

Exhibit 300: Capital Asset Plan and Business Case Summary

Part I: Summary Information And Justification (All Capital Assets)

Section A: Overview (All Capital Assets)

1. Date of Submission: 9/10/2007
2. Agency: Department of Transportation
3. Bureau: Federal Aviation Administration
4. Name of this Capital Asset: FAAXX601: En Route Communications Gateway (ECG)
5. Unique Project (Investment) Identifier: (For IT investment only, see section 53. For all other, use agency ID system.) 021-12-01-11-01-1120-00
6. What kind of investment will this be in FY2009? (Please NOTE: Investments moving to O&M in FY2009, with Planning/Acquisition activities prior to FY2009 should not select O&M. These investments should indicate their current status.) Operations and Maintenance
7. What was the first budget year this investment was submitted to OMB? FY2001 or earlier
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 En Route Automation Programs provide automation infrastructure improvements at the 20 Air Route Traffic Control Centers (ARTCCs) in the continental U.S. ECG routes real-time, processed data, essential for Air Traffic Control to the Central Computer Complex HOST to support efficient and safe control of Air Traffic. ECG is the central point where mission-critical flight and surveillance data enter and exit FAA ARTCCs. ECG supports the FAA's performance gap mission by replacing the Peripheral Adapter Module Replacement Item (PAMRI) with high availability, Commercial-Off-The-Shelf (COTS) components that support modern, open standards and protocols, as well as replacing and subsuming the legacy interface functions. ECG also supports the FAA missions of increased safety and greater capacity by increasing the surveillance sources from 24 radars to 64 radars. ECG supports safety by automating failure recovery abilities of critical and essential services and allowing for continuous operations during scheduled maintenance. Critical and Essential services are services required 99.999 % and 99.9% of the time, respectively, for safe separation and control of aircraft operating in FAA's National Air Space (NAS). The FAA Joint Resources Council (JRC) approved ECG procurement on March 13, 2002. In-Service Decision (ISD) occurred on April 27, 2004. At FY06 end, all 20 operational systems were fully operational and in the Evaluate Phase. The ECG program will use BY09 funding to 1) conduct operational analysis (OA) to verify that the system is providing the benefits, performance, and level of service specified 2) conduct Sustainment and Technology Evolution Plan (STEP) activities to mitigate performance and obsolescence risks 3) support oversight committees such as Service Level Review (SLR), and 4) address Information System Security requirements that include Security Certification Authorization Package (SCAP) remediation activities, conducting yearly Contingency Disaster Recovery Plan, and FISMA Reporting requirements. STEP documents an approach for sustaining the ECG technical baseline by monitoring systems components for obsolescence and identifying the best alternatives for mitigating obsolescence issues.
9. Did the Agency's Executive/Investment Committee approve this request? Yes
 - a. If "yes," what was the date of this approval? 3/13/2002
10. Did the Project Manager review this Exhibit? Yes
11. Contact information of Project Manager?

Name	Abilla, Walter D
Phone Number	Redacted
Email	walter.d.abilla@faa.gov
- a. What is the current FAC-P/PM certification level of the project/program manager? TBD
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 directly support one of the PMA initiatives? No

If "yes," check all that apply:

a. Briefly and specifically describe for each selected how this asset directly supports the identified initiative(s)? (e.g. If E-Gov is selected, is it an approved shared service provider or the managing partner?)

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 a PART review? Yes

b. If "yes," what is the name of the PARTed program? FAA Air Traffic Services

c. If "yes," what rating did the PART receive? Adequate

15. Is this investment for information technology? Yes

If the answer to Question 15 is "Yes," complete questions 16-23 below. If the answer is "No," do not answer questions 16-23.

For information technology investments only:

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 or any project(s) within this investment identified as "high risk" on the Q4 - FY 2007 agency high risk report (per OMB Memorandum M-05-23) No

19. Is this a financial management system? No

a. If "yes," does this investment address a FFMI 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 FY2009 funding request for the following? (This should total 100%)

Hardware 24.000000

Software 38.000000

Services 28.000000

Other 10.000000

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? N/A

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

Name Mauney, Carla

Phone Number Redacted

Title Privacy Officer

E-mail carla.mauney@faa.gov

23. Are the records produced by this investment appropriately scheduled with the National Archives and Records Administration's approval? Yes

Question 24 must be answered by all Investments:

24. Does this investment directly support one of the GAO High Risk Areas? Yes

Section B: Summary of Spending (All Capital Assets)

