Federal Acquisition Service

Integrated Technology Services

Networx – Preparation for Award

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Networx – Agenda

- Program Architecture

- Networx Universal and Enterprise

- Schedules

- RFP Basics
  - How Technical and Pricing Work

- Services plus Examples

- Summary

Networx – Program

- Dual simultaneous procurements representing the third in a series of major competitive telecommunications programs (FTS2000, FTS2001, Networx)

- Largest telecommunications program in Federal history ($68.2B ceiling)

- Networx projected revenue - $20 billion/10 years

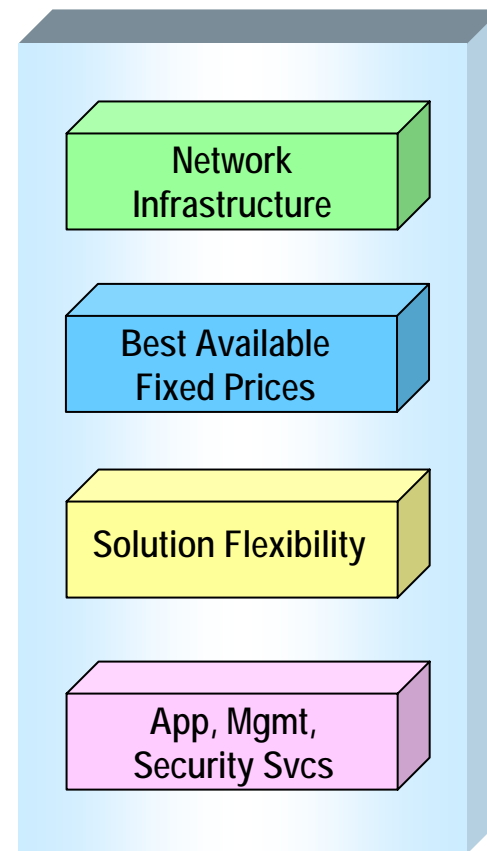- Requirements developed with full IMC participation

Networking in 1998
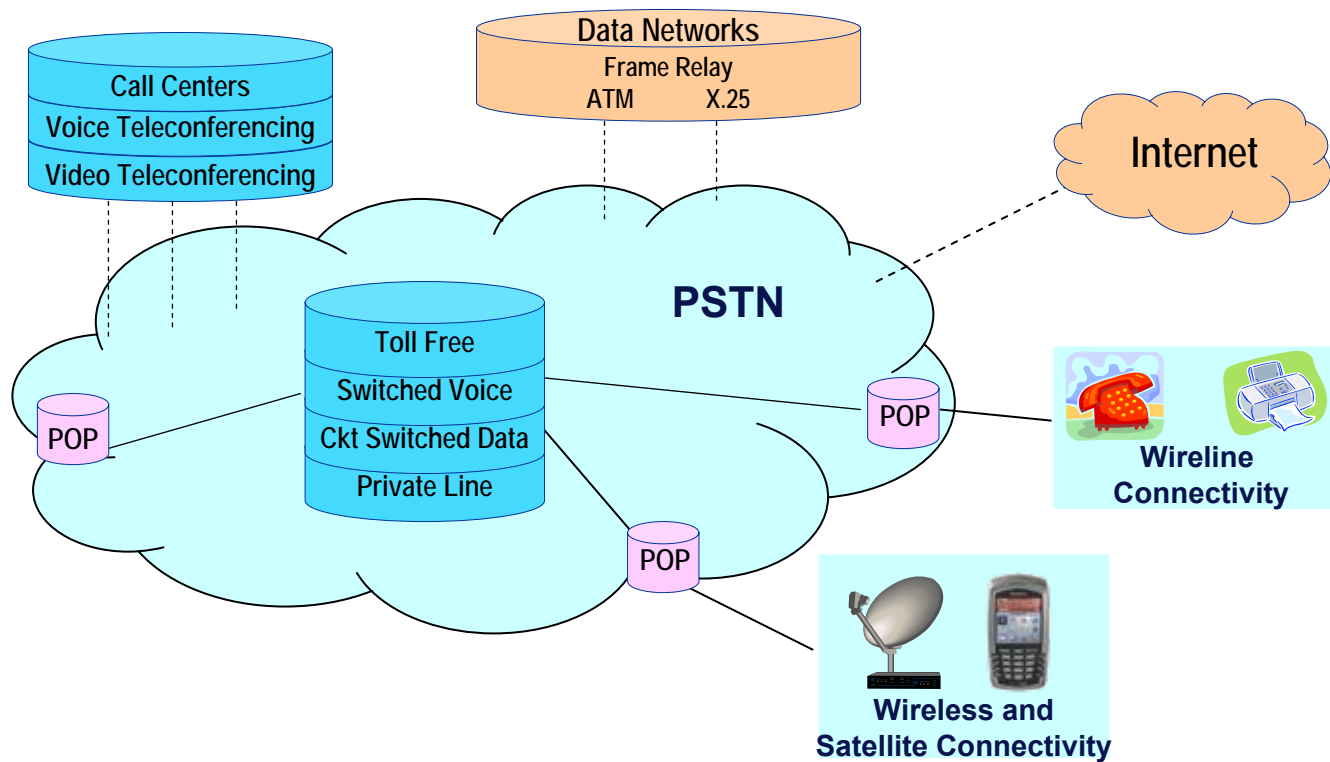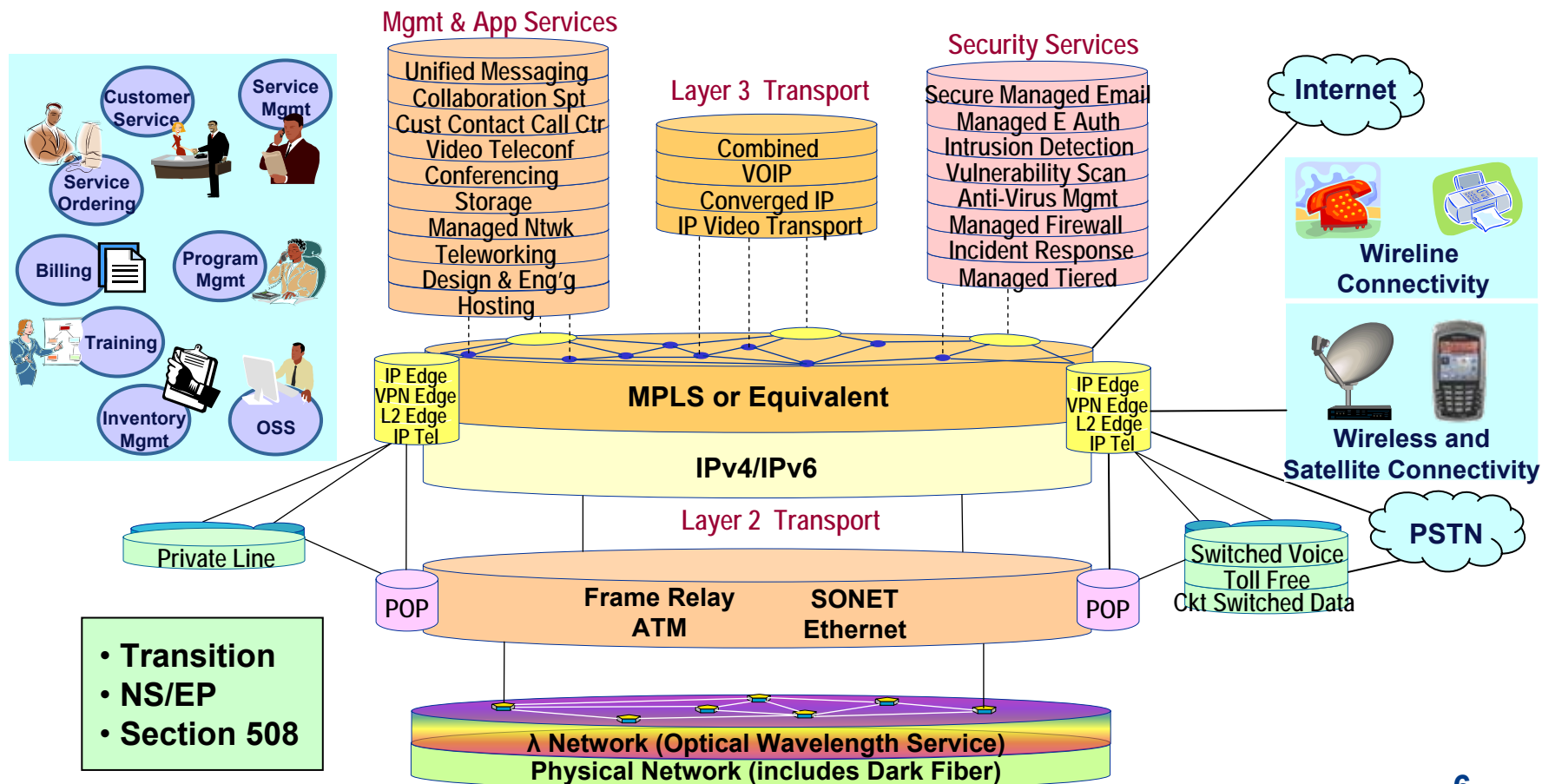

