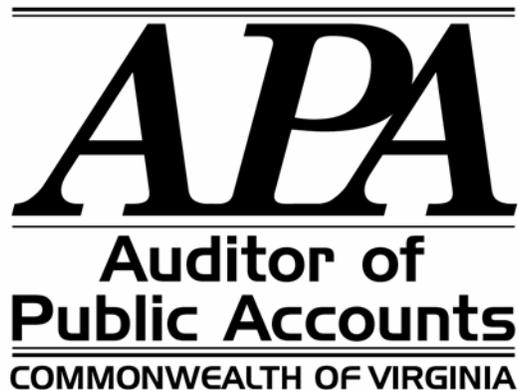


**SERVICE MANAGEMENT ORGANIZATION
OF THE
VIRGINIA INFORMATION TECHNOLOGIES AGENCY**

**INTERIM REVIEW OF THE
INFORMATION TECHNOLOGY PARTNERSHIP
FEBRUARY 2007**



AUDIT SUMMARY

We found that the Service Management Organization of the Virginia Information Technologies Agency (VITA) has established sufficient controls to effectively manage the Comprehensive Agreement between the Commonwealth of Virginia (Commonwealth) and Northrop Grumman (NG) as it progresses through each of three phases. Each phase has its own set of unique management controls to accommodate the environment at the time of the phase.

Current operations payments are for direct material and labor required by NG to manage the existing Commonwealth IT infrastructure. VITA pays NG a premium on its incurred direct labor and direct materials expenses, which complies with the Comprehensive Agreement. The Service Management Organization has sufficient controls to enable it to adequately review each invoice before payment.

Milestone payments are for the delivery of specified milestones set forth in the Comprehensive Agreement. Each milestone has a unique set of acceptance criteria developed and agreed-upon prior to beginning work. The Service Management Organization has adequate controls in place to ensure that it does not approve a payment until Northrop Grumman meets all mutually agreed to acceptance criteria.

The Service Management Organization contracts with CACI International to review the Partnership's performance in complying with project management best practices, a process known as Independent Verification and Validation (IV&V). The IV&V review generally consists of a review of existing program management policies and procedures as well as a means to validate, objectively, that the project products and services satisfy user needs under defined operating conditions. However, in the case of the Infrastructure Partnership Program, it is important to realize that this IV&V process does not provide third party validation that the NG products or services will satisfy Commonwealth needs.

The delivery of a complete and comprehensive Procedures Manual is one of the most critical deliverables necessary for effective management of the Commonwealth's IT infrastructure during the final phase, which begins in July 2008. The Service Management Organization will not be able to comprehensively monitor NG's performance over service deliverables without a complete and comprehensive set of procedures. This comprehensive Procedures Manual will serve as a basis for measuring and monitoring performance. The Service Management Organization is on track to have those procedures detailed in time to provide sufficient oversight and control over services provided by NG during the post-transition phase.

- TABLE OF CONTENTS -

	<u>Pages</u>
AUDIT SUMMARY	
COMPREHENSIVE AGREEMENT DESCRIPTION AND HISTORY	1- 2
COMPREHENSIVE AGREEMENT STATUS	3- 6
TRANSMITTAL LETTER	7- 8
AGENCY RESPONSE:	
Virginia Information Technologies Agency	9
AGENCY OFFICIALS	10
APPENDIX A	11

COMPREHENSIVE AGREEMENT DESCRIPTION AND HISTORY

Background

VITA is responsible for providing and managing the information system infrastructure for Executive branch agencies, excluding institutions of higher education and independent agencies. VITA was to move the infrastructure from a decentralized environment to a centralized operation. In the three years since its creation, VITA has been accumulating all required information system security and infrastructure information from the agencies they inherited. Presently, progress remains incomplete in accumulating this information and developing a set of standard IT infrastructure management and security procedures for the Commonwealth.

Information System Infrastructure Management under the Agreement

In November 2005, the Commonwealth entered into a public-private partnership with NG through signing an Interim Comprehensive Agreement. In doing so, effective July 2006 VITA essentially turned over to NG the management of the IT infrastructure, including security operations, of those agencies currently using VITA. The Commonwealth has agreed to pay a sum not to exceed \$236 million per year for the next ten years for the IT infrastructure service. NG has committed to a number of deliverables including: a consolidated information infrastructure system for the Commonwealth, two facilities to house a portion of the Commonwealth infrastructure, and a means of providing information system service and security to all of the agencies of the Commonwealth.

NG, in order to fulfill its service obligation, has responsibility for the production of a set of mutually agreed to procedures by which VITA will measure their future performance. The Service Management Organization (SMO) has the responsibility to monitor the progress of NG toward completion of all deliverables and milestones specified in the Agreement.

