activities	Productivity and Efficiency	Efficiency	Time for aircrew to acquire proximate traffic information.	TBD – 9/07 See and avoid	TBD – TIS- B/ADS-B	1/2010
2009	Processes and Activities	Productivity and Efficiency	Efficiency	Time for aircrew to acquire weather information	TBD-9/07 average time of data through current process	TBD – access FIS-B	1/2010
2009	Technology	Efficiency	Accessibility	Expansion of Broadcast Services: Percent of GA NAS-wide operations inside FIS-B and TIS-B coverage areas		Coverage area contains 59% of NAS-wide GA Operations	1/2010
2009	Technology	Information and Data	Data Reliability and Quality	Expansion of Broadcast Services: FIS-B latency	No Transmission	FIS-B latency < 10 sec per message (Time from receipt of external data to message transmission)	1/2010
2009	Technology	Information and Data	Data Reliability and Quality	Expansion of Broadcast Services: TIS-B latency	No Transmission	TIS-B latency <= 6.0 sec (Time of measurement of source position data to aircraft display)	1/2010
2009	Technology	Information and Data	Data Reliability and Quality	Expansion of Broadcast Services: ADS-R latency	No ADS-R	ADS-R latency <= 3.0 sec (Time of ADS-R message applicability until display on aircraft)	1/2010
2009	Technology	Information and Data	Data Reliability and Quality	Expansion of Broadcast Services: ADS-B latency	No ADS-B		1/2010
2009	Technology	Reliability and Availability	Availability	Expansion of Broadcast Services: FIS-B	Does not exist	FIS-B service availability >= 99.9%	1/2010

				service availability			
2009	Technology	Reliability and Availability	Availability	Expansion of Broadcast Services: TIS-B service availability	No TIS-B Availability	TIS-B service availability >= 99.9%	1/2010
2009	Technology	Reliability and Availability	Availability	Expansion of Broadcast Services: ADS-R service availability	No ADS-R	ADS-R service availability >= 99.9%	1/2010
2010	Customer Results	Customer Benefit	Customer Impact or Burden	Expansion of Broadcast Services: Controlled Flight into Terrain Accident Costs from fatalities, injuries, and aircraft damage for UAT equipped GA fleet	Projected to be \$642M	Reduction in costs because of equipped aircraft of \$2.2M	of lag in
2010	Customer Results	Customer Benefit	Customer Impact or Burden	Expansion of Broadcast Services: Weather-related Accident Costs from fatalities, injuries, and aircraft damage for UAT equipped GA fleet	Projected to be \$329M	Reduction in yearly cost because of equipped aircraft of \$2.6M	6/2012 because of lag in NTSB data
2010	Customer Results	Customer Benefit	Customer Impact or Burden	Expansion of Broadcast Services: Mid-Air Collision Accident Costs from fatalities, injuries, and aircraft damage for UAT equipped GA fleet	Projected to be \$77M	Reduction in yearly cost because of UAT- equipped aircraft of \$34K	6/2012 because of lag in NTSB data
2010	Customer Results	Customer Benefit	Customer Impact or Burden	Gulf of Mexico, Low-altitude: Average passenger delay of IFR flights in low-altitude sector during IMC conditions	Estimated Baseline passenger delay of 11,538 hrs	Reduction of passenger delay hrs by 28% or 3110 hrs a year after communications and weather installation	6/2011
2010	Customer Results	Customer Benefit	Customer Impact or Burden	CDTI carrier operations: Airborne delay of equipped flights at Louisville International Airport during marginal visual instrument conditions	2006-2008 baseline airborne delay for equipped arrivals into Louisville during marginal visual conditions	75% reduction in difference between airborne delay during MVMC and VMC conditions for equipped aircraft. Estimated annual savings of 33 hrs.	6/2011