• **Transition**
• **NS/EP**

Networx – Supporting the Transformation of Government

- Voice, IP, wireless, satellite, optical connectivity services
- IP-centric application services (hosting, content management, teleworking, etc.)
- Embedded security with flexibility to meet range of needs
- Built-in compliance with policy mandates
- Performance-based services and operations
- Built in technology refreshment

Network Infrastructure

Best Available Fixed Prices

Solution Flexibility

App, Mgmt, Security Svcs

Seamless, Secure, Interoperable

Networx – Program Architecture

Mgmt & App Services
- Unified Messaging
- Collaboration Spt
- Cust Contact Call Ctr
- Video Teleconf
- Conferencing
- Storage
- Managed Ntwk
- Teleworking
- Design & Eng'g
- Hosting

Layer 3 Transport
- Combined
- VOIP
- Converged IP
- IP Video Transport

Security Services
- Secure Managed Email
- Managed E Auth
- Intrusion Detection
- Vulnerability Scan
- Anti-Virus Mgmt
- Managed Firewall
- Incident Response
- Managed Tiered

Internet

Wireline Connectivity

Wireless and Satellite Connectivity

Customer Service
Service Mgmt
Service Ordering
Billing
Program Mgmt
Training
Inventory Mgmt
OSS

IP Edge
VPN Edge
L2 Edge
IP Tel

MPLS or Equivalent

IP Edge
VPN Edge
L2 Edge
IP Tel

IPv4/IPv6

Private Line

Layer 2 Transport

Switched Voice
Toll Free
Ckt Switched Data

PSTN

POP

Frame Relay
ATM
SONET
Ethernet

POP

- **Transition**
- **NS/EP**
- **Section 508**

λ Network (Optical Wavelength Service)
Physical Network (includes Dark Fiber)

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Networx – Universal

Telecommunications Services

Communications Transport
– Voice
– Circuit Switched Data
– Toll-Free
– Combined
– Private Line
– Frame Relay
– Asynchronous Transfer
  Mode
– Ethernet
IP-Based
– Premises-Based IP VPN
– Network-Based IP VPN
– Voice over IP Transport
– Content Delivery Network
– Converged IP
– IP Telephony
– Internet Protocol
– Layer 2 VPN
– IP Video Transport
Optical
– Synchronous Optical Network
– Optical Wavelength
– Dark Fiber

Management & Application Services

– Video Teleconferencing
– Managed Network
– Audio Conferencing
– Teleworking Solutions
– Call Center/Customer
  Contact Center
– Web Conferencing
– Dedicated Hosting
– Collocated Hosting
– Storage
– Customer Specific Design
  and Engineering
– Unified Messaging
– Collaboration Support
– Internet Facsimile

Access Services

– None

Security Services

– Managed Firewall
– Intrusion Detection and
  Prevention
– Managed E-Authentication
– Vulnerability Scanning
– Anti-Virus Management
– Incident Response
– Secure Managed Email
– Managed Tiered Security

Special Services

– Land Mobile Radio
– Mobile Satellite
– Fixed Satellite

Wireless Services

– Cellular/PCS
– Multimode Wireless
– Cellular Digital Packet Data
– Paging

Note: Services in green are optional.

