2.3.13 Operational Support Systems [L34.2.3.13], [C.3.9.2.2]

The Government and its Customer Agencies can efficiently manage their operations and reduce costs through use of integrated Operational Support Systems (OSS) combined with an award winning web portal to handle their daily tasks.

The offeror shall describe its overall approach to Operational Support Systems (OSS) to support billing, service ordering, customer support, service management, inventory management, and program management, as required by Section C.3.9, Operational Support Systems, and Section E, Inspection and Acceptance.

Overview

GSA and Agencies fulfill their critical missions through the use of integrated Operational Support Systems (OSS) supported by AT&T Government Solutions. These support systems provided by AT&T, a full service provider, are integrated into our overall commercial [redacted] plans and provide the flexibility needed to implement Government requirements. The systems are designed to provide Networx users with a positive experience for ordering, billing, inventory management, service management, customer support, and overall program management. For ease of use, GSA and Agencies are provided with the ability to perform their key functions through a single secure entry point. The award-winning AT&T **Business**Direct® secure web portal allows customers access to an entire suite of systems 24x7, providing the benefit of greater control of their services, any time, any place. This portal currently supports 25 million transactions annually and is used by existing Government and commercial customers. Using this tool, GSA and Agencies experience a wealth of information just a ‘click’ away; yet should they need direct contact, the Customer Support Office (CSO) within the Contractor’s Program Organization (CPO) is available at 1-877-GET-NTWX.

AT&T **Business**Direct, AT&T's customer support, service, and management web portal, has been awarded a 2004 Innovation Award from TMC Labs.

"AT&T is setting new standards for network management, customer service and support applications with AT&T BusinessDirect," TMC President Rich Tehrani.

Figure 2.3.13-1: AT&T Business Direct **Sets New Standards.** *GSA and Agencies experience efficient, management of services through use of a comprehensive Networx portal.*

As shown in **Figure 2.3.13-1,** a single portal for service ordering, service management, inventory management, trouble ticketing, billing, customer support, and program management provides the Government with the ability to perform the functions in **Table 2.3.13-1.**

AT&T BUSINESSDIRECT FUNCTIONS
✓ • Allow GSA and Agency customers to manage and control access permissions
✓ • Enable order accuracy by submitting orders through AT&T **Business**Direct
✓ • Shorten provisioning intervals by using electronic capabilities to speed processes
✓ • View and track Transition information through real-time updates
✓ • Speed trouble resolution by creating and tracking trouble tickets online
✓ • Optimize network efficiency by monitoring their own network and administering changes to optimize capacity
✓ • Save administration time by using a single portal to research and investigate inventory updates
✓ • Access billing information easily and quickly without needing to contact the CSO for inquiries
✓ • Spend less time viewing and submitting billing inquiries and disputes by having the ability to point and select inquiries

Table 2.3.13-1: AT&T Business Direct **Provides Automated OSS Functions.** *The Government can save time and manage their business more effectively through the use of a single web based portal.*

Unlike our competitors who have been distracted by internal financial concerns, AT&T has invested more than [redacted] over the past 5 years in infrastructure enhancements and global expansion. AT&T is unique in our ability and willingness to invest in the technology needed to provide the Government features and benefits shown in **Table 2.3.13-2**.

GSA and Agencies benefit from our continuing investment in core network technology and OSS. One of the key OSS investments is the philosophy of Concept of One[SM]. As shown in **Figure 2.3.13-2**, Concept of One focuses on improving customer service through business transformation. This transformation moves away from separate systems and processes to one system and one process. Through Concept of One, we are developing more innovative, useful capabilities for the Government by shifting resources from activities related to problem resolution to focus on capability delivery and detection, and to eliminate defects earlier in the development process.

FEATURES	BENEFITS
Single web-based portal for sales and service	Easy to do business
Simplified e-Servicing	Easy to learn, easy to use
One-stop shopping	Less time to perform functions
Integrated systems	Better end-to-end services flow through
Real time information delivery	Improved efficiency
Fewer touch points	• Higher Productivity • Improved Accuracy • Higher Quality
Streamlined ordering	Shorter Cycle Times

Table 2.3.13-2: Automated OSS Handle Daily Operations. *The Government can save time and manage their business more effectively through the use of AT&T's set of automated OSS.*

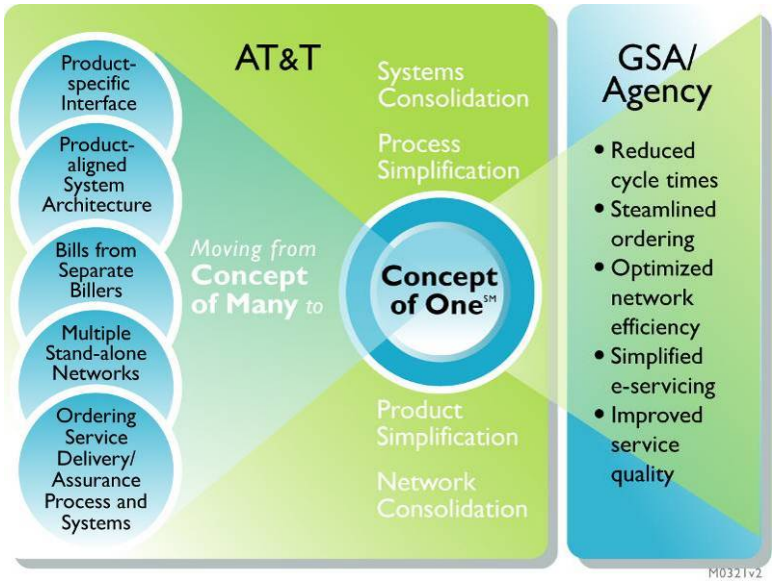

Figure 2.3.13-2: AT&T's Concept of One Philosophy. *The Government benefits from a positive customer experience with the improved ordering, provisioning, maintenance and billing processes resulting from the Concept of One.*

Using the guiding principle of Concept of One, a structured framework called [redacted] manages the OSS. The [redacted] framework assures the Government that the OSS are managed as follows:

- Disciplined approach to system development and management of complex services, resulting in faster delivery, higher quality, and less defects
- Risks are identified and managed to avoid interruption in operations
- Use of proven quality processes and principles for higher accuracy
- Early defect identification and removal reduces development to delivery time for enhancements and maintenance
- Use of quality gates for control (**Figure 2.3.13-3**)
- Uniform metrics for assessing effectiveness to guarantee quality
- Common definition and language for consistency in development

Figure 2.3.13-3: Gated Controls Enable Complete and Accurate Development. *GSA and Agencies receive quality through a gated, disciplined approach in software development.*

Billing

GSA and Agencies are provided the best customer billing solution in the industry through efficient billing support tools and systems and an experienced Networx team serving Government customers. Delivering accurate and timely Networx billing data is an absolute necessity and represents the primary objective of the Networx billing team. However, rendering high quality invoices on time is just the beginning. Invoices must be presented in a format allowing Federal customers to fully view, manipulate, and process the data as efficiently as possible. Use of an award winning portal, support from an experienced CSO and a dedicated CPO focused on the complete success of Networx make the billing experience complete.

From the original [redacted] contract to the current [redacted] contract, a long history has demonstrated our support for billing requirements of Federal Customer Agencies. From a billing perspective, the AT&T **Business**Direct portal is the launching point to other applications performing the following tasks:

- Provide total access to billing information in a secure, web-based environment
- Fully support direct billing, centralized billing, and shared tenant billing
- Allow Government users to quickly and easily submit, track, and get resolution to billing inquiries and disputes
- Permit Networx users to cross-reference Agency Hierarchy Codes (AHCs) to AT&T internal accounting information
- Provide access to an online pricing tool to use for cross verification of Networx billed charges

One of the applications available through AT&T **Business**Direct [redacted], which allows Networx customers to have a web-based view of the data produced by the [redacted] has

the ability to take billing data for multiple Networx services and combine it onto a single, easy- to-interpret invoice. [redacted] is available for Government customers today [redacted] new billing requirements for Networx. It has the ability to provide control over how they view, analyze, sort, and manage billing data for multiple services. [redacted] unique capability to receive data feeds from multiple systems, including the Networx subcontractor's operating systems. This data is aggregated onto a single invoice inclusive of all Networx charges. This includes the capability of clearly displaying any Service Enabling Device (SED) and associating it with the service its supports.

