**REVIEW OF THE FEDERAL TECHNOLOGY
SERVICE'S THIRD GENERATION SYSTEM (3GS)
REPORT NUMBER A030002/T/T/Z04003**

February 11, 2004

Date:	February 11, 2004
Reply to Attn of:	Regional Inspector General for Auditing Information Technology Audit Office (JA-T)
To:	Sandra N. Bates Commissioner, Federal Technology Service (T)
Subject:	Review of the Federal Technology Service's Third Generation System (3GS) Report Number A030002/T/T/Z04003

This report presents the results of our review of the Federal Technology Service's (FTS) Third Generation System (3GS). FTS plans to implement this new system to provide FTS associates and federal clients with real-time access to acquisition, financial, project, program, and contracting information and replace four of FTS' existing legacy systems. 3GS is planned to integrate FTS business processes, reduce legacy system complexity and maintenance costs, support business intelligence and e-Government endeavors, and improve data accessibility, integrity and reliability.

Our review found several areas of project and technical risk that require prompt management attention. The initial Return on Investment (ROI) for 3GS was calculated using development costs rather than lifecycle costs, and the ROI has not yet been updated to reflect revised cost estimates that depict a nine-year lifecycle. An aggressive project schedule for 3GS has not provided adequate flexibility to adjust to unexpected delays, including selecting a hosting provider for the system and migrating legacy data to the Common Oracle Database. Key security components including finalizing user roles and security documentation for the system have not been completed. Other significant obstacles remain that could hinder a successful implementation, including the need to interface with the GSA's financial system of record, completion of comprehensive system testing, and formulation of an effective end-user training program. In addition, performance goals established for 3GS are not consistently measurable to allow monitoring of long-term system performance against expected results. We believe that prompt attention to each of these project and technical risk areas is needed to better ensure a successful system deployment and realization of expected benefits and cost savings for 3GS.

I wish to express my appreciation to all of your staff and other persons who cooperated during the audit. Written comments provided by your office have been included in their entirety in Appendix E. Should you have any questions regarding our review of 3GS, please contact me or Gwendolyn McGowan, the Regional Inspector General for Auditing, Information Technology Audit Office, on 703-308-1223.

Donna P. Peterson-Jones
Audit Manager
Information Technology Audit Office (JA-T)

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Purpose

In August 2002, the General Services Administration's (GSA) Federal Technology Service (FTS) contracted with Unisys to design, develop, and provide technical support to configure a commercial-off-the-shelf (COTS) product, SAP® R/3®, to fundamentally integrate FTS business processes, reduce legacy system complexity and maintenance costs, support business intelligence and e-Government endeavors, and improve data accessibility, integrity and reliability. This new system, FTS' Third Generation System (3GS), will provide FTS associates and federal clients with real-time access to acquisition, financial, project, program, and contracting information and replace four of FTS' existing legacy systems – the Tracking and Ordering System (TOS), the Order Management Information System (OMIS), the Information Technology Solutions Shop (ITSS), and the Integrated Task Order Management System (ITOMS). These four legacy systems are custom developed stovepipe applications that have evolved over time with minimal coordination during development, resulting in significant redundancy and fragmentation across the systems. The focus of the 3GS project is the design and implementation of an integrated enterprise system that supports FTS business units with common business processes within the context of a unified suite of integrated applications. Our overall audit objectives were to determine: (1) is FTS sufficiently mitigating the technical and project risks associated with the design and implementation of an integrated SAP system to achieve goals identified for 3GS; if not (2) what specific challenges remain that could impede the successful implementation of 3GS; and (3) what additional steps are needed to improve the design and implementation of the system. Our review was conducted during 3GS' development phase, from October 2002 through August 2003.

Background

FTS provides information technology and network services solutions to federal agencies, delivering client support through national programs in the Washington, DC metropolitan area and regional programs located throughout the United States in 11 regional offices and numerous field offices. FTS' major systems include ITSS and ITOMS to provide support for FTS' regional programs and TOS and OMIS to provide support for FTS' national programs. ITSS and TOS are the "front-end" ordering/procurement systems that support delivery order development and administration processes, and ITOMS and OMIS are the "back-end" financial management systems that support delivery order accounting processes. These legacy systems contain duplicative functionality and are labor-intensive and costly to maintain, incurring maintenance costs of approximately $12 million annually. These systems consist of different technical platforms resulting in workflow segmentation, a lack of interoperability between functions, and a significant amount of data reconciliation. The current systems are no longer scalable since they were developed initially in response to a particular need for an individual business unit; therefore, FTS is unable to add needed functionality. To resolve these system deficiencies, 3GS

is to provide an integrated, customer-centric system that supports on-demand, real-time access to integrated performance, financial, client, and industry partner information. Appendix A describes additional information on the functionality to be provided with 3GS.

Results-in-Brief

FTS plans to implement 3GS, a web-based SAP® R/3® enterprise resource planning solution, over a 4-month period beginning late January 2004 to replace four existing legacy systems. The new system is to provide "cradle to grave" activities for a more efficient and effective process to identify and deliver technology solutions and services. 3GS is expected to provide FTS associates and federal clients with real-time access to acquisition, financial, project, program, and contracting information. Since the contract to design, develop, and provide technical support was awarded to Unisys Corporation in August 2002, a significant amount of system design and development activity has been completed; however, our review found areas of project and technical risk with 3GS that require prompt management attention. Initial costs for the system, limited to developmental costs, were projected at $37.5 million. However, revised cost estimates for a nine-year lifecycle are now reported at $143.9 million. FTS has not updated their benefits-cost analysis and Return on Investment based on the new estimated lifecycle costs. Further, an aggressive project schedule has not provided adequate flexibility to adjust to unexpected delays, including selecting a hosting provider for the system and migrating legacy data to the Common Oracle Database. As a result, key security components including finalizing user roles and security documentation for the system have not been completed. As FTS completes the configuration of 3GS, significant obstacles remain that could hinder a successful implementation, including the need to interface with GSA's financial system of record, completion of comprehensive system testing, and formulation of an effective end-user training program. Further, performance goals established for 3GS are not consistently measurable to allow monitoring of long-term system performance against expected results. Immediate attention to each of these risk areas is needed to better ensure a successful system deployment and realization of expected benefits and cost savings for 3GS.

Recommendations

We recommend that GSA's Federal Technology Service (FTS) Commissioner, with the assistance of the FTS Chief Information Officer and Assistant Commissioner for Information Technology Solutions, take the necessary actions to: (1) update the benefits-cost analysis conducted for 3GS to verify the Return on Investment based on new estimated lifecycle costs; (2) finalize and comprehensively test user and portal roles to validate segregation of duties and implementation of logical security controls prior to implementing the system; (3) prioritize the completion of key system documentation, including: (a) System Security Plan, Contingency Plan, Certification and Accreditation Plan, and Security Test and Evaluation Plan to document incorporation of security controls and evaluate these safeguards for system operational readiness; (b) Training Plan, System Administration Guide, and Application Help Desk Plan to provide users with necessary information on performing new system functions and on how to navigate and obtain assistance in using the new system during transition to 3GS; and (c) unit, system integration, performance and stress, system qualification, and system acceptance testing plans to ensure that 3GS functionality, system integration, user roles, and quality of migrated data are

fully tested prior to implementation; and (4) develop measurable performance improvement goals to monitor actual performance compared to expected results for 3GS.

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<u>INTRODUCTION</u>

The Federal Technology Service (FTS) has decided to modernize its aging, legacy system environment by replacing four systems - Integrated Technology Solutions Shop (ITSS), Integrated Task Order Management System (ITOMS), Order Management Information System (OMIS), and Tracking and Ordering System (TOS) – with the Third Generation System (3GS), an integrated SAP® R/3® enterprise resource planning solution. Within FTS, the Assistant Commissioner for Information Technology (IT) Solutions and the FTS Chief Information Officer (CIO) have overall project management responsibility for 3GS. The vision for the 3GS solution is to transform FTS business practices and systems into a unified, customer-focused, world-class information solutions and network services provider.

The first step in this modernization effort was to migrate ITSS/ITOMS data into the Common Oracle Database (CODB). The implementation of any new software application system generally requires migrating at least some of the data from the legacy systems into the new system. For the implementation of the 3GS SAP system, FTS is migrating ITSS/ITOMS data from the CODB and from the TOS and OMIS Oracle databases. FTS developed the CODB to consolidate and improve the quality of data from the two regional systems, ITSS and ITOMS. ITOMS stored data in an ACCESS database format, whereas ITSS stored data in a Lotus Notes database format. The goal is to bring FTS applications into a common Oracle operating environment, as required for SAP applications.

The second step in FTS' modernization effort is the implementation of 3GS, an integrated enterprise system that is to support FTS business units with common business processes and provide FTS associates, industry partners, and federal clients with real-time access to project management, procurement, and financial management information. The 3GS solution, an SAP R/3 commercial-off-the-shelf (COTS) product, will also integrate with GSA's Siebel Customer Relationship Management (CRM) solution. Specific SAP functionality and modules that FTS plans to implement with 3GS are described in Appendix A.