Service Areas

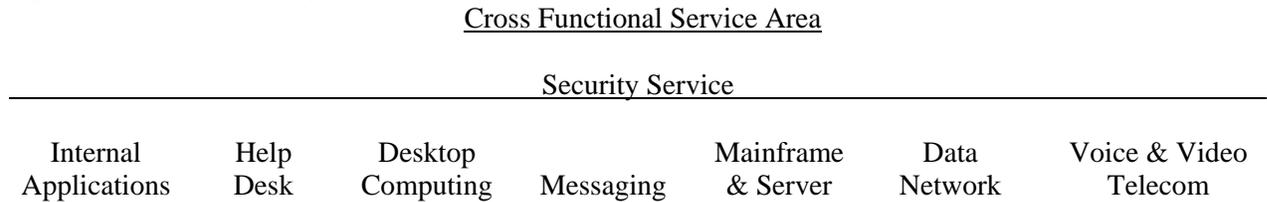
The Agreement identifies the following nine service areas for which NG has responsibility.

Help Desk Services	Messaging Services
Cross-Functional Services	Mainframe and Server Services
Data Network Services	Voice and Video Telecommunication
Desktop Computing	Security Services
Internal Applications Services	

The Agreement outlines the various service level activities including a service commencement date to signify the requirement for NG to begin limited reporting. These commencement dates begin at different times, the earliest being August 2006 through the latest commencement date being March 2007.

Both the cross-functional and security service areas are umbrella areas that are a required function within the other seven areas. The cross-functional services area includes general services necessary across the other seven service areas, to include the identification of the Commonwealth's business requirements and development of procedures for each service area. The security service area is also applicable across functions, and provides for the security of information across each of the seven service areas. Because these service areas are prerequisites to all other service areas, VITA and NG contractually established both the cross-functional and security procedures. When NG will begin measuring these procedures is part of the contract agreement. Figure 1 shows the layout of the nine service areas.

Figure 1: Service Area Layout



The Agreement outlines statements of work for each service area in some detail. These statements of work in the Agreement outline virtually every aspect of the roles and responsibilities for each of the service areas. Statements of work also identify incident resolution, priority levels, backup schedules, service restoration levels, and asset tracking service levels, among other requirements.

It is important to note that the Agreement assigns roles and responsibilities to either VITA or NG. There is no definition of service standards, timeframes, or reporting requirements within the language of the Agreement, merely the notion that either VITA or NG has responsibility. The statements of work for each service area are essentially checklists defining the roles and responsibilities relating to the development of performance metrics, policies and procedures, service standards, project management procedures, and other critical deliverables necessary for successful contract management.

Service Level Methodology

The Agreement outlines the methodology for measuring future service levels against NG's performance. The service level methodology includes requirements that NG provide effective monitoring and produce metrics and reports necessary to measure its own performance against defined service levels. The Agreement also requires NG to self-report its own performance against each service level requirement on a monthly basis as well as perform a root cause analysis, which requires an investigation and correction of any service level failures discovered during monitoring and reporting.

VITA Service Management Organization

Given the Agreement's complexity, VITA has created a dedicated team to monitor and manage the Agreement as well as develop the required documents needed for NG to properly evaluate its performance. This team is the SMO.

The SMO manages the infrastructure services delivered and is the single point of accountability within VITA for the effective management and improvement of infrastructure services. The SMO draws on other VITA divisions to support their work, for example Finance and Supply Chain Management. Within the context of this public-private partnership, the SMO also ensures that NG provides the services to which they committed and that VITA also meets its contractual obligations.

The SMO has general responsibilities to ensure infrastructure services are transformed and deliver an appropriate level of performance to VITA's customers; engage VITA's customers via customer relationship managers and support the interactions between NG and customers; and provide visibility of how the performance of IT infrastructure services has improved and its 'value for money'. The SMO hierarchy is located in Appendix A of this report.

The SMO has responsibilities within the Agreement to establish a single point of accountability for managing the Agreement. The SMO will provide local points of contact for service delivery concerns; define clear accountabilities and responsibilities between VITA and NG for service delivery; and proactively manage the realization of benefits from the partnership.

COMPREHENSIVE AGREEMENT STATUS

Importance of Detailed Procedures

The size and complexity of any large contract makes having detailed and documented roles and responsibilities essential and the NG and VITA Agreement especially meets these criteria. Detailed and documented roles and responsibilities spell out each party's expectations, deliverables, and measures of performance. Finally, the need for detailed and documented information also serves to provide the basis for any contractual changes in either services or cost and as a means of resolving differences understandings and expectations.

