

**TESTIMONY BEFORE
THE U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON GOVERNMENT REFORM
SEPTEMBER 15, 2004**

**Presented by
DONALD E. SCOTT, SENIOR VICE PRESIDENT,
EDS U.S. GOVERNMENT SOLUTIONS**

Mr. Chairman and Members of the Committee,

I am Don Scott, Senior Vice President of U.S. Government Solutions, EDS Corporation. Thank you for inviting me here today to testify, on behalf of EDS, regarding the General Services Administration's (GSA's) strategy for the Networx program. We believe that our comments will help GSA's Networx be most effective in today's telecommunications environment. I am presenting an abbreviated version of the testimony we have submitted in four parts for the record. Our submittal includes the following:

- A recommendation to expand the scope of the Networx program to include applications and other user services. This is outlined in a white paper EDS provided recently to GSA and is included as a part of our testimony.

- Examples of this integrated strategy's successful implementation. Please note that in our testimony submittal we have referred to some recently published papers on network convergence.
- Some suggestions for transitioning to these expanded services.

EDS would like to make it clear that we do not propose that GSA eliminate any of the services proposed under Networx; rather, it is our belief that Networx should offer an even broader, richer set of services and solutions. My comments that follow concentrate on the services that should be offered and explain why they should be offered.

GSA's government-wide responsibility offers a unique opportunity to support the agenda of the Congress and that of the Administration. GSA is in a position to leverage the buying power of the entire Federal Government and has a charter to lead the technology initiatives throughout Government. Networx should be aligned with the Office of Management and Budget's (OMB's) current efforts to move to common government-wide architectures.

Mr. Chairman, we commend you and your committee for your high level of interest in Networx, and we commend GSA for the leadership that Administrator Perry, Commissioner Bates, and Assistant Commissioner Johnson have shown. In

particular, GSA's continuous outreach to stakeholders will help ensure that services are acquired at the lowest cost to the taxpayer and that vigorous competition occurs.

Considerable investment will be required by both Government and industry, and we support long-term contracts for projects having such large size and scope; however, because the Networx contract may be effective for the period 2007 through 2017, GSA should give serious consideration to the services expected to be commonly available during that period and to companies' ability to provide those services. We understand that it is not GSA's role to promote the "state of the art," but GSA should not leave it to customer agencies to individually acquire services that are available in the marketplace and are appropriate for consolidated, government-wide buying consistent with the Government's common enterprise architecture goals.

The telecommunications industry will be much different by 2007 and beyond. There is compelling evidence that the information technology (IT) and telecommunications industries are converging and that traditional telecommunications will largely be acquired using commodity schedules or through integration into total service packages and solutions. In the complete text of this testimony, there are references to a number of industrial, Governmental, academic and medical organizations that have implemented, or are in the process of implementing, converged solutions. Most will be fully implemented and mature by

2007. Also included are references to two convergence studies that were completed in June and August of this year. These studies, published in *The Economist*, each surveyed approximately 100 senior executives on the subject of convergence. The first study found that two thirds of the organizations surveyed will shift their applications to unified networks within the next five years and that one quarter sees this integration as crucial to fulfilling their business strategy. The second study and report concluded that 75 percent of companies will achieve widespread migration to converged networks within three years.

I would like to say a few words in definition of convergence and the associated core enterprise services we are discussing. The definition I am using envisions: all services (voice, data, and video); the associated operating and business applications; integration of transport, storage, and management with the network infrastructure; and use of a data stream based on the Internet Protocol (IP).

These services will include such items as: information storage, security; messaging; collaboration tools; various business applications; situation awareness capabilities; knowledge management tools; hosting capabilities; and other services. Associated enabling devices such as desktop computers, laptop computers, and telephones should be included. Blackberries, pagers, and other remote devices, together with seamless network connectivity, should be included so that a maximum

of capability is provided wherever the user happens to be. The industry is transitioning toward integrated networks that will provide all media over a data network using IP. We expect maturity by 2007, which will render the risk far less than if Government agencies acquire services independently. Along with these technology developments, we believe that traditional telecommunications organizations in the user community will be fully integrated into the IT organizations.

The transformation of the communications marketplace defines a specific progression of events. We anticipate this progression as follows:

- Transport will become a commodity, and minimal strategic value will be placed on carrier providers. Transport will become a converged set of IP-based services and applications.
- IP solutions will become the strategic product, which will be built on the infrastructure through the desktop, PDAs, and other devices. In essence, the current logical demarcations will be moved further into the infrastructure.
- Government agencies will be enabled to move toward true performance-based relationships, in which the success of the mission is directly related to the underlying technology that provides the solution.

