



Rebooting and Reducing Your Telecom Services

October 20, 2016

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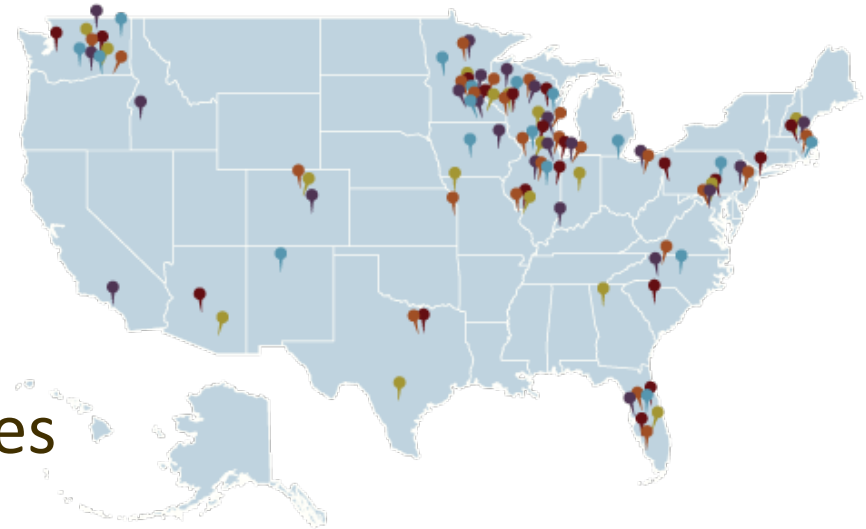
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- A professional services firm with three distinct business lines
 - Wealth Advisory
 - Outsourcing
 - Audit, Tax, and Consulting
- More than 4,500 employees
- Offices coast to coast
- More than 600 state and local government professionals serve more than 1,800 local, county, and state government agencies.



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Speaker Introductions



- **Shannon Cleveland**
Senior Telecom Analyst



- **Courtney Cress**
Technical Director

Learning Objectives

- At the end of this session, you will be able to:
 - Review invoice line items and identify options for service and billing optimization
 - Identify and describe shared solutions
 - Recognize additional methods for lowering telecom expenses
 - Determine who qualifies for the E-Rate program and what services and products are eligible for E-Rate funding





Do Your Telecom Services Need a Reboot?

Average Telephone Bill



Introduction

What is *Telecom Advisory Services*?

We analyze Telecom Expenses:

Local and Long
Distance

Wireless

Internet

Data Networks

Fleet
Management - IoT

Conferencing /
WebEx



Our Focus



Billing *errors* and *discrepancies*

Optimization of existing rates, plans, and services

Availability of more *efficient* services



Our Services



Agenda



- Current Environment
- Opportunities
- Common Billing Errors
- Wireless Trends in Telecom
- E-rate

Current Environment

The longer the billing is and more line items it contains; the more likely it is that expenses and errors go unnoticed.





Results: Common Billing Errors

Duplicate billing

Casual rates (no contract)

Incorrect local market

Usage costs: billing parameters

Taxes, surcharges, and fees

**81 percent of all Telecom Invoices have
discrepancies**

**Average savings of 10-20 percent
plus refunds!**



Taxes / Surcharges and Fees

Which exemptions do you qualify for?



Detail of Taxes

Communications Service Tax	26.15
Federal Excise Tax	5.88
Statutory Gross Receipts	4.79
Statutory Gross Receipts (Business)	0.30

<u>Total Taxes</u>	\$37.12
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Detail of Fees and Surcharges

Access Recovery Charge	9.00
Federal Subscriber Line Charge Fee	27.60
Federal Universal Service Fund Fee	8.94
Interstate Service Fee	4.97
Local Number Portability Fee	1.05
Network Cost Recovery Fee	12.93
Regulatory Assessment Surcharge	0.97
State 911 Recovery Surcharge	1.50
State Telecommunications Relay Service Fund Surcharge	0.33

<u>Total Fees and Surcharges</u>	\$67.29
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Contracts



- Early Termination Fees
- Automatic Renewals
- Penalties

Plan Start Date	Unit Threshold (Annual)	Attainment to Date	Monthly Average	Potential Penalty
5/16/2015	\$180,000.00	\$5,098.97	\$2,549.48	\$149,412

Duplicate Billing (Colton, CA)

(Largest Bakery Supplies Manufacturer)



Account Summary

Previous Charges	\$ 749.76
No Payment Received	.00
Adjustments	- 32,478.11
Balance Forward	- \$ 31,728.35
New Charges	
Verizon (page 3)	\$ 608.72
Other Providers (page 5)	66.72

