IT VOICE SERVICES COVID-19 SUPPORT

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VOICE COMPLEXITIES – PREMISE BASED – TELLING THE STORY FIRST

- PBX systems (UNM, Hospital, HSC, Popejoy, Business Center, CRTC2, Novitski,
- Branch campuses - Valencia, Gallup, Los Alamos
- Approximately 21,000 connections (Digital, Analog, VoIP) VoIP services (IP based) 6,000 + NEC devices
  - Digital @ 8,300 NEC devices
  - Analog @ 7,400 NEC and polycom like devices
- Contact center
  - Voicemail boxes 10,000
  - ACD 400
  - Auto attendants 100
- Emergency devices, - Code blue, elevators, Fire, Security, Ring down
- Fax – analog and e-Fax
- PBX to PBX connections (KUNM, Hospital Cisco, etc.)
- 700 Trunk for local two way, 800, incoming LD, Local
- 5 trunks for Long distance

VOICE COMPLEXITIES

- Premise 911 services

- Support of EOC (Emergency operations centers) for UNM, UH

- Contact center ACD – automatic call distribution, IVR – interactive voice response, AA – auto attendant

- Athletic events, special events, for specialty requirements

- Connections and extensions of specialties services (T1, POTS, 1FB, DSL)

- ADA requirements

- Long distance tracking – Auth code – UNM audit

- 4 UNM FTE
- 2 Students
- 5 Contractors

HOW DID COVID-19 CHALLENGE THE UNIVERSITY FROM THE VOICE PERSPECTIVE?

- The demand for softphone technology prior to Covid 19 was very low and while several products were deployed within the Voice team they had never been vetted or tested for the wider UNM community.

- The softphones had no SLA, no service model, no support model and no funding model

- Suddenly at the beginning of March 5,000 faculty and staff were preparing to work remotely using UC products.

- Requests for softphones started coming in especially for the ACD phones in the call centers.

BARRIERS TO DEPLOYING SOFTPHONES QUICKLY

- UNM VPN required
  - Juniper VPN works but was end of life and only available for 500 users.
  - The new Global VPN does not work with Natting so the softphones failed
  - UNMH/HSC users can't use their medical applications if VPNd to UNM

- Existing phone must be VoIP
  - Only 6,000 of the 21,000 phones at UNM are VoIP.
  - Cost and hands on time to uplift to VoIP prior to installing the softphone were prohibitive.

- Users must have a laptop
  - Many UNM and UNMH staff do not have laptops, especially in the call centers
  - SP350 only supported on Windows machines

- Installation process
  - Softphones installation for IT can be done remotely via SCCM and configured over the phone.
  - Softphone installation for other users requires site visit to manually install the application.

LESSONS LEARNED

- Softphones that were never vetted or made enterprise failed because of the IT network differences between UNM and UH (NATTING, IP space, ports, etc.)
- Today we have IT Customer Service and IT LEARN on the NEC SP350 softphone and works with known limitations but working for business continuity
- The IP differences will be addressed post Covid but for now we will not make changes due to the critical nature of voice communications
- Support model
    - Laptops – WSM
    - Softphone (windows, Apple, mobile devices and operating systems)
    - Connectivity to the teleworker – this is very dynamic and has a different outcome for the voice connection.
        - Issues are teleworkers home connection speed
        - Number of users in the home on the network
        - Other applications the teleworker uses
        - Tier 1 documentation, then Tier 2 and 3 – how to triage and repair remotely or in person –complex since multiple teams are involved.

TELECOMMUNICATIONS SOLUTIONS FOR REMOTE WORKING- THE SOLUTION

- Call Forwarding: Remote workers can call forward their UNM phone line to a local cell, a local landline, another UNM phone number, or to voicemail. If the user is not on site to manually call forward the phone UNM IT Customer Support Services can call forward the phone remotely during business hours.

- Voicemail: If you choose to forward your calls to voicemail you can check your voicemail remotely for messages, request simple unified messaging to receive notification via email of your message, or check your message via the voicemail web phone manager.

