

Analog Line Migration

Continuing the IP Transition

John Madey, RCDD MBA

Associate Director

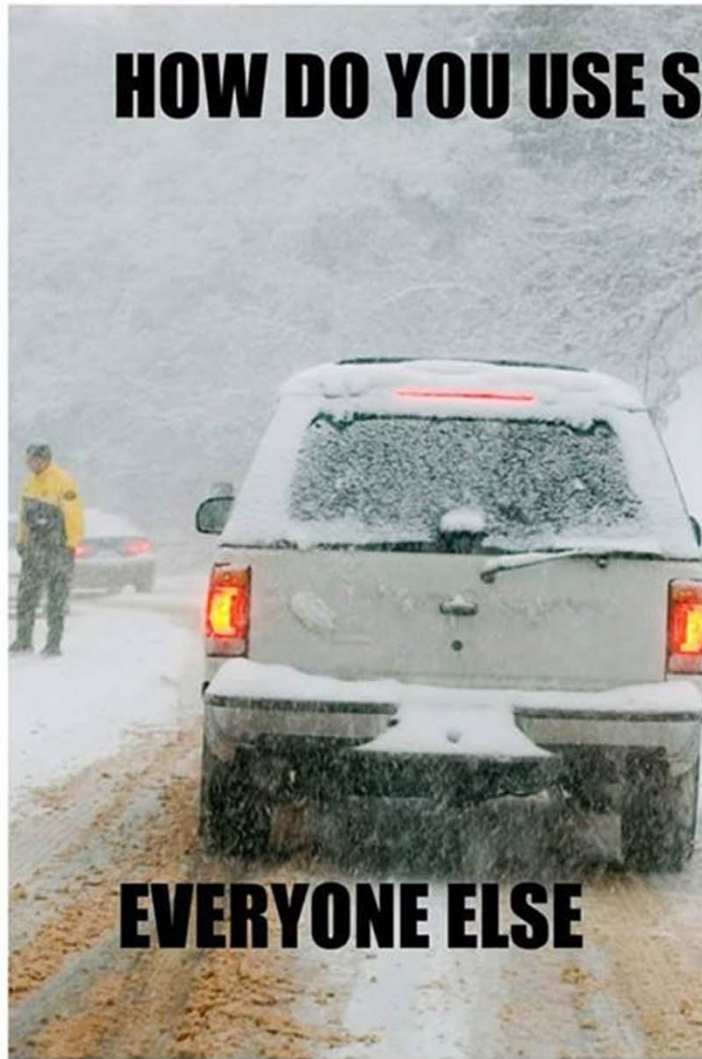
Infrastructure & Communications Technology

UF | Information Technology



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HOW DO YOU USE SALT IN THE WINTER?

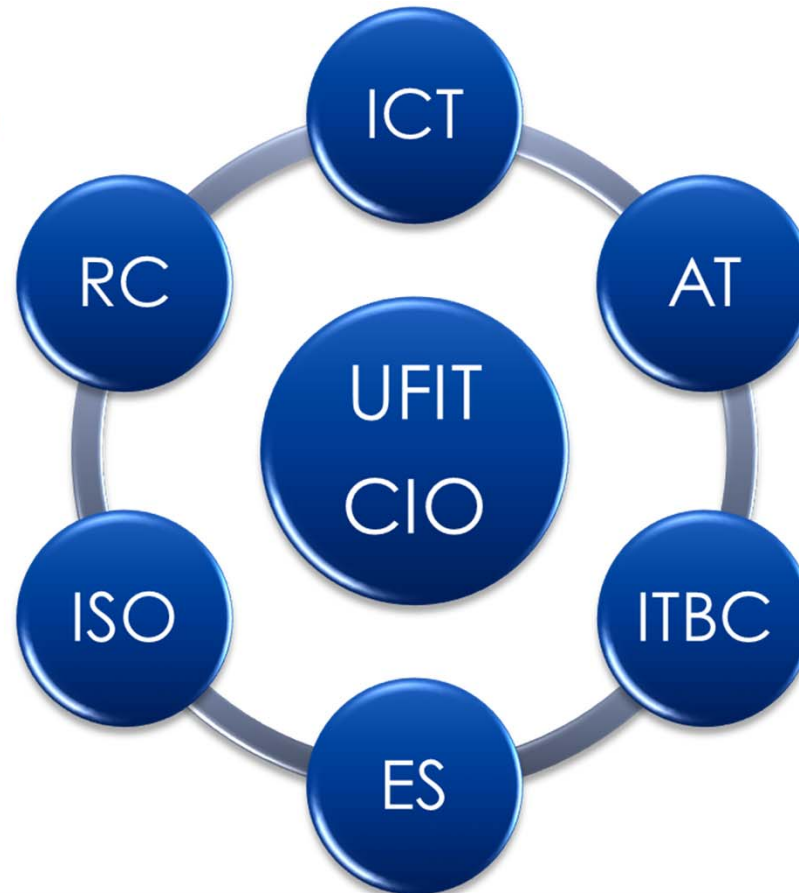


EVERYONE ELSE



FLORIDIANS

UFIT Overview



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UFIT Overview: ICT

- Network Infrastructure: Field Engineers and Techs – Building network support
- Telecom: VoIP Infrastructure, Cisco Call Managers, IP Contact Center, Voicemail
- Emergency Communications: InformaCast, Blue Lights, E911
- Engineering: Design reviews, Telecom standards
- ISP: Inside Plant Cabling
- OSP: Outside Plant Fiber

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Analog Line Migration

Contract Service Arrangement Agreement

Case Number FL16-0123-00
Option 1 of 1

Service description:

This Addendum offers an extension to the service period of the Customer's existing BellSouth® Centrex Service.

This Addendum provides for a thirty-six (36) month service period from the expiration date of the existing Agreement.

All terms and conditions of Contract Service Arrangement Agreement FL00-8849-01 apply to this Addendum unless modified herein.