End-to-end services fit this new mold best. This approach deals with the infrastructure as it directly interfaces with the user and also facilitates consistent thought leadership across the infrastructure. These success factors are critical in IP-driven transformations. By anticipating these marketplace shifts, the Federal Government can provide for the breadth and flexibility that will be required to integrate effective offerings over the life of a contract.

Although the transport components will continue to be a foundation for the applications services being carried, we predict that these will be dwarfed in importance by the applications. We believe that with these enhancements, the Networx program can provide true best-value solutions, deliver cost savings to the taxpayer, increase user productivity, and contribute to organizational transformation. The Networx program should be an integral part of the Government's enterprise architecture. In attracting customer agencies to participate, GSA should offer a wide array of integrated services, thereby discouraging agencies from acquiring them individually.

Mr. Chairman, thank you for the opportunity to comment; I will be pleased to answer any questions.

Issue: Obtaining network services—What is the best approach?

Technology changes in the marketplace are rapidly transforming the network landscape. Organizations, including government agencies, expect more and more from their networks. The value of a network is shifting from providing the benefits of connectivity to providing end-to-end applications and business solutions. As technologies continue to converge, contracting vehicles are needed that allow government customers to obtain their network services by obtaining performance-based business solutions.

The General Services Administration (GSA) has sought industry's insight and comments on the future of network services acquisitions in the government. The GSA seeks to position its Networkx contract appropriately in today's marketplace so that it can optimize the contract's effectiveness in bringing the benefits of industry to the government. The following discussion presents a view of how the GSA can best align its Networkx contract to meet the needs of its customers in conjunction with this evolving landscape. By adopting the recommendations presented, GSA will ensure that the volume of business conducted under Networkx increases.

Aligning Networkx to today's technology—and the needs of today's government

The focus of contracting for network services has been on obtaining circuits and the cost of the transport. This approach has not addressed how the network can be the foundation for significant transformation of the organization and how the network can deliver operational cost savings, end user productivity gains, and competitive advantage through leveraging new technologies. Today, there is a drive to accomplish more and more with technology, and the network is an integral part of the enterprise applications architecture.

Networkx has the potential to provide a forward-facing procurement program with a broadened suite of services available to government organizations through GSA. This will enable the customer to obtain end-to-end network solutions and services, including network applications as a whole and not as piece-parts requiring assembly by the organization. This is more in line with the way that network services will be available to customers. If the emergence of the new network model outpaces the ability to readily obtain these services within Networkx, customers may elect to run their own procurements, awarding their own contracts and bypassing Networkx.

By expanding the GSA offering suite available through Networkx, customers can obtain a greater diversity of solutions and better aligned solutions. Further, they will have greater flexibility to obtain network services that more closely address their total business needs, not as discrete components. The graphic, "Emerging Approach to Obtaining Network Services," shows some of the network features, solutions, and trends that drive customer requirements today and should be reflected in future network services contracts.