Profile

- \$1,395,000 Annual Telecom Expense
- 100 countries with 34 manufacturing facilities, 26 distribution centers, 4 innovation centers

Results

- \$53,600 Refunds
- 36 Month Savings \$1,673,600

BILLING ADJUSTMENTS

1 Apr 27	15 Ln Hunt CR 10/28/11 - 12/9/14	CR 929.90
Tracking #	2015042200144	
2 Apr 27	15 PBX Trks CR 10/28/11 - 12/9/14	CR 20,605.09
Tracking #	2015042200144	
3 Apr 27	3 ARC CR 7/3/12 - 4/17/15	CR 161.21
Tracking #	2015042200144	
4 Apr 27	3 SLC CR 10/28/11 - 4/17/15	CR 1,146.98
Tracking #	2015042200144	
5 Apr 27	8 Bus Lns CR 10/28/11 - 12/9/14	CR 9,634.93
Tracking #	2015042200144	
Adjustment(s) applied to previous charges.		Total CR \$ 32,478.11



Casual Rates (Central Florida)

(University w/ 12 locations and distance learning)

Before

MONTHLY SERVICE - BASIC (Jul 28 to Aug 27)			
Description	Qty	Unit Rate	
2 ISDN PRI access	6	350.00	2,100.00
3 Federal Access Recovery Charge	6	10.40	62.40
4 DID first block of 100 numbers	3	440.00	1,320.00
5 DID addl block of 20 numbers	1	100.00	100.00
6 ISDN B channel	138	15.00	2,070.00
7 ISDN T1 facility	6	250.00	1,500.00
8 Federal Subscriber Line Charge	6	42.90	257.40
9 ISDN interstate access port	6	10.00	60.00
Total			\$ 7,469.80

After

MONTHLY SERVICE - BASIC (May 28 to Jun 27)			
Description	Qty	Unit Rate	
CKT# 1M.PCXX.813.226.4800..			
3 DID block of 100 num - 1 Yr Term	3	40.00	120.00
4 DID block of 20 numbers - 1 Yr Term	1	20.00	20.00
5 Federal Access Recovery Charge	6	10.40	62.40
6 ISDN access - 3 yr	6	623.04	3,738.24
7 Federal Subscriber Line Charge	6	43.00	258.00
8 ISDN interstate access port	6	10.00	60.00
Total			\$ 4,258.64

Refund

BILLING ADJUSTMENTS

1 May 5	Local service billing adjustment	CR 27,595.13
2 May 5	Late payment charge adjustment	CR 376.26
Adjustment(s) applied to previous charges.		Total CR \$ 27,971.39



Incorrect Local Market (Washington, DC) (One of the nations largest law firms)



BEFORE (March 2013)

ACCOUNT ACTIVITY

DATE OF INVOICE 04.08.13
INVOICE PERIOD 03.08.13 - 04.07.13

INVOICE NUMBER [REDACTED]
ACCOUNT NUMBER [REDACTED]
PAGE 37

ACTIVITY FOR ACCOUNT - [REDACTED] WASH DC

USAGE CHARGES

Description	Calls	Minutes	Amount
International Long Distance Charges	52	651.2	\$88.3300
Local Directory Assistance Charges	7	0.0	\$13.9300 ⁺
Local Measured Service Charges	15,828	63,631.0	\$954.4650 ⁺
Out of State Long Distance Charges	216	827.7	\$0.0000
Regional Long Distance Charges	171	585.8	\$0.0000

TOTAL USAGE



AFTER (March 2014)

ACCOUNT ACTIVITY

DATE OF INVOICE 04.08.14
INVOICE PERIOD 03.08.14 - 04.07.14

INVOICE NUMBER [REDACTED]
ACCOUNT NUMBER [REDACTED]
PAGE 39

ACTIVITY FOR ACCOUNT - [REDACTED] WASH DC - (PIN: 5371)

USAGE CHARGES

Description	Calls	Minutes	Amount
Canadian Long Distance Charge (D)	14	78.0	\$2.0000
Caribbean Long Distance Charges	4	7.6	\$1.2100
International Long Distance Charges (D)	63	835.4	\$86.9700
Local Directory Assistance Charges	3	0.0	\$5.9700 ⁺
Local Measured Service Charges	14,129	61,728.0	\$0.0000 ⁺
Out of State Long Distance Charges (D)	2,946	20,792.2	\$0.0000
Regional Long Distance Charges (D)	165	762.4	\$0.0000
TOTAL USAGE CHARGES	17,324	84,203.6	\$96.1500



Usage Parameters (Philadelphia)

(Marketing company w/ small call center)

