



Commonwealth Voice Modernization

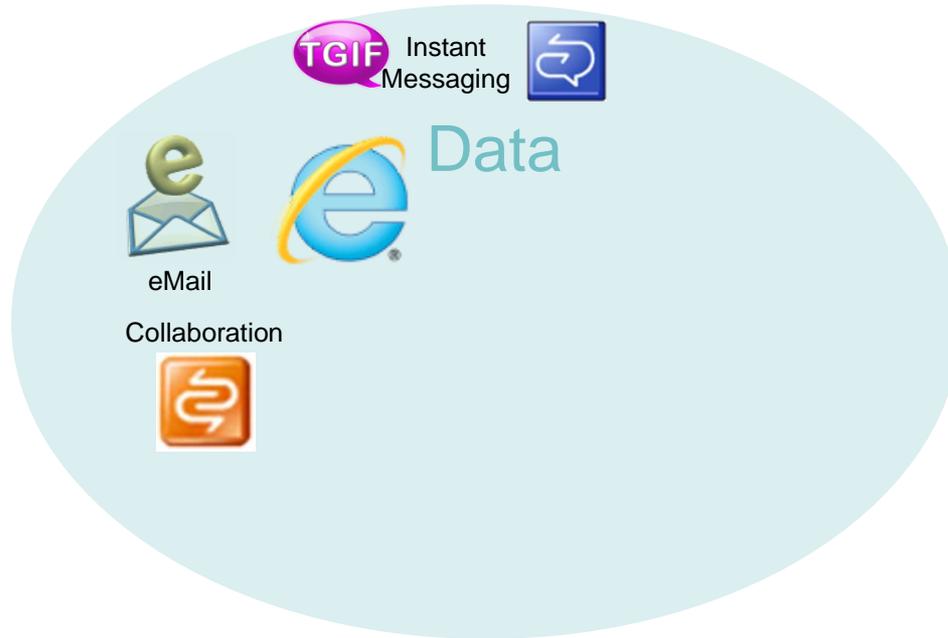
Unified Communications as a Service (UCaaS)