1. 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	PY 2007	CY 2008	BY 2009	BY+1 2010	BY+2 2011	BY+3 2012	BY+4 and beyond	Total
Planning:	14.351	0	0	0	Redacted	Redacted	Redacted	Redacted	Redacted
Acquisition:	221.649	0	0	0	Redacted	Redacted	Redacted	Redacted	Redacted
Subtotal Planning & Acquisition:	236.000	0	0	0	Redacted	Redacted	Redacted	Redacted	Redacted
Operations & Maintenance:	21.512	13.104	13.175	16.156	Redacted	Redacted	Redacted	Redacted	Redacted
TOTAL:	257.512	13.104	13.175	16.156	Redacted	Redacted	Redacted	Redacted	Redacted
Government FTE Costs should not be included in the amounts provided above.									
Government FTE Costs	10.975	1.736	1.809	1.884	Redacted	Redacted	Redacted	Redacted	Redacted
Number of FTE represented by Costs:	105	15	15	15	Redacted	Redacted	Redacted	Redacted	Redacted

Note: For the multi-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? No

a. If "yes," How many and in what year?

3. If the summary of spending has changed from the FY2008 President's budget request, briefly explain those changes:

Redacted

Section C: Acquisition/Contract Strategy (All Capital Assets)

1. Complete the table for all (including all non-Federal) contracts and/or task orders currently in place or planned for this investment. Total Value should include all option years for each contract. Contracts and/or task orders completed do not need to be included.

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:

At the beginning of FY07, ECG was re-categorized as a steady state investment, therefore EVM is not a requirement. All remaining work under existing and planned future contracts is for O&M activities. However, earned value is calculated at the program level to include Government FTEs using methodology in accordance with EIA Standard 748-A section 3.7.3. The contractors provide data on ECG costs that meet the requirement of the EVM standard, even though it is not a contractual requirement. The contracts listed in the contract strategy table were all awarded prior to ECG's steady state status and are addressed below.

The LMTSS prime contract is firm fixed price (FFP), awarded in November of 2002 using performance-based payments and delivery incentives for the DME portion of the contract. FFP contracts were not subject to EVM requirements at the time of contract award. The ECG program baseline is funded through FY2015 however the LMTSS contract ends in FY2017. This is because if all the LMTSS contract options are exercised, the last option will be fully funded in FY 2015 with a period of performance from FY 2015 to FY 2017.

The remaining contracts are time and materials (T&M) and/or level of effort (LOE) support contracts. Earned value is not included in those contracts. This allows the government to contract at the lowest cost for products and services that are difficult to estimate prior to contract award. The PM has to balance his concern for contract risk with his concern for the ability to perform the mission without interruption. To minimize contract risk to the ECG program, the PM assigns all work to be performed and schedules periodic program reviews to status the work and deliverables that are expected per contract. During the program reviews, work schedules and cost estimates are agreed to and established. The program manager reviews weekly status reports and monthly invoices against actual technical schedule and planned cost. These reviews help the program manager to identify and mitigate potential variances from the planned work in a timely manner. Deliverables include; Sustainment and Technology Evolution Plan (STEP) reports, OA reports, POA&M closure reports, CDRP Plan, and various program data. Future O&M contracts will be performance based and executed via the STEP effort to address sustaining ECG's technical baseline. Once these efforts are negotiated, the contract strategy table will be updated with more detailed information.

3. Do the contracts ensure Section 508 compliance?

No

a. Explain why:

The ECG system is located in the automation wing basement of Air Route Traffic Control Centers (ARTCCs). In accordance with FAA's Section 508 Procurement Standard Operating Procedures, En Route Communications Gateway program has determined that none of the Section 508 standards apply to the program because only service personnel such as technicians frequent the ECG System for maintenance, repair, or monitoring.

4. Is there an acquisition plan which has been approved in accordance with agency requirements?

Yes

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

5/9/2002

b. If "no," will an acquisition plan be developed?

1. If "no," briefly explain why:

Section D: Performance Information (All Capital Assets)

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 (indicators) 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 the following table to report performance goals and measures for the major investment and use the Federal Enterprise Architecture (FEA) Performance Reference Model (PRM). 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 each of the four different Measurement Areas (for each fiscal year). The PRM is available at www.egov.gov. The table can be extended to include performance measures for years beyond FY 2009.

Performance Information Table								
Fiscal Year	Strategic Goal(s) Supported	Measurement Area	Measurement Category	Measurement Grouping	Measurement Indicator	Baseline	Target	Actual Results
2005	Reduced Congestion	Mission and Business Results	Transportation	Air Transportation	Availability	The ECG system is the operational system providing an availability of	Target is 0.999998.	Achieved. No outages were reported for 2005, and the resulting