Before

After

TIME	# CALLED	LOCATION	MINUTES	AMOUNT
01:33 PM	870 413-0096	PINE BLUFF,AR	0.1	0.0100
01:34 PM	401 421-8389	PROVIDENCE,RI	0.6	0.0100
01:34 PM	210 387-3481	SANANTONIO,TX	0.1	0.0100
01:34 PM	219 801-1017	E CHICAGO ,IN	0.2	0.0100
01:35 PM	203 345-6321	BRIDGEPORT,CT	0.1	0.0100
01:35 PM	401 965-9841	PROVIDENCE,RI	0.1	0.0100
01:35 PM	818 951-7675	SUNLD TJNG,CA	0.1	0.0100
01:35 PM	707 863-0697	FRFLD-SUIS,CA	0.1	0.0100
01:36 PM	504 462-0057	KENNER ,LA	0.1	0.0100

TIME	# CALLED	LOCATION	MINUTES	AMOUNT
09:58 AM	480 451-5989	SCOTTSDALE,AZ	0.1	0.0013
09:58 AM	786 217-3857	HOMESTEAD ,FL	0.2	0.0026
09:58 AM	786 718-9164	MIAMI ,FL	0.1	0.0013
09:58 AM	207 865-4417	FREEPORT ,ME	0.1	0.0013
09:58 AM	910 876-1035	ELIZABHTN,NC	0.1	0.0013
09:58 AM	508 251-0573	MARLBORO ,MA	0.1	0.0013
09:58 AM	716 897-0740	BUFFALO ,NY	0.1	0.0013
09:58 AM	740 981-7625	PORTSMOUTH,OH	0.1	0.0013
09:58 AM	513 459-9496	MASON ,OH	0.1	0.0013

TOTAL USAGE CHARGES 409,943.8 \$10,636.6539

TOTAL USAGE CHARGES 402,451.4 \$5,357.2645



PAYMENTS, CREDITS & OTHER CHARGES (CONT'D)








Date	Description	Amount
01/21/2011	Regional Long Distance Credit	(\$105.6900)
01/21/2011	In State Long Distance Credit	(\$272.8700)
01/21/2011	Out of State Long Distance Credit	(\$13,315.5500)
01/21/2011	Regional 8XX Credit	(\$147.2400)
01/21/2011	In State 8XX Credit	(\$16.9500)
01/21/2011	Out of State 8XX Credit	(\$1,383.0700)
01/21/2011	International 8XX Adjustment	\$32.8700
TOTAL PAYMENTS, CREDITS & OTHER CHARGES		(\$32,613.1000)







Taxes, Surcharges, and Fees (Central Florida)

(Nations largest home health provider)

Before

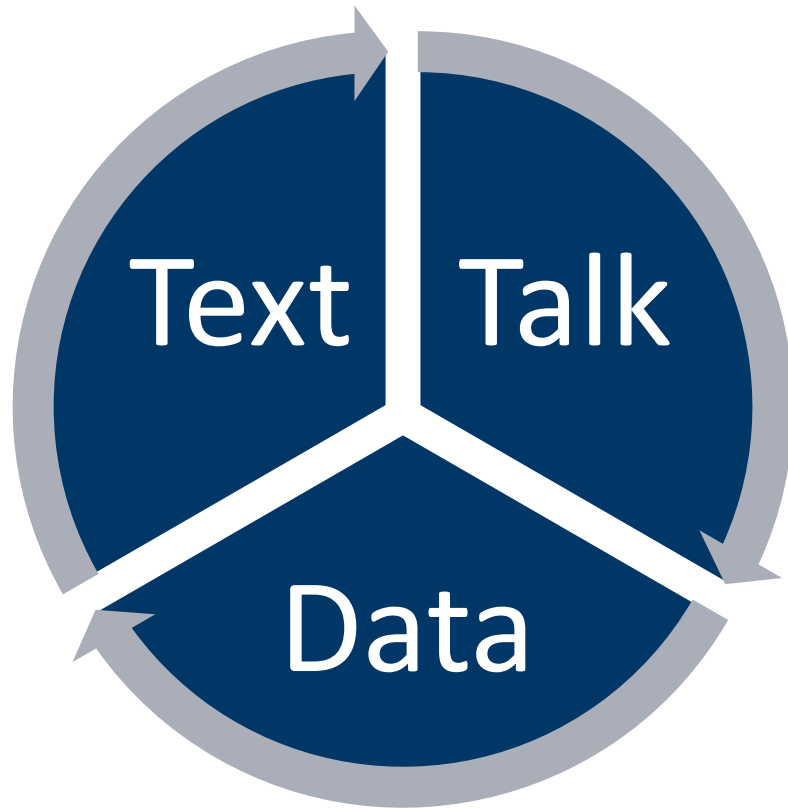
> MONTHLY INVOICE SUMMARY		
March 27 - April 26, 2013		
Previous Balance		247,673.07
Payments as of 04/27/13 - Thank you		-246,202.04
Outstanding Balance - Due Upon Receipt		<u>\$1,471.03</u>
 0001-Access and Related Items		108,748.69
 0002-Cellular Services		1,126.33
 0004-Messaging Services		33.30
 0005-Data and Third Party Services		153.94
 0006-Equipment and Retail Purchases		349.99
 0007-Sprint Surcharges +		1,570.77
 0008-Government Fees and Taxes +		8,499.83
*Total Current Charges for [REDACTED] Due 05/20/13		\$120,482.85
Total Amount Due		\$121,953.88