Don Murtaugh, Northrop Grumman
Dec.14, 2011



NORTHROP GRUMMAN

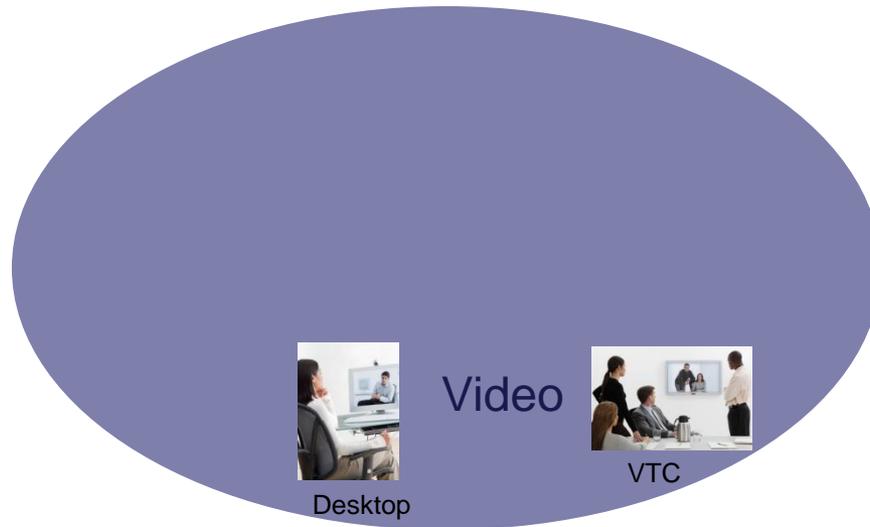
Building Block - Data



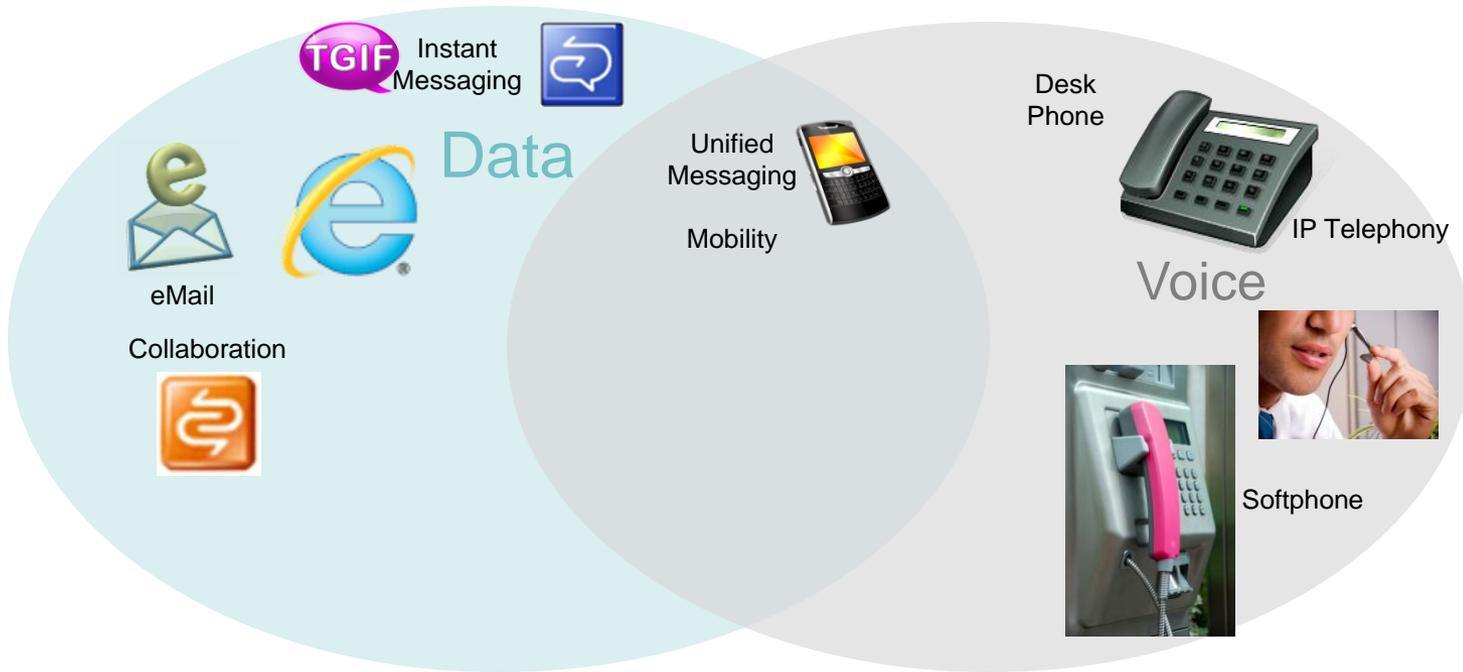
Building Block - Voice