The importance of the detailed, documented procedures is apparent as the contract begins addressing the Commonwealth's lack of existing consistent and uniform management of the current infrastructure. Our December 2006 report titled "A Review of Information Security in the Commonwealth of Virginia" provides an example of this lack of consistency. This report, as well as all of our audit reports is on our website at www.apa.virginia.gov.

As we found in this review and the report above, the current state of the Commonwealth's infrastructure management may not improve until VITA and NG adopt a set of standard procedures for the management of the Commonwealth's infrastructure. Additionally, until NG documents their procedures, it will be difficult, if not impossible, for the SMO to effectively monitor NG's performance and hold NG accountable. Because of this risk, the SMO has adopted a phased approach to manage the Agreement.

Management of the Agreement

The Agreement calls for a phased approach toward the consolidation and takeover of the information system infrastructure. Although NG is responsible for infrastructure security and management as of July 2006, management of the infrastructure consolidation will be transitioned over three distinct phases. Each of the phases has a set of unique management controls to accommodate the environment in which the phase takes place.

Current Operations Phase

The current operations phase began on the service commencement date in July 2006 and consists of the labor and materials currently delivered by NG through the first two years of the Agreement. These are the necessary expenses incurred in order to operate the current information system infrastructure for the Commonwealth including salaries and payroll expenses for transitioned staff. The current operation activities include charges for actual expense incurred. Billable direct labor hours, includes an established overhead rate of 45 percent to reimburse NG for employer and employee fringe benefit expenses such as medical and dental insurance, and vacation, sick and holiday time. In addition, actual direct material expenses include a seven percent markup for general and administrative expenses. In addition, NG applies an additional seven percent general markup to the total bill.

VITA has the necessary controls in place to monitor the activity of NG to ensure that both direct labor and materials relate to current operations before payment. NG submits current operation invoices with sufficient detail to allow the SMO to verify any direct materials purchased by way of receipt as well as any hours recorded by NG employees. It is the responsibility for each Service Area Manager to review their respective portion of each monthly invoice to ensure the receipt and placement into service of any direct materials, and that direct labor hours are reasonable. The SMO uses a central invoice-review documentation system where each Service Area manger may approve their portion of the monthly invoice as well as document any communication with NG about questioned costs and the resolution of those costs.

NG has also begun self-reporting its performance to VITA; this reporting is not currently a means for evaluation of payment during the Current Operations Phase. However, this tool will eventually become the basis for service payments to NG during the Post-Transition Phase in year three. Each month NG provides the SMO with a detailed Quality of Service Report, which currently reports progress on existing performance metrics. Some examples of such current metrics include average speed to answer calls, rates of call abandonment's, email responses, and voicemail responses, and percentage of availability for circuits and computing time.

SMO and NG will incorporate additional performance metrics into the Quality of Service Reports through the development of the procedures manual, discussions and negotiations, which will be the mechanism to refine the terms of service delivery within the Agreement. Management of Commonwealth infrastructure will use a Quality of Service Report that the SMO anticipates will include over one hundred various metrics across the service areas.

Transformation Phase

The Transformation phase spans from year one through year three and overlaps both the Current Operations phase and the first year of Post-Transition. This phase currently consists of 74 milestones, some of which have no payment.

The Transformation Phase consists of the completion of identified milestones in the Agreement. These are targets toward successful completion of the transition between VITA infrastructure management to NG infrastructure management. With completion of transformation, the billing and payment structure will change from the current operations billing for direct material and direct labor to a service provider scheme, such as that commonly found in telephone service plans.

Prior to beginning each milestone, VITA and NG develop and agree upon a set of acceptance criteria that will constitute the acceptable measure of completion by both parties for each major milestone. Once the acceptance criteria has been established and agreed to NG carries out the accepted criterion. Upon completion of and review by VITA of each of the acceptance criteria to the milestone or deliverable, VITA may permit payment of an invoice for the successful completion of the milestone. An option to negotiate partial payment for a milestone based upon partial completion of acceptance criteria also exists.

Post-Transition Phase

The Post-Transition Phase will span from year three through year ten of the Agreement. In this phase, NG will consolidate the data centers; set out procedures for the continuing operation and management of Commonwealth IT infrastructure; and report its performance against established metrics set forth in the Agreement.

NG will self-report their performance. NG has the responsibility of producing a standard Procedures Manual, monitoring their performance against those procedures, and reporting compliance to the SMO. The SMO provides oversight and review of the results; but generally relies on NG to provide accurate and unbiased information regarding their performance. The Agreement clearly provides that VITA has audit rights to validate NG reporting.