Performance Information Table								
Fiscal Year	Strategic Goal(s) Supported	Measurement Area	Measurement Category	Measurement Grouping	Measurement Indicator	Baseline	Target	Actual Results
						at least 0.999998.		achieved Operational Availability of 1.00 exceeds the planned improvement.
2005	Reduced Congestion	Technology	Effectiveness	IT Contribution to Process, Customer, or Mission	Lifecycle management process to better support ECG product obsolescence issues	ECG traditional Tech Refresh approach per the APB	Improved and innovative approach to commercial product obsolescence that results in better system support and reduced funding spikes	Achieved. The ECG Sustainment and Technology Evolution Plan was approved on September 27, 2005
2005	Reduced Congestion	Technology	Quality	Compliance and Deviations	Open system standards compliance	The PAMRI system was designed for proprietary protocols and could not accept new open system interfaces	New open system standard interfaces will be incorporated as interfaces.	Achieved. Actual result was: IP & ASTERIX formats added
2005	Reduced Congestion	Technology	Quality	Functionality	New capability Integration	The PAMRI system does not support interfaces using Internet Protocol nor does it process extensible data formats.	The ECG system will support interfaces using Internet Protocol as well as legacy interfaces. The ECG system will process extensible data formats as well as legacy data formats.	Achieved. The fielded system delivered the planned improvement of the integration of open system standards. New and planned systems will be capable of integration into the NAS through ECG.
2006	Reduced Congestion	Customer Results	Customer Benefit	Customer Satisfaction	Number of flights delays attributable to ECG Hardware or Software failures.	Baseline is zero flights have been delayed due to ECG Hardware or Software failures.	Target is 0.	13 delays were attributable to ECG in November 2005. The delays were caused by an interface line with legacy DARC that no longer exists. Achieved. As of 12/31/06 there have been no more delays.
2006	Reduced Congestion	Mission and Business Results	Information and Technology Management	Lifecycle/Change Management	Impact of commercial product obsolescence	The ECG system is standardized under configuration management control and experiencing no obsolescence or evolution issues.	Obsolescence issues will be mitigated before they can impact the ECG technical baseline. Commercial product end of life issues will not result in a loss of service.	Achieved. Monthly STEP ECG Component EOL Analysis Report confirms commercial product end of life issues have not resulted in a loss of service.
2006	Reduced Congestion	Mission and Business Results	Transportation	Air Transportation	ECG System Availability to provide radar surveillance and flight data to ARTCCs.	The ECG system is the operational system providing an availability of at least 0.999998.	Target is 0.999998.	Achieved. Quarterly Operational Analysis reports analysis confirms that the ECG availability continues to be 0.99999 or better.
2006	Reduced Congestion	Processes and Activities	Security and Privacy	Security	Remediation of issues documented in the SCAP produces higher levels of information security assurance and	Initial ECG SCAP included 12 items/ issues needing remediation. (Findings are not identified here due to security considerations)	Decrease items to be remediated by 15% annually from baseline established when the SCAP was approved 17 February 2004	Achieved. 2 of 12 remediation items, or 16.7 percent, were closed since the initial C&A package was approved. The objective of

Performance Information Table								
Fiscal Year	Strategic Goal(s) Supported	Measurement Area	Measurement Category	Measurement Grouping	Measurement Indicator	Baseline	Target	Actual Results
					compliance.			remediating 15% of outstanding issues per year has been met through FY 2006.
2006	Reduced Congestion	Technology	Quality	Compliance and Deviations	Open system standards compliance	The PAMRI system was designed for proprietary protocols and could not accept new open system interfaces	New open system standard interfaces will be incorporated as interfaces.	Accomplished for 2006. The fielded system delivered the planned improvement of the integration of open system standards.
2007	Reduced Congestion	Customer Results	Customer Benefit	Customer Satisfaction	Number of flights delays attributable to ECG Hardware or Software failures.	Sustain no flights delays attributable to ECG Hardware or Software failures.	Target is 0.	To date no flight delays have been attributed to ECG.
2007	Reduced Congestion	Mission and Business Results	Information and Technology Management	Lifecycle/Change Management	Impact of commercial product obsolescence	The ECG system is standardized under configuration management control and experiencing no obsolescence or evolution issues.	Obsolescence issues will be mitigated before they can impact the ECG technical baseline. Commercial product end of life issues will not result in a loss of service.	The CISCO 3725 Router IOS & VirusScan software were updated to mitigate obsolescence issues & sustain ECG's technical baseline. The Lexmark T520 Laser printer sparing quantities were increased by 5 based on the monitoring of printer requisition rate.
2007	Reduced Congestion	Mission and Business Results	Transportation	Air Transportation	ECG System Availability to provide radar surveillance and flight data to ARTCCs.	The ECG system is the operational system providing an availability of at least 0.999998.	Target is 0.999998	Since ECG has been operational, availability has been 1.0.
2007	Reduced Congestion	Processes and Activities	Security and Privacy	Security	Remediation of issues documented in the SCAP produces higher levels of information security assurance and compliance.	12 issues needing resolution in the ECG 2004 SCAP	Decrease items to be remediated by an additional 15% (a total of 30%) from the February 2004 SCAP	Achieved. 6 of 12 remediation items, or 50 percent, have been closed since the initial C&A package was approved. The objective of remediating 15% of outstanding issues per year has been met through FY 2007.
2007	Reduced Congestion	Technology	Quality	Compliance and Deviations	Open system standards compliance	The PAMRI system was designed for proprietary protocols and could not accept new open system technologies and interfaces.	As proprietary or FAA-only legacy formats are retired, migrate to Open Systems Interface (OSI) or other recognized standard open interface protocols.	ECG has implemented an OSI-compliant TCP/IP protocol interface for bi-directional communications with the Flight Data Input/Output (FDIO) system.
2008	Reduced Congestion	Customer Results	Customer Benefit	Customer Satisfaction	Number of flights delays attributable to ECG Hardware or Software failures.	Sustain no flights delays attributable to ECG Hardware or Software failures.	Target is 0.	TBD; Verifiable data should be available December 2008
2008	Reduced Congestion	Mission and Business Results	Information and Technology Management	Lifecycle/Change Management	Impact of commercial product	The ECG system is standardized under	Obsolescence issues will be mitigated before	TBD; Verifiable data should be available