2010	Mission and Business Results	Transportation	Air Transportation	Expansion of Broadcast Services: Controlled Flight into Terrain Accident Rate for UAT equipped GA and Air Taxi fleet	7.3 CFIT accidents per million operations in total GA fleet	17% reduction in CFIT accident rate for GA fleet equipped with UAT multi- function display	6/2012 because of lag in NTSB data
2010	Mission and Business Results	Transportation	Air Transportation	Expansion of Broadcast Services: Weather-related Accident Rate for equipped UAT equipped GA and Air Taxi fleet	5.7 Weather- related accidents per million operations in total GA fleet	26% reduction in Weather- related accident rate for GA fleet equipped with UAT multi- function display in coverage area when FIS-B service available	6/2012 because of lag in NTSB data
2010	Mission and Business Results	Transportation	Air Transportation	Expansion of Broadcast Services: Mid-Air Collision Rate for equipped UAT fleet	2.7X10^-16 mid-air collisions per operation	71% reduction in mid-air collision rate for GA fleet equipped with UAT multi- function display in coverage area when TIS-B service available	6/2012 because of lag in NTSB data
2010	Mission and Business Results	Transportation	Air Transportation	Gulf of Mexico, Low-altitude: Average block delay of IFR flights in low- altitude sector during IMC conditions	Estimated Baseline delay of 11,538 hrs	Reduction of delay hrs by 28% or 3110 hrs a year after communications and weather installation	6/2011
2010	Mission and Business Results	Transportation	Air Transportation	CDTI carrier operations: Airborne delay of equipped flights at Louisville International Airport during marginal visual instrument conditions	2006-2008 baseline airborne delay for equipped arrivals into Louisville during marginal visual conditions	75% reduction in difference between airborne delay during MVMC and VMC conditions for equipped aircraft. Estimated savings of 20 hrs.	6/2011
2010	Processes and Activities	Productivity and Efficiency	Efficiency	Time for aircrew to acquire proximate traffic information.	TBD – 9/07 See and avoid	TBD – TIS- B/ADS-B	1/2011
2010	Processes and Activities	Productivity and Efficiency	Efficiency	Time for aircrew to acquire weather information	TBD-9/07 average time of data through current process	TBD – access FIS-B	1/2011
2010	Processes and Activities	Productivity and Efficiency	Efficiency	CDTI carrier applications: Effective capacity of Louisville International Airport during marginal visual instrument	2006-2008 Baseline peak arrival rate during marginal visual meteorological conditions	75% reduction in difference between peak arrival rates during MVMC and VMC conditions.	6/2011

				conditions			
2010	Processes and Activities	Productivity and Efficiency	Efficiency	Gulf of Mexico, Low-altitude: IFR capacity of low- altitude sector after improved services (communications, weather, surveillance)	Instantaneous capacity of 10 aircraft	Instantaneous capacity of 15 aircraft after communications, weather installation	1/2011
2010	Technology	Information and Data	Data Reliability and Quality	Expansion of Broadcast Services: FIS-B latency	No Transmission	FIS-B latency < 10 sec per message (Time from receipt of external data to message transmission)	1/2011
2010	Technology	Information and Data	Data Reliability and Quality	Expansion of Broadcast Services: TIS-B latency	No Transmission	TIS-B latency <= 6.0 sec (Time of measurement of source position data to aircraft display)	1/2011
2010	Technology	Information and Data	Data Reliability and Quality	Expansion of Broadcast Services: ADS-R Latency	No Transmission	ADS-R latency <= 3.0 sec (Time of ADS-R message applicability until display on aircraft)	1/2011
2010	Technology	Information and Data	Data Reliability and Quality	Expansion of Broadcast Services: ADS-B surveillance latency	No Transmission	End-to-end ADS-B surveillance latency <= 2.7 seconds for terminal operations, <=3.3 seconds for en route operations.	1/2011
2010	Technology	Information and Data	Data Reliability and Quality	CDTI carrier operations & Gulf of Mexico – Low & high altitude: Terminal ATC surveillance application latency	No Transmission	Terminal ATC surveillance application latency <= 2.7 sec (time of applicability of ADS-B Message data until display by ATC Automation)	1/2011
2010	Technology	Reliability and Availability	Availability	Gulf of Mexico, Low-altitude: Availability of upgraded communications and weather stations in low- altitude Gulf of Mexico sector	No Communications and Weather	Upgraded communications and weather station availability >= 99.9%	1/2011
2010	Technology	Reliability and Availability	Availability	Expansion of Broadcast Services: FIS-B	No FIS-B	FIS-B service availability >= 99.9%	1/2011

				service availability			
2010	Technology	Reliability and Availability	Availability	Expansion of Broadcast Services: TIS-B service availability	No TIS-B	TIS-B service availability >= 99.9%	1/2011
2010	Technology	Reliability and Availability	Availability	Expansion of Broadcast Services: ADS-R service availability	No TIS-B Availability	ADS-R service availability >= 99.9%	1/2011
2010	Technology	Reliability and Availability	Availability	CDTI carrier operations & Gulf of Mexico – Low & high altitude: ADS-B service availability	No ADS-B	ADS-B service availability >= 99.999% (Includes total outage time for navigation source, back up surveillance source, broadcast services infrastructure, and automation system)	1/2011

I.E. Security and Privacy

In order to successfully address this area of the business case, each question below must be answered at the system/application level, not at a program or agency level. Systems supporting this investment on the planning and operational systems security tables should match the systems on the privacy table below. Systems on the Operational Security Table must be included on your agency FISMA system inventory and should be easily referenced in the inventory (i.e., should use the same name or identifier).