The [redacted] provides GSA and Agencies with Networx billing data that consistently exceeds GSA requirements. Some of the features and benefits associated with [redacted] are listed in **Table 2.3.13-3.**

FEATURES	BENEFITS
Consolidated Billing CLIN-level Pricing Allocation Capabilities	Easier verification of bills Improved Accuracy Multiple Agencies can share access costs
Customized Invoice Messages	Agency-specific information on billing changes or upcoming events can be delivered
Multi-Media Delivery Options	Easier internal processing and ad hoc reporting
Agency Account Management	Flexible, customer-driven hierarchies and access permission levels

Table 2.3.13-3: ISB Features and Benefits Support GSA Accounts. [redacted] *has the flexibility to deliver and consolidate multiple services on a single, accurate invoice.*

Government customers experience the following benefits with the [redacted] option:

- Manage AT&T bills conveniently and securely, 24x7
- View the current Networx bill and 12 previous months bills online
- Analyze bills conveniently online with many different standard or custom reports
- Save time by minimizing phone calls and callbacks
- Submit billing inquires, disputes, and track them through to resolution
- Decrease manual entries/improve transaction accuracy
- Cut costs by increasing productivity and redirecting resources

- Gain hands-on control of billing with up-to-the-minute status
- Eliminate paper bills
- Confidently rely on industry leading security practices
- Gain access to billing information on demand
- Validate and authorize Customer Agency personnel

If, for any reason, the Agency has questions on their invoice, they can enter queries through the AT&T **Business**Direct web portal by selecting [redacted] From there, they can click on [redacted] GSA and Agency users can drill down to individual charge level items and submit their query/dispute with a few clicks of the mouse. The [redacted] tool automatically brings up the disputed charges along with much of the charge level information pre-populated to reduce the amount of input required by Agencies. Networx customers can also benefit by accessing the [redacted] to meet individual Agency or GSA needs.

Service Ordering

GSA and Agencies are fully supported with a powerful set of secure service order management tools used to submit service orders easily and track orders through to completion. Over the past two decades, we have dedicated significant resources to successfully support large Federal contracts, such as [redacted] and [redacted] AT&T is recognized as a major telecommunications provider to the Government and we continuously strive to enhance their service ordering experience.

We facilitated the creation of easy to use tools and processes, and GSA and Agencies are provided with secure, convenient, electronic order management resources to simplify order issuance, tracking and receipt of acknowledgement and confirmation notices. These functions can be performed on line, reducing time spent on paperwork and telephone calls. Currently, [redacted] and by AT&T's largest commercial customers. Government customers can perform the service order functions listed in **Table 2.3.13-4**:

AT&T BUSINESSDIRECT ORDERING CAPABILITIES

- ✓ Submit service orders in a secure, online environment. Flow-through automation on frequently ordered Networx services speed the request directly into provisioning
- ✓ Monitor order status on pending Networx service orders in real-time for optimum service installation planning
- ✓ [redacted]
- ✓ Easily obtain pre-order price quotes and verify billed charges
- ✓ Quickly determine the relationship between Agency Hierarchy Codes (AHCs) and account information
- ✓ Produce customized reports including only the Government data elements

Table 2.3.13-4: Ordering Made Easy with AT&T BusinessDirect. *Agencies have the ability to perform all ordering functions through a secure on-line portal complete with Government specific fields.*

GSA and Agencies can [redacted]. For example, [redacted] Agency may [redacted] The **Business**Direct Agency Administrator ([redacted] Designated Agency Representative (DAR) Administrator) can set up this type and other types of access control as shown in **Table 2.3.13-5.**

ACCESS AND PERMISSION FUNCTIONS

- ✓ Adding and deleting authorized users within each Agency
- ✓ Adding and deleting tools from users' profiles
- ✓ Resetting passwords, when necessary
- ✓ Accepting terms and conditions on behalf of each Agency (one time only)

Table 2.3.13-5: Agencies Have Control over Access and Permissions. *DARs control access for various permissions within AT&T **Business**Direct*

BUSINESSDIRECT

- ✓ Submit Networx orders
- ✓ Track and receive the current status of any Networx order

Government customers may submit orders electronically using the AT&T **Business**Direct web portal. This allows Networx customers to perform the ordering functions listed in **Table 2.3.13-6.**

✓ View service order confirmations and acknowledgements
✓ Obtain price quotes for any Networx service

Table 2.3.13-6: Ordering Made Easy. *Agencies can perform ordering functions through one portal, saving time and resources.*

Government customers who choose not to submit or track orders electronically can rely on the highly trained personnel within the CSO to provide ordering support.

When a Government customer is [redacted] Several online fields are pre-populated with the customer's data, such as name, address, contact information, service type, and circuit identifier. Once again, this eliminates the need for Networx customers to re-key common information. The benefits of Government ordering are:

Government Ordering Benefits

- **Pre-populated Screens:** Fields on screens are pre-populated for the customer when placing an order. This reduces the possibility of errors.
- **Built-in Logic:** Government ordering includes built-in logic for more frequently ordered services. This provides immediate feedback on certain kinds of errors, such as data entries outside the range of expected values, thereby reducing errors even further.
- **Online Order Confirmation:** When a customer places an order online, they receive an immediate online order confirmation, along with a tracking number.
- **Shopping Cart Features:** Familiar website shopping cart features facilitate the ordering process.

- **Order Status:** Once an order is placed, customers can check the status of the order online at any time of the day or night.
- **Save Partially Completed Orders:** Government ordering allows GSA and Customer Agencies to compile an order and save it in a shopping cart without submitting it. The customer can return to the cart, when convenient, and submit the order.
- **Reports:** Government ordering provides extensive reporting capabilities including the ability to filter by many variables.
- **Availability:** 99% availability allows Networx customers to perform ordering functions when it is most convenient for them.

Pages 386 and 387 intentionally left blank

Customer Support

The Networx CSO is established organizationally with proven processes, robust systems and efficient tools dedicated to support the Networx requirements. AT&T is revamping all aspects of the customer experience in the telecommunications industry by simplifying Service Level Agreements (SLAs), slashing cycle time, improving accuracy, and rolling out powerful electronic servicing capabilities. All of this revamping translates into Government benefits for trouble and complaint handling, queries, technical support, revenue forecasts, service optimization, billing, training, and ordering.

A subset of tailored OSS for Networx is provided by AT&T Government Solutions, a business unit of AT&T. Networx Subscribers have easy access to support systems in one common area, through the AT&T **Business**Direct web portal, as shown in **Figure 2.3.13-4**. Designed to give Networx users greater control of communications from any location, worldwide, 24x7, GSA and Agencies have easy access to all service ordering information, inventory information, billing information, dispute information and Networx prices.