After

> MONTHLY INVOICE SUMMARY		
August 27 - September 26, 2014		
Previous Balance		118,725.31
Adjustments to previous balance		-2,143.03
Outstanding Balance - Due Upon Receipt		<u>\$116,582.28</u>
 0001-Access and Related Items		9,815.80
 0005-Data and Third Party Services		18.00
 0007-Sprint Surcharges +		39.89
 0008-Government Fees and Taxes +		22.00
*Total Current Charges for [REDACTED] Due 10/20/14		\$9,895.69
Total Amount Due		\$126,477.97



Wireless



VS.





Wireless

Average Cost Per User with
Verizon Wireless:



State of Florida
Contract

• **\$35.64**


WSCA

• **\$48.78**

Enterprise

• **\$51.25**

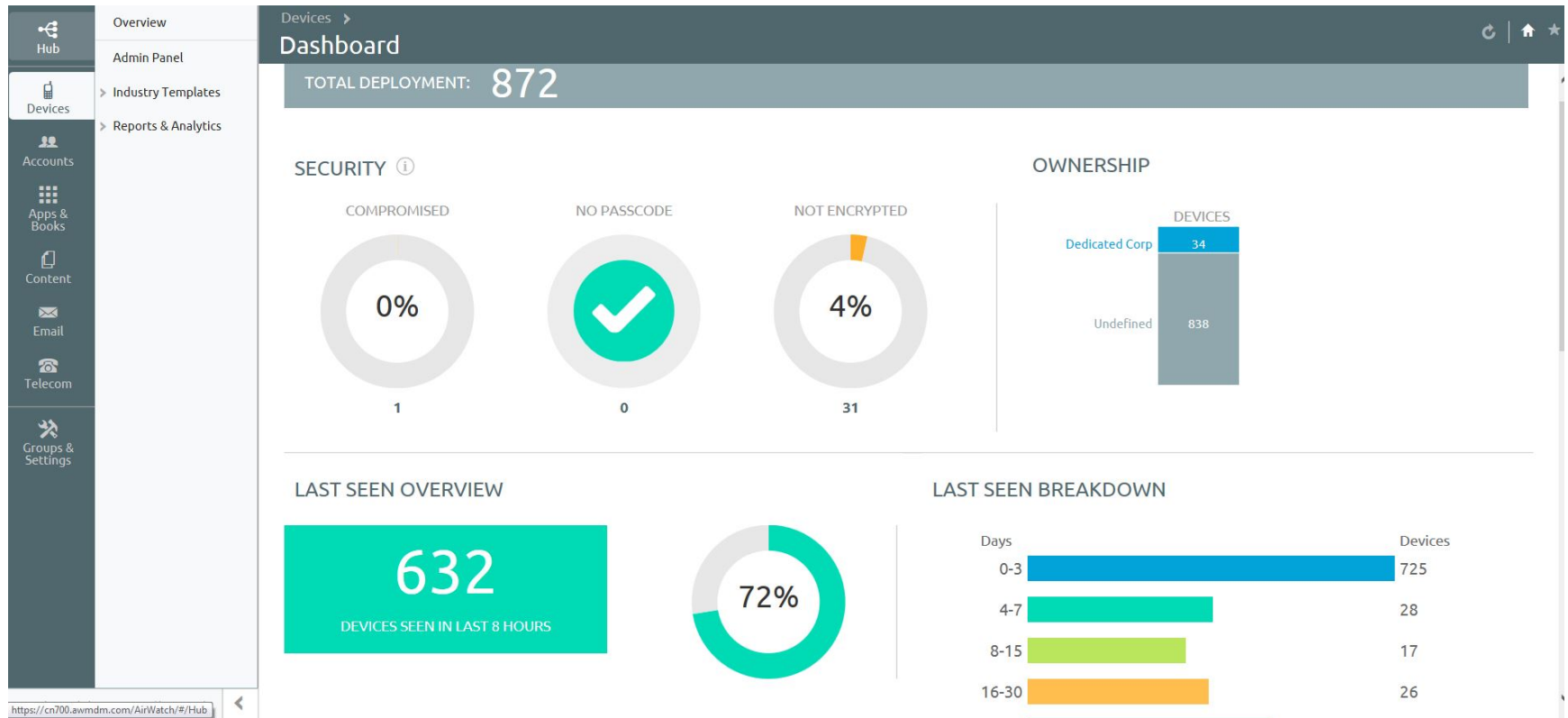


Enterprise Owned	BYOD	C.O.P.E.	STIPEND
Full Control. You own the line, the device, the use.	You own the line, Employee owns the device. Your IT folks get to support multiple platforms. Yay.	You own the phone, your employee activates the line.	You own nothing. 
MDM Appropriate	MDM appropriate (with Containerization)	With Containerization	With containerization.
\$29-\$54 per user	\$25-\$54 per user		\$50-\$85 per user



Trends in Telecom

Umbrella compliance through MDM: protecting many users in multiple groups.



Devices > List View >

Android - Dennis Lyons

samsung SAMSUNG-SGH-I747 | 4.4.2 | Ownership: Undefined

Query Send Lock More

1 / 2
Recent List

Summary Compliance Profiles Apps Content Location User More ▾

 DEVICE IS NOT COMPROMISED
  0 COMPLIANCE VIOLATIONS
  ENROLLED 5/29/2015
  LAST SEEN 2 HOUR(S) AGO

Security

- ✓ Managed By MDM
- ✓ Encryption Compliance
- ✓ Internal Storage Encryption

User Info

USERNAME
Dennis

NAME
Dennis Lyons

EMAIL
djl574@hotmail.com

Device Info

ORGANIZATION GROUP
Suncoast Hospice / Default Restrict

LOCATION