All systems supporting and/or part of this investment should be included in the tables below, inclusive of both agency owned systems and contractor systems. For IT investments under development, security and privacy planning must proceed in parallel with the development of the system/s to ensure IT security and privacy requirements and costs are identified and incorporated into the overall lifecycle of the system/s.

Please respond to the questions below and verify the system owner took the following actions:

1. Have the IT security costs for the system(s) been identified and integrated into the overall costs of the investment:	Yes
a. If "yes," provide the "Percentage IT Security" for the budget year:	0.870000
2. Is identifying and assessing security and privacy risks a part of the overall risk management effort for each system supporting or part of this investment.	Yes

5. Have any weaknesses, not yet remediated, related to any of the systems part Yes of or supporting this investment been identified by the agency or IG?

a. If "yes," have those weaknesses been incorporated agency's plan of action Yes and milestone process?

6. Indicate whether an increase in IT security funding is requested to remediate No IT security weaknesses?

a. If "yes," specify the amount, provide a general description of the weakness, and explain how the funding request will remediate the weakness.

	8. Planning & Operational Systems - Privacy Table:							
Name of System	Is this a new system?	Is there a Privacy Impact Assessment (PIA) that covers this system?	Is the PIA available to the public?	Is a System of Records Notice (SORN) required for this system?	Was a new or amended SORN published in FY 06?			
Broadcast Services System Program	Yes	No, because the system does not contain, process, or transmit personal identifying information.	No, because a PIA is not yet required to be completed at this time.	No	No, because the system is not a Privacy Act system of records.			

I.F. Enterprise Architecture (EA)

In order to successfully address this area of the business case and capital asset plan you must ensure the investment is included in the agency's EA and Capital Planning and Investment Control (CPIC) process, and is mapped to and supports the FEA. You must also ensure the business case demonstrates the relationship between the investment and the business, performance, data, services, application, and technology layers of the agency's EA.

1. Is this investment included in your agency's target enterprise architecture?	Yes
a. If "no," please explain why?	
2. Is this investment included in the agency's EA Transition Strategy?	No
a. If "yes," provide the investment name as identified in the Transition Strategy provided in the agency's most recent annual EA Assessment.	
b. If "no," please explain why?	
To effectively balance the development and management of the DOT Transit	ion Strategy, the first version

To effectively balance the development and management of the DOT Transition Strategy, the first version was scoped to include those investments with development activities (non O&M). Additionally, as the NAS Architecture was publicly available, it was also not fully integrated with the materials forwarded to OMB in February 2006. However, the NAS is considered part of the DOT Transition Strategy and will be more fully integrated within the next revision. Future revisions are set to expand upon that scope and include both steady state (O&M) investments and expanded linkages to the NAS Architecture. Since this FAA investment does not appear to be specifically mentioned within the DOT Transition Strategy or the FAA Modernization Blueprint, please refer to the following public NAS websites which document the plan for the FAA's target architecture where the investment can be found as well as a sequencing plan showing the dependencies in the NAS Operational Improvement Report. Please reference the link and search on ADS-B. http://www.nas-architecture.faa.gov/nas5/downloads/full_oi_long_report.pdf

3. Service Reference Model (SRM) Table:

Identify the service components funded by this major IT

custom	investment (e.g., knowledge management, content management, customer relationship management, etc.). Provide this information in the format of the following table. For detailed guidance regarding components, please refer to http://www.whitehouse.gov/omb/egov/.							
Agency Component Name	Agency Component Description	Service Domain	FEA SRM Service Type	FEA SRM Component		FEA Service Component Reused UPI	Internal or External Reuse?	BY Funding Percentage
Aircraft-to- Aircraft Separation (ATC- Separation Assurance):	Aircraft are separated from other known aircraft in the terminal, en route, and oceanic environments. Separation assurance involves the application of separation standards to ensure aircraft remain an appropriate minimum distance or altitude from other known aircraft. Standards are defined for aircraft based on aircraft type, size, equipment, and for operating in different environments. (NAS ATC- Separation Assurance):	Business Analytical Services	Visualization	Mapping / Geospatial / Elevation / GPS			No Reuse	75
Aircraft- Terrain- Obstacles (ATC- Separation Assurance)	Aircraft are separated from terrain and obstacles using published safety zones and processing position and intent information. Aircraft positions are derived from navigational systems, surveillance information,	Business	Visualization	Mapping / Geospatial / Elevation / GPS			No Reuse	5