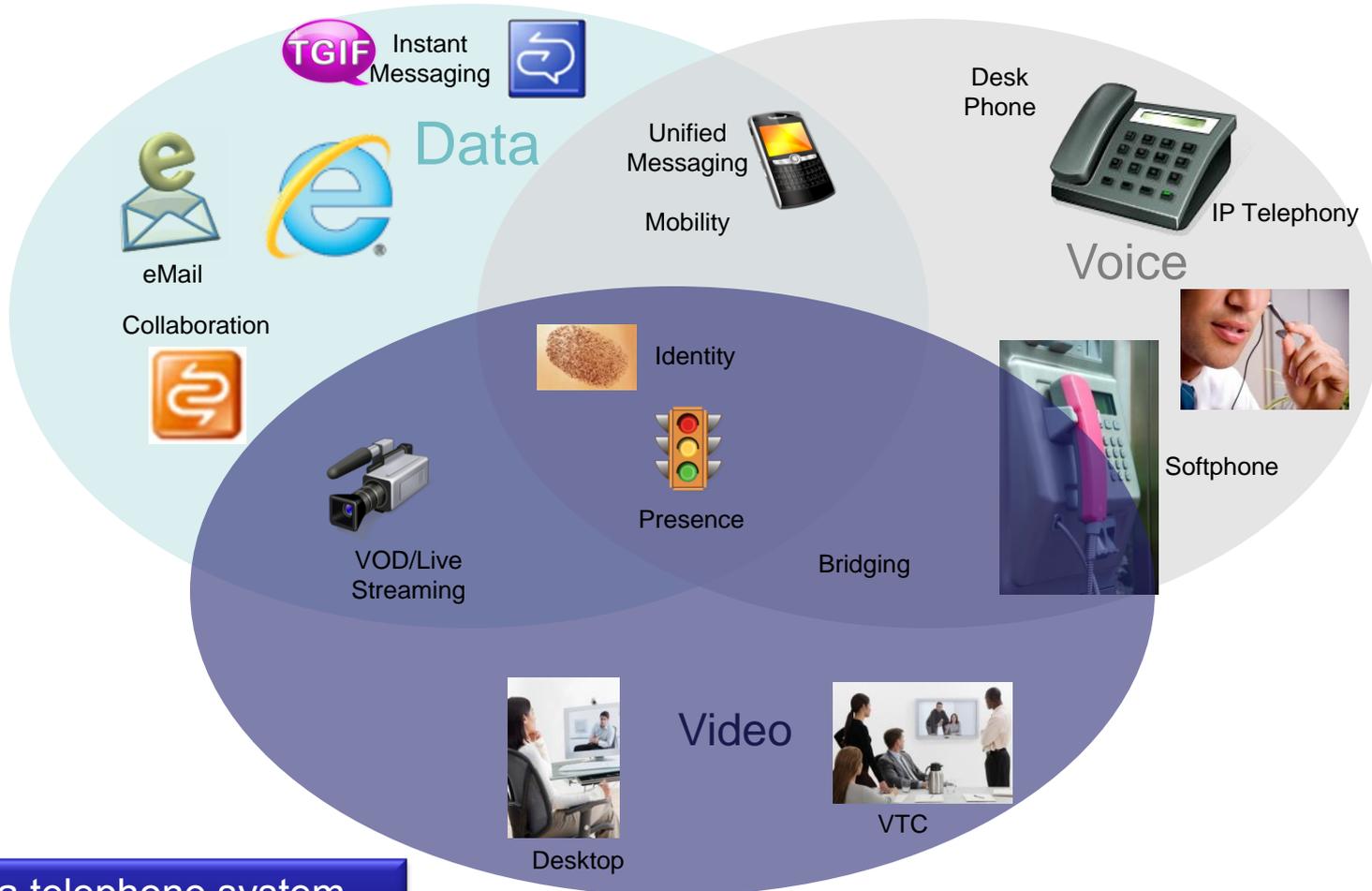
Building Block - Video



Unify Data and Voice



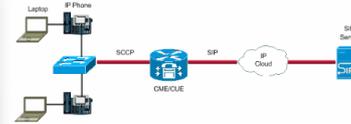
Unify Data and Voice and Video



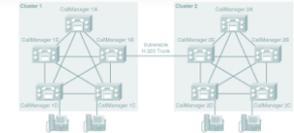
Not just a telephone system...