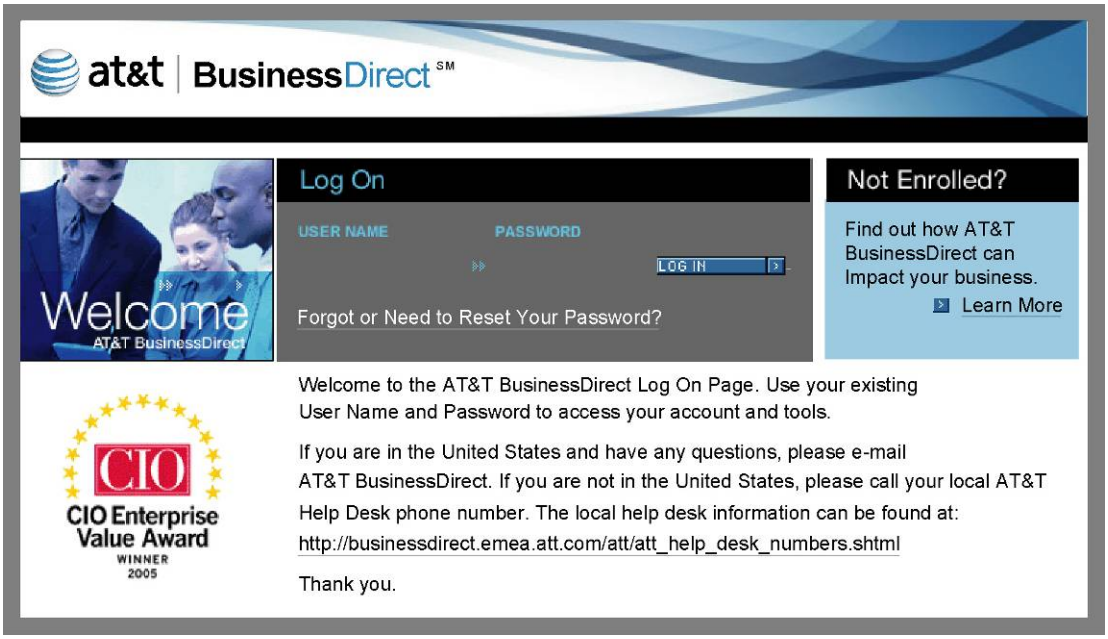

Figure 2.3.13-4: Welcome Screen. *AT&T **Business**Direct is the authorization gateway for Government customers to perform a variety of Networx service functions.*

Service Management

The critical nature of Government missions depend on the capability to operate and manage Networx services to the level of performance required. GSA and Agencies can be assured that AT&T's management solution is built upon reliability and performance with Networx tailored systems, processes and professional staff support provided by the CPO.

The components of the system architecture used to support Networx services, the associated functions, and GSA Customer Benefits are described in **Table 2.3.13-7**.

SERVICE MANAGEMENT SYSTEM ARCHITECTURE COMPONENTS

System	*Function*	*GSA Customer Benefits*
AT&T **Business**Direct	Highly available, secure portal	Single point of entry for GSA Customers, provides access to all network management applications; performance reports, monitor Service Level Agreement (SLAs), view tickets, order services, track orders, service and configuration maps.
[redacted]	Trouble Management	Supports converged trouble management functions; automatic ticketing of root causes, ticket assignments, and ticket processing

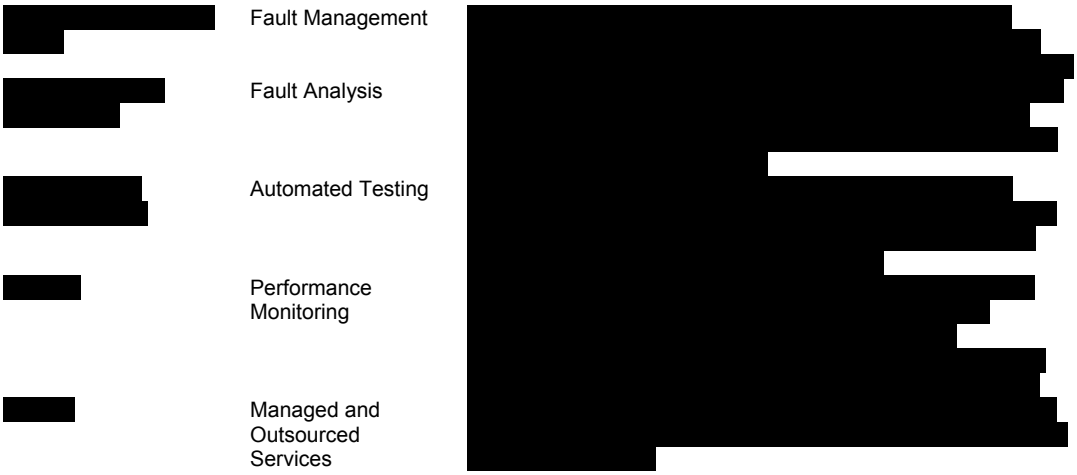

Table 2.3.13-7 Service Management System Architecture Components. *These system architecture tools give GSA Customers high service availability, high service performance, a common tool set, and easy to access web portal.*

Figure 2.3.13-5: Network Management System Architecture. *AT&T's network management solution offers GSA customers flexibility and can be tailored to match their requirements.*

These architectural components represented in **Figure 2.3.13-5,** provide GSA Customers with demonstrable network management differentiators and are accessed through a secure web portal that provides visibility to track service

quality. In addition, **Figure 2.3.13-5** shows a [redacted] GSA Customers' service. This permits fast, accurate root cause identification avoiding downtime and reducing mean time to repair.

*"AT&T **Business**Direct™ Service Provides Network Control"*

*"With all the communication services and equipment that must be tracked and paid for, (government) agencies are also demanding that telecommunication service providers offer ways to make their management chores easier. For instance, more than a dozen agencies are using AT&T's AT&T **Business**Direct service, which allows them more control over the networks AT&T manages for them. Agencies can get a nationwide view of their networks and how they are working."*

Federal Times – October 2004

As shown in **Figure 2.3.13-6,** AT&T **Business**Direct is a secure portal for complex user requirements and service management.

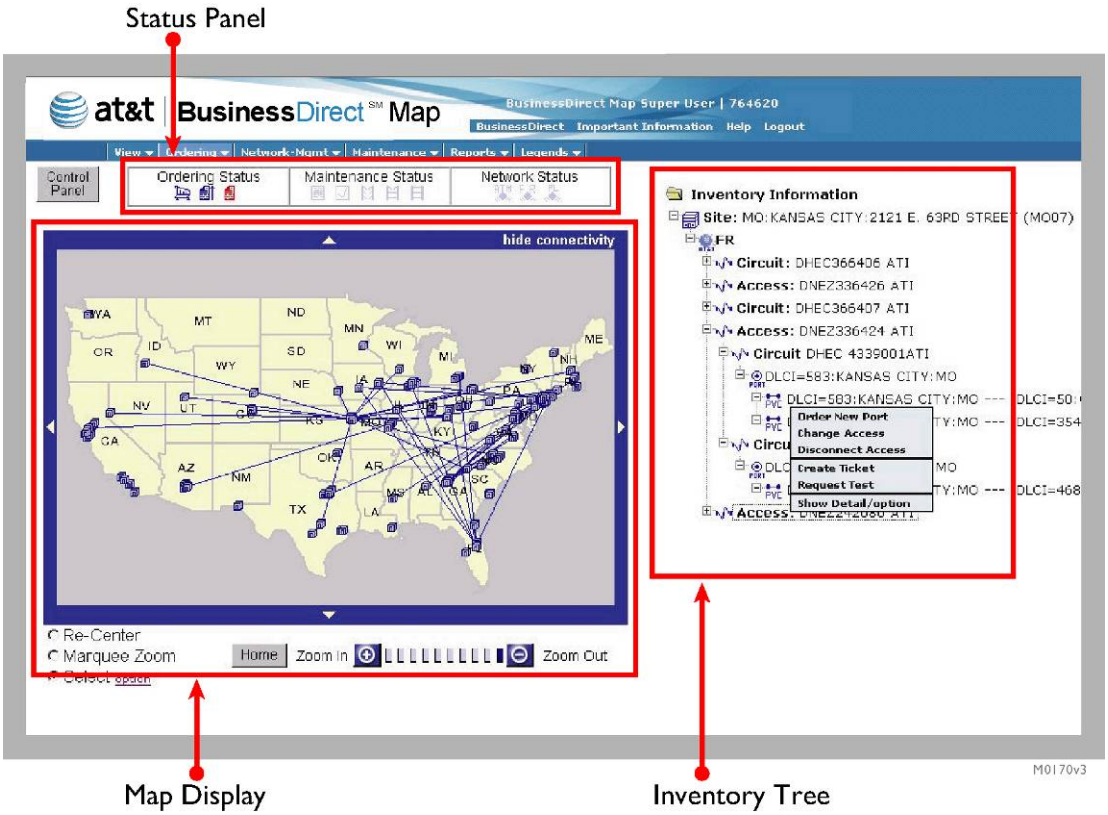

Figure 2.3.13-6: Network and Inventory Viewed Through AT&T BusinessDirect Map. *With this tool, Agencies have capability to view their networks and network components.*

[redacted]

These tools combined with the support of the CPO, are provided to help GSA and Agencies spend more time on critical missions.