FTS has contracted with multiple vendors to provide for a wide array of 3GS project support, including project management, independent verification and validation, quality assurance, and system development and configuration. While planning for the new system, FTS contracted with Gartner Group, Inc. (Gartner) to develop a "road map" to guide future system development and technical decisions; assist in consolidating, documenting, and identifying a target state application architecture for short and long-term business and technical strategic requirements; assess the current state of FTS' legacy applications; prepare an acquisition strategy and business case for the target architecture; and develop metrics to measure and monitor 3GS contractor performance. Gartner provided support for 3GS requirements analysis, acquisition, and ongoing project management, and has performed reviews of 3GS documentation.

A contract was awarded to Unisys Corporation (Unisys) in August 2002 to design, develop, and provide technical support to configure the SAP R/3 solution for 3GS. Independent of this development contract, in May 2003 Unisys was also selected to establish, operate, and maintain the production environment for 3GS. FTS contracted with SiloSmashers to provide support services for pre-award activities related to the 3GS project, including requirements gathering and validation sessions, workflow workshops, project schedule development and maintenance, and milestone preparation. SiloSmashers was tasked to provide support for acquisition activities related to developing the request for information and task order request, and assisting FTS in conducting technical and cost proposal evaluations. SiloSmashers has responsibility to provide planning and support for 3GS project management, quality assurance, configuration management, risk management, and action item tracking activities in addition to reviewing deliverables. FTS contracted with Computer Sciences Corporation to provide security testing and evaluation and risk assessment support, and with the Defense Finance Accounting Service to provide for support with independent verification and validation for 3GS.

Objective, Scope, and Methodology

Our overall audit objectives were to determine: (1) is FTS sufficiently mitigating the technical and project risks associated with the design and implementation of an integrated SAP system to achieve goals identified for 3GS; if not (2) what specific challenges remain that could impede the successful implementation of 3GS; and (3) what additional steps are needed to improve the design and implementation of the system. We focused our review on current development efforts as well as project and technical challenges that the 3GS project is facing. Accordingly, we reviewed FTS' efforts towards system development, data migration, integration, internal controls, and security. Although we reviewed the contract between FTS and Unisys as well as overall estimated and actual cost figures, we did not perform a review of all contractual agreements used for the development and deployment of 3GS or how contractors are billing for their services.

To gain an understanding of SAP subject matter, we met with an SAP expert and reviewed the Information Systems Audit and Control Association's Security, Audit and Control Features SAP® R/3®: A Technical and Risk Management Reference Guide, published in 2002. We also reviewed FTS' plans for and status of key project activities, including but not limited to system testing, user training, communication, transition and configuration management, reporting, and maintenance; attended design reviews held during the blueprint and realization phases; and met with a wide range of FTS officials and contract personnel, including the FTS-Chief Information Officer (CIO); FTS-Director, Center for Systems Development; FTS and Unisys 3GS Project Managers; Data Migration and Interface Team Leads; Business Objects Specialist; Information Systems Security Officer; and Unisys 3GS Security Manager. Budget information on 3GS was obtained from the Information Technology Investment Portfolio System and 3GS Project Managers.

We reviewed: (1) applicable statutes, regulations, and policies, such as the General Services Administration's (GSA) Information Technology (IT) Security Policy, CIO P 2100.1A, January 2003; the Office of Management and Budget Circular A-130, Appendix III, revised November

2000; and guidance from the GSA-CIO, including the <u>IT Security Procedural Guide: Password Generation and Protection</u>, CIO-IT-Security-01-01, January 26, 2001; <u>IT Security Procedural Guide: Conducting Risk Assessments</u>, CIO-IT-Security-01-03, March 13, 2001; <u>IT Security Procedural Guide: Security Test and Evaluation (ST&E)</u>, CIO-IT-Security-01-04, March 13, 2001; <u>IT Security Procedural Guide: Developing a Configuration Management (CM) Plan</u>, CIO-IT-Security-01-05, March 21, 2001; <u>IT Security Procedural Guide: Access Control</u>, CIO-IT-Security-01-07, April 27, 2001; and <u>IT Security Procedural Guide: Certification and Accreditation (C&A)</u>, CIO-IT-Security-01-09, May 18, 2001; (2) relevant criteria and reports such as the GSA Office of Inspector General's (OIG) <u>Systems Audit of Integrated Task Order Management System, Federal Technology Service</u>, Report Number A000815/T/5/Z00007, September 18, 2000; the GSA OIG's <u>Systems Audit of FTS' Information Technology Solutions Shop</u>, Report Number A010163/T/5/Z03003, November 20, 2002; the National Institute of Standards and Technology's (NIST) <u>Generally Accepted Principles and Practices for Securing Information Technology Systems</u>, NIST Special Publication 800-14, September 1996; NIST's <u>Guide for Developing Security Plans for Information Technology Systems</u>, NIST Special Publication 800-18, December 1998; NIST's <u>Security Guide for Interconnecting Information Technology Systems</u>, NIST Special Publication 800-47, August 2002; NIST's <u>Security Self-Assessment Guide for Information Technology Systems</u>, NIST Special Publication 800-26, November 2001; NIST's <u>Risk Management Guide for Information Technology Systems</u>, NIST Special Publication 800-30, October 2001; the General Accounting Office's (GAO) <u>Federal Information System Controls Audit Manual</u>, GAO/AIMD-12.19.6, January 1999; GAO's <u>Standards for Internal Control in the Federal Government</u>, GAO/AIMD-00-21.3.1, November 1999; GAO's <u>Business Process Reengineering Assessment Guide</u>, GAO/AIMD-10.1.15, Version 3, May 1997; GAO's <u>Internal Control Management and Evaluation Tool</u>, GAO-01-1008G, August 2001; and (3) other information available on SAP implementations, such as <u>Succeeding with SAP</u>, a SAP video provided by FTS.

We performed our audit review work between October 2002 and August 2003 in accordance with generally accepted government auditing standards.

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RESULTS OF AUDIT

FTS plans to implement 3GS, a web-based SAP® R/3® enterprise resource planning solution, over a 4-month period beginning late January 2004 to replace four existing legacy systems. The new system is to provide "cradle to grave" activities for a more efficient and effective process to identify and deliver technology solutions and services. 3GS is expected to provide FTS associates and federal clients with real-time access to acquisition, financial, project, program, and contracting information. Since the contract to design, develop, and provide technical support was awarded to Unisys Corporation in August 2002, a significant amount of system design and development activity has been completed; however, our review found areas of project and technical risk with 3GS that require prompt management attention. Initial costs for the system, limited to developmental costs, were projected at $37.5 million. However, revised cost estimates for a nine-year lifecycle are now reported at $143.9 million. FTS has not updated their benefits-cost analysis and Return on Investment based on the new estimated lifecycle costs. Further, an aggressive project schedule has not provided adequate flexibility to adjust to unexpected delays, including selecting a hosting provider for the system and migrating legacy data to the Common Oracle Database. As a result, key security components including finalizing user roles and security documentation for the system have not been completed. As FTS completes the configuration of 3GS, significant obstacles remain that could hinder a successful implementation, including the need to interface with GSA's financial system of record, completion of comprehensive system testing, and formulation of an effective end-user training program. Further, performance goals established for 3GS are not consistently measurable to allow monitoring of long-term system performance against expected results. Immediate attention to each of these risk areas is needed to better ensure a successful system deployment and realization of expected benefits and cost savings for 3GS.

Initial Project Cost and Schedule Estimates Have Increased

Since the original Return on Investment (ROI) for 3GS, based on developmental costs, was conducted in 2001, cost estimates have been revised to $143.9 million to reflect a nine-year lifecycle. The initial 14-month development and implementation timeframe, as illustrated in Appendix B, has left little room for potential delays in 3GS project activities. Delays in completing scheduled development activities have occurred concurrent with this cost escalation, as shown in Appendix C. For instance, delays have occurred in contracting with Unisys to host the 3GS production environment, establishing the production facility, incorporating and documenting logical and physical security controls, developing interfaces with agency and external systems, and completing testing of the new system and its configurations. As a result of this slip in completing key project activities, a successful implementation of the system is at risk under the current schedule to introduce the system to FTS users in January 2004.
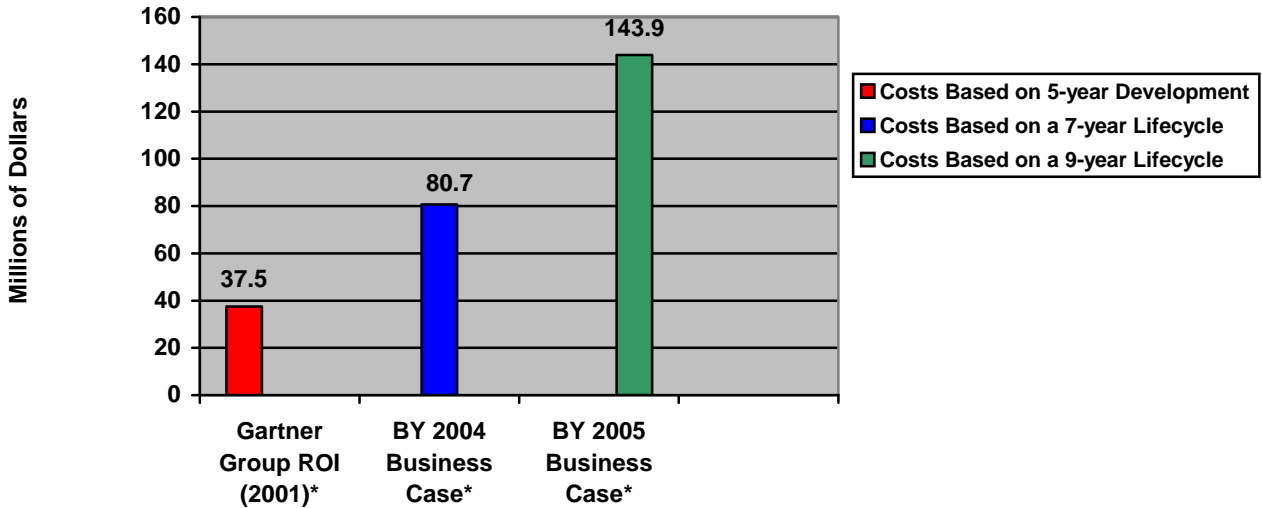
3GS Estimated Costs Have Escalated