	visual orientation, and position reports to ensure an aircraft's trajectory maintains a minimum safe distance from ground, mountainous terrain, and man-made obstacles. (NAS ATC- Separation Assurance)						
Traffic Advisory (ATC- Advisory Services)	Traffic advisories are provided to alert aircraft to potential conflicts with others on the surface or in- flight. For example, traffic advisories are provided to aircraft or other flight objects that are in the proximity of hot air/gas balloons, missile launches, or other potential hazards. Traffic advisories for aircraft on the surface include the number, type, position, and intent of the ground traffic. (NAS ATC-Advisory Services)	Business Analytical Services	Visualization	Mapping / Geospatial / Elevation / GPS		No Reuse	10
Weather Advisories Capability (ATC- Advisory Services)	ATC Advisories - Weather information is available either automatically or manually through communication with ATC and other facilities. For example,	Services	Visualization	Mapping / Geospatial / Elevation / GPS		No Reuse	10

pilots receive				
weather				
advisories				
from				
automated				
surface				
observing				
systems and				
other systems,				
ATC facilities,				
and aircraft				
operations				
centers				
(AOCs).				
Advisories				
provide both				
routine and				
hazardous				
weather				
information				
and/or flight				
conditions at				
airports or				
along a flight				
path. (NAS				
ATC-Advisory				
Services)				
20111000)	1			

Use existing SRM Components or identify as "NEW". A "NEW" component is one not already identified as a service component in the FEA SRM.

A reused component is one being funded by another investment, but being used by this investment. Rather than answer yes or no, identify the reused service component funded by the other investment and identify the other investment using the Unique Project Identifier (UPI) code from the OMB Ex 300 or Ex 53 submission.

'Internal' reuse is within an agency. For example, one agency within a department is reusing a service component provided by another agency within the same department. 'External' reuse is one agency within a department reusing a service component provided by another agency in another department. A good example of this is an E-Gov initiative service being reused by multiple organizations across the federal government.

Please provide the percentage of the BY requested funding amount used for each service component listed in the table. If external, provide the funding level transferred to another agency to pay for the service.

4. Technical Reference Model (TRM) Table: To demonstrate how this major IT investment aligns with the FEA Technical Reference Model (TRM), please list the Service Areas, Categories, Standards, and Service Specifications supporting this IT investment.						
FEA SRM Component	FEA TRM Service Area	FEA TRM Service Category	FEA TRM Service Standard	Service Specification (i.e. vendor or product name)		
Mapping / Geospatial / Elevation / GPS	Component Framework	Data Interchange	Data Exchange	TBD after prime contract negotiation scheduled for June 2007.		
Mapping / Geospatial / Elevation / GPS	Component Framework	Presentation / Interface	5	TBD after prime contract negotiation scheduled for June 2007.		

Mapping / Geospatial / Elevation / GPS	Service Access and Delivery	Access Channels	Other Electronic Channels	TBD after prime contract negotiation scheduled for June 2007.
Mapping / Geospatial / Elevation / GPS	Service Interface and Integration	Interoperability	Data Transformation	TBD after prime contract negotiation scheduled for June 2007.
Mapping / Geospatial / Elevation / GPS	Service Platform and Infrastructure	Database / Storage	Database	TBD after prime contract negotiation scheduled for June 2007.
Mapping / Geospatial / Elevation / GPS	Service Platform and Infrastructure	Hardware / Infrastructure	Servers / Computers	TBD after prime contract negotiation scheduled for June 2007.
Mapping / Geospatial / Elevation / GPS	Service Platform and Infrastructure	Software Engineering	Test Management	TBD after prime contract negotiation scheduled for June 2007.

Service Components identified in the previous question should be entered in this column. Please enter multiple rows for FEA SRM Components supported by multiple TRM Service Specifications

In the Service Specification field, Agencies should provide information on the specified technical standard or vendor product mapped to the FEA TRM Service Standard, including model or version numbers, as appropriate.

5. Will the application leverage existing No components and/or applications across the Government (i.e., FirstGov, Pay.Gov, etc)?

a. If "yes," please describe.

6. Does this investment provide the public with access to a government automated information system?

a. If "yes," does customer access require specific software (e.g., a specific web browser version)?

1. If "yes," provide the specific product name(s) and version number(s) of the required software and the date when the public will be able to access this investment by any software (i.e. to ensure equitable and timely access of government information and services).

Exhibit 300: Part II: Planning, Acquisition and Performance Information

II.A. Alternatives Analysis

Part II should be completed only for investments identified as "Planning" or "Full Acquisition," or "Mixed Life-Cycle" investments in response to Question 6 in Part I, Section A above.