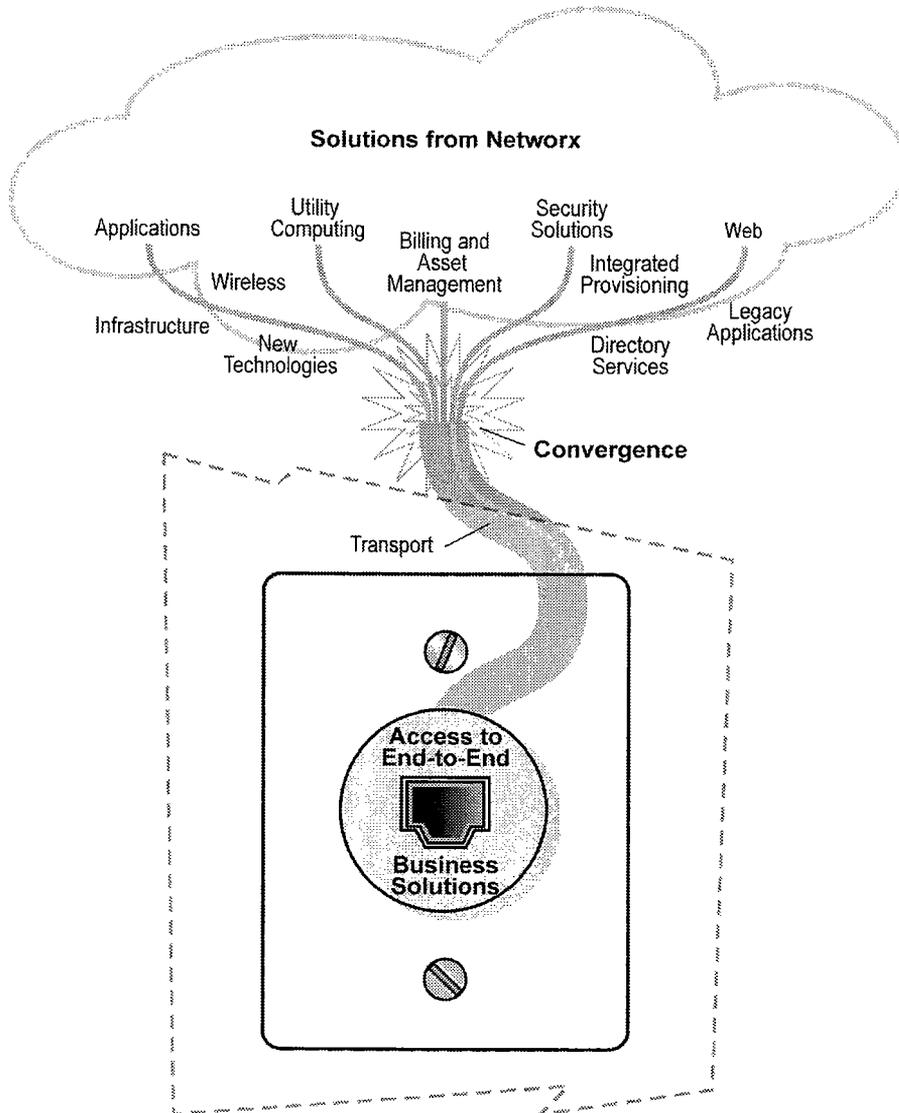
Today's network landscape
Internet protocol (IP) communications are transforming the network model dramatically and improving business performance. The evolving networks are more intelligent and applications-aware, with the applications aligned to supporting the business objectives. IP communications solutions, such as IP telephony, IP video conferencing, unified messaging and voice mail, voice gateways and applications, security solutions, and enterprise network management, are currently available with the trend leading to more network-based applications in the future.

Directory services and access, including solutions such as meta-directories and single sign-on, allow organizations to gain operational

efficiencies. These solutions, which enable the functionality of desktops, servers, and Web and remote access, have become tightly integrated with the network architecture, performance, and security. Services are needed that align network-based applications to an effective network and infrastructure architecture.

Utility computing provides for a more agile enterprise and simplified oversight of the network. This allows desktop, network, applications, and security services to be bundled and purchased as a utility, providing business solutions. Resulting performance-based service level agreements (SLAs) enable alignment of network operations to the mission of the organization, rather than to merely technical specifications. Performance-based contracting increases the value of programs to their customers. The use of these programs in government is increasing. By using a service model with SLAs that define incentives and disincentives and align with their missions, customers receive greater value for their dollars.

Converged voice and data networks have extended the network beyond its traditional demarcations, and promoted a trend where customers acquire end-to-end solutions that help them effectively harvest the value of their network investment. This demands a strong



Emerging Approach to Obtaining Network Services

knowledge of the applications across the architecture aligned with consistent thought leadership to effectively support the organization. The integration of services is a complex challenge, the value of which increases as technologies converge.

Multicarrier solutions are now popular and significantly mitigate the risks that are a part of today's carrier industry. It is becoming unusual for mission-critical networks to be provided by a single

carrier, particularly at the access and Internet access areas. Customers need the flexibility to react to marketplace events and to enter into long-term programs that ensure continuity of services. Multicarrier network infrastructures can be rapidly shifted from one provider to another in reaction to marketplace events.

Wireless communications are rapidly impacting the network landscape, making it far more complex and far reaching. The

wireless vision is simple: provide continuous and secure access to data inside and outside of multiple locations across disparate geographies. A consistent solution requires coordination and common management across a number of service and device providers. No single service provider currently has a ubiquitous wireless footprint nor is likely to in the near future. Secure single sign-on across the enterprise is needed, not as a separate feature but as an integral part of these solutions.

Common platforms for management, reporting, billing, and provisioning allow customers to effectively oversee their networks across all services. A single, Web-based platform that integrates asset management, change management, and trouble resolution maximizes operations. Automating these processes provides a solution that drives down the costs of operations, and also increases network reliability and improves customer services.

Recommendations for Networkx

Emerging technologies are rapidly transforming the network marketplace. Government agencies need a Networkx contract that allows them to obtain not only network connectivity, but a host of associated services. Networkx should be tailored to afford customers the flexibility and opportunities to procure a range of services that are integral to a full, network-enabled business solution. GSA should avoid a narrow focus that may result in discouraging customers from using Networkx. Instead, it should embrace this emerging network model and help customers capitalize on its benefits.