- Full range of services
- National and international coverage
- Strong competition for best prices
- Ensures continuity of current service
- Length: 4-year base with 3 2-year options
- Multiple awards
- MRG - $525M

Networx – Enterprise

Telecommunications Services

Communications Transport
– Voice
– Circuit Switched Data
– Toll-Free
– Combined
– Private Line
– Frame Relay
– Asynchronous Transfer Mode
– Ethernet
IP-Based
– Network-Based IP VPN
– Voice over IP Transport
– Internet Protocol
– Premises-Based IP VPN
– Content Delivery Network
– Converged IP
– IP Telephony
– IP Video Transport
– Layer 2 VPN
Optical
– Synchronous Optical Network
– Optical Wavelength
– Dark Fiber

Management & Application Services

– Customer Specific Design and Engineering
– Managed Network
– Audio Conferencing
– Teleworking Solutions
– Call Center/Customer Contact Center
– Web Conferencing
– Dedicated Hosting
– Collocated Hosting
– Storage
– Video Teleconferencing
– Unified Messaging
– Collaboration Support
– Internet Facsimile

Access Services

– Wireline Access
– Broadband Access
– Wireless Access
– Satellite Access

Security Services

– Managed Firewall
– Intrusion Detection and Prevention
– Managed Tiered Security
– Anti-Virus Management
– Managed E-Authentication
– Vulnerability Scanning
– Incident Response
– Secure Managed Email

Special Services
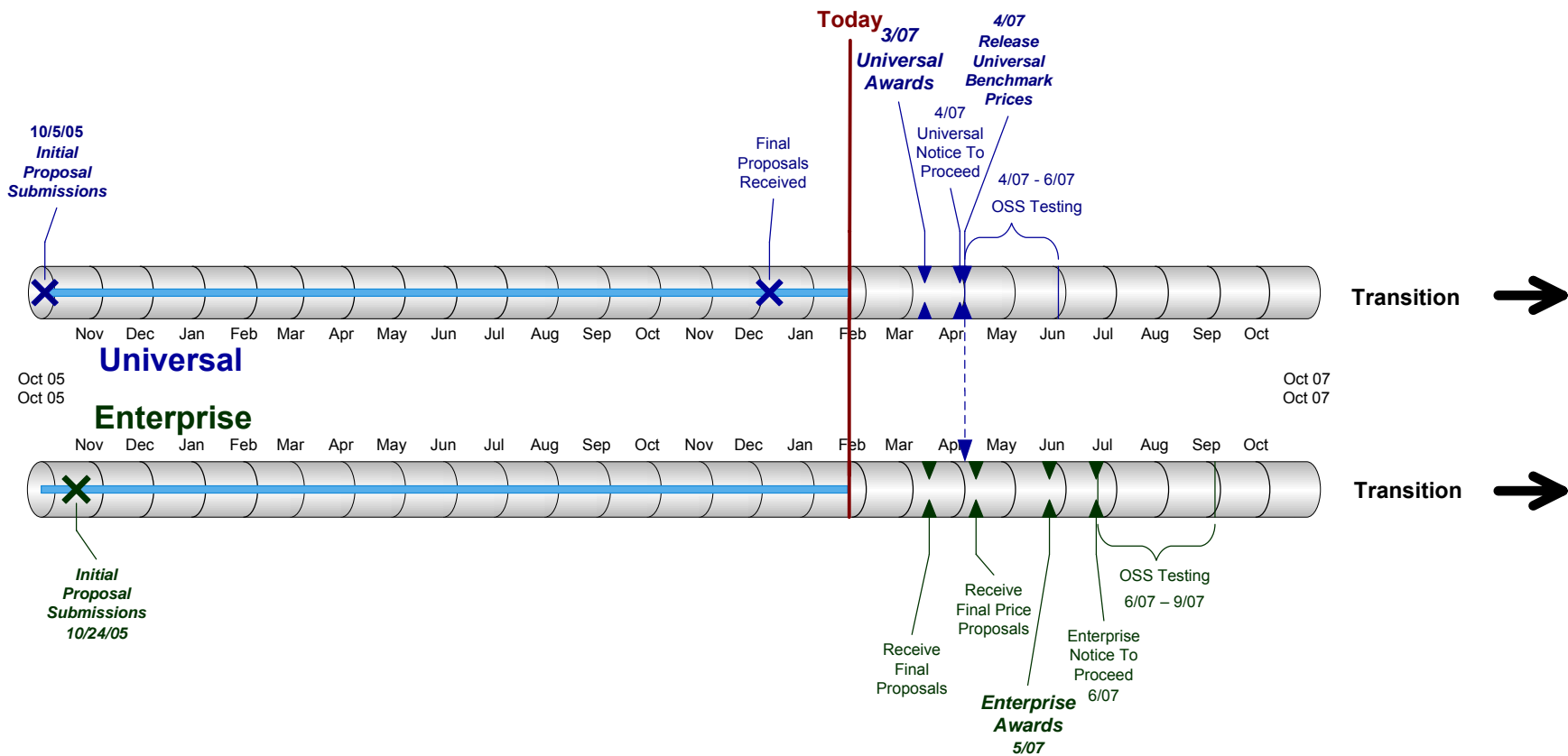
– Land Mobile Radio

Wireless Services

– Cellular/PCS
– Multimode Wireless
– Cellular Digital Packet Data
– Paging

Note: Services in green are optional.

- Minimum requirement: must offer 9 mandatory services for secure, IP, managed network solutions
- May offer wide range of optional services
- National coverage required; international coverage optional
- Length: 4-year base with 3 2-year options
- Multiple awards
- MRG - $50M

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Networx – Schedule to Award

Today

3/07 Universal Awards

4/07 Release Universal Benchmark Prices

10/5/05 Initial Proposal Submissions

Final Proposals Received

4/07 Universal Notice To Proceed

4/07 - 6/07 OSS Testing

Universal

Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct

Oct 05
Oct 05

Oct 07
Oct 07

Transition

Enterprise

Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct

Initial Proposal Submissions 10/24/05

Receive Final Proposals

Receive Final Price Proposals

Enterprise Notice To Proceed 6/07

OSS Testing 6/07 – 9/07

Enterprise Awards 5/07

Transition

Networx – Award Criteria

UNIVERSAL	ENTERPRISE
• Best Value, Fixed Price with Price Management Mechanism	• Best Value, Fixed Price with Price Management Mechanism
• Award based on:	• Award based on:
– Price for mandatory services **>** all other factors combined	– Price for mandatory services **>** Technical, Management, Adjectival Price, Eligible Optional Services, or Past Performance factors
– Technical, Management, and Adjectival Price equal in weight **>** Past Performance	– Eligible Optional Services new factor to provide incentive to offer optional services
	– Final Price Revisions requested after release of first year averaged Universal prices

Networx – SLAs to Ensure Performance

Telecommunications Services

Communications Transport
– **Voice**
– **Circuit Switched Data**
– **Toll-Free**
– **Combined**
– **Private Line**
– **Frame Relay**
– **Asynchronous Transfer Mode**
– **Ethernet**
IP-Based
– **Premises-Based IP VPN**
– **Network-Based IP VPN**
– **Voice over IP Transport**
– **IP Telephony**
– **Internet Protocol**

Optical
– **Synchronous Optical Network**
– **Optical Wavelength**

Management & Applications Services – **Dedicated Hosting**

Access Services – **Wireline Access (Enterprise Only)**

KPIs
Av (SDP-to-SDP)
Av (POP-to-POP)
TTR

KPIs
Av (VPN)
Latency (CONUS)
Latency (OCONUS)
TTR

Credits
Av (SDP-to-SDP)
TTR
Service Outage
On-Time Provisioning
Billing Accuracy

Credits
Av (VPN)
Latency (CONUS)
TTR
Service Outage
On-Time Provisioning
Billing Accuracy