Inventory Management

GSA and Agencies receive accurate, up-to-date Networx inventory information, simply accessed through a secure web portal. By selecting [redacted] as shown in **Figure 2.3.13-7**, Networx inventory is effectively managed and maintained.

Figure 2.3.13-7: Inventory Management Made Easy. *Agencies can manage their inventory by performing the functions shown above.*

Government customers can view accurate and current inventory data for its management needs whenever required. Agencies with multiple and complex requirements are able to take advantage of securing inventory data from a single source for all Networx services. Consequently, the Government saves time and gains productivity as Agencies select and procure Networx services.

Service Order Completion Notices (SOCNs) are delivered to the Government electronically, as specified in Section C.3.5 of the RFP, Service Ordering, and defined in Section J.12 of the RFP, Ordering and Billing Data Elements. All the data elements listed on the SOCN are maintained and updated, as required, in the [redacted] As a final step of the order completion process, shown below in **Figure 2.3.13-8,** the [redacted]

[redacted] is updated within 24 hours of posting the SOCN. This timely update also allows the Government to use the Networx [redacted] tool to verify service orders and transition completions.

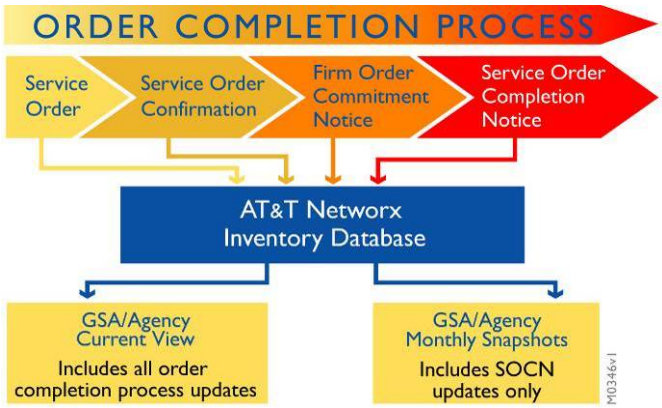

Figure 2.3.13-8: Networx Orders Update [redacted] *Agencies can see their inventory updated from the beginning of the order process to the end.*

Updates to the inventory are driven by service orders. Therefore, changes to the service, such as added features, replacement of service enabling devices (SEDs), or disconnects, are recorded in the [redacted] from data in the SOCN for the service order. The ability to verify and track all service changes and updates to the inventory database within the same inventory system tool is extremely helpful and convenient in verifying data and resolving inventory discrepancies or billing inquiries.

The [redacted] the [redacted] to create an inventory report [redacted] of interest as applicable. For example, the user can create a list of [redacted] This report could be [redacted] the SOCN data elements. This flexibility in data query is designed so the Government can work more efficiently with the resulting reports and their assigned tasks.

- The [redacted] view of the [redacted] contains an [redacted] which provides a list of [redacted] for [redacted]. When a single [redacted]

the Government user can [redacted] link to [redacted] This information, conveniently accessed in the [redacted], is essential for [redacted] The Government can expect efficiency and productivity to increase with use of the [redacted]

Program Management

For Networx, a suite of OSS tailored to meet Government-specific requirements is in place to provide support. These systems are integrated into our state of the art target architecture plans to ensure easy integration of new services and OSS improvement initiatives. These systems were developed with the flexibility needed to implement unique Government requirements. The AT&T **Business**Direct portal provides GSA a way to easily access all service ordering information, inventory information, billing information, dispute information, and Networx prices. [redacted] and [redacted] Tool have been in existence [redacted] and are familiar systems to [redacted] customers.

The specific systems tailored for Government use are all available via AT&T **Business**Direct:

[redacted]

These systems further refine our approach of [redacted] All these systems handle the entire suite of Networx services. This eliminates the confusion often occurring when an Agency receives bills out of multiple billers from a single vendor. Although the Networx RFP allows multiple billers

to be utilized, one single integrated biller is being proposed. A single integrated biller affords the following benefits:

- Customer Friendly
- Easy to verify and validate charges
- Higher Accuracy
- Lower risk of duplicate billing

We are also integrating sub-contractor service offerings into all of these program and customer support functions and tools. This common experience across services and sub-contractors consistently exceeds requirements through the support of the OSS and applications used for Networx.

OSS Integration

The offeror shall describe its degree of integration among all OSS.

AT&T has tailored our commercial [redacted] to meet Government and Networx requirements. GSA and Agencies are provided with the ability to perform their key functions through access to a secure, web portal interface which allows Government customers access to an entire suite of applications, 24x7.

These customer support management applications and tools are accessible through the AT&T **Business**Direct portal. GSA and Agencies can easily and securely share information, [redacted] OSS [redacted] **Figure 2.3.13-9.**

Figure 2.3.13-9: Leading the Way with Integrated Networx OSS. *The Government is lead through each step of an integrated set of OSS.*

Table 2.3.13-8 presents the applications offered to GSA and Agencies to manage their Networx services. This information, accessible via a single logon ID in the AT&T **Business**Direct portal sets the pace and [redacted] by offering the most complete and well integrated presentation of Government and Networx information.

AT&T BUSINESSDIRECT APPLICATIONS	APPLICATION FUNCTIONALITY
Networx Public Page (accessible to everyone via http://www.att.com/Networx)	Home Page Relevant to Networx - View Contacts, Redacted Contract, Product and Services Reference Guide, Networx Training. (GSA may Influence Home Page with Information on User Profiles and Preferences).
Networx Subscriber Page	All links that are described below, are ID/Password authenticated based on Agency permission, via secure website.
Inventory Management	View Active Services and "Snapshot" for Current Month; View Network Components for Each Site, Track and View Order Confirmations and Notices through Implementation
Ordering and Order Status	Submit Service Order, Track Order Status
Trouble Reporting	Submit Trouble Ticket, Receive Automatic Status of Existing Trouble Tickets, Initiate Circuit Tests and View Results and Retrieve Reports on Trouble Tickets
Billing	View Government's Current and Prior Bills on-line, Download and Print Detailed Invoices, Make Inquiries and Request Adjustments
Transition	View Transition Notices, Inventory and Transition Reports
Billing Dispute	Resolve Bill Inquiries
Service-affecting Events	View Service-affecting Events
Performance Reporting	Access Up-to-Date Information on GSA Network Performance; Create Daily, Weekly and Monthly Network Activity Reports for Most Services; View GSA, Agency and CPO Management Reports

Price Quote Tool	Obtain Quotes
Training	Register for a Class, View Training Catalog, Suggest New Courses

Table 2.3.13-8: AT&T BusinessDirect Applications. *The OSS capabilities provide a broad menu of services to Networx users through a secure portal.*

Use of a single portal for service ordering, service management, inventory management, trouble ticketing, billing, customer support and program management provides the Government with the ability to:

- Improve order accuracy by submitting orders with point and click menus
- Shorten provisioning intervals by utilizing electronic capabilities to speed processes
- View and track Transition information through real time updates
- Speed trouble resolution by creating and tracking trouble tickets on line
- Optimize network efficiency by monitoring their own network and administering changes to optimize capacity
- Save administration time by utilizing a single portal to research and investigate inventory updates
- Access billing information easily and quickly without needing to contact the Customer Support Office (CSO) for inquiries

THE YANKEE GROUP

"AT&T's Business Direct portal has achieved the highest overall level of integration and feature support across ordering, maintenance, billing and network management"

January 2005

Verification Testing

In addition, the offeror shall address its OSS approach to:
(a) Verification Testing

With the critical nature of the Government's missions, it is imperative the integrated OSS be ready for GSA and Agencies, prior to the issuance of the first order. This is demonstrated through achievement of the OSS Verification Test objectives (**Figure 2.3.13-10**). [redacted]