Exhibit 300: FAAXX601: En Route Communications Gateway (ECG) Redacted 1-25-2008

Performance Information Table								
Fiscal Year	Strategic Goal(s) Supported	Measurement Area	Measurement Category	Measurement Grouping	Measurement Indicator	Baseline	Target	Actual Results
					obsolescence	configuration management control and experiencing no obsolescence or evolution issues.	they can impact the ECG technical baseline. Commercial product end of life issues will not result in a loss of service.	December 2008
2008	Reduced Congestion	Mission and Business Results	Transportation	Air Transportation	ECG System Availability to provide radar surveillance and flight data to ARTCCs.	The ECG system is the operational system providing an availability of at least 0.999998.	Target is 0.999998.	TBD; Verifiable data should be available December 2008
2008	Reduced Congestion	Processes and Activities	Security and Privacy	Security	Remediation of issues documented in the SCAP produces higher levels of information security assurance and compliance.	12 issues needing resolution in the ECG 2004 SCAP	Decrease items to be remediated by an additional 15% (a total of 45%) from the February 2004 SCAP	TBD; Verifiable data should be available December 2008
2008	Reduced Congestion	Technology	Quality	Compliance and Deviations	Open system standards compliance	The PAMRI system was designed for proprietary protocols and could not accept new open system technologies and interfaces.	As proprietary or FAA-only legacy formats are retired, migrate to Open Systems Interface (OSI) or other recognized standard open interface protocols.	TBD; Verifiable data should be available December 2008
2009	Reduced Congestion	Customer Results	Customer Benefit	Customer Satisfaction	Number of flights delays attributable to ECG Hardware or Software failures.	Sustain no flights delays attributable to ECG Hardware or Software failures.	Target is 0.	TBD; Verifiable data should be available December 2009
2009	Reduced Congestion	Mission and Business Results	Information and Technology Management	Lifecycle/Change Management	Impact of commercial product obsolescence	The ECG system is standardized under configuration management control and experiencing no obsolescence or evolution issues.	Obsolescence issues will be mitigated before they can impact the ECG technical baseline. Commercial product end of life issues will not result in a loss of service.	TBD; Verifiable data should be available December 2009
2009	Reduced Congestion	Mission and Business Results	Transportation	Air Transportation	ECG System Availability to provide radar surveillance and flight data to ARTCCs.	The ECG system is the operational system providing an availability of at least 0.999998.	Target is 0.999998.	TBD; Verifiable data should be available December 2009
2009	Reduced Congestion	Processes and Activities	Security and Privacy	Security	Remediation of issues documented in the SCAP produces higher levels of information security assurance and compliance.	12 issues needing resolution in the ECG 2004 SCAP	Decrease items to be remediated by an additional 15% (a total of 60%) from the February 2004 SCAP	TBD; Verifiable data should be available December 2009
2009	Reduced Congestion	Technology	Quality	Compliance and Deviations	Open system standards compliance	The PAMRI system was designed for proprietary protocols and could not accept new open system interfaces	As proprietary or FAA-only legacy formats are retired, migrate to Open Systems Interface (OSI) or other recognized standard open interface protocols.	TBD; Verifiable data should be available December 2009
2010	Reduced	Customer	Customer	Customer	Number of	Sustain no	Target is 0.	TBD; Verifiable