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Networx – Critical Service Levels

Telecommunications Services

Communications Transport
– Voice
– Circuit Switched Data
– Toll-Free
– Combined
– Private Line
– Frame Relay
– Asynchronous Transfer Mode
– Ethernet

IP-Based
– Premises-Based IP VPN
– Network-Based IP VPN
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– IP Telephony
– Internet Protocol

Optical
– Synchronous Optical Network
– Optical Wavelength

Management & Applications Services
– Call Center
– Storage Services

KPIs
Av (SDP-to-SDP)
Acceptable Quality Level
Routine: >99.5%

KPIs
Av (SDP-to-SDP)
Acceptable Quality Level
Critical: >99.95%

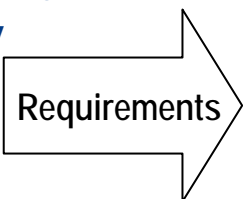**Configuration to Support Critical Availability**

• **Primary working waves will supply routine availability (99.5%)**

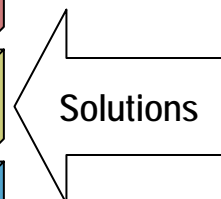• **Redundant waves SDP-to-SDP provide the Agency with critical availability (99.95%)**

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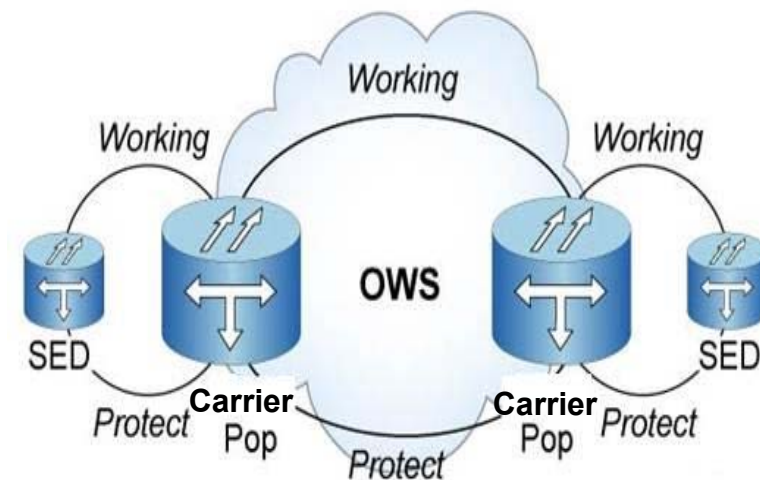
Networx – Security: Services for Defense in Depth

Network Protection Requirements

- **Boundary Protection**
- **Authentication**
- **Authorization**
- **Confidentiality/Encryption**
- **Message Integrity**
- **Access Control**
- **Availability**
- **Nonrepudiation**
- **Malicious Code Filtering**
- **Audit & Monitoring**
- **Config Mgmt & Assurance**
- **Access Diversity**

Application (Layer 7)
Presentation (Layer 6)
Session (Layer 5)
Transport (Layer 4)
Network (Layer 3)
Data Link (Layer 2)
Physical (Layer 1)

Requirements → ← Solutions
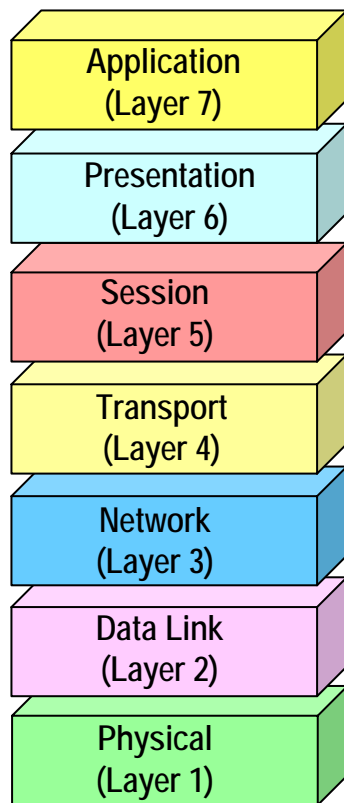
ISO/IEC 7498

Networx Services

- **Managed Tiered Security Service**
- **Managed E-Authentication**
- **Vulnerability Scanning**
- **Incident Response**
- **Secure Managed Email**
- **Intrusion Detection and Prevention**
- **Managed Firewall**
- **Anti-Virus Management**
- **Network-Based IP VPN**
- **Premises-Based IP VPN**
- **Layer 2 VPN**