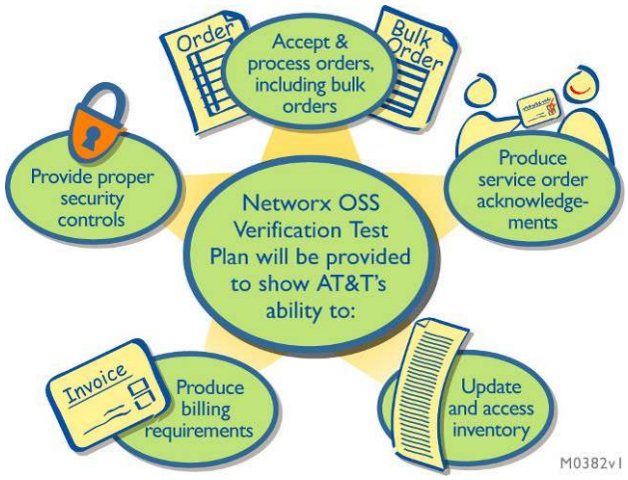

Figure 2.3.13-10: Accuracy Demonstrated through OSS Verification Testing. *GSA and the Agencies experience accuracy firsthand with the timely and accurate completion of the OSS verification test.*

[redacted] It can then be [redacted] GSA and Agencies are shown that all OSS for service ordering, billing and inventory management tools (essential to providing the Networx services) are in place and fully operational.

Government-provided data, [redacted] OSS Verification Test. The Government and the Networx team [redacted] Government [redacted] OSS Verification Test Manager and Test Team are in place to support OSS Verification Testing.

When a new service is offered, the Test and Turn Up process will demonstrate that services are operational and Key Performance Indicators (KPIs) /Acceptable Quality Levels (AQLs) are met. This is coordinated

through the CPO and the Government may participate or observe the test. The Networx Services Verification Test [redacted] CPO.

Further detail is provided in Section 2.3.13.1 and in the Networx OSS Verification Test Plan (Appendix F).

Security and Performance

(b) Security and Performance

In order to meet critical Government security requirements, [redacted] **Table 2.3.13-9.**

ORGANIZATIONS	FUNCTIONS
[redacted]	[redacted]
AT&T Labs	The Labs are a premier research and development organization providing innovative network security products and technical solutions.

Table 2.3.13-9: Worldwide Security Organizations Provide Foundation for Agency Protections. *A partnership of organizations work together to provide the Government with secure OSS and services.*

The Networx security approach includes the following:

[redacted]

[redacted]

To accomplish Government goals, [redacted] AT&T Networx Team [redacted]

[redacted]

Service Level Agreements

[redacted]

Further detail is provided in Section 2.3.13.2 and in the Networx Security Plan in Appendix C.

Change Control

(c) Change Control

OSS need to be adaptable to change, especially with the rapid pace of IT convergence. GSA and the Agencies are provided with systems managed by an efficient, disciplined change control process by which change decisions are proposed, evaluated, agreed to, administered, tested, implemented and controlled. This process protects Government information by minimizing the likelihood of unauthorized change by guaranteeing that all changes are approved, documented and communicated. The Change Management Plan (Appendix G) provides details of how changes are effectively identified, authorized, managed and controlled throughout the life cycle of Networx program.

Government coordination and communication for OSS changes will be accomplished through the OSS Change Control [redacted] OSS changes [redacted] Government [redacted]

[redacted]Networx Change Control process. The Government is able to easily obtain change information and when the changes are implemented.

Further detail is provided in Section 2.3.13.3 and in the Networx Change Management Plan in Appendix G.

The offeror shall provide an OSS Verification Test Plan, in accordance with Sections C.3.9.2.2, Step 2, Verification Testing; E.2, Verification Test Plans; and E.3, Verification Testing of Contractor's Operational Support Systems. The offeror shall describe its OSS security as part of the Security Plan required in Section L.34.2.3.3, Security Management. The offeror shall describe its OSS change control in an OSS Change Management Plan as required in Section C.3.9.2.3, Step 3, Change Control.

AT&T has provided the required plans in the Appendix reference in **Table 2.3.13-10**.

PLAN	APPENDIX LOCATION	REFERENCES
OSS Verification Test Plan	F	C.3.9.2.2, Step 2, E.2., E.3
Security Plan	C	L.34.2.3.3
OSS Change Management Plan	G	C.3.9.2.3, Step 3

Table 2.3.13-10: Appendix References. *AT&T has supplied the Appendix where GSA will find the required plan.*

The contractor shall provide an OSS Verification Test Plan, in accordance with Section E, Inspection and Acceptance at contract award. [C.3.9.2.2]

The OSS Verification Test Plan (Appendix F) outlines the details of the test in accordance with Section E, Inspection and Acceptance. [redacted]OSS[redacted]Government [redacted]

2.3.13.1 Verification Testing [L.34.2.3.13.1], [E.2], [E.2.1], [E.2.2]

The offeror shall describe its approach to provide OSS verification testing.
The offeror shall address the following at a minimum:
(a) Completeness and consistency of its plan for meeting the requirements of Section E, Inspection and Acceptance and meeting all performance requirements
(b) Testing approach which supports completion of testing within 60 calendar days from the Notice to Proceed or the date GSA approves its OSS Verification Test Plan (whichever is later), even if any retesting is required, with a description of how Government observers are involved
(c) Effective and timely testing for new functionality or services

GSA and Agencies will have fully operational OSS ready to order Networx services. The OSS are tested using data provided by the Government, to confirm all essential systems used for ordering, billing, and inventory management are ready for the beginning of the ordering cycle. AT&T follows the

guidelines in Section E: Inspection and Acceptance, for the OSS Verification Test Plan and the Networx Services Verification Test Plan, and the [redacted]

For Networx, [redacted] OSS to support the Networx contract. Networx functionality is being implemented in the [redacted] system release schedules so that we are fully ready for testing after Notice to Proceed. This coupled with an internal testing process serves to validate completeness and accuracy of the OSS. The internal testing process is used as products/services and changes are introduced into the existing OSS. [redacted] Networx OSS Verification Test.

The Networx OSS Verification Test Manager coordinates each step with the Government and makes arrangements for its participation and observation. Once the Networx OSS Verification Test Plan is approved by GSA, the test begins. AT&T utilizes the test data provided by the Government to ensure the outcome meets the pre-defined expected results. This test verification process provides GSA and Agencies with the confirmation all OSS are in place and are fully operational. This is demonstrated by using Government data to:

- Accept and process orders and produce acknowledgements
- Process bulk orders
- Produce billing files
- Verify that orders update inventory correctly
- Provide proper security and authorization for access

This test is coordinated using a preplanned schedule and is completed within 60 days of Notice to Proceed or the date GSA approves the OSS Verification Test Plan, depending on which date occurs later. Results of the test are recorded and reported to the GSA Contracting Officer's Representative

(COR). [redacted] however, no Networx orders are processed until approval is given by the Government.

Data and Interfaces

(d) Complete description of data and interfaces

Using data provided by the Government, the OSS Verification Test is used to validate the readiness of the OSS and the ability to:

- Accept and process orders and produce acknowledgements
- Process bulk orders
- Produce billing files
- Verify orders update inventory correctly
- Provide proper security and authorization for access

Figure 2.3.13.1-1 shows the main applications and interfaces used for the Networx and the OSS Verification Test.