Microsoft®
Exchange
2010

Data



SIP Trunking Pilot



Cisco Call Manager

BlackBerry



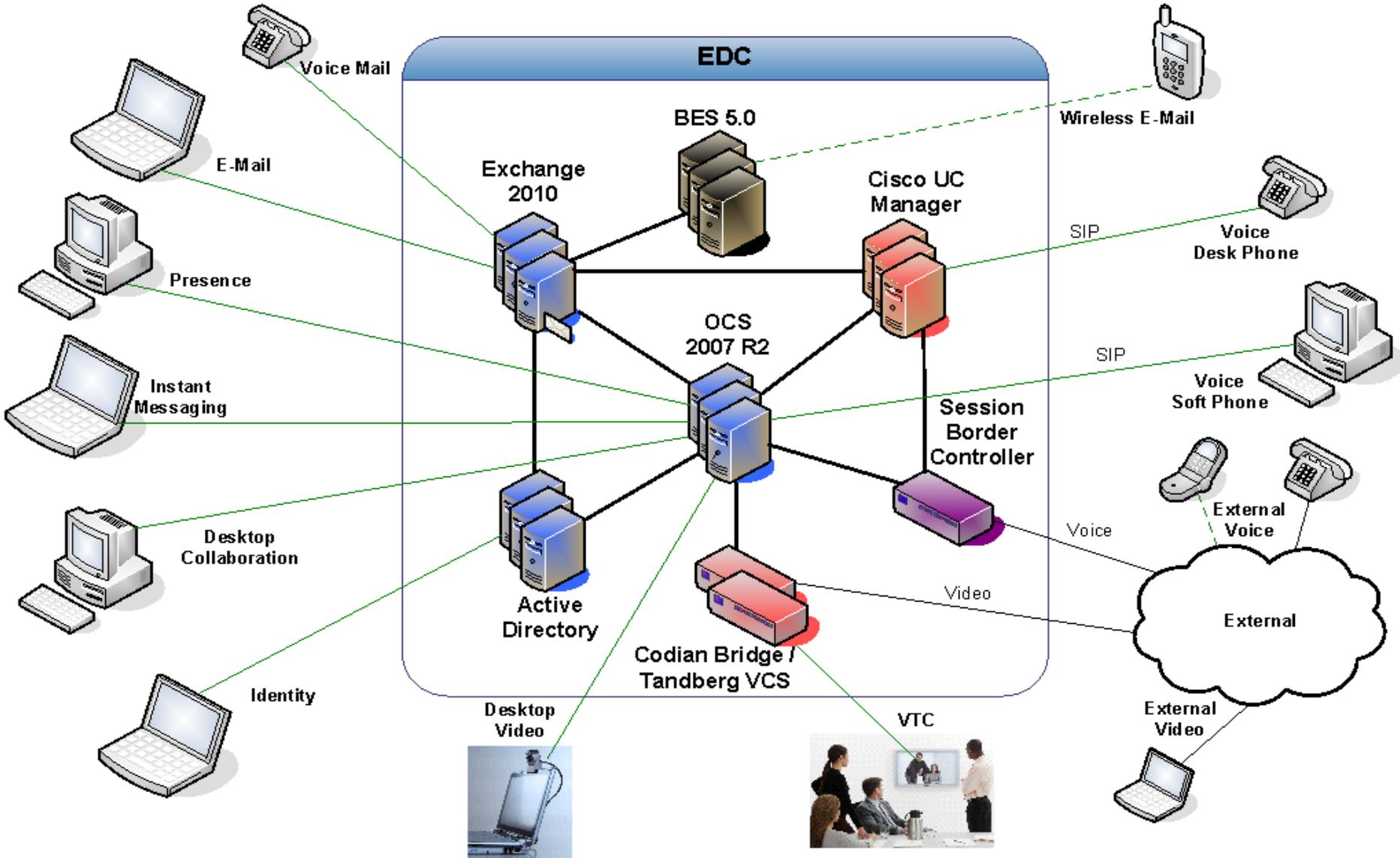
Voice

Microsoft Office
Live Meeting



Video

Unified Communications Components in the Enterprise Data Centers (CESC and SWESC)



Fourteen agencies

- CIT, DCSE, VDH, DRS, DHR, Treasury, VDOT, DOC, DSS, NVTC, ABC, DJJ, DFS and VITA served

5,464 users at 56 locations served

- Ten sites never close – opened around the clock (1,894 phones)
- Largest installed location – 504 phones for VDOT NoVA
- Smallest installed location – 4 phones for DCE showroom
- Seventeen sites use greater than 100 phones each (4,036 phones)

Benefits of UCaaS

Strategic

- Secure solution
- Quickly scales to your needs
- Commitment free
- Vendor managed lifecycle – no future capital requirements
- Enables efficient business processes
- Designed to ease implementation of new features and services

Financial

- No-surprise, fixed monthly service fee
- Agency avoids expense to create budget, design and build new service
- Commonwealth minimizes lump sum capital intensive procurements

Productivity and Efficiency

- Unified IMAC for office move
- Full 24 x 7 support and site service redundancy
- Platform for collaboration (video conferencing, LiveMeeting, etc.)
- Improves productivity / effectiveness through use of enhanced features
- Future releases support executive goals (service for home users)
- Integrated voice, video and messaging services (end state)

UCaaS Services

- Statewide coverage
- Local, site-level redundancy and core switch redundancy
- Prices based on phone type and service desired
- Standard features (auto attendant, voice mail, call forwarding, etc.)
 - 49 telephone features and 27 UNITY (voicemail) features
- Work group productivity (small work team call routing)
- Service is deployed in 4 structured steps
 - Initial assessment -- provides first estimate of cost for agency analysis and planning
 - Planning -- gathers details to deploy the service are compiled into a formal proposal
 - Installation -- a team configures the network and deploys the phones, service is active
 - Closeout -- agency approves the installation and records are updated for billing