Performance Information Table								
Fiscal Year	Strategic Goal(s) Supported	Measurement Area	Measurement Category	Measurement Grouping	Measurement Indicator	Baseline	Target	Actual Results
	Congestion	Results	Benefit	Satisfaction	flights delays attributable to ECG Hardware or Software failures.	flights delays attributable to ECG Hardware or Software failures.		data should be available December 2010
2010	Reduced Congestion	Mission and Business Results	Information and Technology Management	Lifecycle/Change Management	Impact of commercial product obsolescence	The ECG system is standardized under configuration management control and experiencing no obsolescence or evolution issues.	Obsolescence issues will be mitigated before they can impact the ECG technical baseline. Commercial product end of life issues will not result in a loss of service.	TBD; Verifiable data should be available December 2010
2010	Reduced Congestion	Mission and Business Results	Transportation	Air Transportation	ECG System Availability to provide radar surveillance and flight data to ARTCCs.	The ECG system is the operational system providing an availability of at least 0.999998.	Target is 0.999998.	TBD; Verifiable data should be available December 2010
2010	Reduced Congestion	Processes and Activities	Security and Privacy	Security	Remediation of issues documented in the SCAP produces higher levels of information security assurance and compliance.	Resolve issues in the ECG 2010 SCAP.	Decrease items to be remediated by an additional 15% from the 2010 SCAP.	TBD; Verifiable data should be available December 2010
2010	Reduced Congestion	Technology	Quality	Compliance and Deviations	Open system standards compliance	The PAMRI system was designed for proprietary protocols and could not accept new open system interfaces.	As proprietary or FAA-only legacy formats are retired, migrate to Open Systems Interface (OSI) or other recognized standard open interface protocols.	TBD; Verifiable data should be available December 2010
2011	Reduced Congestion	Customer Results	Customer Benefit	Customer Satisfaction	Number of flights delays attributable to ECG Hardware or Software failures.	Sustain no flights delays attributable to ECG Hardware or Software failures.	Target is 0.	TBD; Verifiable data should be available December 2011
2011	Reduced Congestion	Mission and Business Results	Information and Technology Management	Lifecycle/Change Management	Impact of commercial product obsolescence	The ECG system is standardized under configuration management control and experiencing no obsolescence or evolution issues.	Obsolescence issues will be mitigated before they can impact the ECG technical baseline. Commercial product end of life issues will not result in a loss of service.	TBD; Verifiable data should be available December 2011
2011	Reduced Congestion	Mission and Business Results	Transportation	Air Transportation	ECG System Availability to provide radar surveillance and flight data to ARTCCs.	The ECG system is the operational system providing an availability of at least 0.999998.	Target is 0.999998.	TBD; Verifiable data should be available December 2011
2011	Reduced Congestion	Processes and Activities	Security and Privacy	Security	Remediation of issues documented in the SCAP produces higher levels of information security assurance and compliance.	Resolve issues in the ECG 2010 SCAP.	Decrease items to be remediated by an additional 15% from the 2010 SCAP.	TBD; Verifiable data should be available December 2011
2011	Reduced Congestion	Technology	Quality	Compliance and Deviations	Open system standards compliance	The PAMRI system was designed for proprietary	As proprietary or FAA-only legacy formats are retired, migrate	TBD; Verifiable data should be available December 2011

Performance Information Table								
Fiscal Year	Strategic Goal(s) Supported	Measurement Area	Measurement Category	Measurement Grouping	Measurement Indicator	Baseline	Target	Actual Results
						protocols and could not accept new open system interfaces.	to Open Systems Interface (OSI) or other recognized standard open interface protocols.	
2012	Reduced Congestion	Customer Results	Customer Benefit	Customer Satisfaction	Number of flights delays attributable to ECG Hardware or Software failures.	Sustain no flights delays attributable to ECG Hardware or Software failures.	Target is 0.	TBD; Verifiable data should be available December 2012
2012	Reduced Congestion	Mission and Business Results	Information and Technology Management	Lifecycle/Change Management	Impact of commercial product obsolescence	The ECG system is standardized under configuration management control and experiencing no obsolescence or evolution issues.	Obsolescence issues will be mitigated before they can impact the ECG technical baseline. Commercial product end of life issues will not result in a loss of service.	TBD; Verifiable data should be available December 2012
2012	Reduced Congestion	Mission and Business Results	Transportation	Air Transportation	ECG System Availability to provide radar surveillance and flight data to ARTCCs.	The ECG system is the operational system providing an availability of at least 0.999998.	Target is 0.999998.	TBD; Verifiable data should be available December 2012
2012	Reduced Congestion	Processes and Activities	Security and Privacy	Security	Remediation of issues documented in the SCAP produces higher levels of information security assurance and compliance.	Resolve issues in the ECG 2010 SCAP.	Decrease items to be remediated by an additional 15% from the 2010 SCAP.	TBD; Verifiable data should be available December 2012
2012	Reduced Congestion	Technology	Quality	Compliance and Deviations	Open system standards compliance	The PAMRI system was designed for proprietary protocols and could not accept new open system interfaces.	As proprietary or FAA-only legacy formats are retired, migrate to Open Systems Interface (OSI) or other recognized standard open interface protocols.	TBD; Verifiable data should be available December 2012

Section E: Security and Privacy (IT Capital Assets only)

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).

