

The Battle for the American Couch Potato: Bundling, Television Internet, Telephone, Wireless

April 2020

This document contains valuable confidential information of
The Convergence Research Group Limited,
which is licensed for internal review only.

© 2020, The Convergence Research Group Limited.
All rights reserved.

CLIENT CONFIDENTIAL

www.convergenceonline.com

Contents

-1
- COMMENTARY.....6**
- CORONAVIRUS IMPACT ASSESSMENT.....8**
- SECTION ONE: US TV MARKET BATTLE..... 10**
 - Estimated US Total TV Subscribers by Cable, Satellite, Telco, 2018-202210
 - US Cable Versus Satellite Versus Telco Subscribers: Estimated TV Market Share, 2018-2022.....10
 - Estimated US Cable, Satellite, Telco TV Net Subscriber Additions and Growth, 2018-2022.....11
 - Estimated US TV Subscribers by Comcast, Charter, Cox, Altice, DirecTV, Dish, AT&T, Verizon, Frontier, 2018-202211
 - Estimated TV Subscribers by Mediacom, Wow, Cable One, Atlantic Broadband, 2018-202012
 - Estimated US TV Access Revenue by Cable, Satellite, Telco, and ARPU, 2018-202212
 - Estimated TV Access Revenue by Comcast, Charter, Cox, Altice, DirecTV, Dish, 2018-202213
 - Estimated TV ARPU by Comcast, Charter, Cox, Altice, DirecTV, Dish, 2018-2022.....13
 - US Cord Cutter/Nevers: Critical Mass14
 - US Cord Cutter/ Never Household Model, 2010-202214
 - Estimated US TV Subscribers, TV Access Revenue, Cord Cutter/ Never Households, 2019, 2022, 2025.....16
 - Comparing DirecTV & Dish: Subscriber Trajectories, TV Package Prices, Rate Increases.....17
 - Cable TV: Subscriber Loss Uptick, Strong Broadband Additions.....19
 - Comcast, Charter, Cox, Altice: Subscriber Trajectories, Rate Increases, TV Package Prices, Bundles20
 - AT&T, Verizon, Frontier’s TV & Broadband Network Strategies, Offers, Pricing22
 - Estimated Total US Telco TV Subscribers Broken Out by AT&T, Verizon, Frontier, Other, 2018-202222
 - Estimated US Telco TV Subscribers by Cincinnati, TDS, Consolidated, 2018-2020.....22
 - AT&T: U-verse Network & Subscriber Metrics, U-verse TV on Ice, DSL Cannibalization, DirecTV, Review of TV, Internet, Telephone Prices and Packages.....23
 - Frontier: Debt Restructuring, Network & Subscriber Metrics, Review of TV, Internet, Telephone Prices and Packages, Dish26
 - Verizon: Fios Network & Subscriber Metrics, DSL Cannibalization, Review of TV, Internet, Telephone Prices and Packages28

US VOD, DVR and HD.....	30
Cable/Satellite/Telco VOD: Growth Constrained.....	30
Estimated US Cable/Satellite/Telco TV VOD Revenue, 2018-2022	30
Satellite, Cable, Telco DVR: Penetration Plateaus as Subscribers Decline...Pricing by Provider	31
Estimated US DVR Subscribers by Cable, Satellite, Telco, and as Percentage of Total TV Subscribers, 2018-2022	31
Estimated US DVR Penetration by Cable, Satellite, Telco, 2018-2022 ..	31
Estimated DVR Subscribers and Penetration by Comcast, Cox, DirecTV, Dish, 2019 and 2020.....	31
Satellite, Cable, Telco HD: Penetration Continues to Slowly Rise as Subscribers Decline...Pricing & Channel Count by Provider.....	33
Estimated US HD Subscribers by Cable, Satellite, Telco, and as Percentage of Total TV Subscribers, 2018-2022	33
Estimated US HD TV Penetration by Cable, Satellite, Telco, 2018-2022	33
Estimated HD Subscribers and Penetration by Comcast, Cox, DirecTV, Dish, 2019 and 2020.....	33