In selecting the best capital asset, you should identify and consider at least three

No

viable alternatives, in addition to the current baseline, i.e., the status quo. Use OMB Circular A- 94 for all investments, and the Clinger Cohen Act of 1996 for IT investments, to determine the criteria you should use in your Benefit/Cost Analysis.

1. Did you conduct an alternatives analysis for this project?	Yes
a. If "yes," provide the date the analysis was completed?	5/31/2006
b. If "no," what is the anticipated date this analysis will be completed?	

c. If no analysis is planned, please briefly explain why:

II.B. Risk Management

You should have performed a risk assessment during the early planning and initial concept phase of this investment's life-cycle, developed a risk-adjusted life-cycle cost estimate and a plan to eliminate, mitigate or manage risk, and be actively managing risk throughout the investment's life-cycle.

1. Does the investment have a Risk Management Plan?	Yes			
a. If "yes," what is the date of the plan?	5/10/2006			
b. Has the Risk Management Plan been significantly changed since last year's submission to OMB?	Yes			
c. If "yes," describe any significant changes:				

The Risk Management Plan (RMP) was developed as a part of the JRC2b process. Additionally, the Risk Management Board meets bi-monthly and updates the risks, their mitigation strategies, and evaluates their Risk level. These updates are included in the risk database and reported as a part of the RMP. The program can produce the approved RMP, a refresher workshop training package, evidence of biweekly Risk Board meetings, identified program risks and their status, and associated mitigation plans and status.

2. If there currently is no plan, will a plan be developed?

a. If "yes," what is the planned completion date?

b. If "no," what is the strategy for managing the risks?

3. Briefly describe how investment risks are reflected in the life cycle cost estimate and investment schedule:

RESULTS: Cost adjustments were made to Program Management and System Engineering work breakdown structure (WBS) elements, which resulted in an overall risk adjustment of 13.5% to total program costs. Schedule adjustments were made to individual tasks and are reflected in the task durations. METHODOLOGY: The program implemented the approved Risk Management Plan which provides the framework for the assigned Risk Management Coordinator and designated Risk Board to implement the process for identifying, analyzing, mitigating and managing program risks. The risks were documented and assessed as to their likelihood, consequence and overall risk level, and these assessments were input to the cost and schedule estimation processes. For cost adjustments, the risks were "mapped" to elements in the program WBS based on information in the risk statements and mitigation plans which were used to determine areas in the estimate that may be impacted, and ranges for the triangular distribution (i.e., pessimistic, most likely, optimistic). A software tool was used to perform a Monte Carlo simulation against the estimates, and the results were included in the final submission. For schedule estimates, the risks were used to adjust the durations that were included in the program schedule using a similar approach (i.e., pessimistic, most likely and optimistic estimates). ADS-B will establish a management reserve for both schedule and costs. As the program identifies the recommended solution, the program risk assessment will be used to establish a management reserve strategy for the program and for the contractors. The management reserves will be monitored and revised as the program evolves and risk profile changes. Total FAA Costs (In Thousands) Risk Adjusted: 2,481,782 No Risk Adjustment: 2,185,652

II.C. Cost and Schedule Performance

1. Does the earned value management	No
system meet the criteria in ANSI/EIA	
Standard-748?	

2. Answer the following questions about current cumulative cost and schedule performance. The numbers reported below should reflect current actual information. (Per OMB requirements Cost/Schedule Performance information should include both Government and Contractor Costs):

a. What is the Planned Value (PV)?	9900.000000
b. What is the Earned Value (EV)?	9900.000000
c. What is the actual cost of work performed (AC)?	9900.000
d. What costs are included in the reported Cost/Schedule Performance information (Government Only/Contractor Only/Both)?	Contractor Only
e. "As of" date:	6/30/2006
3. What is the calculated Schedule Performance Index (SPI = EV/PV)?	1.000000
4. What is the schedule variance (SV = EV-PV)?	0
5. What is the calculated Cost Performance Index (CPI = EV/AC)?	1.00
6. What is the cost variance (CV=EV-AC)?	0
7. Is the CV% or SV% greater than +/- 10%? (CV%= CV/EV x 100; SV%= SV/PV x 100)	No
a. If "yes," was it the?	
b. If "yes," explain the variance:	
c. If "yes," what corrective actions are b	eing taken?
d. What is most current "Estimate at Completion"?	2481782.000000
8. Have any significant changes been made to the baseline during the past fiscal year?	No
8. If "yes," when was it approved by OMB?	No