

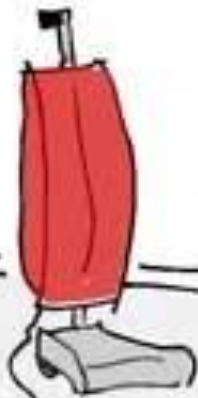
PWC G8 Gals@Technology

Cutting The Cord

Current Topics

- Quicktime for Windows goes End-Of-Life. Uninstall it now.
- Prime Video now offers monthly option
- FCC pushing “Unlock The Box”
 - Cable box rental is a \$20 Billion/year revenue stream for Comcast, Time Warner Cable, and AT&T
 - Option to own the box
 - Option for new innovative boxes
 - Potential benefit to Google and Apple
- Apple – Today may announce first ever YoY drop in iPhones sales.

Great news, sweetie -
I finally cut the
cable cord!



www.TTworld.com

Potential Digital Connections To Your House



- Power -- data at low bandwidth and dangerous
- Twisted Pair/Phone –Voice and low end data-over-voice (DSL)
- Coaxial Cable – Digital content with significant data rates (50-100Mbps)
- Fiber – Digital content with very significant data rates (100Mbps – 1Gbps)
- Cellular – Likely 4G (100 Mbps) with 5G coming (1Gbps)

Things To Keep In Mind

- Huge changes are coming
- We just at the beginning and “early adopters” enjoy both benefits and growing pains
- In the end, this will be more cost effective but not “free”
- Integration is still a challenge

Voice

- Regardless of option – you can almost certainly keep you existing phone number when you move services but it takes time
- [Telecommunications Act of 1996](#), requires all [local exchange carriers](#) (LECs) to offer number portability in accordance with the regulations of the [Federal Communications Commission](#) (FCC).^[18] The FCC implemented regulations on 27 June 1996, with LECs required to implement them in the 100 largest [Metropolitan Statistical Areas](#) by 1 October 1997 and elsewhere by 31 December 1998.^[19] (The regulations are currently located at [47 C.F.R. 52 Subpart C](#), [47 C.F.R. 52.20 et seq.](#)) The [North American Numbering Council](#) (NANC) was directed to select the Local Number Portability Administrators (LNPAs), akin to the [North American Numbering Plan Administrator](#) (NANPA) which administers the [North American Numbering Plan](#).^[20]
- LNP was first implemented in the U.S. upon the establishment of the original [Number Portability Administration Center](#) (NPAC) in Chicago, Illinois in 1998. This service covered select rate centers in the Ameritech region. Thereafter, as switches and telephone networks were upgraded with [location routing number](#) (LRN) capability, LNP was deployed sequentially to the remaining [Regional Bell Operating Company](#) (RBOC) areas. The U.S. FCC since has mandated *Wireless Local Number Portability* starting November 24, 2003 (in metropolitan areas), and allowed operators to charge an additional monthly *Long-Term Telephone Number Portability End-Use Charge* as compensation. On November 10, 2003, the FCC additionally ruled that number portability applies to [landline](#) numbers moving to mobile telephones and, on October 31, 2007, the FCC made clear that the obligation to provide LNP extends to [VoIP](#) providers.^[21]

Voice

- Option #1 – Just move to only cell phone.
 - “home phone” moves with you
 - Cell phone becomes your “home phone” but you need to carry it around the house
 - Which one to select if you have multiple cell numbers

Voice

- Option #2 – Voice-Over-IP (VoIP)
 - Requires reasonable internet connection
 - Can still use all existing “house phones” by connecting to existing house wires
 - Disconnect house wire from pole at the “NID”
 - Usually Red/Green or Blue/White
- MagicJack - \$69 first year, \$99 annually
- BasicTalk - \$10/mnth
- Vonage - \$10/mnth
- Cable Double Play - \$20/mnth (\$60 w/data)



Voice

- Option #3 – Cellular Hybrid Alternative
 - Verizon and Straight Talk offer “home connect”
 - Connects all existing “home phones” to a single cellular numbers
 - All cell phone plan options and discounts apply
 - Can still use all existing “house phones” by connecting to existing house wires
 - Disconnect house wire from pole at the “NID”
 - Usually Red/Green or Blue/White