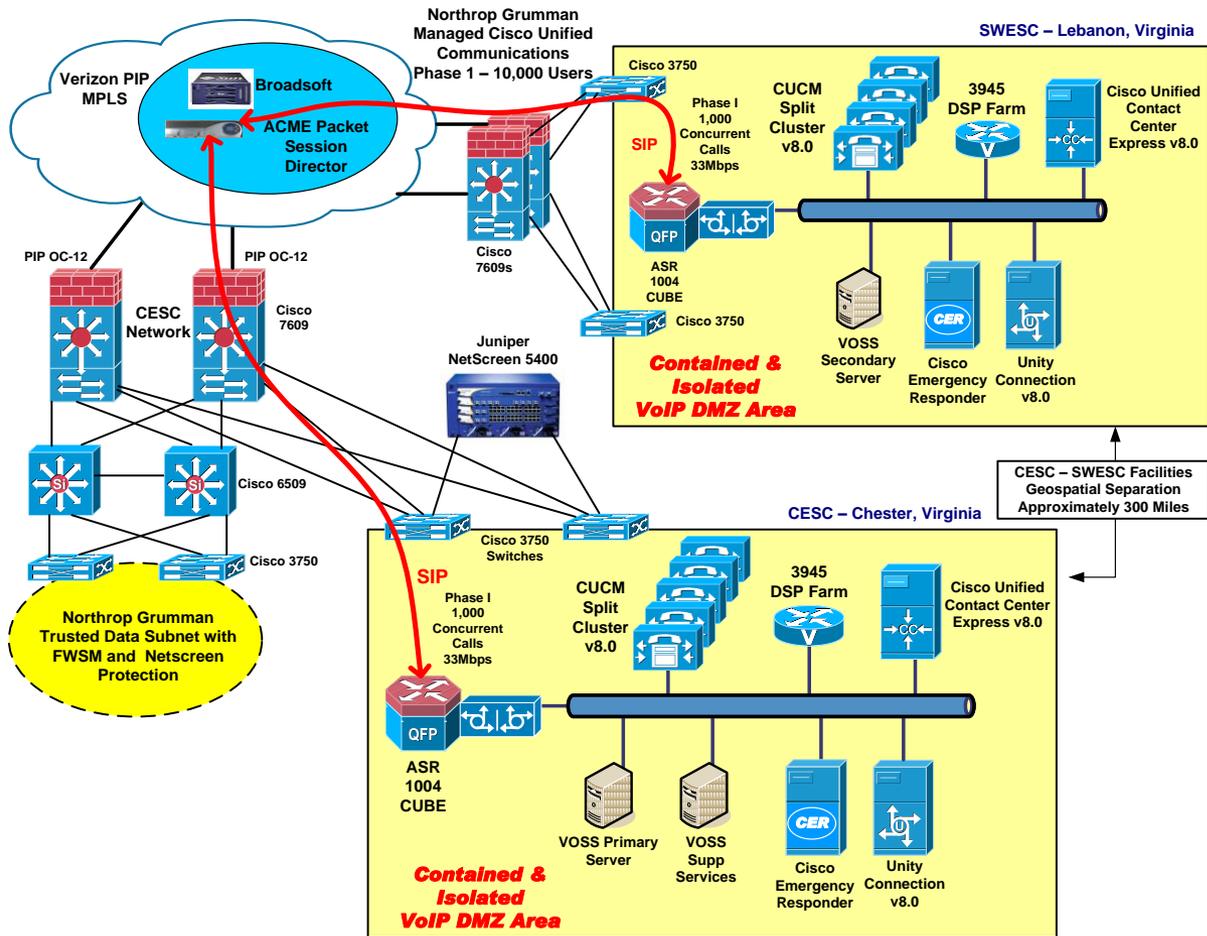
What is included in the UCaaS fee?