Default Restrict default

SMART GROUPS
Default And, Default And 3GB, Encryption
[+12 more](#)

PHONE NUMBER
17277358605

SERIAL NUMBER
R38F108DGBT

Profiles

Apps



Granular level detail, control, security.

Devices > List View >








Android - Dennis Lyons
samsung SAMSUNG-SGH-I747 | 4.4.2 | Ownership: Undefined

Query Send Lock

Summary Compliance Profiles Apps Content Location User Telecom

Filters >

Search List

Type	Data Usage Date	Total KB	Data Sent (KB)	Data Received (KB)	Carrier	Country	Roaming State
	4/4/2016	3470	1165	2305	AT&T	United States	Not Roaming
	4/3/2016	6751	2211	4540	AT&T	United States	Not Roaming
	4/2/2016	38672	8479	30192	AT&T	United States	Not Roaming
	4/1/2016	431627	36013	395614	AT&T	United States	Not Roaming
	3/31/2016	347514	55432	292081	AT&T	United States	Not Roaming
	3/30/2016	324195	58624	265571	AT&T	United States	Not Roaming
	3/29/2016	974828	45382	929445	AT&T	United States	Not Roaming

Mobile Device Management

The screenshot displays a Mobile Device Management (MDM) console interface. At the top, a header bar shows the device name "Android - Dennis Lyons" and the model "samsung SAMSUNG-SGH-I747" with version "4.4.2" and "Ownership: Undefined". Navigation tabs include "Summary", "Compliance", "Profiles", "Apps", "Content", "Location" (selected), "User", and "More". A "Period" dropdown is set to "1 Week". A list of location history entries is shown on the left, each with a location pin icon and a timestamp. On the right, a map of the Tampa Bay area displays the device's location history as a series of orange pins with numbers, indicating movement between various locations like Belleair, Indian Rocks Beach, and Pinellas Park. The map includes a Bing logo and a scale bar.