Summary for Ksander Home: 765-463-0849

Your Plan

The Verizon Plan Large 6GB
(see pg 3)

Monthly Charges

Wireless Home Phone Line Acc	04/21 – 05/20	20.00
Whp Caller Name ID	04/21 – 05/20	1.99
		\$21.99

Usage and Purchase Charges

Voice	Allowance	Used	Billable	Cost
Shared <i>minutes</i>	unlimited	123	---	---
Mobile to Mobile <i>minutes</i>	unlimited	273	---	---
Night/Weekend <i>minutes</i>	unlimited	102	---	---
Total Voice				\$.00

Total Usage and Purchase Charges \$.00

Verizon Wireless' Surcharges+

Fed Universal Service Charge	1.15
Regulatory Charge	.21
Administrative Charge	1.23
IN Utility Receipts Surcharge	.36
IN Telecom Relay Surcharge	.03
IN Universal Service Fee	.14
IN State PUC Fee	.03
\$3.15	

Taxes, Governmental Surcharges and Fees+

IN State 911 Fee	1.00
IN State Sales Tax-Telec	1.88
\$2.88	

Total Current Charges for 765-463-0849 \$28.02

+Percentage-based taxes, fees, and surcharges apply to charges for this line, including overage charges, plus this line's share of account charges.

Detail for Ksander Home: 765-463-0849

Voice

Date	Time	Number	Rate	Usage Type	Origination	Destination	Min.	Airtime Charges	Long Dist/ Other Chgs	Total
3/21	12:50P	866-596-5276	Peak	PlanAllow	West Lafayette IN	Incoming CL	1	---	---	---
3/21	1:45P	470-204-6775	Peak	PlanAllow	West Lafayette IN	Incoming CL	1	---	---	---
3/21	2:45P	317-292-5775	Peak	M2MAllow	West Lafayette IN	Incoming CL	24	---	---	---
3/22	8:28A	765-427-8075	Peak	M2MAllow	West Lafayette IN	Incoming CL	15	---	---	---
3/22	9:39P	765-427-8075	Off-Peak	N&W	West Lafayette IN	Incoming CL	15	---	---	---
3/23	9:04A	765-427-8075	Peak	M2MAllow	West Lafayette IN	Incoming CL	2	---	---	---
3/23	12:15P	765-427-1028	Peak	M2MAllow	West Lafayette IN	Incoming CL	1	---	---	---
3/23	3:07P	317-748-3467	Peak	PlanAllow	West Lafayette IN	Incoming CL	1	---	---	---

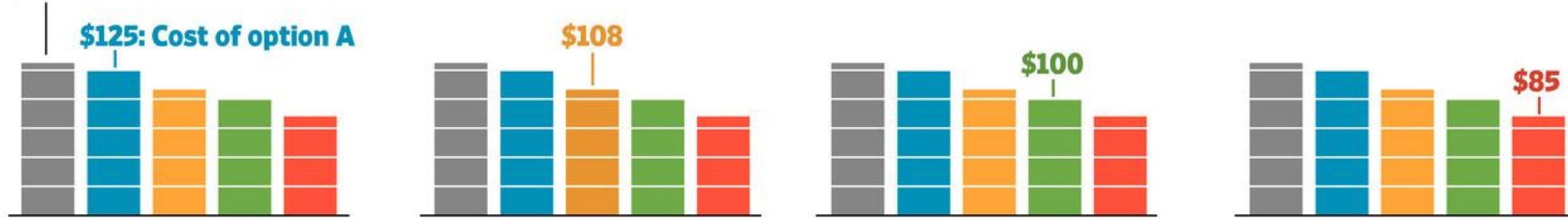
Voice

- 911 service can be problematic
- For cellular, location is provided
- For VoIP, you can set your E911 address

Disable Your Cable?