For existing Mixed-Life Cycle investments where enhancement, development, and/or modernization is planned, include the investment in both the "Systems in Planning" table (Table 3) and the "Operational Systems" table (Table 4). Systems which are already operational, but have enhancement, development, and/or modernization activity, should be included in both Table 3 and Table 4. Table 3 should reflect the planned date for the system changes to be complete and operational, and the planned date for the associated C&A update. Table 4 should reflect the current status of the requirements listed. In this context, information contained within Table 3 should characterize what updates to testing and documentation will occur before implementing the enhancements; and Table 4 should characterize the current state of the materials associated with the existing system.

All systems listed in the two security tables should be identified in the privacy table. The list of systems in the "Name of System" column of the privacy table (Table 8) should match the systems listed in columns titled "Name of System" in the security tables (Tables 3 and 4). For the Privacy table, it is possible that there may not be a one-to-one ratio between the list of systems and the related privacy documents. For example, one PIA could cover multiple systems. If this is the case, a working link to the PIA may be listed in column (d) of the privacy table more than once (for each system covered by the PIA).

The questions asking whether there is a PIA which covers the system and whether a SORN is required for the system are discrete from the narrative fields. The narrative column provides an opportunity for free text explanation why a working link is not provided. For example, a SORN may be required for the system, but the system is not yet operational. In this circumstance,

answer "yes" for column (e) and in the narrative in column (f), explain that because the system is not operational the SORN is not yet required to be published.

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 Yes
and integrated into the overall costs of the investment:

a. If "yes," provide the "Percentage IT Security" for the 5.06
budget year:

2. Is identifying and assessing security and privacy risks a part Yes
of the overall risk management effort for each system
supporting or part of this investment.

3. Systems in Planning and Undergoing Enhancement(s), Development, and/or Modernization - Security Table(s):			
Name of System	Agency/ or Contractor Operated System?	Planned Operational Date	Date of Planned C&A update (for existing mixed life cycle systems) or Planned Completion Date (for new systems)
Redacted			

4. Operational Systems - Security Table:							
Name of System	Agency/ or Contractor Operated System?	NIST FIPS 199 Risk Impact level (High, Moderate, Low)	Has C&A been Completed, using NIST 800-37? (Y/N)	Date Completed: C&A	What standards were used for the Security Controls tests? (FIPS 200/NIST 800-53, Other, N/A)	Date Complete(d): Security Control Testing	Date the contingency plan tested
Redacted							

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

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

6. Indicate whether an increase in IT security funding is Redacted
requested to remediate 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.

Redacted

7. How are contractor security procedures monitored, verified, and validated by the agency for the contractor systems above?

Redacted

8. Planning & Operational Systems - Privacy Table:					
(a) Name of System	(b) Is this a new system? (Y/N)	(c) Is there at least one Privacy Impact Assessment (PIA) which covers this system? (Y/N)	(d) Internet Link or Explanation	(e) Is a System of Records Notice (SORN) required for this system? (Y/N)	(f) Internet Link or Explanation
FAAXX601 : En Route Communications Gateway (ECG)	No	No	No, because the system does not contain, process, or transmit personal identifying information.	No	No, because the system is not a Privacy Act system of records.

Details for Text Options:
 Column (d): If yes to (c), provide the link(s) to the publicly posted PIA(s) with which this system is associated. If no to (c), provide an explanation why the PIA has not been publicly posted or why the PIA has not been conducted.
 Column (f): If yes to (e), provide the link(s) to where the current and up to date SORN(s) is published in the federal register. If no to (e), provide an explanation why the SORN has not been published or why there isn't a current and up to date SORN.
 Note: Working links must be provided to specific documents not general privacy websites. Non-working links will be considered as a blank field.

Section F: Enterprise Architecture (EA) (IT Capital Assets only)

In order to successfully address this area of the capital asset plan and business case, the investment must be included in the agency's EA and Capital Planning and Investment Control (CPIC) process and mapped to and supporting the FEA. The business case must demonstrate 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? Yes

a. If "yes," provide the investment name as identified in the Transition Strategy provided in the agency's most recent annual EA Assessment. EnRoute Communications Gateway (ECG)

b. If "no," please explain why?

3. Is this investment identified in a completed (contains a target architecture) and approved segment architecture? Yes

a. If "yes," provide the name of the segment architecture as provided in the agency's most recent annual EA Assessment. Air Traffic

4. Service Component Reference Model (SRM) Table:
 Identify the service components funded by this major IT 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.egov.gov>.