Devices > List View >

Android - Dennis Lyons
samsung SAMSUNG-SGH-I747 | 4.4.2 | Ownership: Undefined

Query Send Lock More

Summary Compliance Profiles Apps Content **Location** User More

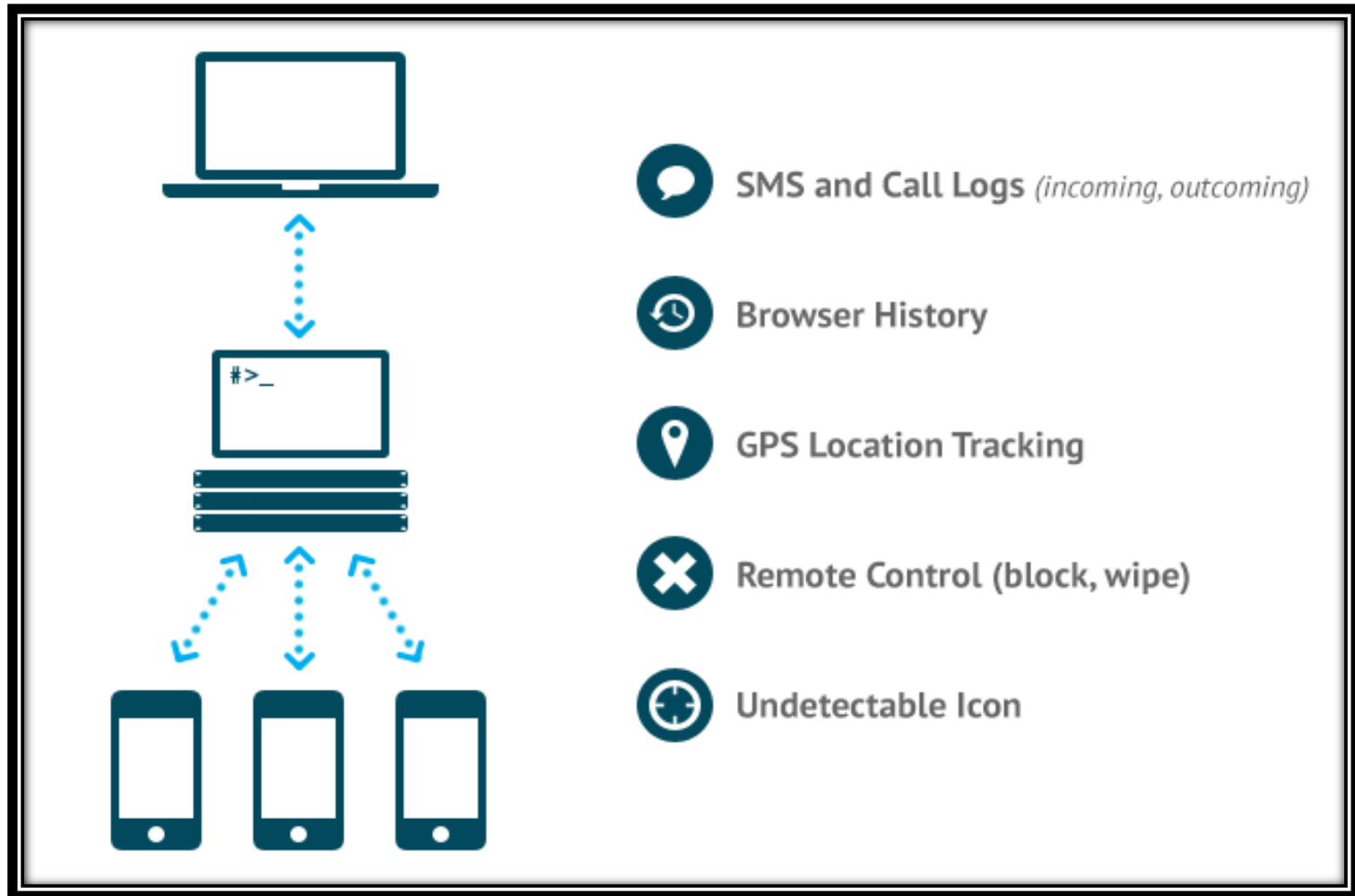
Period 1 Week

Search

- 4/1/2016 2:05 PM
- 4/1/2016 10:01 AM
- 4/1/2016 8:14 AM
- 4/1/2016 7:14 AM
- 4/1/2016 7:01 AM
- 4/1/2016 6:14 AM
- 4/1/2016 5:14 AM
- 4/1/2016 5:01 AM
- 4/1/2016 4:14 AM
- 4/1/2016 4:00 AM