Those willing to give up certain channels and some live programming can save money by switching to Internet TV. Among the options:

\$130: Typical 'double-play' package includes broadband Internet, plus basic cable channels and HBO



Option A
As much live as you can get

\$60 for Internet

\$50 for PlayStation Vue

\$15 for HBO Now

What's missing: ABC, ESPN, PBS

Option B
Some live, some delayed

\$60 for Internet

\$20 for Sling TV

\$15 for HBO Now

\$5 for CBS

\$8 for Hulu

What's missing: Live NBC, Fox, ABC, PBS, Fox News, Comedy Central, regional sports networks like YES

Option C
Cable shaving

\$75 for Internet Plus including broadband, broadcast networks and HBO

\$9 for Netflix

\$8 for Hulu

\$8 for Amazon Prime

What's missing: Live ESPN and other sports network, CNN, Fox News, Comedy Central

Option D
See it eventually

\$60 for Internet

\$9 for Netflix

\$8 for Hulu

\$8 for Amazon Prime

What's missing: Live channels and current-season shows from CBS and HBO

Sources: The companies

THE WALL STREET JOURNAL.



Service Details

Contact us: @ www.xfinity.com 1-800-XFINITY



XFINITY Bundled Services

Preferred XF Double Play	05/06 - 06/05	99.99
Includes Digital Preferred, Streampix, selected premium channel, Digital Converter, access to On Demand Programming, and Blast! Internet.		
HBO	05/06 - 06/05	0.00
Included in bundle		
Term Agreement Applies	05/06 - 06/05	0.00
24 Month Term Agreement on account. Visit www.xfinity.com/myaccount for details.		
Total XFINITY Bundled Services		\$99.99



Additional XFINITY TV Services

Additional Outlet	05/06 - 06/05	39.90
HD/DVR Converter 2 @ \$19.95 each		
Additional Outlet	05/06 - 06/05	23.94
Digital Adapter 6 @ \$3.99 each		
Additional Outlet	05/06 - 06/05	9.95
Digital Converter		
HD/DVR Converter	05/06 - 06/05	7.99
HD Technology Fee	05/06 - 06/05	0.00
Customer Owned Equipment	05/06 - 06/05	-2.50
Total Additional XFINITY TV Services		\$79.28

Other Charges & Credits

Broadcast TV Fee	05/06 - 06/05	3.50
Regional Sports Fee	05/06 - 06/05	3.00
Total Other Charges & Credits		\$6.50

Taxes, Surcharges & Fees

TV		
Sales Tax	05/06 - 06/05	10.28
FCC Regulatory Fee	05/06 - 06/05	0.08
Total Taxes, Surcharges & Fees		\$10.36

The Broadcast TV fee recovers a portion of the costs of retransmitting television broadcast signals.

Regional Sports Fee recovers a portion of the costs to transmit certain regional sports networks.

CHANNEL CHANGE: On June 21, 2016, the following channel changes will occur: TV One and TV One HD will move from Digital Preferred to Digital Starter.

Channel Changes: On June 21, 2016, the following channel changes will occur: NFL Network and NFL Network HD will move from Digital Deluxe to Digital Standard.

Channel Changes: On June 21, 2016, the following channel changes will occur: NFL Network and NFL Network HD will move from Digital Preferred to Digital Starter.

Digital Content

- OTA – Over the Air (Problematic in Lafayette)
- Winegard - FlatWave AIR Outdoor Amplified HDTV Antenna

Post-transition Digital Coverage


Signal Legends

Strong Moderate Weak No Signal

Callsign	Network	Virtual Channel	Band
WLF1	CBS	18-1	Hi-V
WRTV	ABC	6-1	UHF
WHMB	IND	40-1	UHF
WTTK	CW	29-1	UHF
WTHR	NBC	13-1	Hi-V
WXIN	FOX	59-1	UHF
WICD	NBC	15-1	UHF
WISH	CBS	8-1	Hi-V
WFY1	PBS	20-1	UHF
WNDY	MYTV	23-1	UHF
WDTI	IND	69-1	UHF
WIPB	PBS	49-1	UHF
WCLJ	TBN	42-1	UHF

DTV Reception Map Tips

30 feet above ground level. Indoor reception may vary significantly.



