Analog Line Migration

*Continuing the IP Transition*

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Associate Director
Infrastructure & Communications Technology
HOW DO YOU USE SALT IN THE WINTER?

EVE...
UFIT Overview
# 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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**2018 BICSI WINTER CONFERENCE & EXHIBITION**  
Orlando, FL | February 4-8
Analog Line Migration

Contract Service Arrangement Agreement

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
Analog Line Migration

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.
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  
Item location: Cincinnati, Ohio, United States  
Ships to: Local pick-up only

Delivery: Varies

Payments: PayPal, VISA, MasterCard, Discover  
Credit Cards processed by PayPal  
See details
396 Million Wireless Subscribers (2016)
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.
Analog Line Migration

• 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.

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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."

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

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). Upon initial review the filing appears to be complete.

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

<table>
<thead>
<tr>
<th>CenturyLink Public Notice No.</th>
<th>Type of Change(s)</th>
<th>Location of Change(s)</th>
<th>Originally Planned Implementation Date(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-006</td>
<td>Due to</td>
<td>In the following Wire Center in AL – Winfield</td>
<td>May 15, 2017</td>
</tr>
</tbody>
</table>
Analog Line Migration

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.
Currently connect to PSTN (Centrex) via SmartRing on OC-12 circuit using PRIs
Session Border Controllers used for connection to Level 3
Leverage / Add Session Border Controllers for Connection to AT&T Cloud

To be deprecated
UF VoIP 47%
UF Health VoIP 31%
VoIP Other 10%
Centrex 12%
UF VoIP 47%
Service Use:
- Centrex
- Key System
- VoIP
## Analog Line Migration

<table>
<thead>
<tr>
<th>Phone Number</th>
<th>Service Type</th>
<th>Category</th>
<th>Description</th>
<th>Service Code</th>
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<tbody>
<tr>
<td>3522941308</td>
<td>Voice</td>
<td>In Service</td>
<td>0958 (CHEMICAL ENGINEERING STUD) / TR01A</td>
<td>10060601-T CHEMICAL ENGINEERING</td>
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<tr>
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<td>In Service</td>
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<tr>
<td>3523920317</td>
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<td>0723 (CHEMICAL ENGINEERING) / 221</td>
<td>10060601-T CHEMICAL ENGINEERING</td>
</tr>
</tbody>
</table>

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eFAX Service

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

To... Enter Fax Number Like Dialing Phone from Campus: [fax:28701]

Note: Once entered, Outlook displays just the phone number

Add attachments in order you want to send. This is what you are faxing.
PrintSmart Service

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

• Blue Light Phones:
  – SIP phone
  – IP Speaker
Credit Card / Point of Sale

• Just use the network
• UFNet 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
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
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)
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.
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:

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
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.
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
Fire Alarm Notification
Mesh RF Network

Source: AES Corporation AHJ Resource Guide
Summary

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

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