It is recommended that services available through Networkx should be expanded to enable GSA to maintain pace with emerging technologies and the diverse, evolving needs of its customers. Some solutions that are appropriate as part of an expanded suite include the following:

- Directory services and meta-directories
- IP communications
- Local and wide area network (LAN/WAN) solutions
- Managed desktop environment
- Managed wireless networks
- Multicarrier networks
- Single sign-on
- Specialized security services
- Web hosting
- Desktop to desktop solutions
- Utility computing
- Converged voice and data.

Expanding the types of services provides convenience and flexibility for GSA's customers, and positions Networkx as an effective way to capitalize on the transforming technology landscape and access the many benefits of industry.

Establishing a foundation that will continue to expand Networkx is also important, since new solutions will continue to evolve. Including a robust services suite will ensure that the contract addresses the types of services and solutions needed today—and those needed in the future.

Contact EDS:

Don Scott
EDS
13600 EDS Drive
Herndon, VA 20171
703 736 4117

SELECTED IMPLEMENTATION EXAMPLES AND CONVERGENCE STUDIES

Introduction

The following examples are records of convergence and network integration efforts from a variety of sources. Their scope ranges from complete outsourcing of information technology (IT) and telecommunications operations and all security and applications such as has been performed for the Navy Marine Corps Intranet (NMCI) contract to initial convergence efforts such as those of Science Applications International Corporation (SAIC). These examples include commercial, government, educational, and health care-related projects.

The object of these descriptions is to raise awareness of projects that have been initiated within the past five years. Many of these implementations have been completed. Most of them were undertaken for the purpose of cost savings; however, they have also resulted in simplicity, efficiency of operations, and ease of scalability to additional sites. We also include citations of two articles on convergence published in *The Economist*. Additional information is available on request.

Commercial Examples

Bank of America

Bank of America is among the world's leading financial institutions and has more than 4,200 branches in 21 states. EDS, the Bank's systems integrator, has become the single point of contact for Bank of America. Leveraging its partner and vendor relationships, the EDS team provides for Bank of America a flexible, secure telecommunications solution that applies best-in-class technology and processes to closely focus on the Bank's specific objectives. This integrated solution comprises the following functions:

- Wide area network (WAN)
- Large area network (LAN)
- Conferencing services
- Voice and video communications
- Network management services
- Converged network services
- Service desk services.

Eastman Kodak

Of Kodak's 64,000 global employees, half now use converged networks. Kodak estimates toll and access charge savings of 30 percent to 80 percent, depending on location.

EDS South Australia

The original purpose of this initiative was the implementation of a more efficient communications system. EDS deployed a converged network featuring Internet Protocol (IP) telephony and voice mail. System uptime and user satisfaction levels are consistently high. EDS reduced monthly recurring costs by 15 percent and the cost of changes by more than 50 percent.

H.J. Heinz Foods

H.J. Heinz integrated its European voice and data networks into a single IP platform and achieved objectives that included reduced costs and flexibility in adding new locations. Heinz concurrently merged responsibility for voice and data applications into its IT department.

Science Applications International Corporation (SAIC)

SAIC has implemented IP voice communications across the entire company and realized significant savings.

Tesaro Petroleum Corporation

Tesaro, a Fortune 500 company, is one of the world's largest independent oil refining, distributing, and marketing companies, with annual revenues of more than \$5 billion. Tesaro has networked 600 business locations into an IP, voice, and other media capability. Tesaro's business goals for the IP solution were increased stability, lower WAN costs, and reduced infrastructure costs at field locations. All goals have been met, and Tesaro has realized additional benefits of greater ease in making changes and in adding new locations.

Government Examples

Environmental Protection Agency (EPA)

The EPA awarded a multi-million contract to Dyncorp to organize and manage its vast IT and telecommunications services. The implementation is currently on schedule.

Navy Marine Corps Intranet (NMCI)

NMCI provides comprehensive, end-to-end information services, enterprisewide to more than 360,000 Navy and Marine Corps users through a common computing and communications environment. NMCI's geographic scope includes the Continental United States (CONUS), Alaska, Hawaii, Guantanamo Bay (Cuba), Puerto Rico, and Japan. This environment enhances system and software interoperability and enhances information exchange among garrisoned and deployed forces. The Government's objectives include enhanced network security, interoperability with the other Services, knowledge sharing, increased productivity, improved reliability and service quality, and reduced costs. More than 300,000 seats have been assumed by EDS, the prime contractor. Objectives are being achieved. Added benefits include a drastic reduction in unique software from more than 100,000 legacy applications to fewer than 10,000 and the ability to add new sites or change scale quickly.