Feb 2016



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1979 – The DMS-100 is born

Northern launches DMS-100, a full-featured, local/toll digital switch that supports up to 100,000 lines. The phenomenal success of this flagship product propels Northern to global prominence.

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Shop by category

Search...

All Ca

Back to search results | Listed in category: Business & Industrial > Office > Telecom Systems > Phone Switching Systems, PBXs



Nortel DMS SWITCH DMS-100 TDMA and CDMA

Item condition: **Used**

Price: **US \$125,000.00**

Buy It Now

Add to cart

Best Offer:

Make Offer

36 watching

[Add to watch list](#)

[Add to collection](#)

19 inquiries

Located in United States

Best offer available

Shipping: **Free Local Pickup** | [See details](#)

Item location: Cincinnati, Ohio, United States

Ships to: Local pick-up only

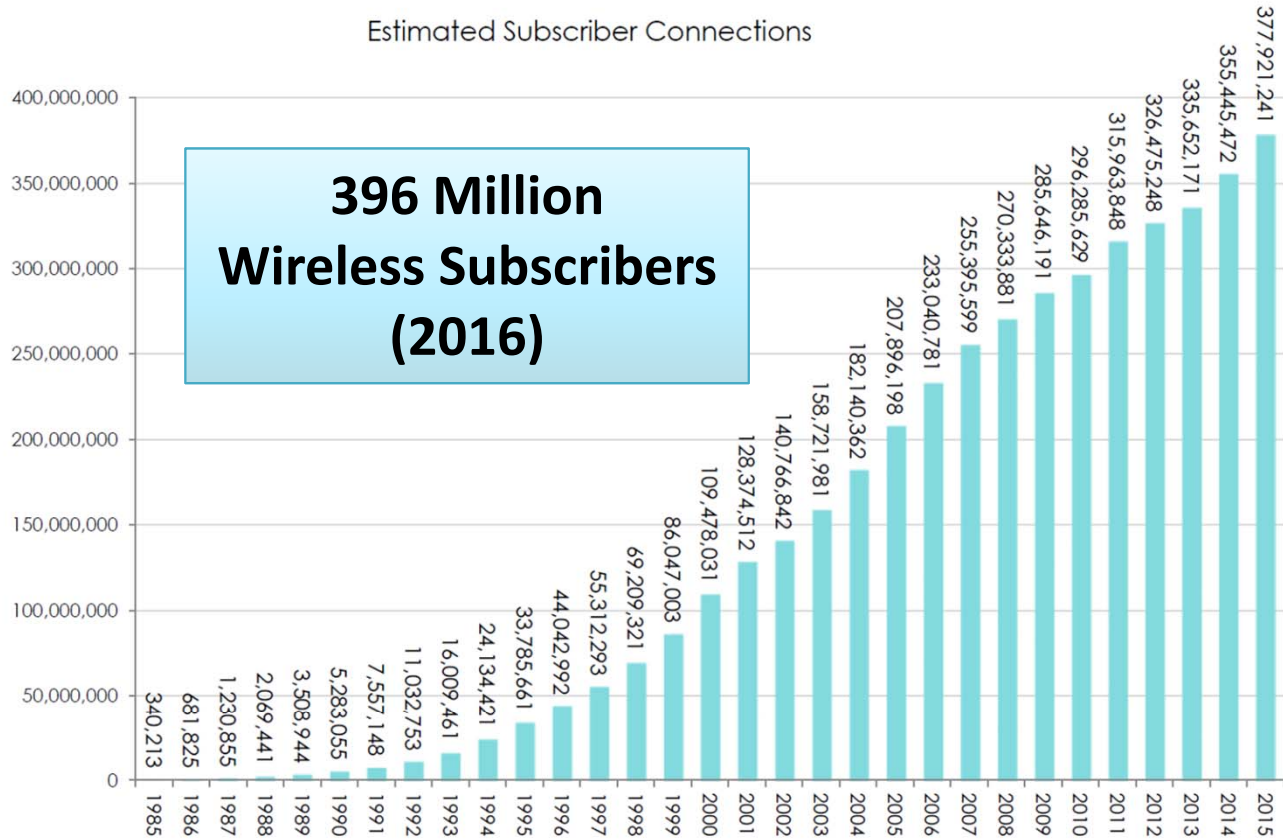
Delivery: **Varies**

Payments: **PayPal**    

Credit Cards processed by PayPal

[See details](#)

Estimated Subscriber Connections



**396 Million
Wireless Subscribers
(2016)**

Year-End Estimated Connections Near 378 Million

Source: CTIA

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Analog Line Migration

- The telco said that by the end of this year **less than 10 percent** of housing units where it operates as a wireline provider will continue to use **TDM-based voice services**.

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- In 2014, AT&T made Alabama and Florida the first two areas where it will conduct tests on all-IP services as part of its broader initiative **to shut down its legacy copper and TDM-based network in 2020.**

Source: June 2016 -- <http://www.fiercetelecom.com/telecom/at-t-defends-streamlining-tdm-to-ip-process>



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- **Under the FCC's new rules, a company's application to discontinue legacy TDM-based voice service can be automatically granted in 30 days** "if the applicant meets a clear, objective, three-pronged test," the agency said. That test includes comparable network performance, access to 911 service, and compatibility with "popular" services like home security systems, medical monitoring devices, credit card readers and fax machines, **"subject to sunset in 2025."**

Source: July 2016 -- <http://www.fiercetelecom.com/telecom/fcc-votes-to-streamline-process-for-operators-to-transition-from-tdm-to-ip-services>

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PUBLIC NOTICE

Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

News Media Information 202 / 418-0500
Internet: <http://www.fcc.gov>
TTY 1-888-835-5322