- Auto Attendant (voicemail tree) and ACD changes: If your department has an auto attendant or Automatic Call Distribution (ACD) system configuration changes can be made to provide callers with an alert message or point to different numbers. New auto attendants easy to set up remotely.

COVID-19 EXAMPLES OF TIER 1 AND 2 SUPPORT

During this time with a hybrid of Tier 1 and 2 support for IT voice and Alarms we asked our staff what they felt were the biggest challenges they faced and continue to face on a daily basis.

- Tier 1- On site "boots on the ground"
  - Initial rush to expedite moving phones for departments and setting up new locations for Covid19 support.
  - Triage and troubleshoot incidents ASAP
  - Teamwork between IT Voice team, technicians, and customer is critical to success.

COVID LESSONS LEARNED FOR TIER 1

- Sanitizing everything you touch from the time you leave your house is the new normal. Have hand sanitizer or wipes at your desk, in your vehicle, at home, and on hand. Wash your hands whenever possible and as often as possible.
- Make sure you have the PPE even if you have a cloth mask. Protect yourself and customers. Also protect your family. If you don't have a mask ask for one on site.
- Stay upbeat and positive, it can be very different without the daily noise and human interactions. Keep busy, keep positive. Get your mind right so you are not putting yourself in danger.
- Schedule with you customers and associates. Be super organized to limit your time in the field away from your office. Business is slower so make an effort to be efficient.
- Avoid others that have loosened up with precautions. I have noticed other vendors we interact and work with think they are invincible.
- Get tested if you feel ill.
- Make yourself comfortable working from home. You may need a new office chair or desk to work comfortably.

COVID LESSONS LEARNED FOR TIER 2

Forwarding
- Individuals must be at their desks with their devices in order to set up forwarding
- Having UNM IT Voice technicians set forwards is billable @$40/hour
- Issues:
    - Many individuals did not have a chance to forward their phones before isolation began
    - Some individuals set up forwarding that was incorrect
    - Some individuals wanted to change their forwarding during isolation
- Temporary solution:
    - UNM IT CSS – Voice has been setting or modifying forwards at no charge during limited operations

Voicemail Notification
- Issue: when you are not at your phone, you cannot see that the voicemail indicator light is on
- Solution: simple unified messaging can be setup to notify you via email that you have a new voicemail message
- Challenge: UNM IT had not formally rolled out simple unified messaging as a feature of voicemail, though it was available for a charge upon request
- The ability to receive email notification for voicemail messages was in high demand at the beginning of the crisis
- The team quickly conducted testing and published FAQs to ensure the service was well-documented and understood
- This included figuring out how customers can update the destination email themselves at the online web phone manager

Request and Incident Volume
- Volumes for health care customers have remained steady
- Volumes for main campus requests have been much lower than usual, with a higher percentage of voicemail and forwarding requests and incidents
- UNMH had a need for urgent fulfillment of time-sensitive requests related to COVID response, so we updated processes to accommodate

COVID LESSONS LEARNED FOR TIER 2

- Big challenge was definitely the sudden demand for softphones and the subsequent push to test, deploy, and document those services in a short period of time for IT.
- Most customers wanted to know what their options were. At the simplest added alerts to some auto attendants, routed pilots through the ACD configuration to numbers off site or voice mailboxes. Assisted many with out of office recordings for auto attendants since they record through call processors and not mailboxes and general consulting
- Troubleshooting failures and anomalies on both the network and the client for softphones was extensive.
- Managing Workforce-
  - Assuring adequate workload for NEC techs and Voice Techs proved to be very challenging.
  - Utilizing technician skill set based on remote access and on site labor
  - Scheduling site visits based on urgency of task, tech availability, project requirements etc…
  - Providing oversight on work related to system audits, counts, updates, upgrades. Work that can be completed remotely.
  - Providing direction and scheduling on small projects and task for Voice Techs. Ie. Area clean up, MDF relabeling, cable removal, 256 Consolidation
  - Good time to complete online training and certifications.