VPN Cluster

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Networx – A Toolbox for Agency Network Security that complies with FISMA
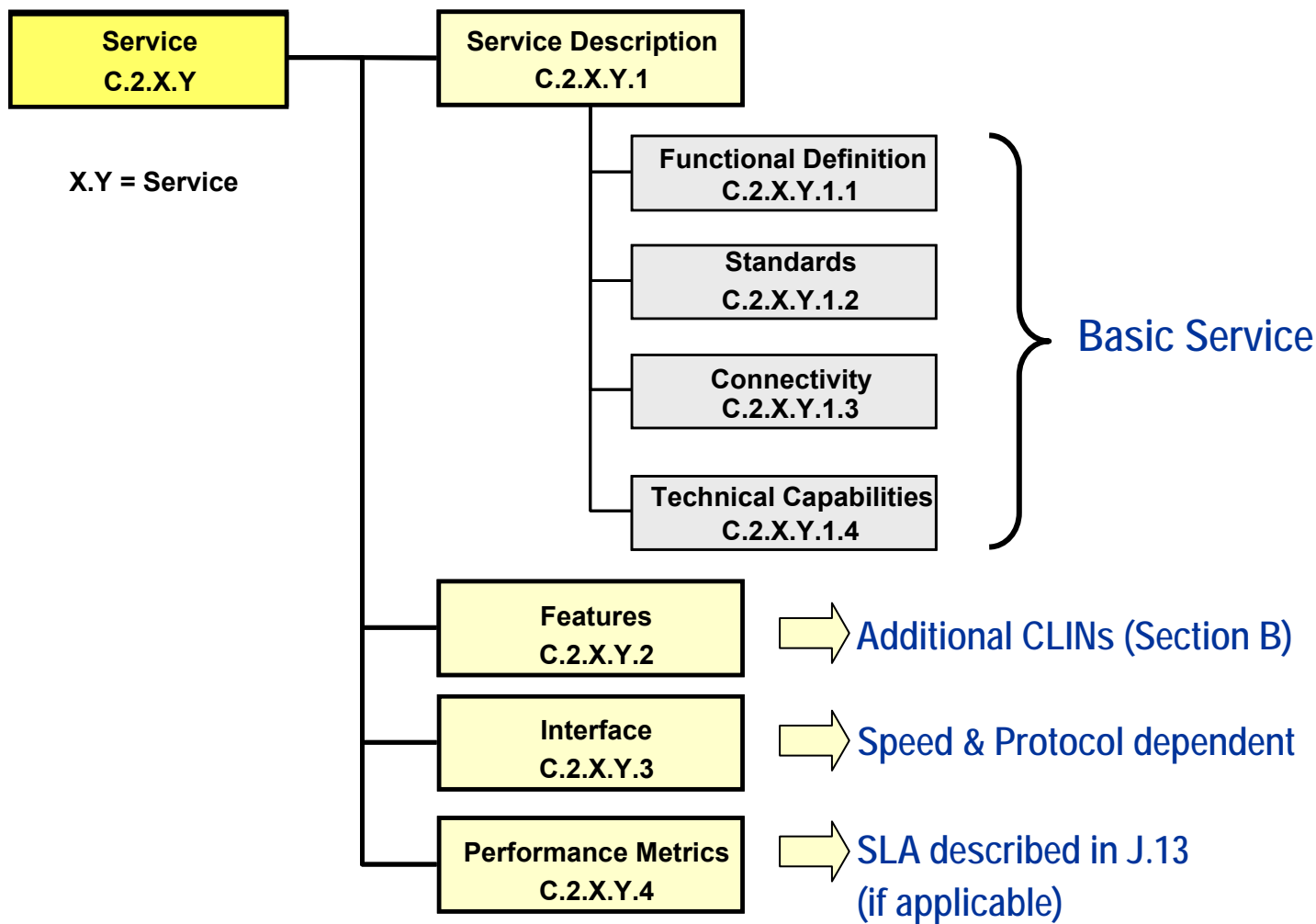
Networx Security:
13 Required Steps for Each Offeror (RFP Section C.3.3.2)

- **Security Plan**
- **Risk Analysis**
- **Risk Mitigation**
- **Information Security**
- **Information Assurance**
- **Security Breach Notification**

- **Alarms and Audit Trails**
- **Personnel Security**
- **Physical Security**
- **Procedural Security**
- **Ongoing Security Refreshment**
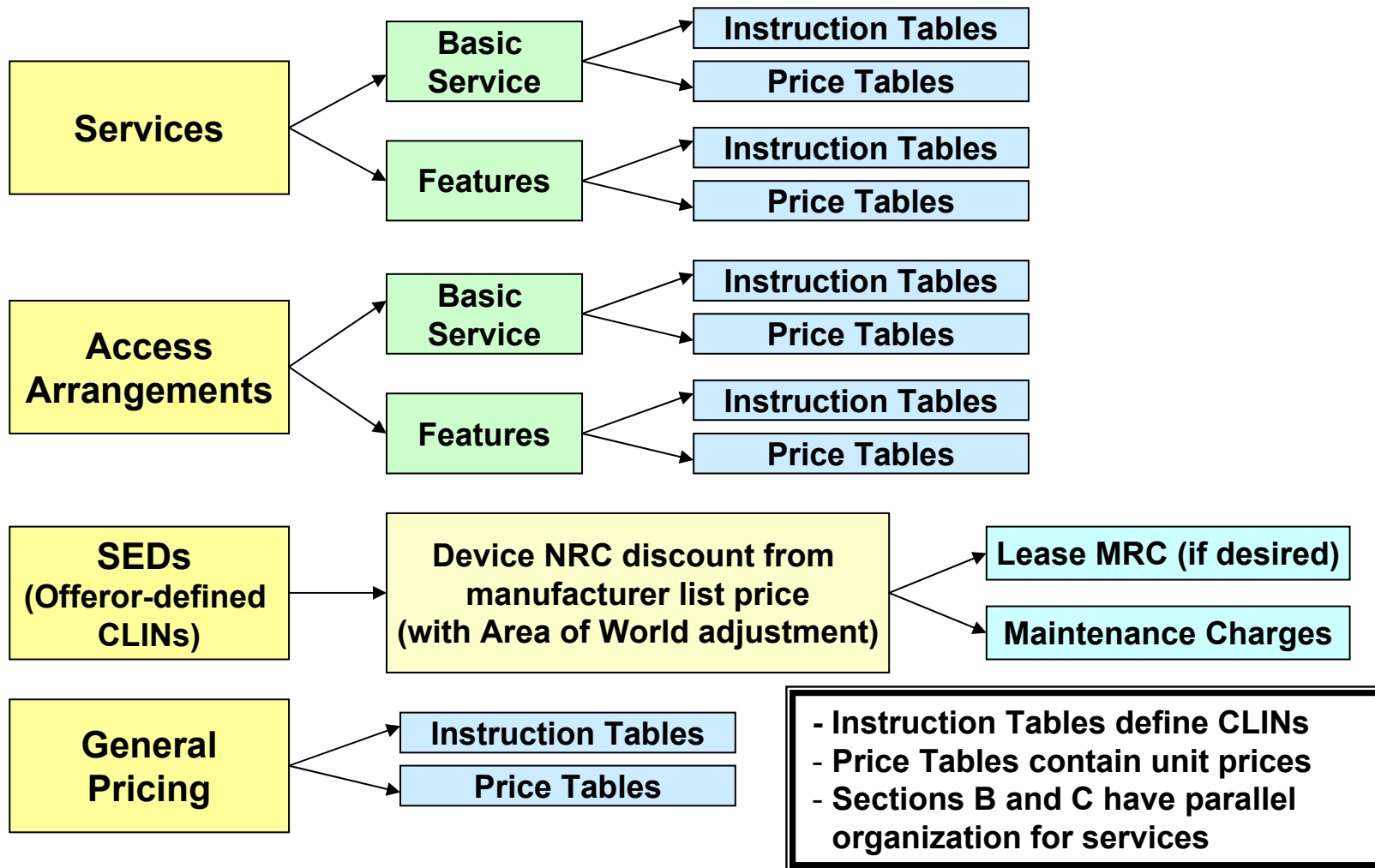- **Non Domestic Services**
- **Fraud Prevention Management**

Networx – IPv6

- Specific language governs all Technical requirements

    "*OMB Memorandum M-05-22 directs that Agencies must transition from IPv4 Agency infrastructures to IPv6 Agency infrastructures (network backbones) by a predetermined date. The Networx contractor shall ensure that services delivered shall support Federal Agencies as required to comply with OMB IPv6 directives.*"