WIRELINE COMPETITION BUREAU COPPER RETIREMENT NETWORK CHANGE NOTIFICATION FILED BY CENTURYLINK

WC Docket No. 16-397
Report No. NCD-2651

December 1, 2016

Re: NETWORK CHANGE NOTICE RECEIVED

CenturyLink, an incumbent local exchange carrier (LEC), has filed public notice of network changes involving the retirement of copper, as required by section 51.332(b)(1) of the rules of the Federal Communications Commission (FCC or Commission).¹ Upon initial review the filing appears to be complete.²

The incumbent LEC's notice refers to the change(s) identified below:

CenturyLink Public Notice No.	Type of Change(s)	Location of Change(s)	Originally Planned Implementation Date(s)
16-006	Due to	In the following Wire Center in AL – Winfield	May 15, 2017

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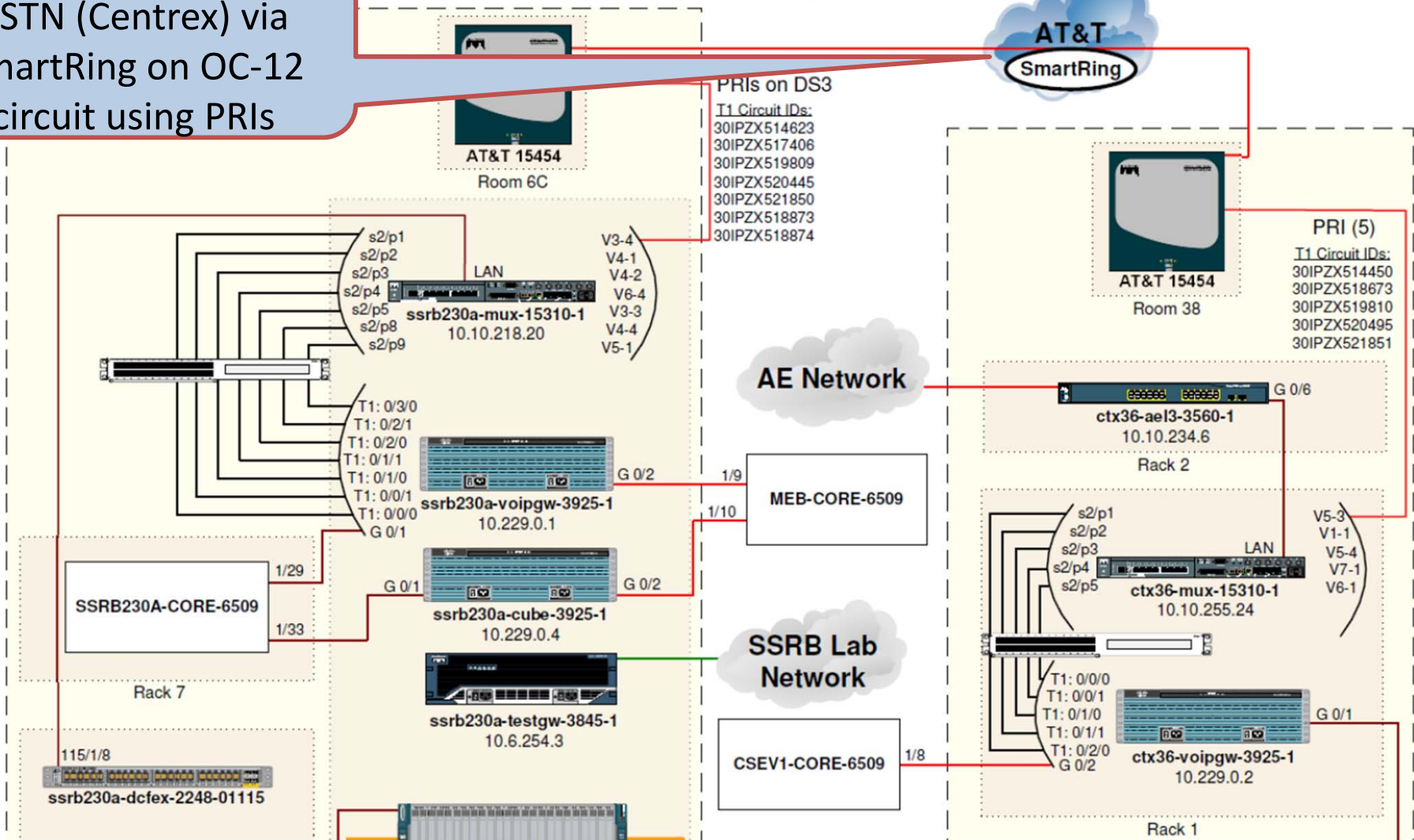
All term plans for SMARTRing® Service which are established, renewed or extended after December 13, 2013, for term lengths which are scheduled to expire at any time after **February 1, 2019**, will instead expire on February 1, 2019. All such services provided on or after February 1, 2019 will be provided on a month-to-month basis at the then-current Month-to-Month rate.