- Core Infrastructure
 - 24 x 7 security
 - 24 x 7 monitoring
 - 24 x 7 infrastructure support
- Core switch redundancy
- Site level calling redundancy
- Scalability (cloud delivery model)
- Email / voice mail integration
- Includes domestic long-distance charges
- VA §56-484.19 compliance
- 911 multi-party notification
- Telecom lines required for redundant service
- Fixed monthly budgeting vs. lump sum

Typical Lifecycle Costs

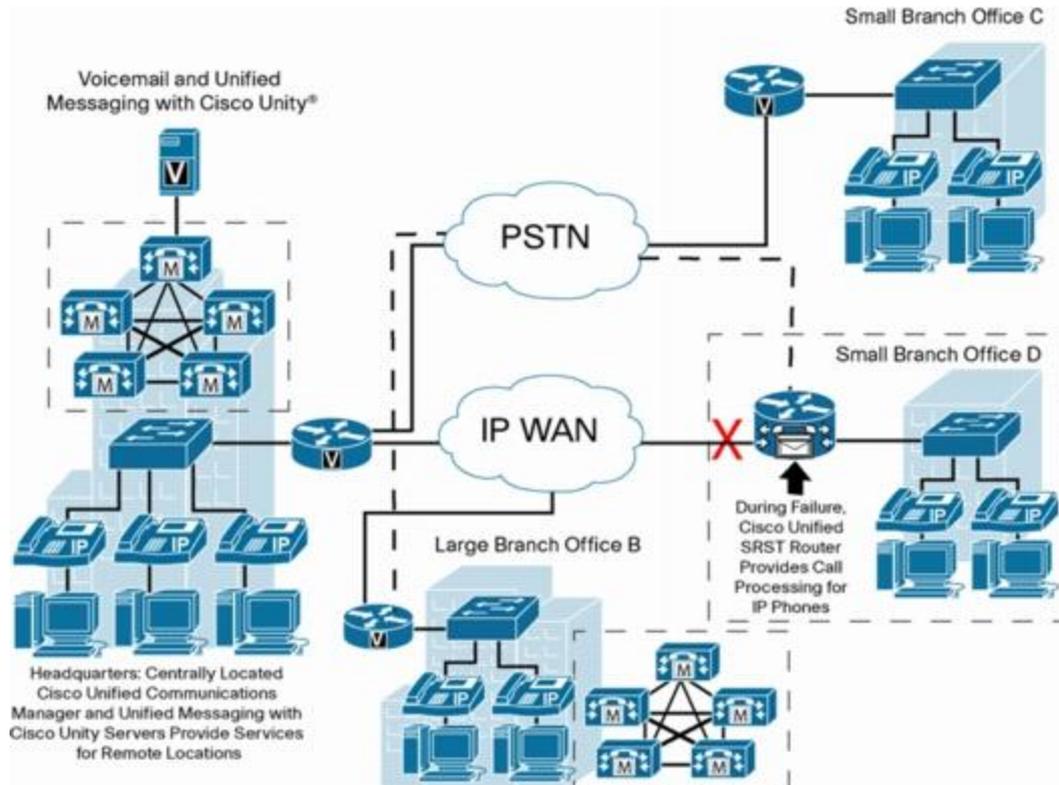
- Analysis and documentation of requirements
- Procurement (acquisition documents, vendor proposals, validation)
- Phones and switching equipment and software
- Delivery, installation and configuration
- Initial training and post installation support
- Hardware maintenance and replacement
- Software maintenance and upgrades
- System administration (users and features) (vendor coordination)
- Compliance with emergency calling regulations
- Local access charges, long-distance charges, etc.
- Budget for future upgrades, refresh / replacement

Core System Redundancy



Architecture provides redundancy and disaster recovery

Local Site Redundancy



Each site will have fail over to standard outbound telephone service

Changes to Service

- Adding or returning phones
 - Traditional TSR – account for billing changes
- Option Changes
 - Request processed through the VCCC (Q ticket)
 - Office moves can be accomplished just as the PC move
 - The phone and PC are easily movable within the same building
 - Changes affecting more than 15 users constitutes a work request



Lessons from Experience

- Just 'cause it work in the past ...
 - Cisco changed singling schemes to enable new features – old stuff no longer functions as it did before conversion -- most notably, FAX machines and monitoring probes
- When is old called vintage or just too old?
 - Older phones are four microcode versions back – the new system can update the last version of microcode and not older while the original system cannot update the firmware far enough to meet the minimum of the new system – the gap cannot be transverse
- Security has rules ...
 - Sec 501 requires separation of voice and data management controls from user channels – your older wireless LAN bridge requires an upgrade (\$)
- Hey it's a phone. How hard is it?
 - Planning requires attention to detail and the patience to answer questions that have to date need no answer (The ring three times here, then four times there, and finally answer by voice mail must be identified, captured and communicated.)
- Houston, we have a problem...
 - Planning requires advance trips to sizable locations

Additional Lessons

- Is it worth the effort
 - Using ATAs in order to merge analog phones into a digital service seemed like a good idea until ...
- Que Pasa?
 - It may impossible to expect you to know everything configured in your system and impractical to expect us to know everything -- something will break or be overlooked.
- “Pay that person behind the curtain no never mind...”
 - Not all cable runs are contiguous and free of splices -- once the cable enters the wall, uncertainty begins (Remain flexible to making changes as situations are uncovered.)
- Construction is not disruption free...
 - Expect cleanup



Commonwealth Communications and Collaboration Conversion Work



Planning with a personal touch...