Agency Component Name	Agency Component Description	FEA SRM Service Domain	FEA SRM Service Type	FEA SRM Component (a)	Service Component Reused Name (b)	Service Component Reused UPI (b)	Internal or External Reuse? (c)	BY Funding Percentage (d)
ATC-Separation Assurance-Aircraft-Terrain Obstacles	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, 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)	Back Office Services	Data Management	Data Exchange			No Reuse	43
TM Synchronization-Airborne	Airborne synchronization or spacing and sequencing of air traffic safely maximize the efficiency and capacity of the NAS throughout the cruise, arrival, and departure phases of flight. Traffic synchronization is provided to aircraft during cruise, through metering at fixes/waypoints, and modifying traffic flow patterns to meet operational objectives and accommodate	Back Office Services	Data Management	Data Exchange			No Reuse	43

4. Service Component Reference Model (SRM) Table:								
Identify the service components funded by this major IT 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.egov.gov .								
Agency Component Name	Agency Component Description	FEA SRM Service Domain	FEA SRM Service Type	FEA SRM Component (a)	Service Component Reused Name (b)	Service Component Reused UPI (b)	Internal or External Reuse? (c)	BY Funding Percentage (d)
	user preferences. (NAS-TM Synchronization)							
ATC-Separation Assurance-Aircraft-Terrain Obstacles	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, 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)	Support Services	Security Management	Identification and Authentication			No Reuse	7
TM Synchronization-Airborne	Airborne synchronization or spacing and sequencing of air traffic safely maximize the efficiency and capacity of the NAS throughout the cruise, arrival, and departure phases of flight. Traffic synchronization is provided to aircraft during cruise, through metering at fixes/waypoints, and modifying traffic flow patterns to meet operational objectives and accommodate user preferences. (NAS-TM Synchronization)	Support Services	Security Management	Identification and Authentication			No Reuse	7

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

b. 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.

c. '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.

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

percentages in the column can, but are not required to, add up to 100%.

5. 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 (a)	FEA TRM Service Area	FEA TRM Service Category	FEA TRM Service Standard	Service Specification (b) (i.e., vendor and product name)
Identification and Authentication	Component Framework	Security	Supporting Security Services	Redacted
Data Exchange	Service Access and Delivery	Delivery Channels	Internet	Redacted
Identification and Authentication	Service Access and Delivery	Service Requirements	Authentication / Single Sign-on	Redacted
Identification and Authentication	Service Access and Delivery	Service Requirements	Legislative / Compliance	Redacted
Data Exchange	Service Access and Delivery	Service Transport	Service Transport	Redacted
Data Exchange	Service Platform and Infrastructure	Delivery Servers	Portal Servers	Redacted
Data Exchange	Service Platform and Infrastructure	Hardware / Infrastructure	Network Devices / Standards	Redacted
Data Exchange	Service Platform and Infrastructure	Hardware / Infrastructure	Peripherals	Redacted

a. 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

b. 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.

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

a. If "yes," please describe.

Exhibit 300: Part III: For "Operation and Maintenance" investments ONLY (Steady State)**Section A: Risk Management (All Capital Assets)**

Part III should be completed only for investments identified as "Operation and Maintenance" (Steady State) in response to Question 6 in Part I, Section A above.

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? 9/11/2006
 - 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) process has not changed however new risks have been identified via STEP and OA, which are integral parts of the RMP. Once new risks are identified through risk assessment they are reviewed and analyzed. After analysis, risk mitigation strategies are reviewed during monthly OA and STEP meetings and a mitigation strategy is selected and executed. Results of the OA and STEP process revealed that the CISCO 3725 Router IOS, VirusScan software, and Lexmark T520 Laser printer were items at risk for sustaining ECG's technical baseline. The CISCO 3725 Router IOS and VirusScan software were updated to the latest version to mitigate obsolescence issues and security vulnerabilities. The Lexmark T520 Laser printer sparing quantities were increased to avoid the possibility of not having sufficient quantities to support the requisition rate.

A PART was conducted on FAA Air Traffic Services; however there were no specific findings relative to the ECG program.

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?

Section B: Cost and Schedule Performance (All Capital Assets)

1. Was operational analysis conducted? Yes
 - a. If "yes," provide the date the analysis was completed. 5/31/2007
 - b. If "yes," what were the results?

ECG OA began in September 2005. Reports are developed quarterly for the ECG PM to monitor the performance of the ECG system. Information from this report indicates:

Customer Satisfaction

ECG meets or exceeds all legacy PAMRI requirements while adding greater capability as listed below:

- Ability to accept input from an additional 40 radars per ARTCC
- Ease of maintenance
- Support for modern open standards and protocols
- Addition of automated failure recovery
- Use of a modern extensible platform using COTS software and hardware for reducing cost.