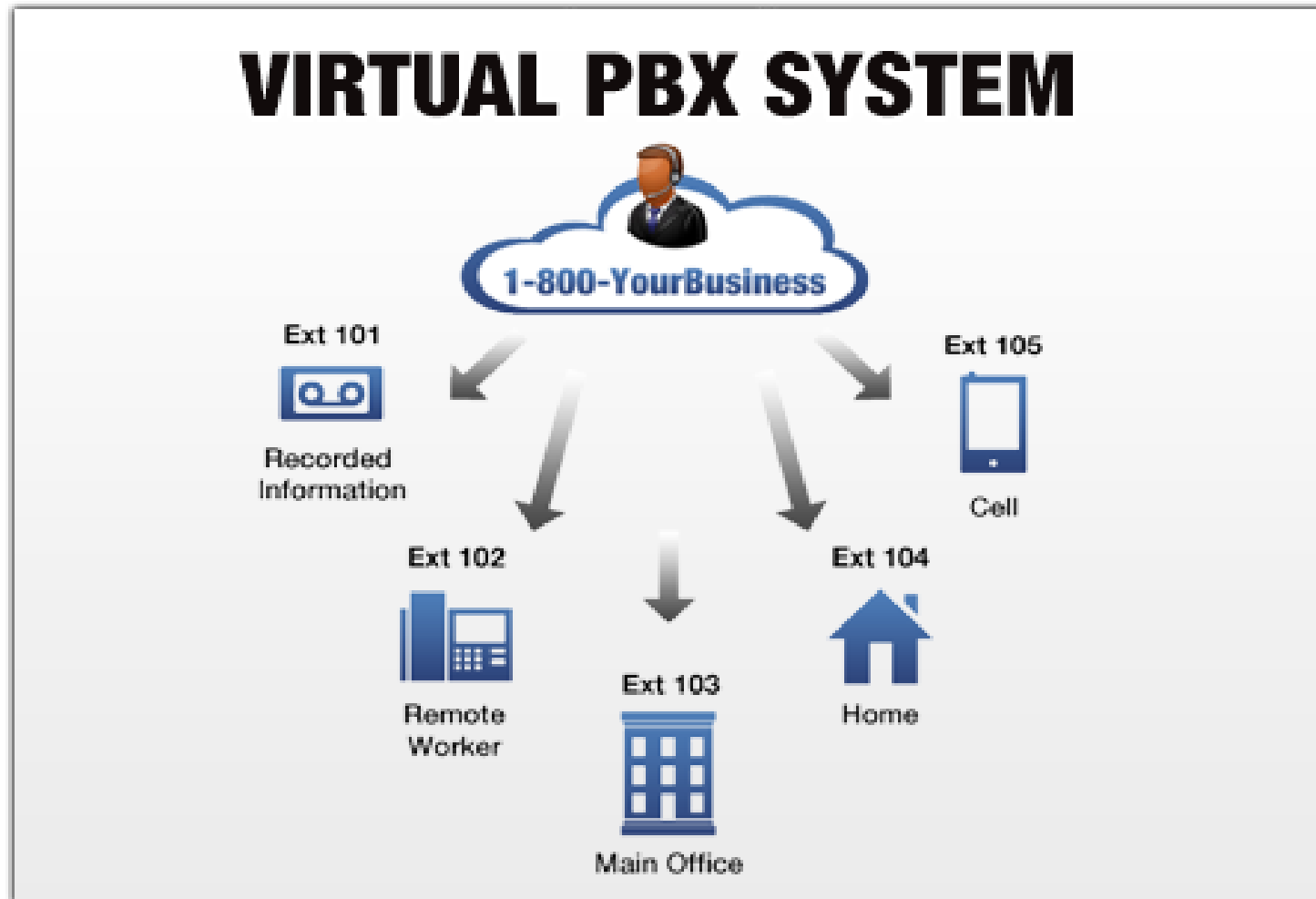
bing

Mobile Device Management turns questions into answers.



Hosted Solutions

Hosted = in the cloud vs. traditional on premise



Internet of Things (IoT)