The initial $37.5 million ROI estimated for the 3GS project, calculated in 2001, was limited to developmental costs. Since then, cost estimates have been revised first to an estimated seven-year lifecycle cost of $80.7 million, then to the current nine-year lifecycle estimate of $143.9 million. With the delays that have already occurred with 3GS, there is little assurance that cost estimates for the system have stabilized. Accurate lifecycle cost estimates are needed for FTS to determine expected ROI for 3GS and to monitor contractor costs for building and operating the new system. To ensure that the benefits outweigh the costs for the system, FTS needs to carefully analyze what the 3GS system is going to fully cost.

The Office of Management and Budget (OMB) requires that new IT investments be justified based on the need to fill a gap in the ability to meet strategic goals and objectives. This must be accomplished at the lowest lifecycle costs of the various solutions and provide risk-adjusted cost and schedule goals along with measurable performance benefits. Investments that are still in planning or full acquisition stages must demonstrate satisfactory progress toward achieving baseline cost, schedule, and performance goals. However, due to the escalating lifecycle costs, the estimated cost of fully deploying 3GS is not yet stable. Additional contractors are being hired, and a final total cost figure to establish a cost baseline has not been developed.

In March 2001, Gartner recommended the use of a COTS package in developing 3GS, identifying that this alternative would offer a five-year ROI of 121%. Gartner estimated that the cost to develop 3GS would be $37.5 million. This calculation does not include costs for deployment, data migration, application hosting, and operational support. The 3GS business case for Budget Year (BY) 2004, as well as the Information Technology Investment Portfolio System lifecycle cost report updated August 14, 2002, document that the lifecycle cost for implementing 3GS escalated to an estimated $80.7 million. This estimate included the cost of contractor support in configuring the SAP R/3 application and FTS' business processes and maintenance cost for a fully deployed system. The 3GS business case for BY 2005 illustrates that the new lifecycle cost estimate for the 3GS project has further increased to $143.9 million based on nine-year lifecycle costs. Yearly maintenance costs presented in the BY 2005 business case range from $11.1 million to $17.8 million, while yearly maintenance costs in the business case for BY 2004, ranged from $760 thousand to $5.9 million.

The Gartner study and business cases discussed above cover different time periods for system lifecycle costs, with the initial study covering a five-year period, from 2001 to 2005, the BY 2004 business case covering a seven-year period from 2001 to 2007, and the BY 2005 business case covering a nine-year period from 2001 to 2009. However, even within the same five-year period the Gartner study ROI justification covered, costs for 3GS continue to escalate. The following chart depicts the initial development costs based on five years and estimated lifecycle costs for seven and nine years.

Development and Lifecycle Cost Estimates for 3GS

Millions of Dollars

	Gartner Group ROI (2001)*	BY 2004 Business Case*	BY 2005 Business Case*
Value	37.5	80.7	143.9

Legend:
- Costs Based on 5-year Development
- Costs Based on a 7-year Lifecycle
- Costs Based on a 9-year Lifecycle

* The years over which the Gartner study and subsequent business cases cover vary, from a five-year estimate for the Gartner study, to the BY 2004 Business Case covering a seven-year period from 2001 to 2007, and the BY 2005 Business Case covering a nine-year period from 2001 through 2009. The red demonstrates development costs over a five-year period, used in the initial business case ROI justification. The blue and green illustrate the increasing total estimated lifecycle costs.

An updated Benefits-Cost Analysis/ROI calculation has not been performed for 3GS since January 30, 2002. Further, this ROI calculation does not include the cost of the hosting provider to support 3GS, nor the additional contractors that have joined the 3GS project. The BY 2005 business case presents a seven-year ROI of 158%; however, this calculation was computed using the initial cost estimate of $37.5 million rather than the current nine-year lifecycle estimate of $143.9 million. An updated ROI calculation needs to be performed with current cost estimates so that FTS fully understands actual benefits and system functionality to be delivered with this major IT investment and to ensure that long-term goals and cost savings are achieved with 3GS.

Aggressive Development Schedule Has Caused Delays in Key Activities

FTS initially planned to implement 3GS in two phases. Phase 1 was to focus on the requirements analysis, design, development, and deployment of the Initial Operational Capability (IOC), which was intended to implement the majority of functionality currently in the legacy systems, along with enhancements. Implementation of this IOC Release was planned for a limited group of selected FTS Regional and National programs and scheduled for October 1, 2003. FTS planned to use this initial implementation, referred to as Beta IOC, to: (1) determine how well the system meets FTS' needs, (2) ensure that the system operates as intended, and (3) assess the success of preparing and training users for the new system and reengineered business processes prior to full deployment across FTS. The 3GS IOC was then to be rolled out to the business

units from December 2003 to February 2004. The Phase 2 implementation was to occur after a successful beta implementation of the IOC Release and was to include the design, development, and deployment of the 3GS Full Operational Capability (FOC) Version. The 3GS FOC Release was to include expanded capabilities, interfaces, and enhancements to the 3GS IOC Release. While they still plan to implement functionality for 3GS in two phases, one for IOC and the other for FOC, FTS no longer uses the term "beta" since this term generally refers to parallel testing rather than limited rollouts in the production environment. Thus, FTS now refers to "waves" of deployment for the 3GS system.

After awarding the contract to Unisys in August 2002, FTS has taken an ambitious 14-month development and implementation schedule for 3GS. Delays have occurred, however, in the completion of key activities under this schedule that have and continue to affect the entire project, as depicted in Appendix C. For example, delays have occurred in migrating regional data from the ITSS and ITOMS legacy systems into the CODB, which could impact the 3GS project since migration of accurate historical data is integral to the success of the new system. Unisys was selected as the 3GS hosting provider in May 2003, under a different contract than the one to design, develop, and provide technical support for 3GS. This late selection of a hosting provider has delayed the setup of the production environment for 3GS and also delayed the identification and documentation of required physical security controls for the site. These delays have prevented FTS from completing critical tasks, including security documentation required for certification and accreditation of controls for the system.

<u>Delays Have Occurred in the Migration of Data into the CODB</u>. The CODB migration effort is extremely important to the success of the 3GS project since the new system will require quality data to provide accurate information to its users. This effort is outside of the scope of the 3GS project and thus not under the direct control of the 3GS Project Management Team. However, delays in achieving the timely and successful migration to the CODB, have impacted the 3GS project timeline. The completion date for data migration to the CODB, has been postponed numerous times. FTS planned to integrate the ITSS and ITOMS legacy systems and migrate regional legacy data from each system's database to one combined Oracle database. The legacy regional data, now maintained and updated in the CODB, would then be migrated to the 3GS database. FTS initially planned to implement the CODB in July 2000; however, migration to the CODB was not completed until June 2003, almost a three-year delay from its initial planned implementation. Further, the 3GS Data Migration Strategy assumes successful implementation of the CODB in all regions by April 30, 2003 at the latest. The delays in migrating to the CODB have been attributed to various complications, including input/output problems between the CODB and Lotus Notes.

<u>Late Selection of a Hosting Provider Has Adversely Affected 3GS Development and Implementation Timeline.</u> The Statement of Work for acquiring complete enterprise hosting services was not developed until March 2003, with the contract tasking Unisys to provide those production hosting services awarded in May 2003. As part of the initial contract awarded August 2002 to develop, deploy, and support 3GS, Unisys was tasked to size, configure, and host the

development and quality assurance environments. Unisys tasking included providing sizing requirements for the 3GS production environment. Because the contract for 3GS production hosting services was not awarded until May 2003, the production hosting facility, located in Salt Lake City, Utah, was not scheduled for completion until July 31, 2003, merely two months prior to the initial scheduled rollout date for deploying the IOC in October 2003. Since then, the date for completing the production hosting facility has slipped, first to September 2003, then to December 2003.