These capabilities were design features included in the ECG system when it was placed in service beginning in April 2004. As of March 31, 2007, the ECG system achieved 384,024 hours or nearly 44 equivalent years of accumulated operation while never having a system outage. This means that ECG performed all these functions while maintaining an Operational Availability of 1, exceeding the system requirement of .999998.

Strategic and Business Results

ECG provides the foundation for En Route Automation Modernization (ERAM). ECG routes real-time data essential for Air Traffic Control. Its' open architecture enabled the additions of EBUS and ECG-U, helping to attain the FAA goal of Reduced Congestion, and will allow NexGen capabilities to be achieved through 2015.

Financial Performance

The ECG OA Report indicates that Mean Time Between Corrective Maintenance Actions is far greater than expected. The lowest value in any month to-date was 65.3 days, far above the benchmark of 28 days. This results in a very robust system that costs significantly less to maintain than originally estimated.

The system was delivered ahead of schedule and actual costs have been and are continuing to run below expected costs.

As of May 2007

Expected costs: \$266.161 M

Actual costs: \$235.712 M

Difference: \$30.449 M under budget.

Innovation

ECG uses a COTS architecture to enable future NAS innovation. It addresses innovation through cooperation between the OA and STEP programs. This provides purposeful monitoring of component performance with a focus on reduced costs and increased performance to meet the same mission needs and strategic goals.

ECG OA Reports verify that the system is delivering results that meet and exceed expectations, is exceeding all technical performance requirements and benchmarks, and is operating at costs lower than anticipated.

c. If "no," please explain why it was not conducted and if there are any plans to conduct operational analysis in the future:

2. Complete the following table to compare actual cost performance against the planned cost performance baseline. Milestones reported may include specific individual scheduled preventative and predictable corrective maintenance activities, or may be the total of planned annual operation and maintenance efforts).

a. What costs are included in the reported Cost/Schedule Contractor and Government Performance information (Government Only/Contractor Only/Both)?

2.b Comparison of Plan vs. Actual Performance Table: Redacted

Comparison of Plan vs. Actual Performance Table							
Milestone Number	Description of Milestone	Planned		Actual		Variance	
		Completion Date (mm/dd/yyyy)	Total Cost (\$M)	Completion Date (mm/dd/yyyy)	Total Cost (\$M)	Schedule (# days)	Cost (\$M)
1	Useful Segment 1: ECG Deployment	9/30/2002	\$24.09	9/30/2002	\$17.19	0	\$6.90
2	Useful Segment 2:	9/30/2015	\$233.88	9/30/2006	\$212.91	3287	\$20.97
2.11	Previously Reported Headquarters Support Roll-up	12/31/2004	\$17.60	12/31/2004	\$14.93	0	\$2.67
2.12	Previously Reported Field Support Roll-up	9/30/2004	\$16.40	9/30/2004	\$10.50	0	\$5.90
2.13	Previously Reported Prime Contractor Roll-up	2/15/2005	\$151.74	2/8/2005	\$149.29	7	\$2.44
2.14	Previously Reported Government Management and Technical Oversight of Acquisition - FTE Roll-up	9/30/2004	\$3.51	9/30/2004	\$3.75	0	(\$0.24)
2.15	Completion of ECG Initial Acquisition	6/30/2007	\$39.39	4/30/2006	\$31.15	426	\$8.24
2.16	Sustainment & Technology Evolution Planning & Execution. 2.16 has been re-categorized as O&M, therefore, the remaining \$68.9M was reallocated to O&M costs.	9/30/2015	\$5.24	9/30/2006	\$3.30	3287	\$1.95
2.16.1	Sustainment & Technology Evolution Planning & Execution. 2.16 has been re-categorized as O&M, therefore, the remaining \$68.9M was reallocated to O&M costs. No FTEs	9/30/2015	\$4.40		\$2.45		\$1.95
2.16.2	Roll-up of FTEs	9/30/2006	\$0.84	9/30/2006	\$0.84	0	\$0.00
2.16.2.1	FY06 FAA F&E FTEs - Sustainment Activity	9/30/2006	\$0.84	9/30/2006	\$0.84	0	\$0.00
3	Useful Segment 3: ECG O&M	9/30/2015	\$196.32	9/30/2006	\$28.70	3287	\$167.62
3.1	This is the remaining STEP funding from 2.16 that has been re-categorized as Sustainment O&M	9/30/2015	\$65.50				
3.2	FAA Sustainment Activity FTEs - Roll-up	9/30/2015	\$3.47		\$0.29		\$3.18

Comparison of Plan vs. Actual Performance Table							
Milestone Number	Description of Milestone	Planned		Actual		Variance	
		Completion Date (mm/dd/yyyy)	Total Cost (\$M)	Completion Date (mm/dd/yyyy)	Total Cost (\$M)	Schedule (# days)	Cost (\$M)
Redacted							