E-rate

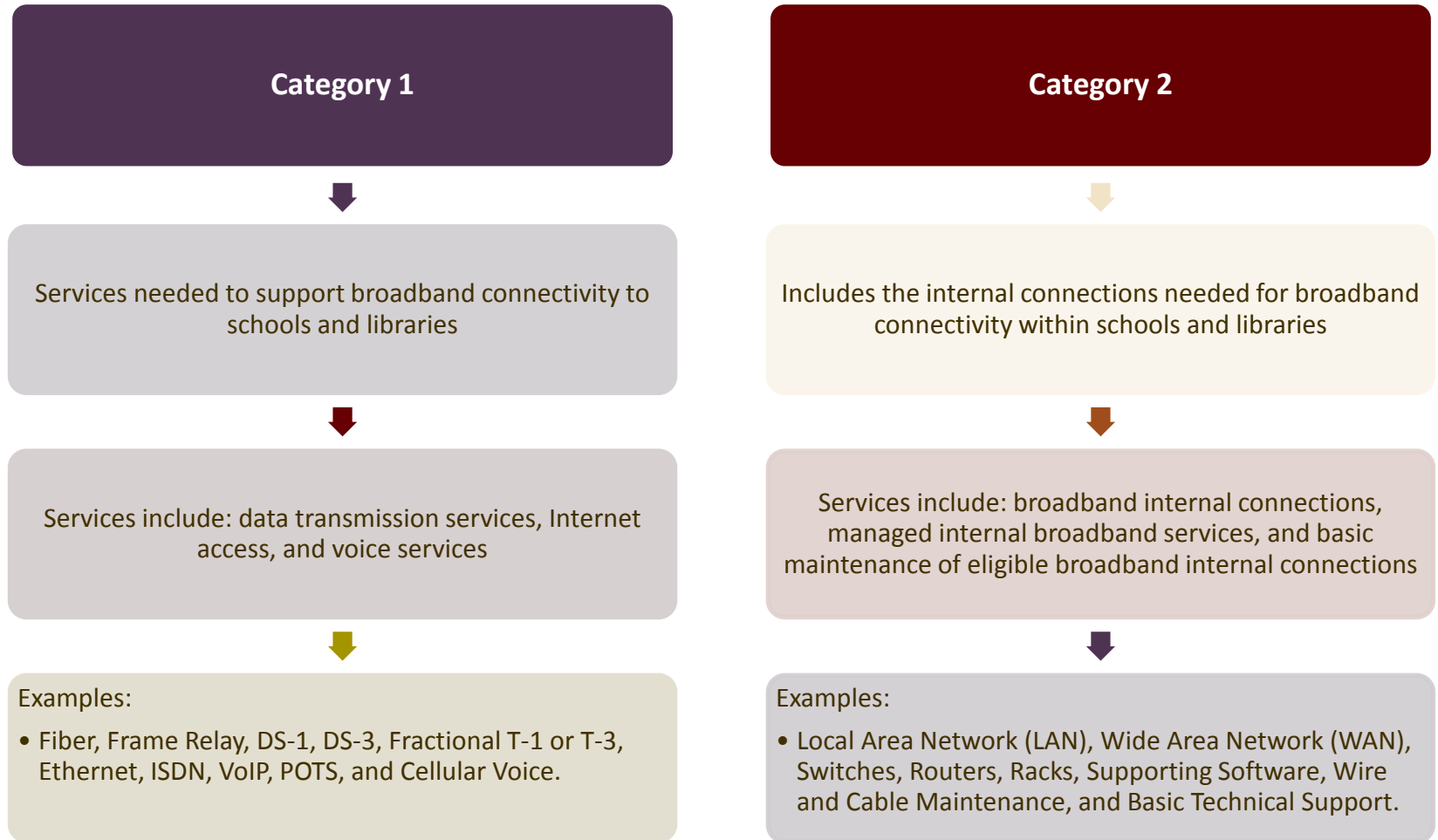
E-rate Program- Schools and Libraries

The E-rate program is designed for eligible participants to request funding in five categories of service: Telecommunications, Telecommunications Services, Internet Access, Internal Connections, and Basic Maintenance of Internal Connections. The E-rate discounts are based on the following criteria:

INCOME	URBAN LOCATION	RURAL LOCATION
Measured by percentage of students eligible for the National School Lunch Program	Discount	Discount
If the % of students in your school that qualifies for the National School Lunch Program is...	...and you are in an URBAN area, your discount will be...	...and you are in a RURAL area, your discount will be...
Less than 1%	20%	25%
1% to 19%	40%	50%
20% to 34%	50%	60%
35% to 49%	60%	70%
50% to 74%	80%	80%
75% to 100%	90%	90%

Current E-Rate Funding

The E-rate program currently provides funding for the following services:



E-Rate Modernization

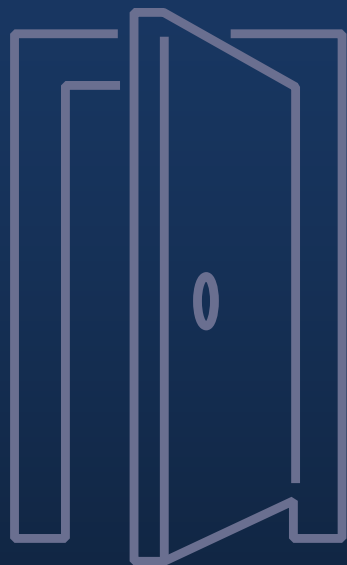
E-rate is implementing a new E-rate Modernization Order to phase out Voice Services and focus on high-speed broadband needed for digital learning. The E-rate Modernization Order phases out support for voice services and circuit capacity dedicated to providing voice services.

Discount % for Other Category One Services	Voice Phase Down Discount %				
	FY2015	FY2016	FY2017	FY2018	FY2019
90	70	50	30	10	0
80	60	40	20	0	0
70	50	30	10	0	0
60	40	20	0	0	0
50	30	10	0	0	0
40	20	0	0	0	0
30	10	0	0	0	0
25	5	0	0	0	0
20	0	0	0	0	0

The E-rate Modernization order also eliminates support for other legacy services, such as directory assistance, text messaging, inside wire maintenance, voicemail, email, webhosting, and paging.



Thank you!



Shannon Cleveland, Senior Technical Analyst

Telecom Advisory Services

813-384-2737

shannon.cleveland@CLAconnect.com

Courtney Cress, Technical Director

Telecom Advisory Services

813-384-2780

courtney.cress@CLAconnect.com

CLAconnect.com