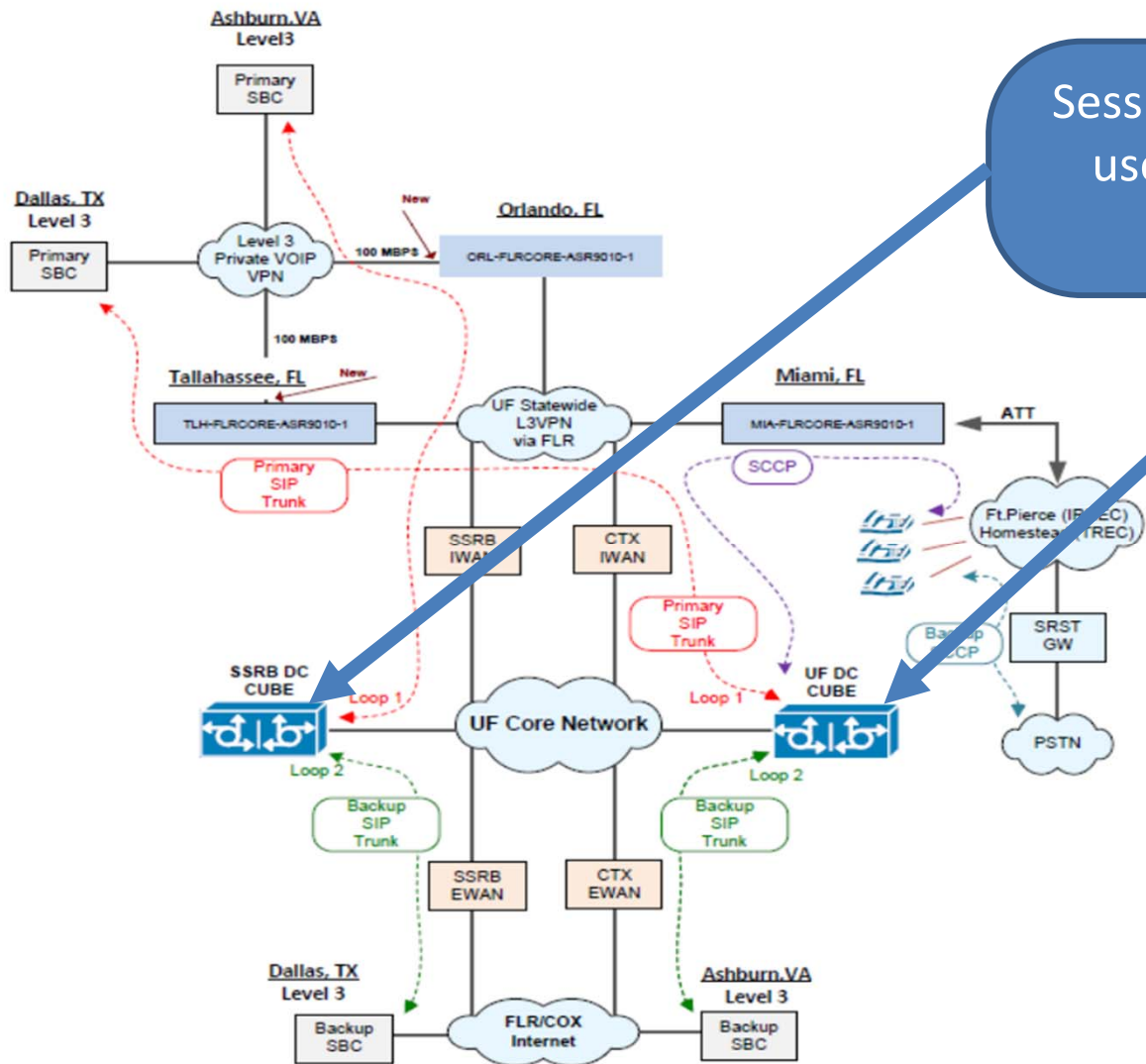


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Currently connect to PSTN (Centrex) via SmartRing on OC-12 circuit using PRIs