Such delays have had a ripple effect on various areas of the 3GS project, including completing the Risk Assessment, Security Test and Evaluation (ST&E), and system testing as well as on the overall system deployment schedule. According to Computer Sciences Corporation, their evaluation of the network and hosting environment to perform system risk assessment and ST&E efforts, including vulnerability scanning, cannot be completed until the production hosting environment is established at the Salt Lake City data center. The Risk Assessment, originally scheduled to begin July 16, 2003 and be completed August 15, 2003, has been rescheduled to commence October 7, 2003 and end December 12, 2003. The ST&E, which was also scheduled to begin July 16, 2003 and end August 10, 2003, has been rescheduled to commence in December 2003 and be completed in January 2004. The late selection of the production hosting provider and establishment of the hosting facility has also contributed to delays in the completion of 3GS user roles, the user registration process, and the finalization of security documentation required for the system's certification and accreditation.

The 3GS schedule was overly ambitious in attempting to deploy the system only two months after the initial proposed completion of the production hosting facility. It was not feasible to complete all necessary activities, including risk assessment, ST&E, and other testing efforts, to provide assurance that adequate security controls were incorporated into the system prior to deployment. It should be recognized that FTS made a wise and beneficial decision to postpone the first wave of deployment until the end of January 2004 to adjust to the challenges that have emerged. However, if deployed too early, FTS runs the risk of implementing a system that has not been sufficiently tested and could introduce vulnerabilities into the environment with the potential of jeopardizing the systems interconnected to and exchanging data with 3GS.

Actions Needed to Incorporate Required Security Controls for 3GS

Security is a particular area of concern in an SAP environment because of its fully integrated and real-time nature. As a result of the delays that occurred in selecting the production hosting provider and completing the hosting facility, certain essential security components remain unfinished and are needed to provide assurance that adequate security controls have been incorporated into the system before deployment. Areas of highest concern include the need for completion and synchronization of user and portal roles, and finalization of security documentation required for certification and accreditation of controls for the system.

User Roles Necessary to Ensure System Security Are Not Yet Finalized

With an SAP application, a fundamental control for minimizing loss through fraud and error is

the proper segregation of duties among system users. The SAP R/3 Authorization Concept is the application's inherent security mechanism to protect against unauthorized access and consists of a collection of user authorizations. This concept allows for segregation of duties and restriction of user access, but requires the assignment of roles and profiles for system users. Segregating the duties of users is generally considered to be an extremely complex process in SAP R/3 that is prone to error in the design of the security model and profiles. Once user roles and authorizations are in place, users can only access transactions and programs explicitly assigned to them through the single and composite user roles in their user master record. Upon every user's access request, SAP R/3 performs an authority check to determine if the user possesses the proper authorizations. If the user does not have the appropriate authorizations, the system will deny the user's access request to the corresponding programs, transactions, or data.

With 3GS, user roles must be created based on reengineered business processes across FTS relating to specific job responsibilities to be performed by system users. After the completion of the business process reengineering, or "blueprinting," in February 2003, the SAP R/3 transaction codes required to perform the future business processes were to be identified and mapped to defined roles for 3GS. Throughout development, various testing of the roles was to be performed to verify that excessive access had not been granted, with potential segregation issues reported to management for resolution or acceptance. Mapping roles to 3GS users should start as early in the security design as possible, since decisions made: (1) could require changes to role and position design, and (2) will be used by the Training Team to identify each user's training requirements. Creation of user roles, profiles, and authorizations sometimes requires combining disparate job responsibilities that could negate proper segregation of duties. Therefore, without detailed documentation of the development and implementation of 3GS user roles, profiles, and authorizations, it may be difficult to adequately test security and proper segregation of duties, as irregularities may not be traceable back to their root causes. Further, it may also be difficult to determine if security has been implemented in accordance with management's intentions.

In conjunction with the development of user roles for the system, portal roles must also be constructed and mapped back to the application user roles. Since 3GS is a web-based system, an Enterprise Portal will provide a single sign-on mechanism to authenticate users to the different data resources and applications, including the SAP application and GSA's Customer Relationship Management System. Portal roles determine specifically what each user is able to view and access from the portal. It is critical that portal roles be matched and synchronized with the corresponding user roles developed for 3GS. If the strategy for mapping the roles is not effective, security may not be implemented according to management's intentions, and segregation of duties conflicts could result. However, as of mid-September 2003, user and portal role documentation had still not been completed. Further, the process for registering users to enable access through the portal cannot be established until user roles and profiles have been created and tested. According to 3GS management, the production environment must be complete before system user roles can be assigned, and delays in selecting the production hosting provider and establishing the hosting facility have impacted the completion of user roles.

Lack of timely completion of user roles and profiles for 3GS has impacted transition management, which has been a primary task during Phase 1. For example, during the design

review on August 19, 2003, Business Unit Liaisons voiced that FTS associates continue to lack an understanding of how their processes are going to be changing and that they would find it beneficial to see the new transactions and activities related to their jobs prior to role-based training. Further, the 3GS Training Team is reliant upon system roles documentation to identify each user's SAP training requirements. Because of these very important dependencies, it is critical that user roles, profiles, and authorizations for 3GS be fully tested prior to implementing the system.

Required System Security Documentation Is Not Yet Finalized

Key 3GS security documentation planned for completion July 2003, to coincide with completion of the production hosting facility and the initial scheduled start of Risk Assessment and ST&E activities, including the System Security Plan, Contingency Plan, and Certification and Accreditation (C&A) Plan, has yet to be finalized. Computer Sciences Corporation, the contractor responsible for performing the 3GS Risk Assessment and ST&E, has been tasked to conduct a review of system security documentation as part of their analysis. A complete system Risk Assessment and ST&E require information contained in security documentation to present a fully effective and independent evaluation of risk and security controls. The System Security Plan is intended to describe how security controls are integrated into the system. A lack of a complete Contingency Plan for 3GS, which would provide step-by-step guidance to facilitate a return to normal business operations in case of a system failure, could subject critical business resources to serious risk in the case of an emergency or disaster. A C&A Plan is needed for 3GS to highlight the scope of the C&A, level of effort, resources required, timeline of activities, and acceptable level of residual risk for the system. Creation of an ST&E Plan is also essential because it identifies the detailed test objectives and procedures for the system.

OMB guidance requires that key security documentation be completed for major federal systems. The delay in completing necessary documentation for the C&A has been attributed to a lack of information that the hosting provider is responsible for providing to FTS. This information primarily relates to controls for 3GS' production environment, such as physical and environmental protection; auditing and monitoring; web-related security, including firewalls and intrusion detection systems; and contingency planning. Completion and finalization of the aforementioned security documentation is imperative to avoid further delays in the Risk Assessment and ST&E schedule and to allow for adequate testing to maintain the current C&A schedule for achieving authority to operate 3GS by January 2004, prior to implementation.

Obstacles Remain that Could Hinder Successful System Implementation

In addition to difficulties faced in integrating security within this new system, our review of the 3GS project identified additional challenges requiring management attention and resolution prior to implementation. Specifically, software version compatibility must be thoroughly analyzed and comprehensive testing of external and internal interfaces must be completed; user training plans and help desk guides to prepare users for the transition to the new system are needed; system testing plans and comprehensive system testing to detect any system functionality or incompatibility problems must be completed; and data migrated to 3GS must be complete and accurate. Taking steps to address risks in each of these areas, prior to implementing the new

system, will assist FTS management in achieving success with 3GS and with the realization of expected benefits for the system.

Important Interface Activities Remain to be Completed Prior to Deployment

The 3GS team has made progress toward developing interfaces required for 3GS; however, much interface work remains to be completed to prepare the system to exchange data with systems that are both external and internal to GSA. The 3GS team has worked on Interface Agreements (IAs) with the other system owners so that both sides can understand what tasks are expected of them. IAs lay out the overall strategy plans, functions, and specifications for system interfaces; identify contingencies in case the interface is not operational; and should be finalized for all systems that will interface with 3GS prior to deployment. Development of 41 interfaces, identified as of August 2003, does not begin until both parties sign the IAs. An interface is a recurring, structured exchange of data between computer systems/applications external to 3GS and between 3GS modules or applications integrated with the 3GS system. These 41 interfaces are not to 41 distinct systems but are 41 data exchanges that require development. The Interface Design Documents (IDDs) are the day-to-day operational development with specifications that must be approved. During our review, 24 IDDs had been finalized, documenting 30 of the 41 interfaces identified. IDDs have not yet been addressed for four interfaces, and seven IDDs were identified as not being finalized. At the end of August, coding had only begun on one interface. Thus, a substantial amount of work remains for the 3GS team to complete prior to deployment. One interface of critical importance is GSA's financial system of record, Pegasys. If this interface is not functioning as intended, 3GS goals of completely eliminating manual reconciliation and providing real-time information may not be reached with the system.