Per the Agreement, the SMO and NG agree to a set of performance metrics by which NG will monitor themselves as well as a reporting mechanism by which NG will report any service level failures to the SMO. During the Post-Transition Phase, if a service level failure recurs in consecutive reporting intervals, NG will apply a penalty amount, which will be a credit to the Commonwealth's bill from NG. If, however, during the three months immediately following such failure, NG restores the performance level or exceeds the minimum service level; the vendor may earn back the initial credit.

Increased dependency on self-monitoring and self-reporting by NG requires the SMO to firmly establish a set of standards to which the Commonwealth may hold NG accountable. The SMO must consistently monitor level of service feedback from both NG as well as the agencies they service. It will also become imperative for agencies to provide effective feedback to the SMO, if they experience problems with NG's IT infrastructure services. NG's services will become similar to that of telecommunications services, in which performance is a self-monitored and reported event, however customer service becomes the ultimate measure of success. Customer service data will therefore become the definitive independent measuring tool by which the Commonwealth may assess the performance of NG.

Budget Capacity

The Agreement currently has an annual budget cap of \$236 million as an added control mechanism. NG may not exceed this \$236 million cap for all of its billings in a given fiscal year. This cap includes milestone payments, current operations payments, as well as service payments during the post-transition phase in the third year of the Agreement. In order for NG to receive funding beyond the \$236 million budget cap, the SMO must approve a change order amending the Agreement, which undergoes a separate process to review and approve, which we discuss later.

Change Control

The SMO has established comprehensive procedures for evaluating potential changes to the Agreement. The SMO evaluates and initiates all changes in one of two ways: through a contract amendment request or via a request for service. Each method has a similar process by which both NG and the SMO determine whether the request is within or outside of the Agreement's scope.

A VITA customer makes a request for service for a specific purpose such as implementation of wireless networking or additional backup capabilities. The SMO and the NG partner first evaluate the detailed request for feasibility and then to determine if the request falls within the scope of the existing Agreement. If the request falls within scope, such as the example of wireless networking, the request is processed and NG adds the requested service to the queue for delivery. If the request is determined to be out of scope, such as the additional backup capabilities, further negotiation between the SMO, the requesting agency, and NG will commence and an agreed-upon change order to the Agreement will result with additional expense of the requesting agency.

The engaging party must first make a proposal and a negotiation process must commence if either VITA or NG determine that the Agreement as it exists must change for any reason. All stakeholders are included in the negotiation of changes to the Agreement. Examples of completed change orders include the following modifications.

- Reflect timing of NG invoicing,
- Provide an email address rather than an "800 number" for invoice questions; and,
- Change some of the non-critical milestone delivery dates.

As of the date of this review, 13 out of the 27 total amendments remain open, one of which is the only change identified as high risk.

The outstanding high-risk change involves modification of the technical approach for Voice-Over-IP implementation, which would change that section of the Agreement to accelerate the period for which implementation will take place. Although VITA considers this change as high-risk, there is no net bottom-line effect on the Agreement budget.

Independent Verification and Validation Review

The SMO contracts with CACI International to review the Partnership's performance in complying with project management best practices, a process known as Independent Verification and Validation (IV&V). The IV&V review generally consists of a review of existing program management policies and procedures as well as a means to validate, objectively, that the project products and services satisfy user needs under defined operating conditions. However, in the case of the Infrastructure Partnership Program, it is important to realize that this IV&V process does not provide third party validation that the NG products or services will satisfy Commonwealth needs.

CACI does not consider the Infrastructure Partnership a classical "major IT project" such as the development and/or implementation of a new system, which is typically the subject of the IV&V process. However, the SMO considers the IV&V review beneficial to the program and have therefore, revised the IV&V process to reflect the nature of the agreement. There will be four IV&V reviews on the Partnership.

The first is a review of established program governance, which consists of an assessment of the standardization of processes and management. The second will expand the review to include establishment of stakeholder management as well as follow up on the initial review. The third review will examine the establishment of benefit management and the final review will encompass governance, stakeholder, and benefit management but specifically focus on process improvements.

The purpose of the review is to benchmark the project management effectiveness against best practice and point out potential for improved processes. The review does not track the progress of specific deliverables or ensure their completion. It is important to realize the IV&V provides no assurance that the Partnership project is progressing on time, on budget, or within scope, rather it provides guidance to the SMO that the established procedures for managing the Partnership follow best practices.