UF Physical VoIP Implementation

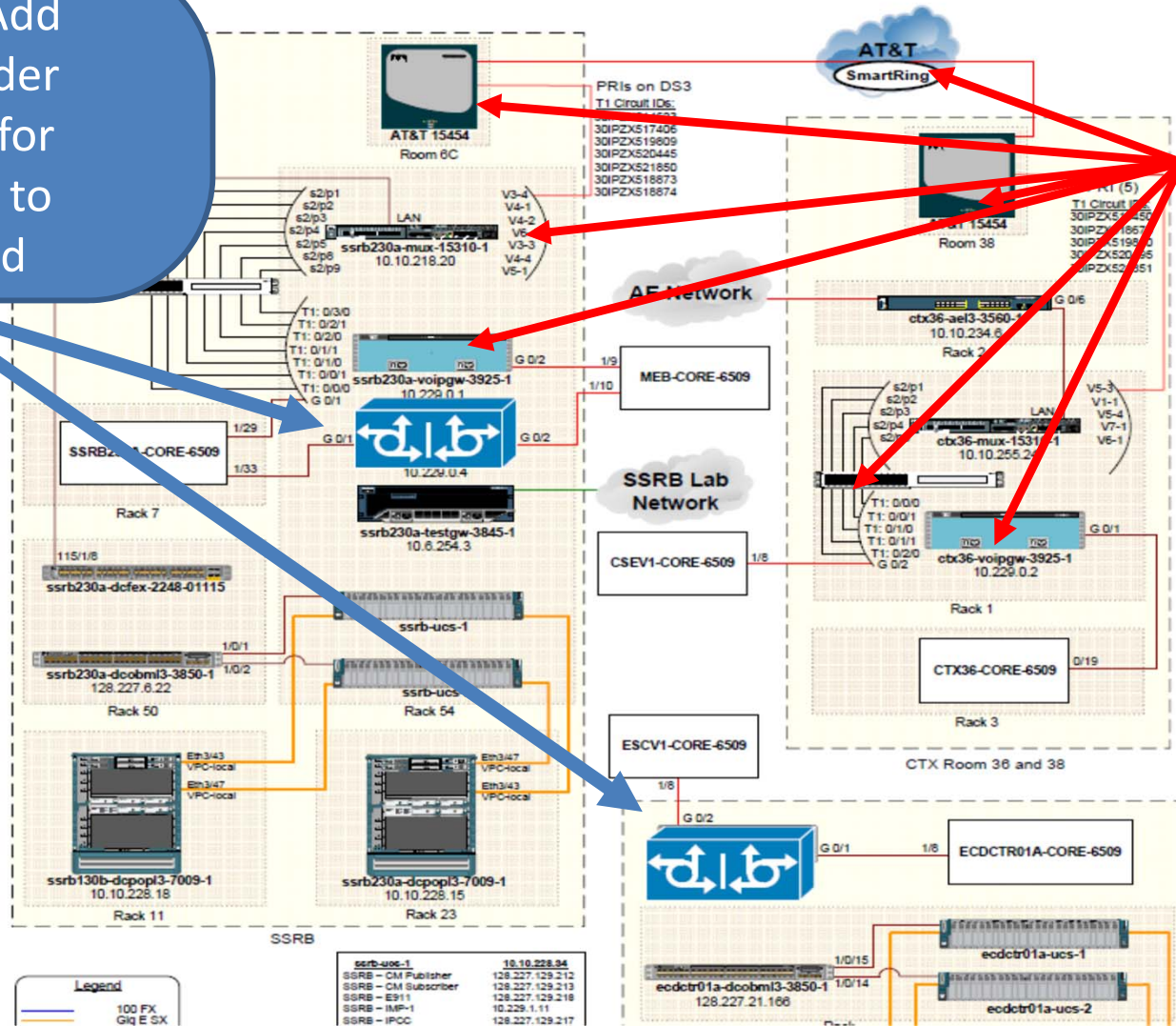




Session Border Controllers used for connection to Level 3

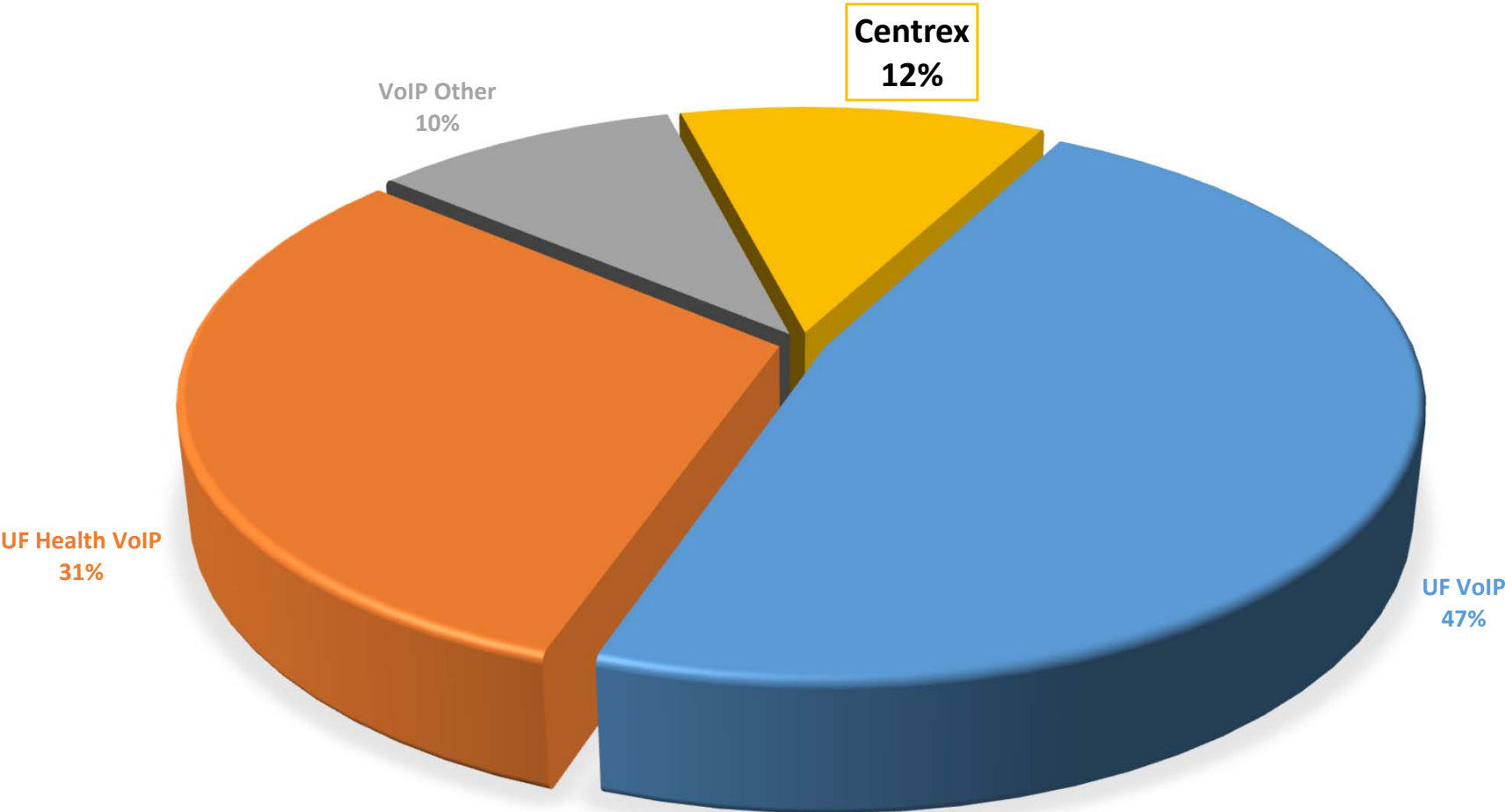
Leverage / Add Session Border Controllers for Connection to AT&T Cloud