For 3GS, both one-way and two-way communication with interfacing systems needs to be established. Key two-way interfaces are needed for Pegasys/National Electronic Accounting and Reporting System for invoicing and billing for clients and industry partners, the Siebel CRM, National Institutes of Health system that collects vendor past performance, and the Defense Contract Audit Agency (DCAA) for audit reports. One-way interfaces will be established with Federal Business Opportunities (FedBizOpps) for client buying pattern information, Federal Procurement Data System (FPDS) for new contract information, and various e-Gov initiatives, including eAuthentication, eTransactions, eCatalogs, Business Partner Network, Intra-Government Transaction Portal, and Central Contractor Registration. While reducing the amount of manual interfaces is important to improve efficiency of FTS operations, manual interfaces are being developed for 3GS in some cases. For instance, manual interfaces are being developed to handle interfacing with DCAA and with FPDS. With these manual interfaces, the information will be viewable by FTS staff via the web portal and then data will be input manually into the system.

According to FTS management, the current 3GS/Pegasys interface is planned to be developed to meet the 5.1 Pegasys release scheduled for implementation spring 2004. Thus, FTS is analyzing possible incompatibility challenges to ensure that the interfaces between 3GS and its interfacing systems, specifically Pegasys, are not hindered by potential software version upgrades to avoid incompatibility challenges that could affect implementation. 3GS project management indicated

that FTS would not be considering moving to another SAP version, SAP Enterprise Architecture, until after the complete implementation of 3GS and the impact on interfaces and integration with other systems could be analyzed.

Interface testing plans for 3GS must be coordinated by providing system owners with the interface testing requirements. There are three cycles to the integration testing of the system, and testing cycles 2 and 3 require interface development to be complete. IAs that have been agreed upon must be executed by both of the parties that signed the agreement. Comprehensive testing needs to be performed on all interfaces between 3GS and its interconnected systems before 3GS is authorized to operate and before the system begins exchanging sensitive data.

<u>Essential Tools Needed for Effective Transition to 3GS Are Still Being Developed</u>

Another major challenge FTS faces in implementing 3GS is preparing the organization and its users for the new technology and business processes introduced with the system. FTS recognizes that associate buy-in is critically important for 3GS' success, and a three-pronged approach consisting of Readiness, Communication, and Education activities has been selected to manage the transition to 3GS. While FTS has completed work in the first two areas of transition preparation, risk remains with preparing users for the changes because a finalized Training Plan, User Guide, System Administrator's Guide, and Application Help Desk Guide have not been completed. Without these essential transition tools in place prior to implementing 3GS, users may not be made aware of how to navigate and use the new system and reengineered business processes.

FTS associates need to understand how the new system and its reengineered business processes will affect their job responsibilities. Throughout the project, FTS has monitored user readiness, the first activity of the three-pronged approach to transition management. Business Unit Liaisons attending realization and blueprint design reviews were surveyed, and impact assessments were conducted to assess FTS' efforts to measure their progress in preparing users for the implementation of 3GS. Overall, the results of the surveys for the reviews indicate that Business Unit Liaisons believe the reviews to be successful. However, our assessment of the results found that in the areas of associate involvement execution and verbal communication from immediate supervisors, the average response from associates is on par with low level awareness attitudes, indicating that they are not actively buying into, or helping, the implementation of the new system. The initial impact assessment indicated a median score of one for the effectiveness of verbal communication from immediate supervisors and associate involvement execution. This score indicates that users are at a level of being unaware or actively resisting change. The second impact assessment indicated a median score of three for verbal communication by immediate supervisors and two for associate involvement execution. A score of two indicates that FTS associates are at a middle-level of awareness of the upcoming change but are not committed to the project, and a score of three indicates that superiors are providing communication on par with "letting it happen" but are still not actively helping to ensure project success. While scores have increased for associate awareness, users are still not at the buy-in level of readiness where they are actively participating and seeking new information, and spending time to understand the new system and business processes.

In the area of communication, the second activity in FTS' three-pronged approach to transition management, the 3GS Core Team has provided information to users at functional design and realization reviews through Business Unit Liaisons; by distributing 3GS Insider Newsletters and more recently 3GS Special Edition Newsletters containing information on dedicated topics, such as User Roles and Training Strategy; and via a 3GS website. FTS also provided users, industry partners, and clients, with bottom-up communication by providing them with e-mail addresses whereby they could ask the 3GS Core Team members questions about the new system and business processes. Additionally, FTS provided business units with road shows to provide additional information about the new system and its changed business processes to help further user awareness. FTS initially planned to hold five road shows to business units, starting with the first road show on awareness in February – March 2003, followed by road shows on associate buy-in May – July 2003, ownership in August – October 2003, preparation in November 2003 – January 2004, and celebration in February – April 2004. While FTS has completed the first awareness road show and scheduled the second buy-in road shows for business units by the end of August 2003, schedules for providing users with roads shows to increase user ownership and preparation for the new system as well as the road show for celebrating the implementation of the new system have not been provided.

Delays in completing key education tasks, the third activity in FTS' three-pronged approach to transition management, introduces risk that users will be unprepared for the new business processes and lack an understanding of how to use and navigate the new system. Training, according to FTS management, will be targeted for the specific activities that will be required to perform one's role in 3GS. Thus, training for users will only be needed for the responsibilities of the job and the functions to be performed. FTS also recognizes that training needs to be held as close to the implementation of the system in each region as possible. Initially, training was to be held during the summer of 2003. However, training cannot be held prior to completion of the configuration of the system or before training materials have been developed. Current plans call for training to be held for users starting January 5, 2004. However, the Draft User Training Plan is not yet complete. Specifically, the plan does not identify the types of training each user role will be provided, identify timeframes for training to be held in each region, or draw reference to developing a User Guide and a System Administrator's Guide, as required by the FTS Systems Development Lifecycle methodology. Further, a 3GS Application Help Desk Plan, which was to be completed in October 2002, was not completed at the end of our review. With FTS' business processes and system look and feel changing, users need this knowledge and resources to fully prepare them to navigate and utilize the new system to perform their duties.

Adequate Time and Resources Are Needed to Complete Extensive System Testing

It is important for FTS to complete documentation of testing plans and to allow adequate time and resources to fully test the system and its functionality prior to implementation. FTS initially planned to conduct beta testing, consisting of a small subset of users who would test functionality to ensure that the system worked properly, two months prior to implementation of the IOC. However, due to project delays, testing plans have been modified, and FTS no longer plans to conduct beta testing prior to introducing the system to FTS users. Instead, FTS plans to

provide a "rolling implementation" where users from a number of regions and national programs will be transitioned to the new system incrementally. FTS plans to begin implementing the system in Regions 3, 8, Financial Services Center, B3, Ft. Worth, Office of the Chief Financial Officer, and FEDSIM Lite[1] in late January 2004.

FTS officials have indicated that system integration, performance and stress, system qualification, and system acceptance testing will be provided, and current plans call for three cycles of system integration testing, beginning the end of September 2003. Completion of performance and stress testing is to coincide with the completion of the last system integration testing cycle. FTS also plans to have an independent verification and validation (IV&V) contractor support system integration and performance and stress testing and conduct separate system qualification and acceptance testing. However, revised testing timelines for 3GS do not identify timeframes for system qualification and system acceptance testing, and FTS has not utilized the IV&V contractor to provide a second set of tests to verify the results of initial system integration and performance and stress testing. Further, system test plans necessary to document input and expected outputs and results, are not yet in place for 3GS.

In general, testing is one of the areas that is often overlooked or not emphasized when development delays occur so that the system can still be implemented on schedule. This approach causes problems to be overlooked or not found until after deployment, making finding the problem, identifying the solution, and fixing the problem much more difficult and costly, and increasing user frustration and dissatisfaction with the system. FTS acknowledged that they could not meet the initial goal of beta testing beginning October 1, 2003, nor implementing the full IOC by December 2003, and IOC implementation has been delayed until late January 2004. However, FTS still needs to make sure that the system and its functionality is put through the full range of testing prior to implementing 3GS and integrating it with other GSA or external systems.

Quality Data Needed for a Successful 3GS

Having quality data migrated from the legacy systems being replaced to the new database is another critical success factor for 3GS. FTS management identified data cleansing as an important task prior to and integral to a successful data migration. Once operational, without complete and accurate data, the processes or reports from 3GS could produce faulty information. Data from four legacy systems is being migrated in different methods, with ITSS and ITOMS data first being migrated to the CODB, then onto the staging area, and finally to the 3GS Oracle database. The data from TOS and OMIS will be migrated directly from the legacy databases to the 3GS database through the use of the staging area. The owners of the legacy systems are responsible for preparing and cleaning the data prior to loading into the staging area. A risk with data migration is identified in the BY 2005 business case for 3GS; however, a risk mitigation plan is not yet in place. According to FTS management, there have been several "dry runs" conducted to validate the steps necessary to successfully extract, transform, and load the production 3GS system with migrated data. However, testing plans for the data migration process, along with the results of any tests that may have taken place were not available during our review. Further, while data contained in legacy systems being replaced by 3GS is to be kept

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[1] The deployment of FEDSIM Lite is optional for Phase 1. If not in Phase 1, it will be deployed with Phase 2.

in a retrievable format, as required by law, a final decision has not been made on how this data will be archived after the legacy systems are shutdown in December 2004.