Your project planner works to ensure that all project planning aims at a successful conversion. That includes the small details, such as removing packaging material.



During project execution, a project control center may be set up to track multiple hundreds of phones and project progress.



Each phone must be identified for a specific user. It is the same concept as your cell phone. The phone's internal electronic serial number is the connection to where the phone company delivers a call to you, the user.



Even conference room phones must be identified, labeled and installed in the identified location.



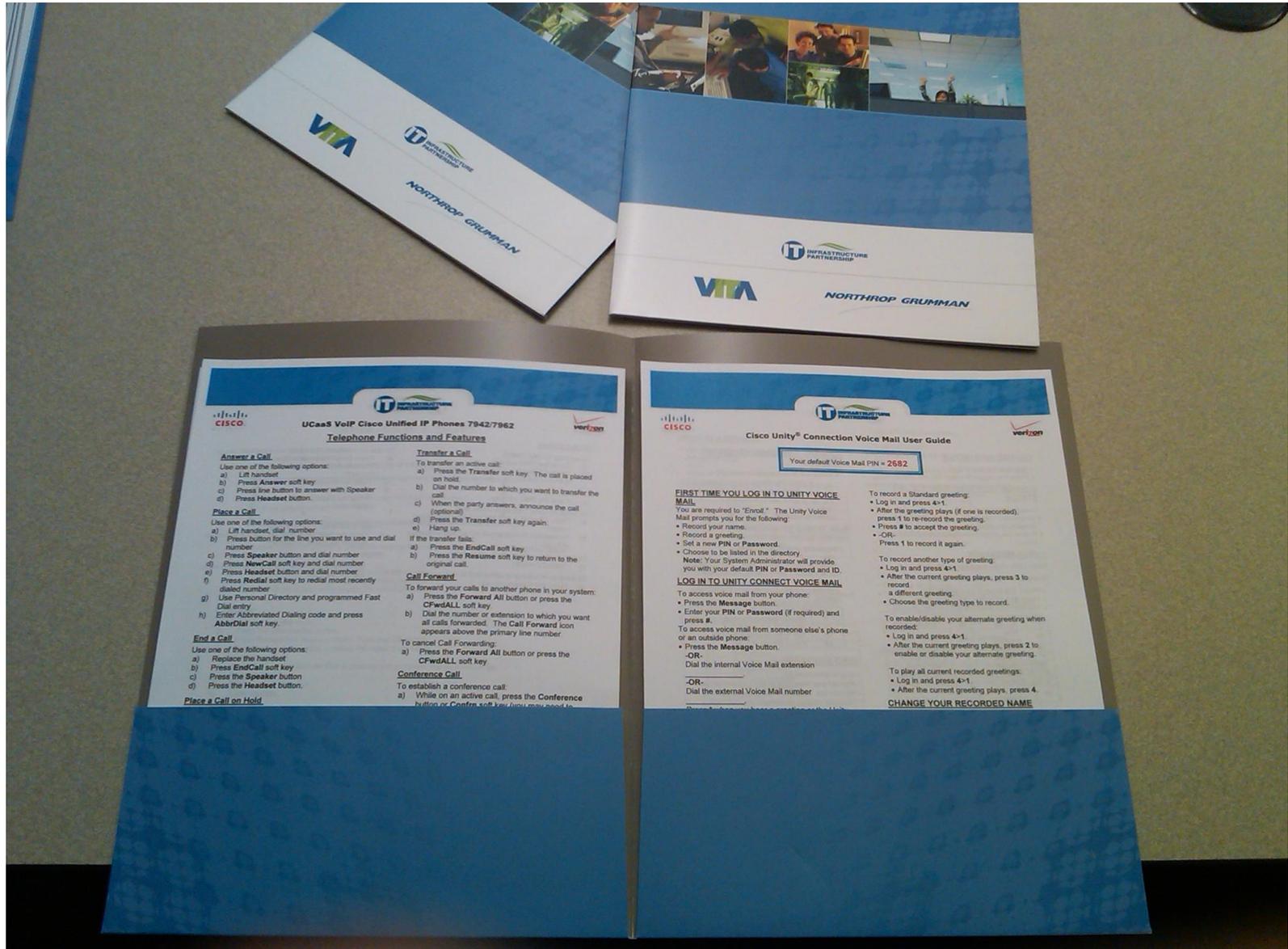
Phones are set at the location where they need be installed so they are available to the installers.