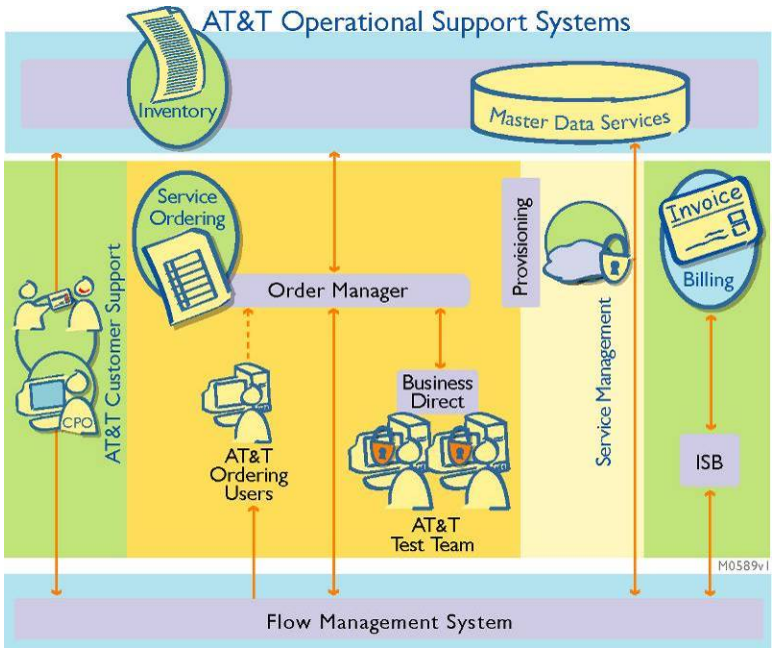

Figure 2.3.13.1-1: Networx OSS Data Passes Through Interfaces to Demonstrate OSS Operations. *Agencies will see how data passes through interfaces to meet the OSS Verification Test requirements.*

Table 2.3.13.1-1 describes in more detail how OSS OSS Verification Test.

TEST CASE	DESCRIPTION OF TEST DATA AND INTERFACES
1	AT&T **Business**Direct Code(AHC) Account Hierarchy AT&T **Business**Direct
2	(Order Receipt and Service Order Completion Notice (SOCN)) produces Order Receipt Acknowledgement. sends Order Receipt Acknowledgement AT&T **Business**Direct. SOCN.
3	AT&T **Business**Direct. AT&T **Business**Direct AT&T **Business**Direct.
4	AT&T **Business**Direct.

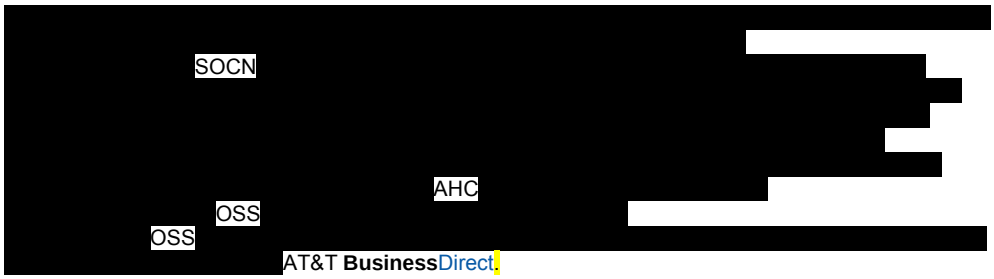

Table 2.3.13.1-1: Data and Interfaces Reflect Networx OSS. *Networx data and interfaces will be demonstrated through the OSS Verification Test.*

(e) Meeting of test results reporting requirements

When the Networx OSS Verification Test begins, the OSS Verification Test Results Report (Appendix F, Attachment D) initiates progress tracking and recording. This report lists the Networx services, as specified in Section C.2, and records the number of test runs and status of Pass or Fail for each of the six test cases, for each service. The OSS Verification Test Manager manages the report and the test process. The report is available in the media types specified in C.3.9.4.1.2.3, Media/Transport/Format – OSS Verification Test Results and are delivered to the GSA COR within five business days of completion of the tests.

The contractor shall develop and execute a Networx Services Verification Test Plan to verify that the services delivered under the contract meet the requirements of Section E.4, Verification and Acceptance Testing of Networx Services, and shall develop and execute an Operational Support System (OSS) Verification Test Plan to verify that its OSS meets the requirements of Section E.3, Verification Testing of the Contractor's Operational Support System. [E.2]

A Networx Services Verification Test Plan to verify that the services delivered under the contract meet the requirements of Section E.4, Verification and Acceptance Testing of Networx Services will be developed and executed by AT&T. Further detail will be provided in the Networx Services Verification Test Plan which will be delivered as specified in Section F, ID 95, within 60 calendar days after Notice to Proceed. The Networx Services Verification Test Plan and OSS Verification Test Plan are located as shown in **Table 2.3.13.1-2**.

PLAN	APPENDIX LOCATION	REFERENCES
Networx Services Verification Test Plan	To be delivered 60 days after Notice to Proceed	C.2, E.2.2, E.4
OSS Verification Test Plan	F	E.2.1, E.3

Table 2.3.13.1-2: Appendix References. *AT&T will provide the Networx Services Verification Test Plan and the OSS Verification Test Plan as noted above.*

The contractor shall prepare an OSS Verification Test Plan in accordance with the requirements of Section C.3.9, Operational Support Systems, and Section E.3, OSS Verification Testing of the Contractor's Operational Support Systems. The contractor shall update the OSS Verification Test Plan when a new service is offered or when an OSS is changed. [E.2.1]

The OSS Verification Test Plan (Appendix F), prepared in accordance with Section C.3.9., Operational Support Systems and Section E.3, Operational Support Systems (OSS) Verification Testing of AT&T's Operational Support Systems, outlines the details of the test. This test demonstrates to GSA and Agencies that all OSS are in place to meet the Networx requirements. AT&T will update the OSS Verification Test Plan (Appendix F) when a new service is offered or when an OSS is changed.

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The test cases that the contractor shall execute acceptably include those listed in Table E.3.1 [E.3]

The Networx OSS Verification Test cases will be executed acceptably in accordance with the test cases listed in Table E.3.1 and shown in **Figure 2.3.13.1-2**.

Figure 2.3.13.1-2: Networx Test Cases demonstrate OSS for the Government. *The Government observes the ability to process orders, produce acknowledgements, update inventory and bill for Networx services specified in Section C.2, Technical Requirement through the OSS Verification Test.*

The contractor shall demonstrate acceptable performance using one of the following electronic media: Internet secure access, electronic mail, or electronic file transfer. [E.3]

The Networx Services Verification Test results and OSS Verification Test results are demonstrated using the media types required by the Government: Internet secure access, electronic mail or electronic file transfer.

2.3.13.2 Security and Performance [L.34.2.3.13.2, C.3.9.2.1]

The offeror shall describe its approach to provide OSS security

In today's world, more than ever before, it is imperative for GSA and Agencies to maintain a secure operating environment. AT&T is deeply committed to a rigorous practice of discipline around security, and commitment is embedded throughout all processes, from desktop management to network and service security. Government customers benefit from the approach, governed by deep security expertise, which exemplifies

the due diligence and discipline a service provider can use to implement leading practices to protect its computing infrastructure.

Excellent security begins with the [redacted] These policies and practices govern security for services from OSS to Operations. [redacted]

For each new service or feature, the [redacted] AT&T Labs.

The Security Plan (Appendix C) for Networx details how the Government's Security Management requirements are to be met. There are 6 major sections in the Security Plan. These sections are listed below:

[redacted]

[redacted]begins with establishment of a security plan. [redacted] The responsible organizations and contacts are listed, including points of contact for the Government. Systems are assigned a status of: [redacted]. A description of the Networx program is provided along with [redacted]

[redacted]

Government information has a high level of sensitivity and requires protection. AT&T recognizes this as one of the [redacted] for Networx. Based upon this [redacted]AT&T [redacted] OSS[redacted]

[redacted] are [redacted] OSS[redacted] **Figure 2.3.13.2-1** [redacted] OSS used by GSA and Agencies.

Figure 2.3.13.2-1: Security Management Controls Protect GSA and Agencies. [redacted]

The OSS Security Management Controls are outlined in **Table 2.3.13.2-1**.

OSS Security Management Controls

CONTROL COMPONENT	CONTROL FUNCTION	PROTECTION AND PHASES
[redacted]		

Table 2.3.13.2-1: Proactive Management Controls Aim for Decreased Risk. *Documented management controls protect the Government against potential OSS security breeches.*

An OSS Security Plan can be developed at any point in [redacted] however [redacted] There are [redacted]

[redacted] (**Figure 2.3.13.2-2**).