3GS Performance Goals Are Not Consistently Measurable

GSA's vision for information technology is to design, build, and operate a customer-focused, agile, and highly secure set of services and applications to enable the agency to deliver what customers want efficiently and effectively. Related strategic goals are intended to provide managers with a yardstick to measure achievement in operating their programs more efficiently and effectively. While 3GS has performance goals and measures tied to GSA's strategic goals, not all of these performance goals are measurable, and other planned performance goals for 3GS are not system-specific. Measurable performance goals are needed to help FTS measure progress made towards milestones in terms of cost and system capability and to help ensure that system investments meet specified requirements.

The Government Performance and Results Act of 1993 requires Federal agencies to focus on defining missions, setting goals, measuring performance, and reporting accomplishments to include demonstrated improvements in IT performance measurement. Performance goals are to be objective, quantifiable, and measurable in order to provide a basis for comparing actual results against established goals. Additionally, OMB requires agencies to justify new IT investments based on the need to fill a gap in the agency's ability to meet strategic goals and objectives with the least lifecycle costs of the various possible solutions and to provide risk-adjusted cost and schedule goals as well as measurable performance benefits. 3GS, while still under development, needs to demonstrate satisfactory progress towards achieving cost, schedule and performance goals. However, as discussed earlier, 3GS lifecycle estimates have escalated, and the implementation schedule for the system has been delayed.

The 3GS business case prepared for the 2005 budget submission identifies performance goals and measures from FY 2002 through FY 2004, as identified in Appendix D. For effectiveness, metrics need to have the ability to be tracked in a manner that shows progress against the goals. However, for three specific performance goals – increased customer satisfaction by providing the best value for customer agencies and taxpayers, increased revenue for FTS at a lower cost by improving the financial condition and solvency of the IT fund, and using a new methodology to score customer surveys for improving customer satisfaction with FTS products and services - FTS has not identified measurable targets for performance metrics. Without targets for measuring performance metrics, FTS will be unable to determine how effectively 3GS is meeting these performance goals. Further, none of the performance goals or measures planned for 3GS are tied specifically to the system, leaving FTS unable to determine long-term efficiency and effectiveness of this very important system.

Recommendations

We recommend that GSA's Federal Technology Service (FTS) Commissioner, with the assistance of the FTS Chief Information Officer and Assistant Commissioner for Information Technology Solutions, take the necessary actions to:

- Update the benefits-cost analysis conducted for 3GS to verify the Return on Investment based on new estimated lifecycle costs.

- Finalize and comprehensively test user and portal roles to validate segregation of duties and implementation of logical security controls prior to implementing the system.

- Prioritize the completion of key system documentation, including:

    (1) System Security Plan, Contingency Plan, Certification and Accreditation Plan, and Security Test and Evaluation Plan to document incorporation of security controls and evaluate these safeguards for system operational readiness.

    (2) Training Plan, System Administration Guide, and Application Help Desk Plan to provide users with necessary information on performing new system functions and on how to navigate and obtain assistance in using the new system during transition to 3GS.

    (3) Unit, system integration, performance and stress, system qualification, and system acceptance testing plans to ensure that 3GS functionality, system integration, user roles, and quality of migrated data are fully tested prior to implementation.

- Develop measurable performance improvement goals to monitor actual performance compared to expected results for 3GS.

Management Response

We met with the FTS Assistant Commissioner for Information Technology Solutions (ITS) and Chief Information Officer (CIO) to obtain feedback on a discussion draft of our report. The FTS CIO and ITS Assistant Commissioner generally concurred with the findings and recommendations presented in the report. Written comments provided by the office of the GSA-FTS Commissioner indicate that the FTS staff has begun taking steps aimed at addressing the four risk areas identified in our report. We have carefully considered FTS' request to clearly delineate developmental cost from lifecycle cost estimates for 3GS. A copy of FTS' management comments is provided in Appendix E.

Internal Controls

As discussed in the Objective, Scope, and Methodology section of this report, our audit objectives were to determine: (1) is FTS sufficiently mitigating the technical and project risks associated with the design and implementation of an integrated SAP system to achieve goals identified for 3GS; if not (2) what specific challenges remain that could impede the successful implementation of 3GS; and (3) what additional steps are needed to improve the design and implementation of the system. We focused our review on current development efforts as well as project and technical challenges that the 3GS project is facing. Accordingly, we reviewed FTS'

efforts towards system development, data migration, integration, internal controls, and security. Although we reviewed the contract between FTS and Unisys and overall estimated and actual cost figures, we did not perform a review of the contractual vehicle used for the development and deployment of 3GS or how the contractor was billing FTS. Our review also did not include a detailed review of FTS' contractual practices used in procuring SAP or awarding contracts to vendors working on the 3GS project.

SAP FUNCTIONALITY TO BE IMPLEMENTED WITH 3GS

The components of 3GS that FTS plans to implement include the front end SAP Unification Portal (UP); the mySAP application suite, consisting of the core SAP® R/3®, including Workflow (WF); Projects; cFolders; Financials (FI); Project System (PS), Funds Management (FM), Sales and Distribution (SD), Materials Management (MM), Procurement (IPRO); Enterprise Buyer Professional (EBP), Controlling (CO), and Supplier Relationship Management (SRM) [2] modules; and the back end application tools to permit 3GS to interface with existing agency and external systems. The seamless integration of SAP modules enables real-time information regarding project budgets and commitment/obligation funding. Customer master data to support order management and accounts receivable processes will be shared between the FTS Siebel CRM and SAP R/3 systems.

| SAP FUNCTIONALITY	DESCRIPTION
Unification Portal (UP)	The UP provides users with a web-based single sign-on user interface and permits users to customize their individual workspaces.
Workflow (WF)	SAP Workflow provides for routing interagency agreements to various approvers and managers throughout a project's lifecycle.
Projects	SAP Projects supports both project administration and project management activities, including setting up a project and tracking a project's deliverables. 3GS will support three key FTS project types - large and small commodity purchases, simple services (such as level of effort projects), and complex services (such as performance based work, and cost plus incentive and award fee contracts).
cFolders	cFolders provides a collaborative workspace for users to develop, store, edit, and track project files. Project files might include statements of work, written deliverables, and other unstructured data elements that are produced "offline" in the normal course of business.

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[2] The SRM was not part of the original scope for 3GS. However, when SAP introduced SRM 3.0 with the bid engine capability, and to avoid necessary modification to the COTS product to meet the requirements in the 3GS task order request, FTS decided to include this functionality within the new system.

SAP FUNTIONALITY	DESCRIPTION
Financials (FI)	The SAP FI module establishes general ledger accounts and processes payables and receivables.
Project System (PS)	The SAP PS module enables development of work breakdown structures and planning for project cost, schedule, milestone, deliverables, and resources to be performed at the project work breakdown structure level. The PS module also supports project accounting processes, including billing incurred project costs. Integration with the other SAP modules (e.g., Financials, Materials Management, Sales and Distribution, and Financial Management) permits real time visibility into project funds, commitments, obligations and actual costs throughout a project's lifecycle. (project management functionality)
Funds Management (FM)	The SAP FM module enables creation of the funding hierarchy by providing functionality to establish, manage and monitor funds at the organizational and project level. (financial functionality)
Sales and Distribution (SD)	The SAP SD module supports order management processes and pricing, and in coordination with project systems, handles resource related billing. (CRM functionality)
Materials Management (MM)	The MM module provides the procurement backbone required to support the execution of purchase requisitions and purchase orders, logical document routing for purchasing approvals, and receipt of goods & services. (procurement functionality)
IPRO	IPRO provides a complete solution for federalized, complex contracting actions. It is designed to support the contract specialist/contracting officer throughout the acquisition lifecycle (including requirements definition, pre-solicitation, solicitation, evaluation, award, post-award and closeout processes). (procurement functionality)

SAP FUNTIONALITY	DESCRIPTION
Enterprise Buyer Professional (EBP)	EBP provides a Web-based interface to procure goods and services via the Internet, allowing FTS associates to directly interact with industry partners to facilitate bid invitations, invoice presentment, and overall supplier integration. EBP supports access to both internal GSA and industry partner product catalogs. (procurement functionality)
Controlling (CO)	The CO module provides internal cost management including activity based costing and the development and maintenance of cost centers. (financial functionality)
Supplier Relationship Management (SRM)	The SAP SRM module provides vendors with the ability to input their vendor information and also provides bid analysis capabilities.