The correct phone to the intended user ensures that existing telephone numbers remain with the known individual.



Users who might require call forwarding are instructed with leave behind notes.



UCaaS VoIP Cisco Unified IP Phones 7942/7962

Telephone Functions and Features

Answer a Call

- Use one of the following options:
- a) Lift handset.
- b) Press **Answer** soft key
- c) Press line button to answer with Speaker
- d) Press **Headset** button.

Place a Call

- Use one of the following options:
- a) Lift handset, dial number
- b) Press button for the line you want to use and dial number
- c) Press **Speaker** button and dial number
- d) Press **NewCall** soft key and dial number
- e) Press **Headset** button and dial number
- f) Press **Redial** soft key to redial most recently dialed number
- g) Use **Personal Directory** and programmed **Fast Dial** entry
- h) Enter Abbreviated Dialing code and press **AbbrDial** soft key

End a Call

- Use one of the following options:
- a) Replace the handset
- b) Press **EndCall** soft key
- c) Press the **Speaker** button
- d) Press the **Headset** button.

Place a Call on Hold

Transfer a Call

- To transfer an active call:
- a) Press the **Transfer** soft key. The call is placed on hold.
- b) Dial the number to which you want to transfer the call
- c) When the party answers, announce the call (optional)
- d) Press the **Transfer** soft key again.
- e) Hang up
- If the transfer fails:
- a) Press the **EndCall** soft key
- b) Press the **Resume** soft key to return to the original call.

Call Forward

- To forward your calls to another phone in your system:
- a) Press the **Forward All** button or press the **CFwdALL** soft key
- b) Dial the number or extension to which you want all calls forwarded. The **Call Forward** icon appears above the primary line number

To cancel Call Forwarding:

- a) Press the **Forward All** button or press the **CFwdALL** soft key

Conference Call

- To establish a conference call:
- a) While on an active call, press the **Conference** button or **Confns** soft key. A **Join** icon appears

Cisco Unity Connection Voice Mail User Guide

Your default Voice Mail PIN = 2652

FIRST TIME YOU LOG IN TO UNITY VOICE MAIL

- You are required to "Enroll." The Unity Voice Mail prompts you for the following:
- Record your name.
- Record a greeting.
- Set a new PIN or Password.
- Choose to be listed in the directory
- Note:** Your System Administrator will provide you with your default PIN or Password and ID.

LOG IN TO UNITY CONNECTION VOICE MAIL

- To access voice mail from your phone:
- Press the **Message** button.
- Enter your **PIN** or **Password** (if required) and press **#**.
- To access voice mail from someone else's phone or an outside phone:
- Press the **Message** button.
- OR-
- Dial the internal Voice Mail extension
- OR-
- Dial the external Voice Mail number

- To record a Standard greeting:
- Log in and press 4-1
- After the greeting plays (if one is recorded), press 1 to re-record the greeting.
- Press **#** to accept the greeting.
- OR-
- Press 1 to record it again.

- To record another type of greeting:
- Log in and press 4-1
- After the current greeting plays, press 3 to record a different greeting.
- Choose the greeting type to record.

- To enable/disable your alternate greeting when recorded:
- Log in and press 4-1
- After the current greeting plays, press 2 to enable or disable your alternate greeting.

- To play all current recorded greetings:
- Log in and press 4-1
- After the current greeting plays, press 4

CHANGE YOUR RECORDED NAME



There may be instances where a phone or a group of phones will continue to be used.



As a second warning, a note is placed on the phone.

Unified Communications

- Commonwealth strong with multiple paths for redundancy
- Leverages multiple Commonwealth IT services
- Enables the business of government
- Opens paths for new or improved agency services

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