Figure 2.3.13.2-2: All Points OSS Security. *A phased approach ensures a lifecycle of OSS security for systems the Government will use.*

[redacted]

To further protect GSA and Agencies, [redacted], shown in **Figure 2.3.13.2-3** and **Table 2.3.13.2-2,** [redacted]

Figure 2.3.13.2-3: OSS [redacted]

Table 2.3.13.2-2: OSS Security Operational Controls.

The OSS used by GSA and Agencies are further protected by shown in **Figure 2.3.13.2-4** and **Table 2.3.13.2-3**, which

[redacted]

Figure 2.3.13.2-4: OSS Protected by Systems. [redacted]

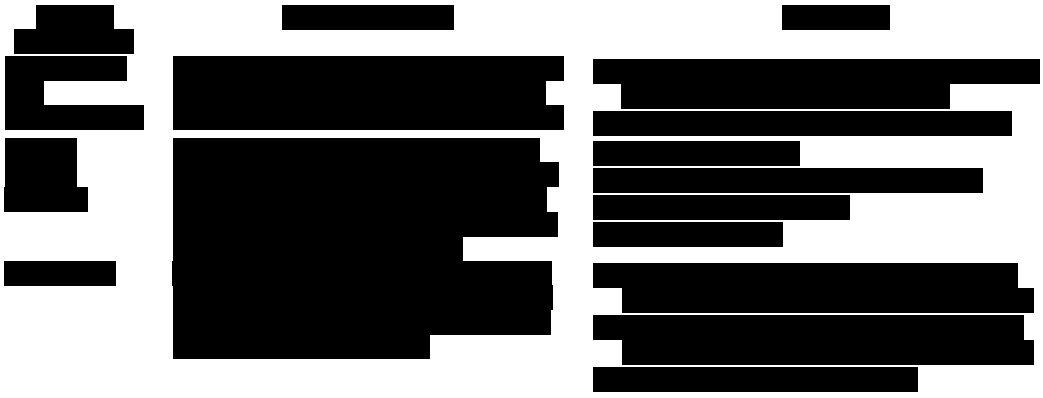

Table 2.3.13.2-3: Technical Controls Used to Protect Systems. [redacted]

Lastly, the [redacted] specifies details regarding how the Government is [redacted]

The offeror shall include in its Security Plan its methods for meeting the requirements of Section C.3.9.2.1, Step 1 -- Security and Performance, ID numbers 1 through 3.

[redacted] **Table 2.3.13.2-4**.

[redacted]

Table 2.3.13.2-4: Appendix Reference. [redacted]

The offeror shall address the following at a minimum:
(a) Complete description of methods to ensure implementation of auditability, access controls, data protection, and backup and recovery of the OSS

[redacted]

GSA and Agencies can be [redacted] exists to protect the system from identified vulnerabilities. [redacted]

[redacted]

Lastly, audit logs will be retained as specified in FAR Subpart 4.7.

[redacted]

The Government receives [redacted]

[redacted]

These [redacted] shown in **Table 2.3.13.2-5** [redacted]

[redacted]

[redacted]

Table 2.3.13.2-5: Critical Access Controls Protect GSA and Agencies. [redacted]

Data Protection

Government data and systems have a high level of sensitivity and require protection. The information and data stored within, processed by or transmitted through is one of the major risk factors. AT&T identifies sensitive information and establishes security controls on a case-by case basis for all systems, including Agency specific ones, used for Networx. The protections for data protection span a multitude of control areas as detailed in **Table 2.3.13.2-2,** OSS Operational Controls.

Backup and Recovery

In the event of a disruption in computer operations, GSA and Agencies can be assured contingency plans are in place to provide continuity of system functions. These contingency plans, also referred to as disaster recovery plan or business recovery plan, include routine steps to ensure preparedness, such as regularly scheduled software backups and management of backup media. Recent software and data backups would be essential if it became necessary to recover from a disaster, whether a natural disaster, such as a fire or flood; a crime, such as an intruder's vandalism of the network or a supporting computer facility; or a hardware or software failure or user error. Duplicate backup media must be stored off site to minimize the risk of being damaged or destroyed with the production environment.

To provide this safeguard for the Government, AT&T does near real time, mirrored back-up of all servers at offsite locations. This includes critical

Networx services configurations and OSS data and information generated and stored at our Networx facilities. Backup storage site(s) are geographically removed from the primary site(s) and physically protected at the same level as the primary site(s).

Data Integrity Assurance

(b) Methods of assuring data integrity for all stakeholders

The priority of protecting Government data from vulnerabilities [redacted] OSS infrastructure [redacted]

Concept of One architecture has been implemented, moving the company from a set of product and work-center specific systems to an end-to-end systems architecture. This concept enables consistency and coordination in service delivery for all Networx services, as well as improvements in service quality, by ensuring data integrity with the enterprise-wide database architecture.

Under the development leadership of AT&T Labs, the OSS are moving toward Concept of One and [redacted] The Concept of One directs each of the support systems, such as billing, inventory, service management, ordering and provisioning towards convergence over time to one common set of systems to handle multiple network, operations and service domains. This effort enables a focused approach to data integrity, provisioning fall-out

mitigation, operations consolidation, and common rules and processes. [redacted]

[redacted] **Figure 2.3.13.2-5**.

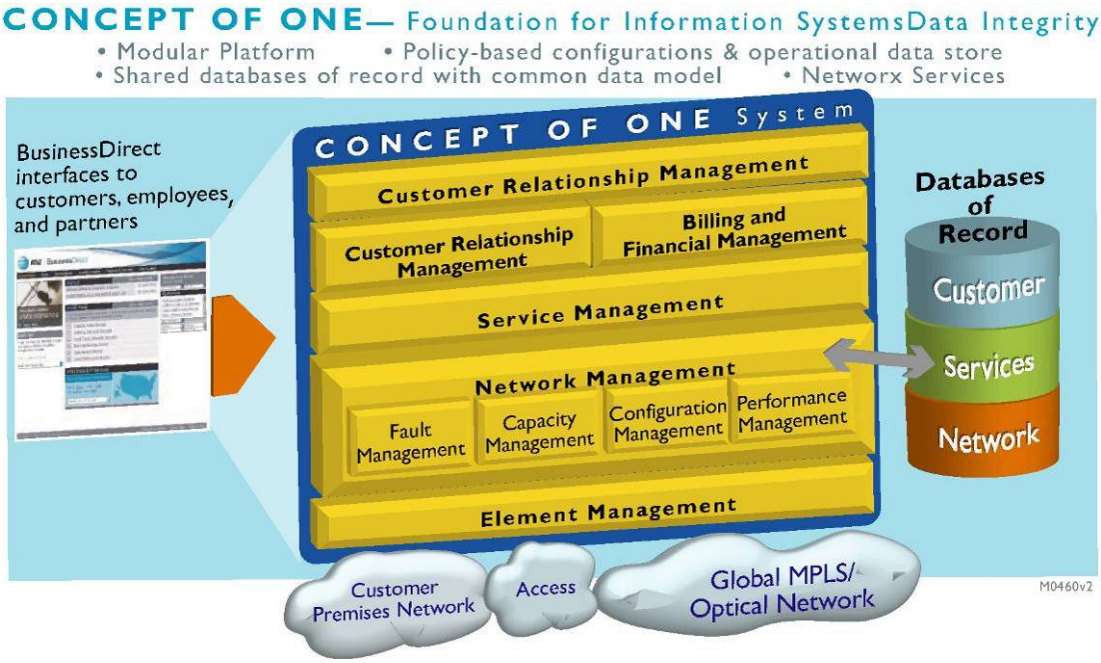

Figure 2.3.13.2-5: Data Integrity Provided through Concept of One Approach. *Streamlined support system development equates to improved data integrity.*

[redacted] The Concept-of-One effort has begun in network and service architecture, and also in back-end operations and support systems. As this concept continues to influence development and process strategies, the Government benefits by having consistently improving

operational and service delivery with less defects and even higher levels of data integrity.