Please note: These predictions are based on a terrain-sensitive propagation model resembling but not identical to the propagation model used when calculating service and interference contours for licensed broadcast television stations. Actual signal

Digital Content

- Internet only plan required.
 - AT&T is now limiting data on internet only plan!! Things will get interesting.
 - Need a reasonable connection
 - 5Mbps download speed really an effective minimum. 10Mbps recommended
- Equipment is different from content (mostly)
 - Streaming box *sometimes* bundled with content but that is changing
- Apps and Services – will not address gaming today

Digital Content

- Streaming boxes
 - New Roku Streaming Stick - \$49.99
 - No 4K support
 - No Headphone jack on remote
 - RF remote rather than IR.
 - Inexpensive, functional, lots of services available
 - Roku box - \$50 - \$130
 - Various options/models (<https://www.roku.com/products/compare>)
 - Good customer support
 - AppleTV - \$149 and \$199
 - New version runs apps
 - Apple eco-system option

Digital Content-

- Amazon Fire TV (<http://www.amazon.com/b/?ie=UTF8&node=8521791011>)
 - FireTV stick - \$40
 - FireTV stick w/voice remote - \$50
 - FireTV box with 4K support - \$100
 - Amazon eco-system

Digital Content

- MOST are streaming device independent or will be
- Netflix - \$8 - \$12/mnth
- Amazon - \$10/mnth
- Hulu - \$8/mnth
- CBS All Access - \$6/mnth
- HBO Now - \$15/mnth
- Showtime - \$11/mnth
- SlingTV - \$20/mnth

Digital Content

- <https://www.washingtonpost.com/graphics/business/cable-calculator/>

	LIVE PROGRAMMING			PREMIUM CHANNELS		ON DEMAND		
	Sling TV	Apple TV	PlayStation Vue	Showtime	HBO Now	Netflix	Hulu	Amazon Prime Instant Video
Internet-ready TV Cost: \$200 and up						✓	✓	✓
Apple TV DIGITAL MEDIA PLAYER Cost: \$149		✓		✓	✓	✓	✓	
Roku DIGITAL MEDIA PLAYER Cost: \$50	✓					✓	✓	✓
Amazon Fire TV Stick DIGITAL MEDIA PLAYER Cost: \$39	✓					✓	✓	✓
Chromecast DIGITAL MEDIA PLAYER Cost: \$35	✓					✓	✓	
PlayStation3 or 4 GAMING CONSOLE Cost: \$150 and up			✓			✓	✓	✓
XBox One GAMING CONSOLE Cost: \$349	✓				✓	✓	✓	✓
Computer Cost: \$150 and up	✓	✓ *		✓ *	✓ *	✓	✓	✓

Digital Content

- <http://www.theverge.com/a/online-tv-stream-price-guide>

CHOOSE YOUR SERVICES



AMAZON



CBS ALL ACCESS



HBO NOW



HULU PLUS



NETFLIX



PLAYSTATION VUE



SLING TV



SHOWTIME

AVAILABLE CHANNELS

ABC	ABC FAMILY	AMC	ADULT SWIM	AMAZON PRIME	ANIMAL PLANET	BET
BRAVO	CBS	CMT	CNN	CARTOON NETWORK	COMEDY CENTRAL	DISCOVERY
DISNEY	EPIX	ESPN	ESPN2	EL REY	FX	FOOD NETWORK
FOX	FOX NEWS	FOX SPORTS	GALAVISION	HBO	HGTV	IFC
LIFETIME	MSNBC	MTV	MAKER	NBC	NBC SPORTS	NAT GEO
NETFLIX	NICKELODEON	SHOWTIME	SYFY	TBS	TLC	TNT
TELEMUNDO	THE CW	TRAVEL	USA	UNIVISION	VH1	

So What Should I Do?

© MARK ANDERSON

WWW.ANDERTOONS.COM



ANDERSON

"Only the picture is high definition.
The shows are as bad as always."