- Networx has embedded IPv6-specific requirements in 39 of 52 services

Networx – Technical Specification

Service
C.2.X.Y

X.Y = Service

Service Description
C.2.X.Y.1

Functional Definition
C.2.X.Y.1.1

Standards
C.2.X.Y.1.2

Connectivity
C.2.X.Y.1.3

Technical Capabilities
C.2.X.Y.1.4

Basic Service

Features
C.2.X.Y.2

Additional CLINs (Section B)

Interface
C.2.X.Y.3

Speed & Protocol dependent

Performance Metrics
C.2.X.Y.4

SLA described in J.13
(if applicable)

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Networx – General RFP Structure for Price

Services →
- **Basic Service** → Instruction Tables / Price Tables
- **Features** → Instruction Tables / Price Tables

Access Arrangements →
- **Basic Service** → Instruction Tables / Price Tables
- **Features** → Instruction Tables / Price Tables

SEDs (Offeror-defined CLINs) → **Device NRC discount from manufacturer list price (with Area of World adjustment)** →
- Lease MRC (if desired)
- Maintenance Charges

General Pricing →
- Instruction Tables
- Price Tables

- Instruction Tables define CLINs
- Price Tables contain unit prices
- Sections B and C have parallel organization for services

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Networx – Factors for Pricing

- Factors for Pricing Include:
    - Service Type
    - Service Bandwidth
    - Geography
    - Distance
    - Access Type
    - Service Enabling Devices (SEDs) selection
    - Other (e.g., class of service, routine vs. critical)

Networx – Basic Service and Features

- Basic Service Prices
  - − Includes the basic technical capabilities of that service
- Features are additional capabilities that are not available under the basic service
  - − Usually have an additional cost
  - − Can only be purchased in addition to basic service
- Price elements under Networx are identified by CLINs -- similar to FTS2001 SCIDs

Networx – CLIN Types and Charging Units

- NRC - Non-Recurring Charge; one time charge (e.g., for installation)
- MRC - Monthly Recurring Charge
- Usage - A metered service charge
- NSP - Not Separately Priced; there is no additional charge for these CLINs but must be ordered
- Charging Units - All these CLIN types can have a variety of charging units depending on the service
- Most prices fixed, some ICB

Networx – Geographic Coverage

- Section J.2 of the RFP provides description of coverage
- Universal
  − Provides continuity for FTS2001
  − Extensive Coverage for Domestic and Non-Domestic locations
  − Required to provide service to over 24,000 buildings (over 9,600 SWCs)
- Enterprise
  − Less mandatory coverage (300 buildings and their associated SWCs)
- Both Universal and Enterprise contractors must provide prices where they provide service commercially

Networx – SEDs Enable Optimum Service Delivery

Satellite

Microwave Radio

VTC

Router

VoIP Gateway

MUX Equipment

Inside Wiring

Serving Wire Center

Access Arrangements
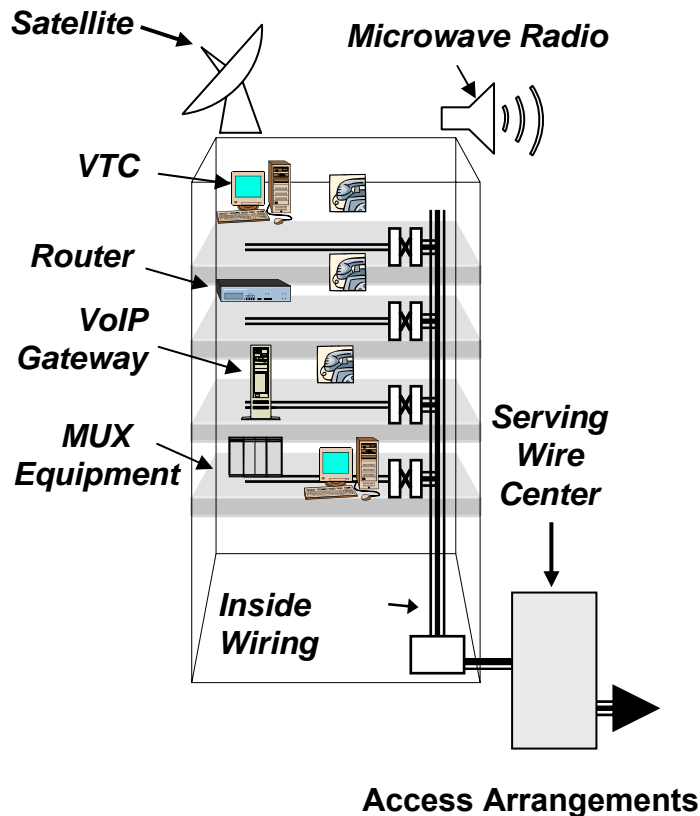
SEDs - three separate price elements:

- Non-recurring charges
  - Installation, moves, modifications
- Device Charge
  - Discount from Manufacturer's list price
  - Must be less than or equal to contractor's corresponding price in GSA MAS
  - One-time payment or fixed term monthly payment (24, 36, or 48 months)
  - Option to assume ownership
- Monthly Maintenance Charge
  - Ongoing maintenance, ongoing charge
  - Can continue following assumption of ownership

Networx – Comm Transport - Voice

- Voice consists of three services:
  - Voice Service (VS)
  - Toll Free Service (TFS)
  - Combined Service (CS)

- Services can meet traditional inbound and outbound calling requirements

- Combined Services adds local calling capabilities (Not available in FTS2001)
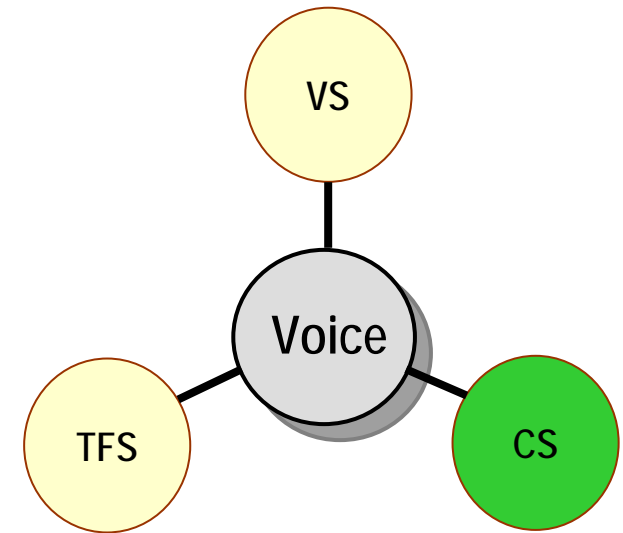
Legend
- *Yellow – FTS2001 Service*
- *Green – New Networx Service*

Networx – Performance Based Specification - Voice Service (VS)

Functional Definition. Voice Service supports voice calls whether initiated from on-net locations etc.