Transportation Security Agency (TSA)

Implementing the mandates of the Transportation Security Act (TSA) very quickly following the events of 9/11, a billion dollar converged telecommunications contract was awarded to Unisys in August 2002. The contract provides integrated IT and telecommunications services, both wired and wireless. The new systems are currently being implemented at hundreds of airports and other TSA offices around the country. Internet-ready applications and wireless capability are now being deployed throughout the network.

Educational Institutions

Aston University, U.K.

Aston University is deploying an IP converged voice, data, and video network.

University of Connecticut

The University of Connecticut deployed a converged network to provide voice, data, video, multi-media applications, and wireless mobility to its School of Business. This solution also includes multimedia collaboration tools and supports the active stock trading floor used in business classes. The project combines an advanced university environment, stringent security, IP telephony, and applications-focused data networking capabilities.

University of Grenada

The University of Grenada is deploying IP telephones across five campuses. This solution will also enable remote access for personal computers and PDAs.

Health Care Systems

AUSL-Nuoro, Italy

AUSL implemented a comprehensive, cost-effective voice and data network that is capable of supporting multi-media applications. All seven Nuoro hospitals are served by the systems, which enable medical staff and patients to benefit from telemedicine and other relevant applications. The implementation began in 2002 and is now completed. The solution saves money, improves security, and provides a new tele-diagnostic service.

Erlanger Health System

This health care leader, which operates in a four-state area implemented a converged voice and data system as a platform for advancing patient care. Erlanger's objective was to reduce costs and complexity. It integrated the previously separate voice and data networks, including Voice over Internet Protocol (VoIP). Erlanger achieved cost reductions, simpler network management, and readiness for future applications.

Gwent Healthcare NHS Trust

Gwent employs more than 11,000 personnel who are deployed throughout Wales to provide health care to more than 600,000 people. The converged network connects 23 hospitals and clinics and Gwent staff. Gwent's main objective in upgrading its system was to support future applications. It also wanted seamless integration, the ability to control costs effectively, and the ability to incorporate new technologies as they become available. In addition to meeting these objectives, Gwent also experienced improved productivity for network managers, cost savings, and capabilities for imaging and for a patient record system.

Selected Articles

"Deploy or Delay? – Converged Networks in the Enterprise." White Paper by *The Economist* Intelligence Unit, June 2004.

This article indicates that two thirds of organizations are planning to shift applications across their businesses to unified IP networks within the next five years. This is according to a survey of 103 senior executives conducted for this report. A quarter of the executives interviewed see this as crucial to fulfilling their business strategy.

"The Next Moves – Convergence in the Communications and Content Industries." White Paper by *The Economist* Intelligence Unit, August 2004.

This article was based on surveys and in-depth interviews with more than 100 senior executives. The study concluded that approximately 75 percent of them would transition to IP-based converged networks within three years.

TRANSITIONING FROM FTS 2001 TO A NETWORK CONTRACT OFFERING INTEGRATED IT AND TELECOMMUNICATIONS SERVICES

The emerging trend in the telecommunications industry is a change in the way networks are procured. The industry is moving away from an infrastructure-based provision of services; that is, purchasing connectivity. The industry is moving to an approach where a core set of common services is obtained. This change allows relatively easy provision of value-added capabilities, giving users greater access to the information and functions they need and speeding their ability to perform their missions.

In this environment, the applications become the most important communications factor, and the company responsible for the end-to-end integrated services is responsible for selecting the carrier(s), applications developers, and information technology (IT) providers that have the most appropriate pricing and solutions.

Government agencies are understandably apprehensive about transitions from one carrier to another. Many of us remember the time and money required to transition to FTS 2000, then 2001. Carriers now have established nationwide or worldwide "clouds," which make it much easier to plug into the network at any location. We are no longer dealing with point-to-point connections, we now simply add an address to the cloud. A real-time Internet Protocol (IP) network allows an integrator or network operator, together with the applications provider, to rapidly create and provision new services and new locations based on the needs of each individual customer.

In the future, with the foregoing scenario, carrier transitions will be easier and less risky; this will help create a smooth transition from FTS2001 to Networx. Implementation of a network, however, should not be viewed as the "end game," just as having a computer on your desk is not the real goal. The real objective should be to provide access to information and to enable rapid response to changing requirements; to do that, a converged network architecture is essential. We believe that you should provide this capability as a platform for the future.