The contractor shall ensure security requirements are met for all automated operational support systems, and shall support Government certification and accreditation of the system via services such as Managed Tier Security Service, Customer Specific Design and Engineering Services, or other services the Government may order to achieve this. The security requirements are defined in Section C.3.3.2, Security Management, and include, at a minimum, security controls for low impact systems as defined in NIST SP 800-53, Annex 1. [C.3.9.2.1]

The OSS used by the Government are [redacted] in the Security Plan (Appendix C) and in the overall Security approach. AT&T [redacted] FISMA, NIST SP 800-14, and FIPS PUB 199 and 200 [redacted]

AT&T will [redacted] Government [redacted] AT&T.

[redacted]

Networx Security Manager [redacted] Security Manager [redacted] AT&T.

[redacted] Agency or at an AT&T [redacted]

[redacted] Government Agency and AT&T premises.

AT&T will support the Government in the Certification and Accreditation of the system via services such as Managed Tier Security Service, Customer Specific Design and Engineering Services, or other services the Government may order to achieve this.

The contractor shall describe its methods for securing these systems as part of the overall Security Plan. [C.3.9.2.1]

Each system shall meet the requirements addressed elsewhere in this contract such as security management, fault management, and trouble handling. [C.3.9.2.1]

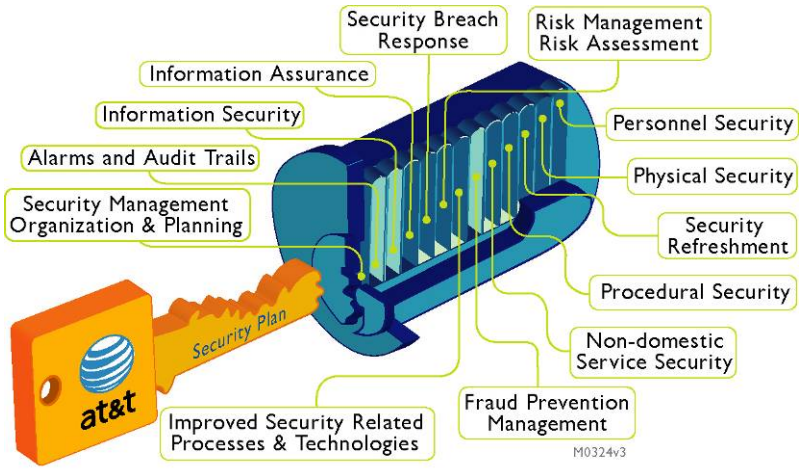

Figure 2.3.13.2-6: Security Plan is the Key for Safeguards. *GSA and Agencies are assured of security for OSS with the all inclusive Security Plan (Appendix C) developed for Networx.*

The Networx OSS used for security management, fault management and trouble handling follow the same security approach and controls as what is outlined in the Security Plan (Appendix C). As show in **Figure 2.3.13.2-6**, security is the key to services and service delivery. Safeguarding all service elements, systems, applications and workstations from unauthorized access, disclosure, corruption or disruption is a priority.

2.3.13.3 Change Control [L.34.2.3.13.3], [C.3.9.2.3]

The offeror shall describe its approach to provide and maintain OSS change control.

Over the life of the Networx contract, changes to the OSS will be required. These changes could be design changes, system upgrades or changes due to system maintenance. Through many years of practical experience in managing some of the industry's largest voice and data networks, a disciplined approach has been developed and is used to effectively manage change control. This approach manages the introduction of changes and modifications to the operating environment in the interest of maintaining service at target performance levels. The process shown in **Figure 2.3.13.3-1** begins with a change (add/update/delete) which has been [redacted]

Figure 2.3.13.3-1: Disciplined Change Control Provides Coordination with the Government. [redacted] *OSS.*

The offeror shall include its OSS Change Management Plan for the process of managing changes to OSS according to C.3.9.2.3, Step 3 -- Change Control.

An OSS Change Management Plan (Appendix G) details the Change Management process. [redacted]

process. These industry recognized standards guarantee GSA and the Agencies interface with systems where changes are identified, authorized, managed and controlled.

The offeror shall address the following at a minimum:
(a) Description of provision for Government review and approval of changes
(b) Methods to assure functionality of interfaces for changes
(c) Methods of communicating to the Government of planned and unplanned changes

Due to the importance of OSS changes on the daily operations of the Government, [redacted] Change Control [redacted] For changes impacting Networx, the Government has the opportunity to participate in the Change Control process and has consistent access to OSS change information. If the scope of a change is significant and affects the Government and the OSS, the Government may coordinate an approval review through the OSS Change Control Manager.

Changes to OSS [redacted]

GSA and Agencies should expect OSS changes to [redacted] on their daily operations. Should OSS changes be made in operational areas affecting the Government, such as [redacted]

[redacted]

[redacted] Networx OSS Change Control Manager [redacted]

The contractor shall deliver an OSS Change Management Plan. [C.3.9.2.3]

The OSS Change Management Plan is included in Appendix G.

The OSS change management requirements shall include, at a minimum, how the contractor will conduct the following:
1. Informing the Government when OSS design changes are planned and when maintenance changes are required

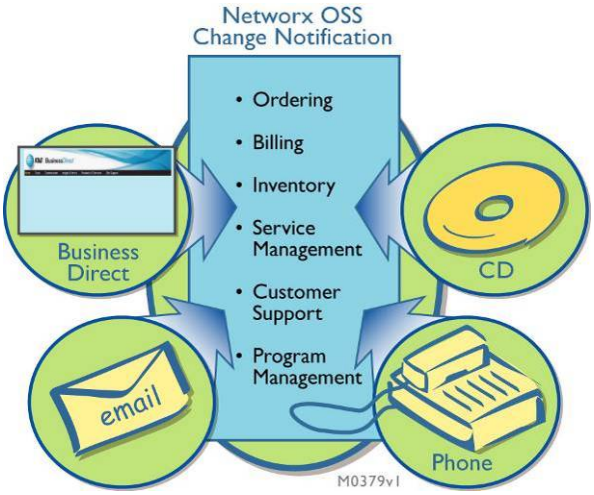

Figure 2.3.13.3-2: Various Means of Notification for OSS Changes. *The Government is notified of OSS changes, ensuring real time updates.*

In addition to notifying GSA and Agencies through the methods described in **Figure 2.3.13.3-2,** [redacted] OSS Change Control Manager [redacted] AT&T Labs [redacted] Change Control [redacted] OSS Change Control [redacted] this information is communicated with the Government as specified in the Change Management Plan (Appendix G).

2. Managing and controlling OSS changes

OSS changes are managed with the process outlined in the Change Management Plan (Appendix G). The AT&T Labs [redacted] change control [redacted]

3. Incorporating Government review and approval by the Government into the contractor's change management process

In order to ensure coordination and communication with the Government on OSS changes, [redacted] OSS Change Control [redacted] OSS Changes, the Government [redacted] GSA or Customer Agencies [redacted] This provides the Government with a continuous flow of information on what is changing, when it is changing and how the changes are to be implemented.

4. Government training, if required by the changes

GSA and Agencies must be kept current with methods for utilizing their Networx systems and tools. Should changes affect the OSS and require Government training, the Change Control process identifies the need. The [redacted] OSS Change Control [redacted]

5. Retesting with the Government to ensure functionality of any impacted interface. [C.3.9.2.3]

With a controlled system release process, GSA and Agencies [redacted] described in the Change Management Plan (Appendix G) which outlines the steps followed for managing, testing, approving and controlling the changes.

If the Offeror's approach to meeting OSS requirements is different for optional services than for mandatory services, the offeror shall describe the differences in a separate optional services sub-section within the OSS section of the Offeror's response.

[redacted] OSS [redacted]

The Offeror shall reflect differences due to optional services in an addendum to the OSS Verification Test Plan, Security Plan, and OSS Change Management Plan.

If overtime differences develop in the OSS Verification Test Plan, Security Plan, and OSS Change Management Plan, [redacted] will be [redacted] reflect the differences.

Summary

The OSS described in this section combine to provide GSA Customers with access to future Networx services in evolving telecommunications technology. Our OSS integration, development, life-cycle support, and operations support teams have the single goal of enabling GSA Customers to focus their resources on accomplishing missions more effectively and efficiently. AT&T's OSS will be ready for OSS Verification Testing after award.