REVIEW OF THE FEDERAL TECHNOLOGY
SERVICE'S THIRD GENERATION SYSTEM (3GS)
REPORT NUMBER A030002/T/T/Z04003

3GS KEY MILESTONE DATES, PLANNED DEVELOPMENT, AND IMPLEMENTATION TIMELINE
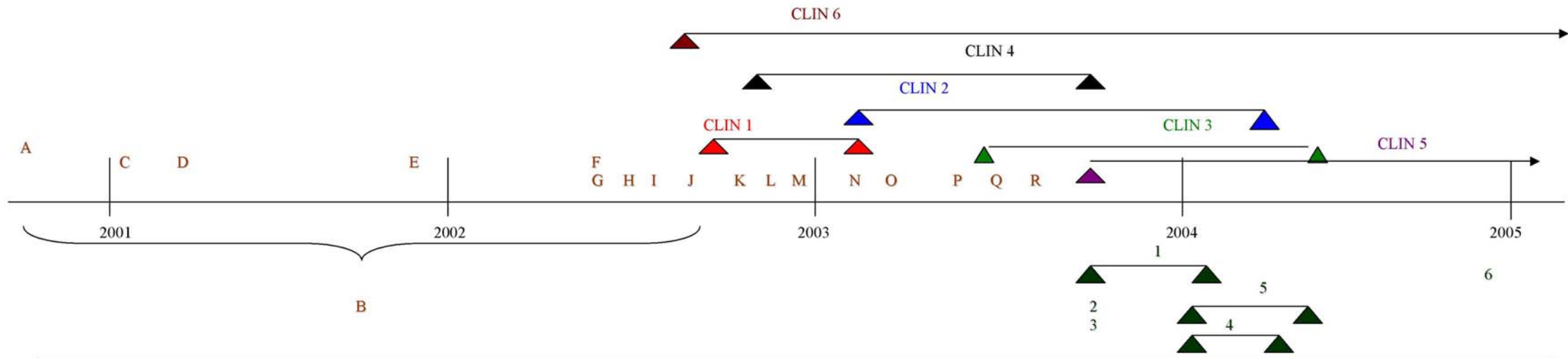
Key Milestone Dates

A) FTS Modernization Project is Initiated September 2000
B) Project to develop a common database for ITSS and ITOMS systems - FY2000 – 3rd Quarter FY2002
C) Feasibility and Market Analysis; Alternatives and Benefit-Cost Analysis January 25, 2001
D) Target State Definition and Business Case - March 2001 (Garter Group Study)
E) Organizational Needs Statement - December 16, 2001
F) Functional Requirements Analysis – April 2002
G) Task Order Request (TOR) was released to industry partners - April 5, 2002
H) Technical evaluations of bids started - May 20, 2002
I) Evaluation of COTS solutions began - June 17, 2002
J) Unisys awarded 3GS contract – August 8, 2002
K) Blueprinting began – October 2002
L) 1st functional design review November 21-22, 2002
M) 2nd functional design review December 18-19, 2002
N) 3rd functional design review February 3-5, 2003
O) SOW soliciting market analysis input on potential production hosting solutions released to vendors March 25, 2003
P) 1st Realization design review – April 15, 2003
Q) 2nd Realization design review – June 17-18, 2003
R) 3rd Realization design review August 19-20, 2003

Implementation Dates

1) Beta Testing – Originally scheduled October 2003 – January 2004
2) Implementation of the 3GS to Pegasys/NEAR interface – October 2003
3) Planned Go-Live (October 1, 2003)
4) Implementation of the IOC – between January 2004 and March 2004
5) Implementation of the Full Operating Capability (FOC) – between January 2004 and April 2004
6) Retirement of ITOMS, ITSS, TOS, OMIS, CODB – December 2004

Major Activity Dates

CLIN 1 - Requirements and Design Review (August 2002 – February 2003)
CLIN 2 - Develop and Deploy IOC (February 2003 – March 2004)
CLIN 3 – Develop and Deploy FOC (May 2003 – April 2004)
CLIN 4 – Data Conversion and Migration Support (November 2002 – October 2003)
CLIN 5 – Operations and Maintenance Support (October 2003 – 2Q 2008)
CLIN 6 – System Enhancements (as needed)

REVIEW OF THE FEDERAL TECHNOLOGY
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DELAYED DEVELOPMENT AND IMPLEMENTATION TIMELINE
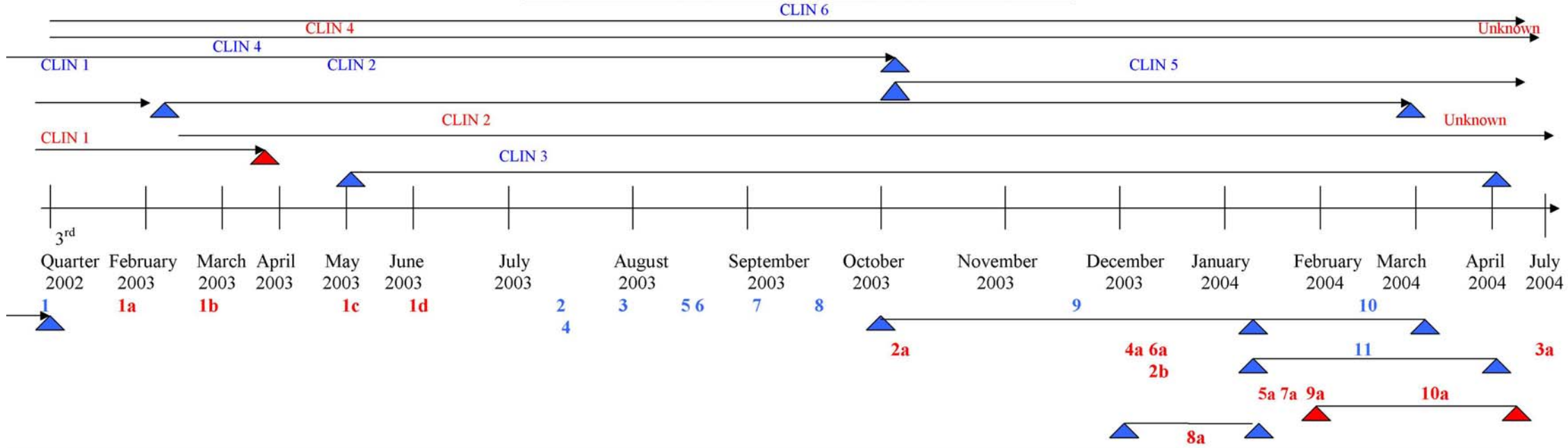
Initial Key Dates
1 – Develop CODB (FY 2000 – 3rd Quarter FY 2002)
2 – Start ST&E and RA (7/16/03)
3 – Finalization of System Security Documentation (7/31/03)
4 – Completion of production facility (7/31/03)
5 – ST&E Report (8/10/03)
6 – Complete RA (8/15/03)
7 – C&A Package to DAA for IATO (9/01/03)
8 – Completion of user roles (9/15/03)
9 – Beta Testing (October 2003– January 2004)
10 – Go-Live IOC (January 2004 – March 2004)
11 – Go-Live FOC (January 2004 – April 2004)

Modified Key Dates
1a – Completion of CODB (February 2003)
1b – Completion of CODB (March 2003)
1c – Completion of CODB (May 2003)
1d – All regions migrated to CODB (June 2003)
2a – Start RA (10/07/03)
2b – Start ST&E (12/03)
3a – Final Security Documents (Pending IG&RA) (07/04)
4a – Completion of production facility (12/03)
5a – Complete ST&E (1/04)
6a – Complete RA (12/12/03)
7a – C&A Package to DAA for ATO (1/04)
8a – Finalizing User Role Documentation (12/03-1/04 (Go-Live))
9a – 3GS Go-Live Regions 3, 8, FSC, Ft. Worth, CFO and FEDSIM Lite (1/26/04)
10a – Go-Live IOC (January 2004 – May 2004)

Initial CLIN Dates
CLIN 1 - Requirements and Design Review (08/02 – 02/03)
CLIN 2 - Develop and Deploy IOC (02/03 – 03/04)
CLIN 3 – Develop and Deploy FOC (06/03 – 03/04)
CLIN 4 – Data Conversion and Migration Support (11/02 – 10/03)
CLIN 5 – Operations and Maintenance Support (10/03 – 2Q 2008)
CLIN 6 – System Enhancements (as needed)

Modified CLIN Dates
CLIN 1 - Requirements and Design Review (09/02 – 04/03)
CLIN 2 - Develop and Deploy IOC (02/03 – Unknown)
CLIN 3 – Develop and Deploy FOC (Unknown – Unknown)
CLIN 4 – Data Conversion and Migration Support (11/02 – Unknown)

REVIEW OF THE FEDERAL TECHNOLOGY
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PERFORMANCE GOALS AND MEASURES INCLUDED IN THE 3GS BUSINESS CASE PREPARED FOR THE 2005 BUDGET SUBMISSION