To be deprecated

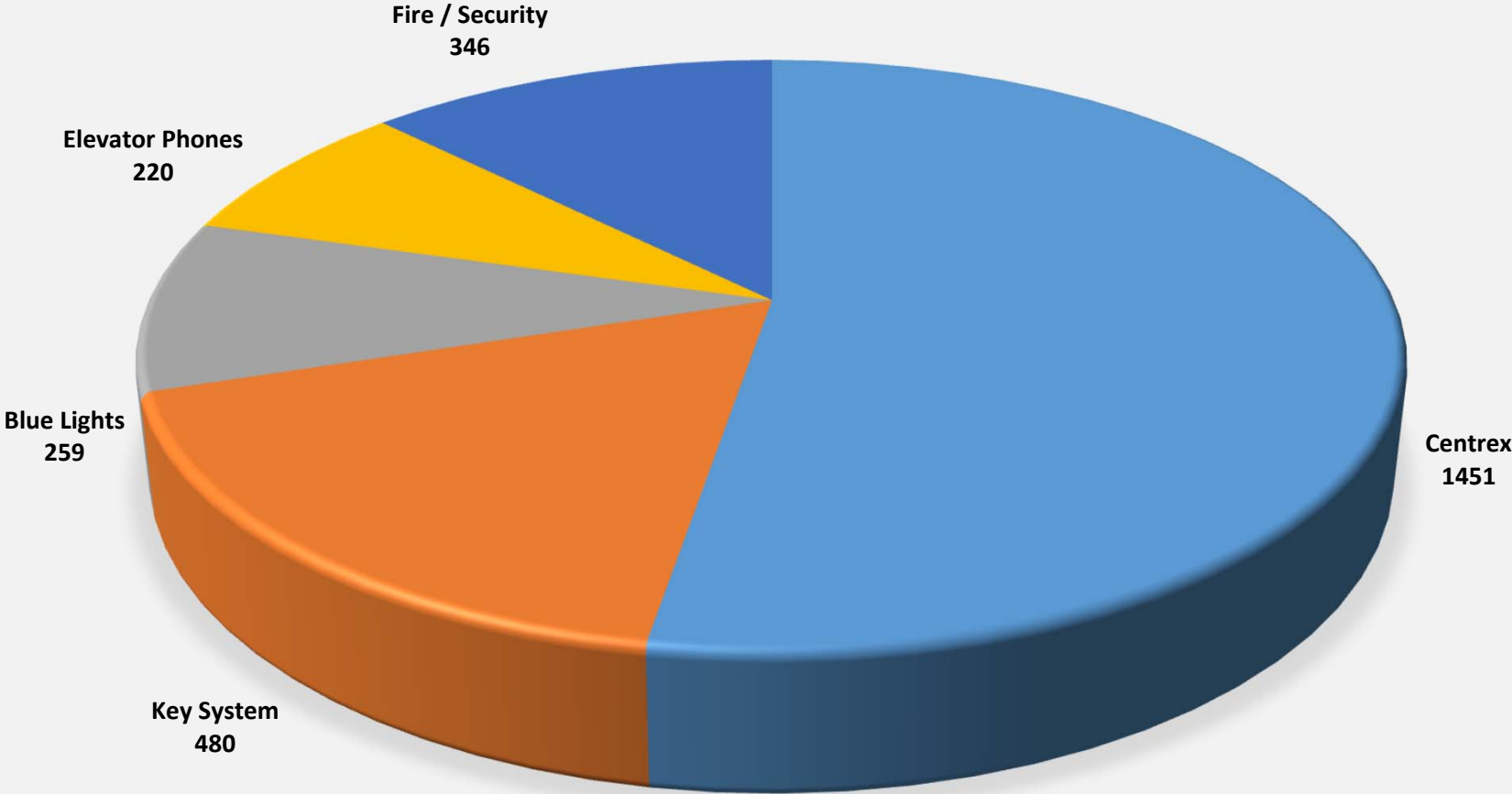




UF LINE MIX



ANALOG LINE USE



John Madey

Services > Voice 3528466990 0833 (PESTICIDE LAB ANNEX B) / 1 / 9

Services | Locations | Pool Numbers | E911 Audit | Report Outputs | Dashboards

Profile | Subscribers | Locations | Recurring | One Time | Notes | Attachments

Search icons | Create | Edit | Service Actions | Add To V

SERVICE PROFILE

Type Voice
Service Number 3528466990 Service Status In Service
Location 0833 (PESTICIDE LAB ANNEX B) / 1 / 9
Alert Open Work Order No
Switch Default Switch Switch Status
Start Date 20-NOV-2015 End Date

Multi-line / Single Service Class
Analog / Digital / IP Switch Address
Line Type
E911 Class Of Svc E911 Type Of Svc

Location [Go] Deassign Location

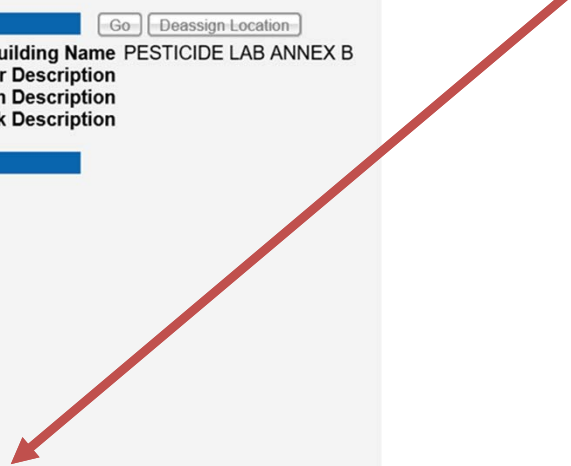
Building 0833 Building Name PESTICIDE LAB ANNEX B
Floor 1 Floor Description
Room 9 Room Description
Jack Jack Description

User Defined Information

Port ID
Device Pool
VOIP Partition
External ID
Circuit Number
External ID
Dialing Number
Switch Location
CTX-RJ
END-RJ
Secondary Loc
Do Not Call
Phantom Number
Service Use ALM (Burglar/Fire Alarm)
DID Type CTX (Centrex)

- Service Use:
- Centrex
 - Key System
 - VoIP

Service Use ALM (Burglar/Fire Alarm)
DID Type CTX (Centrex)