THE HOSTED DIRECTION

- Premise solution with NEC 20M in invested infrastructure, amortization

- Analog, digital, trunking 911, Voicemail, 21,000 extensions, support model , cost recovery

- Premise pro's
  - Installed base since 1983
  - Cost per port in the $3.00 per station area
  - A lot of analog and digital still on premise for specific requirements
  - On site support is efficient already with 2 NEC and 3 Technicians and 4 FTE UNM

- Premise con's
  - Iron – a lot of space, power and cooling
  - Upgrades are expensive
  - Beholden to the product on costs and direction or EOL, EOS issues

THE HOSTED DIRECTION

- Possible new Normal for the future
  - Premise (on campus users) – cost based on port count $800,000 per year
    - Support model with IT Voice- get VPN issues worked out between UNM and UNMH for deployment of existing enterprise softphones.
  - Hosted dial tone (Teleworker) – assume 1,000 move to the cloud $costs TBD
    - Support model and cost recovery model will change
  - Hosted ACD, IVR (Teleworker) – assume 1,000 move to the cloud (currently 400+) costs TBD
    - Support model and costs recovery model will change
  - Note: Hosted would be direct connected to the premise solution to provide 5 digit dialing plan adds to the cost of the hosted solution

GARTNER 2017 (WORLDWIDE) UCAAS MAGIC QUADRANT

❑ Market is moving into consolidation phase

❑ Two major models:
  ❑ Hosted on-premises type systems (multi-instance)
    ❑ Essentially the IP-PBX manufacturers (Cisco, Mitel, NEC, Avaya…)
  ❑ Purpose-built cloud systems (multi-tenant)
    ❑ Start-ups (RingCentral, 8x8, Fuze, Broadsoft)
    ❑ Productivity Suites (Microsoft, Google)
  ❑ Cisco acquiring Broadsoft; captures carrier segment

❑ List at $20 - $30/user/month, plus options
  ❑ Competitive bidding brings to ~$10/user/month
  ❑ Includes telephony minutes, help desk.
    ❑ Optional fees for on-premises connectivity, contact center, etc.

❑ Future trend is bundling with other services.

Figure 1. Magic Quadrant for Unified Communications as a Service, Worldwide

As of August 2017   © Gartner, Inc

COMPLETENESS OF VISION

Source: Gartner (September 2017)

ABILITY TO EXECUTE

CHALLENGERS | LEADERS | NICHE PLAYERS | VISIONARIES

Microsoft, Google, Verizon, BT, AT&T, RingCentral, West, Orange Business Services, 8x8, Fuze, NTT Group, BroadSoft, Mitel, Star2Star, Masergy

THE HOSTED DIRECTION

- Hosted
  - 911
  - Voicemail
  - Features in the cloud
  - Integrated and not integrated
  - Web or Softphone technologies
  - Hard phone technologies
  - Windows, Apple
  - Mobile – all forms
  - Hybrid with Hosted and Premise
  - Support model – dial tone, application, devices, etc.
  - Cost recovery or FTE model

THE HOSTED DIRECTION

- Hosted providers for dial tone (pricing pending per port and features – low end $3.00 to 30.00 per port) enterprise level, trunking, connection to the PBX, domestic dial rates, Voicemail, etc. - Assume 1,000 users or 100,000 per year range

  - NEC Univerge Blue

  - Zoom

  - MS-Teams (A3 – A5)