Standards. Voice Service shall comply with the following standards, as applicable: etc.

Connectivity. Voice Service shall connect to and interoperate with: etc.

Technical Capabilities. The following Voice Service capabilities are mandatory unless indicated otherwise: etc.

Voice Service Features. etc.

Voice Service Interfaces.

UNI Type	Interface/Access Type	Network-Side Interface	Protocol Type
1	Analog Line: Two-Wire	4 kHz Bandwidth	Line-Loop Signaling

Voice Service Performance Metrics.

Key Performance Indicator (KPI)	Service Level	Performance Standard (Threshold)	Acceptable Quality Level (AQL)	How Measured
Availability (POP-to-POP)	Routine	99.95%	$\geq$ 99.95%	See Note 1

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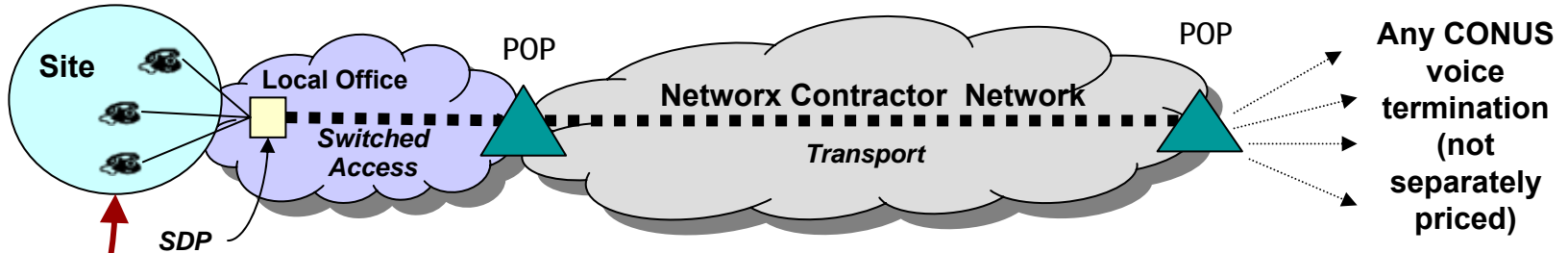# Networx – Voice Service (VS) Pricing

- Traditional
  - Usage charges (per six seconds)
    - Switched originating access
    - Dedicated originating access

Table B.2.2.1.3-3 VS CONUS Usage Pricing Instructions

Routine Usage CLIN	Critical Usage CLIN	Description	Charging Unit
0014001	0014101	VS Transport Usage Price – Switched access origination	Per six-second increment
0014002	0014102	VS Transport Usage Price – Dedicated access origination	Per six-second increment

  - No NRC
  - Feature charges
- Flat Rate
  - Fixed number of minutes/month
  - No NRC
  - Feature charges
  - Overage charges (use of more minutes than included in flat-rate package)

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Networx – Voice Service

Site

Local Office

POP

Networx Contractor Network

POP

Any CONUS voice termination (not separately priced)

Switched Access

Transport

SDP

Note: Local loops not included

Voice Service CLIN for Switched Access

Local Office

SDP

Site

PBX

SDP

Dedicated Access

POP

Networx Contractor Network

POP

Any CONUS voice termination (not separately priced)

Transport
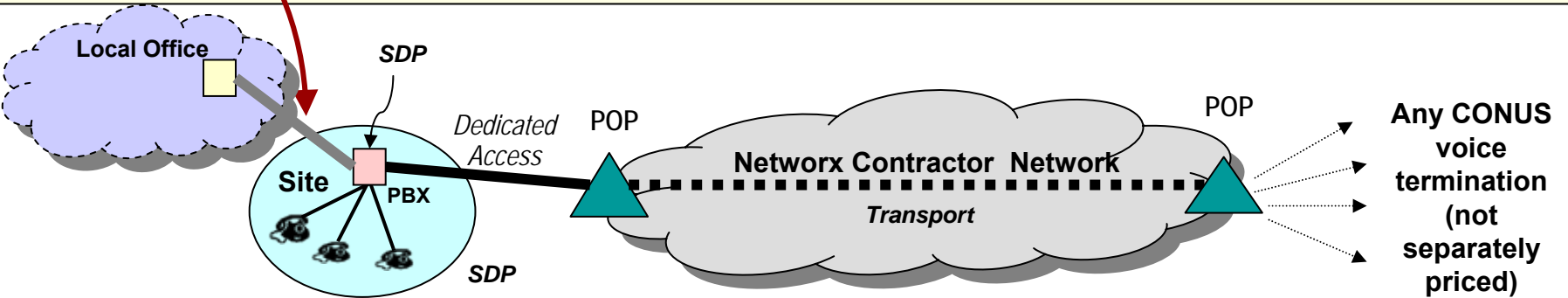
Dedicated Access Arrangement CLINs **+** **Voice Service CLIN for Dedicated Access**

Networx – Combined Service (CS)

- Core package:
  - MRC for Unlimited Local, Regional, and Long Distance calling
  - CLINS available with or without Local Loop
  - Seven common features
    - Call Forward, Transfer, Call Waiting, Caller ID, Caller ID Block, Remote Access to Call Forward, Speed Dial
  - Prices vary by State and OCONUS regions
- Other components can be added, e.g., Internet, Cellular, Calling Card, Toll-free

Table B.2.6.4-3 CS Core Package Pricing Instructions – Routine Performance

MRC	NRC	Description	Charging Unit
0184001	0184011	Core Package including local loop – CONUS	Per analog line

Table B.2.6.4-1   CS Core Package Prices – CONUS (Routine)

CLIN	State (Two Letter Postal Code)	Price	Price Start Date	Price Stop Date	Price Replaced Date

Networx – Voice vs. Combined Service

Site

End Office

POP

Networx Contractor Network

Switched Access

Transport

POP

Any CONUS voice termination (not separately priced)