Analog Line Migration

3522941308	Voice	In Service	0958 (CHEMICAL ENGINEERING STUD) / TR01A	10060601-T CHEMICAL ENGINEERING
3522941309	Voice	In Service	0958 (CHEMICAL ENGINEERING STUD) / TR01A	10060601-T CHEMICAL ENGINEERING
3522941310	Voice	In Service	0958 (CHEMICAL ENGINEERING STUD) / TR01A	10060601-T CHEMICAL ENGINEERING
3523920177	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 328B (FAX)	10060601-T CHEMICAL ENGINEERING
3523920754	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 1 / 114	10060601-T CHEMICAL ENGINEERING
3523920861	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 4 / 406	10060601-T CHEMICAL ENGINEERING
3523920862	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 1 / 114	10060601-T CHEMICAL ENGINEERING
3523920869	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 1 / 101	10060601-T CHEMICAL ENGINEERING
3523920877	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 1	10060601-T CHEMICAL ENGINEERING
3523923412	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 3 / 319A	10060601-T CHEMICAL ENGINEERING
3523924422	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 1 / 114	10060601-T CHEMICAL ENGINEERING
3523924727	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 1 / 114	10060601-T CHEMICAL ENGINEERING
3523925120	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 1	10060601-T CHEMICAL ENGINEERING
3523926509	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 225	10060601-T CHEMICAL ENGINEERING
3523926585	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 1 / 114	10060601-T CHEMICAL ENGINEERING
3523929102	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 1 / 114	10060601-T CHEMICAL ENGINEERING
3523929103	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 1	10060601-T CHEMICAL ENGINEERING
3528461982	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 1 / 114	10060601-T CHEMICAL ENGINEERING
3528462989	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 114 (ALARM)	10060601-T CHEMICAL ENGINEERING
3523920315	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 3 / 319	10060601-T CHEMICAL ENGINEERING
3523920317	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 3 / 329B	10060601-T CHEMICAL ENGINEERING
3523922189	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 4 / 423	10060601-T CHEMICAL ENGINEERING
3523923360	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 427	10060601-T CHEMICAL ENGINEERING
3523920751	Voice	In Service	0723 (CHEMICAL ENGINEERING) / 221	10060601-T CHEMICAL ENGINEERING

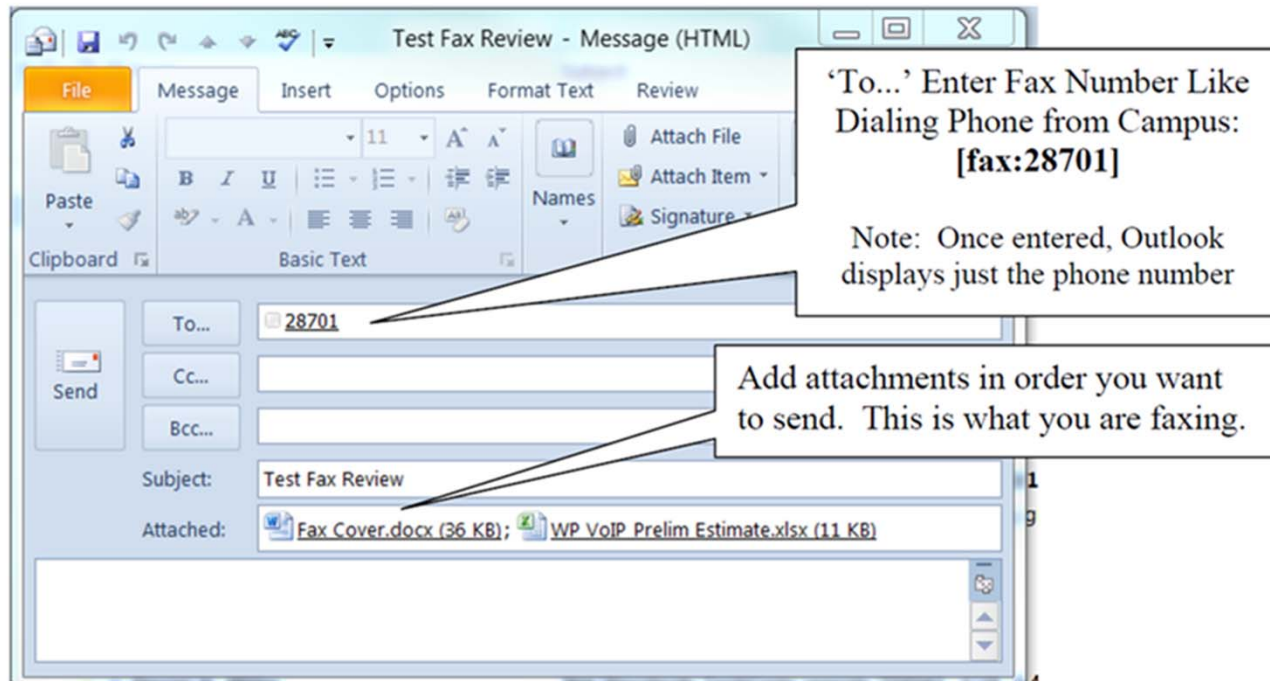
eFAX Service

- Uses Outlook email client
- Add attachments: Word, PowerPoint, Excel, PDF, HTML, JPG, GIF and RTF
- Eliminate fax machines – please!



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eFAX Service



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PrintSmart Service

- Managed print solution offered by UF Purchasing
 - Xerox MFDs
 - Eliminate analog lines and uses network (eFAX) for faxing



UF | PrintSmart
@ the University of Florida

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Elevator Phones

- Use Analog Voice Gateways
- Currently used for other devices
- AHJ gave approval to mount in elevator equipment rooms
- Copper riser is still in our construction standards
 - Explore SIP phone use? TBD



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Emergency Phones

Blue Light Phones:

- Moving to IP based phones
- IP Speakers integrated
- Standard to be updated
- UFPD OK with network power design
- Actively monitored



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Emergency Phones

Blue Light Phones:

- No building network available?
- Use Ethernet extender
- +1,000 feet
- PoE
- Successful proof of concept for adding wireless access points



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Emergency Phones

- Blue Light Phones:
 - SIP phone
 - IP Speaker



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HIB

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Credit Card / Point of Sale

- Just use the network
- UFNNet 2: – PCI VRFs to “segment” the network to increase security and meet compliance:
 - ISN (Industrial Systems) – controls, IP cameras, SCADA, lighting, etc.
 - Health Network
 - Academic Network
 - PCI Network



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Analog Line Migration

- Lift Stations:
 - Moving to cellular
 - Fiber with local switch
- Refrigerator Alarms
- Radiation Monitoring Alarms
- Etc.....3rd party devices should adapt to IP ecosystem



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Fire Alarm Lines

- Current requirement [for UF] – two (2) POTS connections; primary line that is dedicated
- No problem – we'll just stick it on the network...right?
- Or just use cellular...or both...
- Let's check with UF Environmental Health & Safety (EH&S) and Physical Plant Division (PPD)

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Fire Alarm Lines

- Authority Having Jurisdiction:
The authority having jurisdiction is the SFM (State Fire Marshal).