CACI has completed two of the four IV&V reviews of the Partnership. The CACI initial review completed July 2006 found 180 positive findings and 138 minor negative findings. The second review completed January 2007 found 86 of the prior negative findings resolved as well as 12 additional positive findings. There are no major negative findings in either completed reviews.



Commonwealth of Virginia

Walter J. Kucharski, Auditor

**Auditor of Public Accounts
P.O. Box 1295
Richmond, Virginia 23218**

February 28, 2007

The Honorable Timothy M. Kaine
Governor of Virginia
State Capital
Richmond, Virginia

The Honorable Thomas J. Norment
Chairman, Joint Legislative Audit
and Review Commission
General Assembly Building
Richmond, Virginia

We have completed an interim review of the Service Management Organization of the **Virginia Information Technologies Agency** (VITA) management of the Public-Private Partnership agreement with Northrop Grumman, and submit our report entitled, "Interim Review of the Information Technology Partnership." We conducted our review in accordance with the standards for performance audits set forth in Government Auditing Standards, issued by the Comptroller General of the United States.

The Information Technology Partnership is a ten-year, \$2 billion agreement with Northrop Grumman to operate and manage the information system infrastructure for most executive branch agencies, excluding institutions of higher education and independent agencies. Our office monitors the status of major Commonwealth contractual commitments such as the Information Technology Partnership to help identify and prevent failures related to contract management in order to minimize loss to the Commonwealth.

Objectives

Our objectives for the review of the Information Technology Partnership between Northrop Grumman and VITA were to determine that:

- VITA Service Management Organization has provided current practices to Northrop Grumman in order to enable Northrop Grumman to perform contractual services; and,
- the Service Management Organization has established adequate policies and procedures to enable it to effectively manage the Agreement between VITA and Northrop Grumman.

Scope and Methodology

Our review examined the Interim Comprehensive Agreement dated November 2005 between VITA and Northrop Grumman. Our review focused on contract management activities to date with a heavy emphasis on the monitoring of contract deliverables, contract change control, and the most recent critical milestones defined within the Agreement.

Our work consisted of management inquiries regarding the status of the first contractual milestones, examination of the Interim Comprehensive Agreement, review of current procedures, review of current operations and milestone payment documentation, and attendance at Information Technology Investment Board committee meetings responsible for tracking the Information Technology Partnership.

Conclusion

Overall, we found that VITA's Service Management Organization has established sufficient procedures to effectively manage the Comprehensive Agreement as it progresses through each of the three phases. The delivery of a complete and comprehensive Procedures Manual is one of the most critical deliverables necessary for effective management of the Commonwealth's IT infrastructure beginning in July 2008. The Service Management Organization will not be able to comprehensively monitor Northrop Grumman's performance in relation to the Agreement's deliverables without a complete and comprehensive set of procedures to be used as a basis for performance. The Service Management Organization is on track to have those procedures detailed in time to provide sufficient oversight and control over services provided by Northrop Grumman during the post-transition phase.

Additional information concerning the status and history of VITA and the Information Technology Partnership can be found in the body of this report.

We discussed this report with Virginia Information Technologies Agency's management at an exit conference on February 27, 2007.

AUDITOR OF PUBLIC ACCOUNTS

AWP:sks
sks: 42



COMMONWEALTH of VIRGINIA

Virginia Information Technologies Agency

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February 27, 2007

Mr. Walter J. Kucharski
Auditor of Public Accounts
Post Office Box 1295
Richmond, Virginia 23218

Dear Mr. Kucharski:

Thank you for the opportunity to comment on the recently completed "Interim Review of the Information Technology Partnership" report which details the results of the Auditor of Public Account's interim review of the Service Management Organization of the Virginia Information Technologies Agency (VITA) management of the Public-Private Partnership agreement with Northrop Grumman.

We are in great agreement with the acknowledgement of the complexity and magnitude of the IT Partnership between the Commonwealth of Virginia and Northrop Grumman highlighted in the report. We value the independent evaluation of the controls we have deployed to effectively manage the Partnership and the conclusion that these controls are sufficient.

We also acknowledge the importance of having a comprehensive Procedures Manual and will continue to improve that ongoing and meet the objectives for completing the Procedures Manual as was discussed.

As always, we appreciate the professionalism of your staff, particularly lead auditor Andy Powell. We look forward to working with you and your staff during the coming years of the Partnership.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lemuel C. Stewart, Jr.", written in black ink.

Lemuel C. Stewart, Jr.

c: The Honorable Aneesh P. Chopra, Secretary of Technology
Judy G. Napier, Deputy Secretary of Technology
Members, Information Technology Investment Board

VIRGINIA INFORMATION TECHNOLOGIES AGENCY

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APPENDIX A