SDP

Note: Local loops not included

Voice Service CLIN for Switched Access

End Office

SDP

SDP

POP

Networx Contractor Network

Local, Regional Toll

Transport

POP

Any CONUS voice termination (not separately priced)
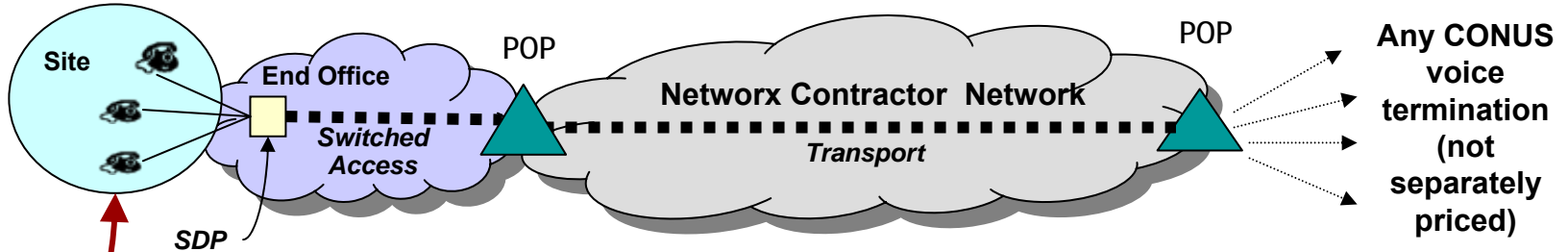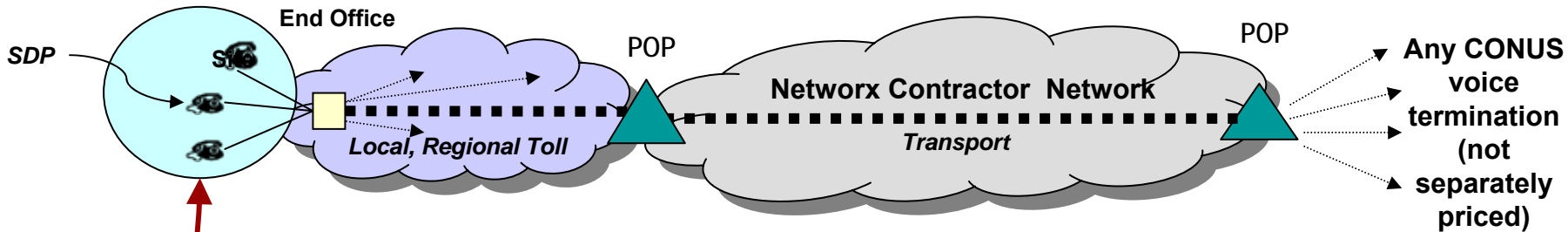
Note: Local loops included

Combined Service CLIN for unlimited local, regional toll, and domestic LD

+

optional CLINs for Internet, Cellular, Calling Card, Toll-Free, etc.

Networx – Managed Network Services

- Provides comprehensive management of agency networks.

Agency Network

Washington D.C.

Agency Node
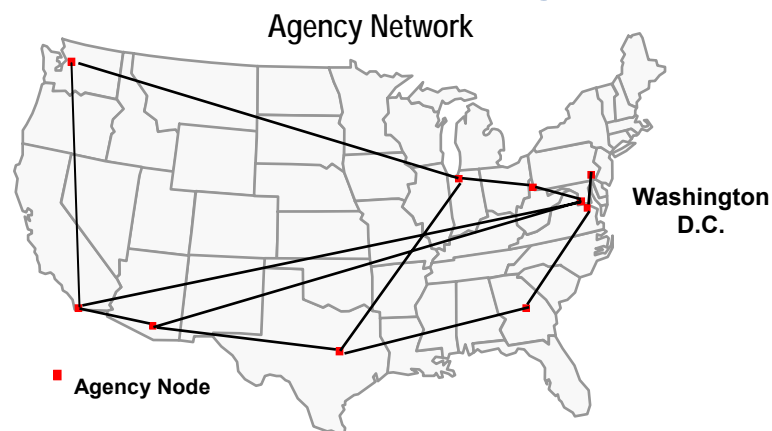
  − Design and Engineering Services
  − Implementation, Management, and Maintenance
    - Real-time proactive network monitoring
    - Troubleshooting and Service Restoration
    - Configuration changes and Backups

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Networx – MNS Pricing

- Network Design and Engineering is ICB

- Implementation, Management, and Maintenance
    - Applies to the contractor's network services (e.g., PLS, FRS) and to the Agency's devices that connect to these services
    - NRC and MRC CLINs are for each device
        - Prices vary with the (1) size of the bandwidth connection to the device and (2) whether connection or connectionless oriented

- Features

Table B.2.9.1.2-4 Managed Network Implementation, Management and Maintenance Pricing Instructions

Connection-Oriented Networks		Connectionless Networks		Description	Charging Unit
NRC CLIN	MRC CLIN	NRC CLIN	MRC CLIN		
0280051	0280151	0280251	0280351	Managed Network Implementation, Maintenance and Management, device up to 1.544 Mbps peak	Per device

Networx – Tools and Databases

- Offerors have had access to state-of-practice, web based, fixed price evaluation
  - 1.3 million traffic records priced worldwide
  - Requirements compliance all online (over 7,400 requirements per acquisition)
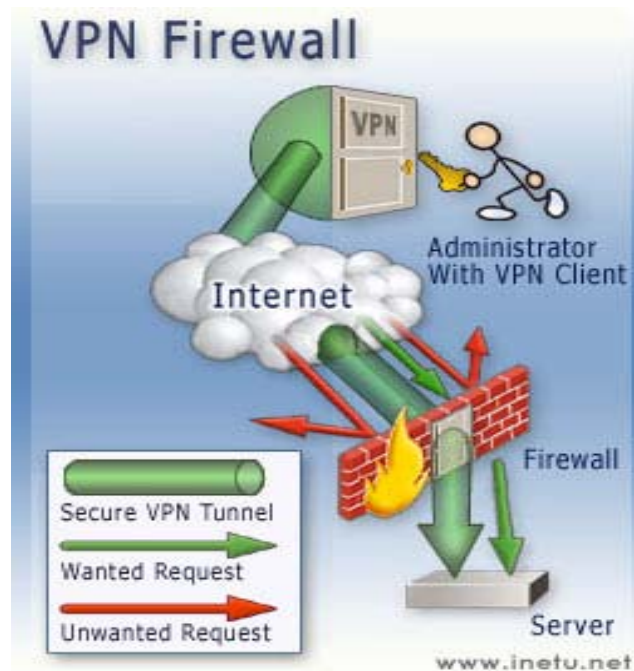
Networx – RFP Online Availability

- The Networx RFPs as amended are accessible online at: www.gsa.gov/networx

- Additional data may be obtained, to include:
  - Networx FAQ
  - Amendments
  - Networx Hosting Center
  - RFP Question and Answers
  - Networx Document Library

Access GSA Networx website: www.gsa.gov/networx ❶

Select Networx RFPs & Amendments ❷

Select appropriate document ❸ (i.e., RFP, section, amendment, etc.)

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Networx – Summary

Performance Based/SLAs

Transition

End-to-End Services

Operations Support

Networx Services

FTS2001 Continuity

Secure, Flexible Solutions

Best Prices

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