  - Broadsoft-Century link – Cisco
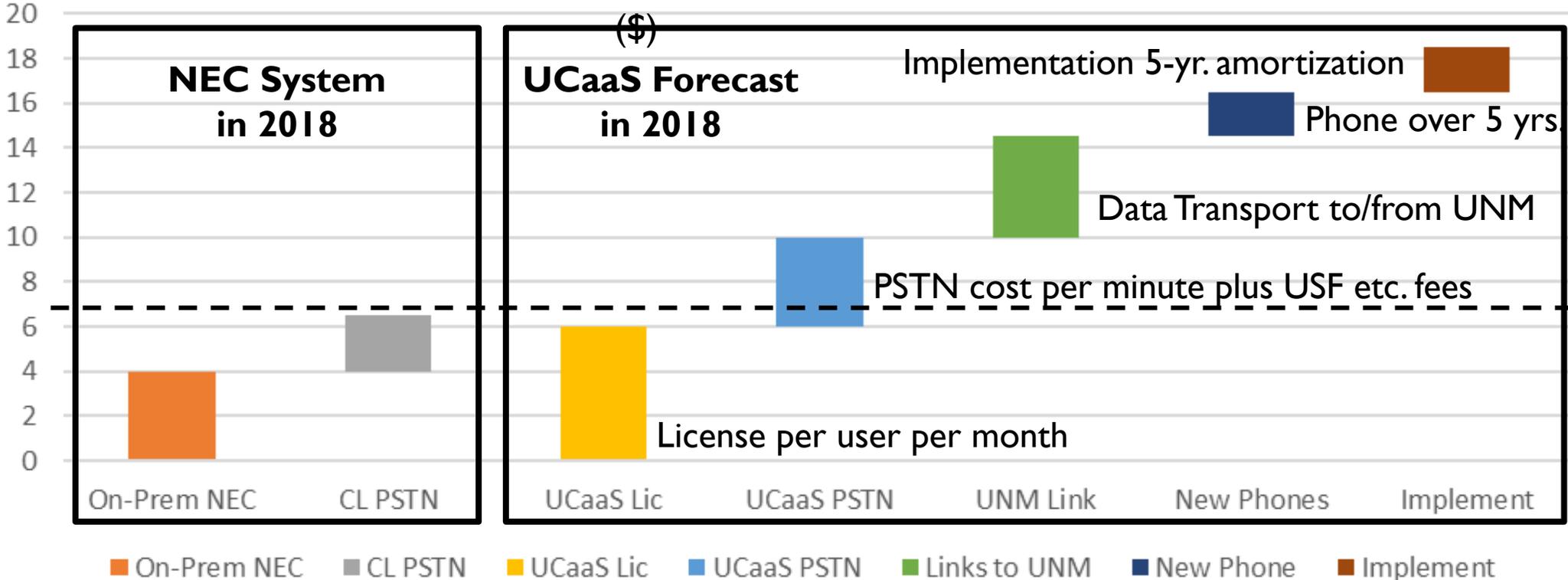
THE HOSTED DIRECTION

- Hosted providers for AA, ACD, IVR (pricing pending per port and features – low end $20.00 to 300.00 per port) enterprise level,- Assume 1,000 users or 300,000 per year range

  - NEC Univerge Blue

  - Ring Central

  - Talkdesk

  - Five9

  - Genesys

UCaaS base cost may seem competitive, other factors triple UNM $/user/mo. Recent NEC presentation of UCaaS options estimated at $22 - $26/user/mo. IT Voice Staff remains for UCaaS vendor management and fee-based MACs.

2018 Cost Forecast of NEC IP-PBX vs. UCaaS

NEC Est.

Cost Per User Per Month ($)

NEC System in 2018

UCaaS Forecast in 2018

Implementation 5-yr. amortization

Phone over 5 yrs.

Data Transport to/from UNM

PSTN cost per minute plus USF etc. fees

License per user per month

On-Prem NEC | CL PSTN | UCaaS Lic | UCaaS PSTN | UNM Link | New Phones | Implement

■ On-Prem NEC ■ CL PSTN ■ UCaaS Lic ■ UCaaS PSTN ■ Links to UNM ■ New Phone ■ Implement

VOICE FOR THE FUTURE

- Cost model – move from a cost recovery to cost allowance for support and refresh
- Support model – depending may be a hybrid with some voice, some applications, server, customer service, work station management, cellular, operating systems and triage processes
- New offerings based on Tier 1, 2, 3 customers
- New offerings for Health Care
- Integration or migration for Branch Campuses
- Planning – now - presentation to IT executive on three area's and the complications, pro's and con's of such a design or change in service offerings.
  - Voice services 101 – revenue versus expenditures
  - NEC contract that ends in 2022
  - Hybrid with Hosted dial tone and ACD, IVR solutions with Premise integration

QUESTIONS?