Fiscal Year	Strategic Goal(s) Supported	Existing Baseline	Planned Performance Improvement Goal	Actual Performance Improvement Results	Planned Performance Metric	Actual Performance Metric Results
2002	Provide best value for customer agencies and taxpayers.	Customer Satisfaction	Increased customer satisfaction	TBD	Measured by repeat business	TBD
2002	Improve the financial condition and solvency of the IT fund	FTS revenue	Increased revenue for FTS at a lower cost	TBD	The variance between planned revenue in dollars for the FY to actual revenue in dollars	TBD
2003	Improve the cost efficiency of operations	FY 2001 actual for operating expenses as percentage of gross margin was 93.8%; this was up from 75.3% in FY 1999	FY 2003 target is to maintain this ratio in the 91 to 96% range	First year of metric	The ratio of operating expenses to gross margin measures the efficiency of the cost of delivering the product to federal agencies	TBD
2003	Maximize customer cost savings in the acquisition of products and services	Collection of this information began in FY 2002, thus there is no baseline	The target for FY 2003 is to ensure a savings of = or > than 10% of actual award cost compared to an independent government cost estimate (IGCE)	First year of metric	The variance between the expected cost of an order (IGCE) and the actual awarded cost	TBD
2003	Improve acquisition processes and methods to reduce time to award	Collection of this information began in FY 2002, thus there is no baseline	The target for FY 2003 is to ensure negotiated award dates for orders are met or exceeded at least 90% of the time	First year of metric	This measures the actual award date against the date for the order negotiated initially with the customer agency	TBD
2003	Improve the financial condition and solvency of the IT fund	During FY 2001, planned revenue vs actual within FTS had a variance of 6.3%	ITS target in support of FTS is to be within 2.5% of planned revenue at end of FY 2003	First year of metric	The variance between planned revenue in dollars for the FY to actual revenue in dollars	TBD

Fiscal Year	Strategic Goal(s) Supported	Existing Baseline	Planned Performance Improvement Goal	Actual Performance Improvement Results	Planned Performance Metric	Actual Performance Metric Results
2003	Improve customer satisfaction with FTS products and services, delivery reliability and quality	76% satisfaction based on FY 2000 old survey method; new method under development for FY 2003	This will be new standard based on survey scoring methodology	First year of metric	Metric is a score for customer satisfaction that will be based on the new survey methodology being developed	TBD
2003	Foster improved competition	70% of task and delivery order award dollars subject to fair opportunity process in FY 2001; target was 75% in FY 2002 which has not closed yet	>= 80% of total dollar volume awarded subject to fair opportunity process	First year of metric	Metric is percentage of acquisition dollars awarded as taken from contracting and reporting systems including IT Solutions Shop (ITSS) and Federal Procurement Data System (FPDS)	TBD
2004	Improve the cost efficiency of operations	FY 2001 actual for operating expenses as percentage of gross margin was 93.8%; this was up from 75.3% in FY 1999	FY 2003 target is to maintain this ratio in the 91 to 96% range	First year of metric	The ratio of operating expenses to gross margin measures the efficiency of the cost of delivering the product to federal agencies	TBD
2004	Maximize customer cost savings in the acquisition of products and service	Collection of this information began in FY 2002, thus there is no baseline	The target for FY 2004 is to ensure a savings of = or > than 10% of actual award cost compared to an independent government cost estimate (IGCE)	First year of metric	The variance between the expected cost of an order (IGCE) and the actual awarded cost	TBD
2004	Improve acquisition processes and methods to reduce time to award	Collection of this information began in FY 2002, thus there is no baseline	The target for FY 2003 is to ensure negotiated award dates for orders are met or exceeded at least 90% of the time	First year of metric	This measures the actual award date against the date for the order negotiated initially with the customer agency	TBD
2004	Improve the financial condition and solvency of the IT fund	During FY 2003, planned revenue vs actual within FTS had a variance of X%	ITS target in support of FTS is to be within X% of planned revenue at end of FY 2004	First year of metric	The variance between planned revenue in dollars for the FY to actual revenue in dollars	TBD

Fiscal Year	Strategic Goal(s) Supported	Existing Baseline	Planned Performance Improvement Goal	Actual Performance Improvement Results	Planned Performance Metric	Actual Performance Metric Results
2004	Improve customer satisfaction with FTS products and services, delivery reliability and quality	76% satisfaction based on FY 2000 old survey method; new method under development for FY 2003	This will be new standard based on survey scoring methodology	First year of metric	Metric is a score for customer satisfaction that will be based on the new survey methodology being developed	TBD
2004	Foster improved competition	70% of task and delivery order award dollars subject to fair opportunity process in FY 2001; target was 75% in FY 2002 which has not closed yet	>= 80% of total dollar volume awarded subject to fair opportunity process	First year of metric	Metric is percentage of acquisition dollars awarded as taken from contracting and reporting systems including IT Solutions Shop (ITSS) and Federal Procurement Data System (FPDS)	TBD
2005	Improve customer satisfaction with FTS products and services, delivery reliability and quality	76% satisfaction based on FY 2000 old survey method; new method under development for FY 2003	Establish line item accountability for all government expenditures	First year of metric	Metric is a score for customer satisfaction that will based on the new survey methodology being developed.	TDB
2005	Improve customer satisfaction with FTS products and services, delivery reliability and quality	76% satisfaction based on FY 2000 old survey method; new method under development for FY 2003	Establish capability for clients to gain better insight into their funding status	First year of metric	Metric is a score for customer satisfaction that will based on the new survey methodology being developed.	TBD
2005	Improve customer satisfaction with FTS products and services, delivery reliability and quality	76% satisfaction based on FY 2000 old survey method; new method under development for FY 2003	Achieve standardized process for project management	First year of metric	Metric is a score for customer satisfaction that will based on the new survey methodology being developed.	TBD
2005	Ensure financial accountability	Significant reconciliation required to align project accounting between legacy systems and NEAR/Pegasys due to lack of two-way sharing of information.	Establish ability to maintain financial management data that is consistently in sync with the financial system of record	First year of metric	Significantly reduce and/or eliminate the requirement to manually reconcile project accounting data between 3GS and the financial system of record.	TBD

Fiscal Year	Strategic Goal(s) Supported	Existing Baseline	Planned Performance Improvement Goal	Actual Performance Improvement Results	Planned Performance Metric	Actual Performance Metric Results
2005	Improve acquisition processes and methods to reduce time to award	Collection of this information began in FY 2002, thus there is no baseline.	Enhanced standardization of solicitation generation and compliance with FAR.	First year of metric	Implemented role-based security for entire user community, industry partners, and clients. Established auditability for all transactional activity.	TBD
2005	Improve the cost efficiency of operations	Baseline is the current legacy operating cost projection. It is important to note that the Lotus Notes-based legacy architecture is not scalability to support future requirements.	Implement Enterprise IT framework by leveraging COTS solution that lowers overall operational cost and provides scalability.	First year of metric	Improved ratio of operating cost compared to FTS revenue. The percent of the cost of operating the 3GS system to revenue. Achieve a platform capable of being extended to Network Services and other GSA services.	TBD
2005	Ensure financial accountability	Legacy environment lacks capability to clearly define roles and enforce data integrity.	Establish a clear separation of duties and data integrity by defining roles that control user access to the data.	First year of metric	100% of all GSA FTS end-users, industry partners, and clients are assigned specific roles Leverages COTS security to enforce separation of duties.	TBD

Source: The Information Technology Investment Portfolio System (I-TIPS) as of December 18, 2003.

**REVIEW OF THE FEDERAL TECHNOLOGY
SERVICE'S THIRD GENERATION SYSTEM (3GS)
REPORT NUMBER A030002/T/T/Z04003**

<u>FTS COMMISSIONER'S RESPONSE TO DRAFT REPORT</u>

GSA

GSA Federal Technology Service

February 4, 2004

MEMORANDUM FOR GWENDOLYN A. MCGOWAN
REGIONAL INSPECTOR GENERAL FOR AUDITING
INFORMATION TECHNOLOGY AUDIT OFFICE (JA-T)

FROM: SANDRA N. BATES
COMMISSIONER
FEDERAL TECHNOLOGY SERVICE (T)

SUBJECT: Review of the Federal Technology Service's
Third Generation System
Report Number A030002

FTS reviewed the Office of the Inspector General's draft report on the Third Generation System. The OCIO and ITS coordinated comments are attached.

I would like to take this opportunity to commend the professionalism and thoroughness of your staff in conducting this review. I am certain 3GS will be improved with the completion of your recommendations.

Attachment

ATTACHMENT

RESPONSE TO
REVIEW OF THE FEDERAL TECHNOLOGY
SERVICE'S THIRD GENERATION SYSTEM
REPORT NUMBER A030002

FTS reviewed the draft report dated January 14, 2004 and both concur with the recommendations made and appreciate the guidance received from the Office of the Inspector General. FTS is already actively pursuing the necessary actions to respond appropriately to the recommendations made in the report.

FTS is concerned that there could be some misperceptions surrounding the cost increase details. FTS would like to see that every effort is made to ensure that the cost discussion be very clear and limit the potential for misinformation.

The content found in the Results-in-Brief section must limit comparisons between like costs to achieve an "apples to apples" comparison. Development costs should only be compared to development costs, and life cycle costs should only be compared to life cycle costs. For example, the pre-award estimated development costs of $37.5M in the business case should be compared to the current post-award development cost of $39.8M. Then the life cycle cost presented in the FY2004 submission should be annualized and adjusted to be comparable to the FY2005 life cycle cost. The results of the development cost and the life cycle cost comparisons then clearly document the increased costs.