All life safety issues shall be referred to EH&S directly. If desired and approved by the project manager communication directly with the SFM shall be done in writing and EH&S shall be copied on all correspondence.



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Fire Alarm Lines

- The following publications are hereby adopted and incorporated by reference herein and added to the Florida Fire Prevention Code and shall take effect on January 1, 2015:
- NFPA 72, 2010 edition, National Fire Alarm and Signaling Code.



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Fire Alarm Lines

26.6.3.2.1.4 Transmission Channels.

(A) A system employing a DACT shall employ one telephone line (number). In addition, one of the following transmission means shall be employed:

- (1) One-way private radio alarm system
- (2) Two-way RF multiplex system
- (3) Transmission means complying with 26.6.3.1

NFPA 72 – 2013 [2016 now out - similar]

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Fire Alarm Lines

The 2013 version of NFPA 72 code includes some changes that will impact the primary and secondary POTS lines in an installation. If you have a primary POTS connection, and you're under 2013 jurisdiction, you're now required by the code to seek out alternative communication methods as a backup to the POTS Lines. A secondary POTS line is not permitted for multi-path communications unless there is no cellular, IP or radio available in the area.

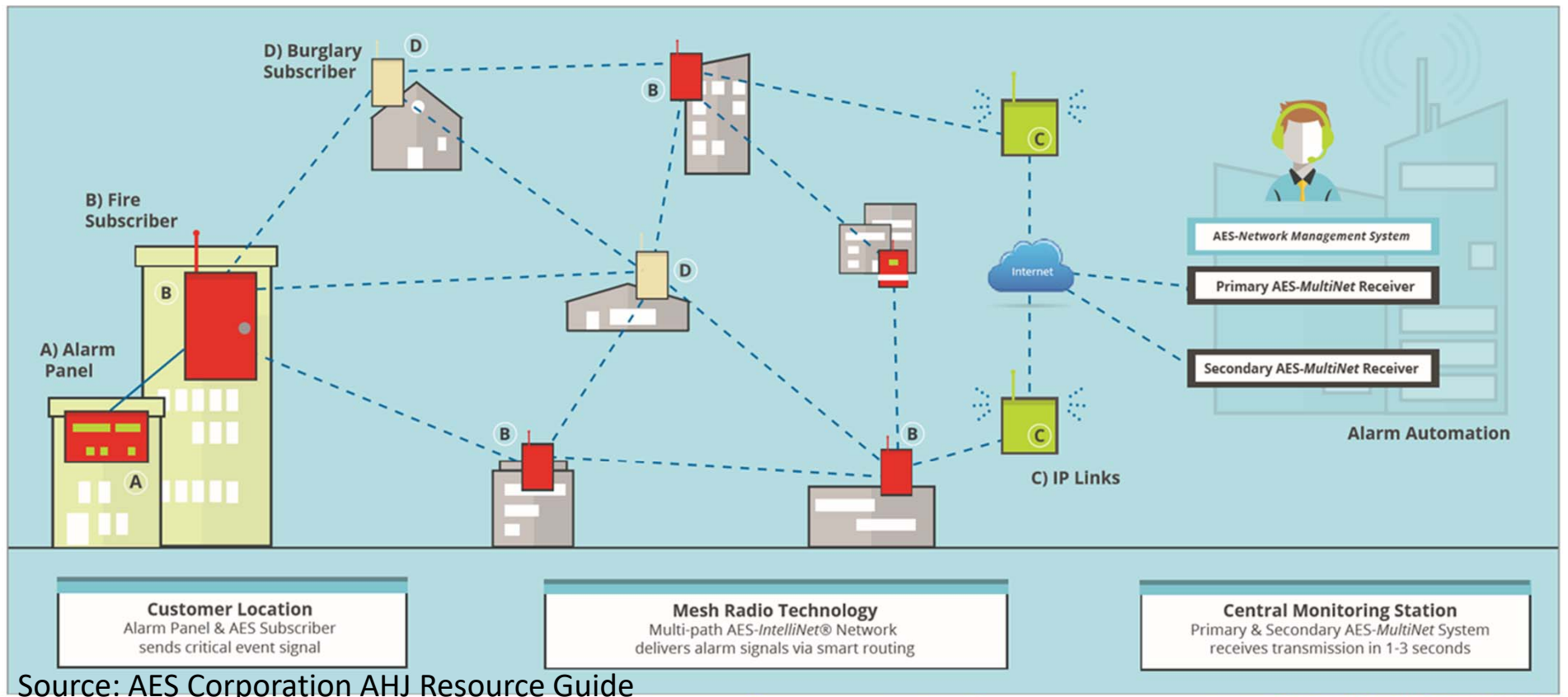
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Fire Alarm Lines

- Power: 8 to 24 hours depending on AHJ
- See ACUTA Journal / Spring 2012, “Building a Critical—Services Data Network” (Magnussen and McConnell)
- Based on typical MDF and one IDF for 8 hours back up:
 - UPS: \$29,600
 - DC Power Plant: \$17,025
- Trouble Reporting and Testing

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Fire Alarm Notification Mesh RF Network



Summary

- Inventory of current line use
- Disconnect, disconnect, disconnect
- Update standards / services
- AHJ / Codes – what is approved?
- Inform constituents
- Know your sunset date

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Questions / Discussion



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