SECTION TWO: US INTERNET ACCESS MARKET BATTLE 35

Estimated US Residential Internet Subscribers by Cable, Telco, Other Broadband, and as Percentage of US Households, 2018-2022	35
US Residential Cable Versus Telco Versus Other Broadband Subscribers: Estimated Market Share, 2018-2022.....	36
US Residential Cable Versus Telco Internet Subscribers: Estimated Market Share, 2018-2022.....	36
Estimated US Cable, Telco, Other Net Internet Subscriber Additions and Growth, 2018-2022	37
Estimated Share of US Internet Subscriber Additions by Cable, Telco, Other 2018-2022	37
Estimated Residential Internet Subscribers by Comcast, Charter, Cox, Altice, AT&T, Verizon, CenturyLink, Frontier, 2018-2022	38
Estimated Residential Internet Subscribers by Mediacom, Wow, Cable One, Atlantic Broadband, 2018-2020	39
Estimated Residential Internet Subscribers by Windstream, Consolidated, TDS, Cincinnati 2018-2020	39
Estimated AT&T, CenturyLink, Frontier, Verizon, Comcast, Charter, Cox, Non-Residential Internet Subscribers, 2018-2020	40
Estimated US Residential Internet Access Revenue by Total Internet, Cable, Telco, Other Broadband, and ARPU, 2018-2022	41
Estimated Residential Internet Access Revenue by AT&T, CenturyLink, Frontier, Verizon, Charter, Comcast, Cox, Altice, 2018- 2022	41
Estimated Residential Internet Access ARPU by AT&T, CenturyLink, Frontier, Verizon, Charter, Comcast, Cox, Altice, 2018-2022.....	42
Cable Reigns: Cable’s Residential Internet Market Share Lead Continues to Grow, Telco Cannibalization and Broadband Losses	43

AT&T, CenturyLink, Frontier, Verizon: Prices, Speeds, Caps/Overage, Bundle Offers, Network & Subscriber Trajectories.....	45
Altice, Charter, Comcast, Cox: Prices, Speeds, Caps/Overage, Bundle Offers, Network & Subscriber Trajectories.....	50
SECTION THREE: US WIRELINE TELEPHONE BATTLE.....	54
Estimated US Wireline Cable Telephone, Residential Cable Telephone, Residential Telco, Total Residential Telephone Subscribers, Cable Residential Telephone Market Share, 2018-2022	54
Estimated Wireline Telephone Subscribers by Comcast, Charter, Cox, Altice, 2018-2022	54
Estimated US Wireline Residential Telephone Lines and Line Loss by AT&T, Verizon, CenturyLink, Frontier, Total Telco (includes Other), 2018-2022.....	55
Estimated Annual Residential Telephone Line Loss by Cable, by Telco, and by Total, 2018-2022	55
Estimated Wireline Telephone Subscribers by Mediacom, Wow, Cable One, Atlantic Broadband, Consolidated, TDS, 2018-2020	56
Estimated US Wireless-Only Household Penetration, 2018-2022	57
Telco Residential Telephone Line Loss, Cable Telephone Line Loss But Market Share Gains Continue, Wireless-Only Household Penetration Growth	58
AT&T, CenturyLink, Frontier, Verizon’s Residential Telephone Offers & Pricing, Subscriber Trajectories.....	59
Altice, Charter, Comcast, Cox, Residential Telephone Offers & Pricing, Subscriber Trajectories	62
SECTION FOUR: US WIRELESS TELEPHONE BATTLE.....	64
Estimated US Wireless Subscribers, Net Additions, Subscriber Growth, Population, Penetration of Population, 2018-2020	64
Estimated Wireless Subscribers by AT&T, Sprint, T-Mobile, Verizon, 2018-2020.....	65
Estimated Wireless Postpaid and Prepaid Subscribers by AT&T, Sprint, T-Mobile, Verizon, 2018 and 2019	65
Estimated Wireless Subscriber Market Share by AT&T, Sprint, T-Mobile, Verizon, 2018-2020	66
Estimated Wireless Service Revenue by AT&T, Sprint, T-Mobile, Verizon, 2018-2020	67
Estimated Wireless Service ARPU by AT&T, Sprint, T-Mobile, Verizon, and Total Weighted Average ARPU, 2018-2020	67
Estimated Wireless Operating Margins by AT&T, Sprint, T-Mobile, Verizon, 2018-2020	67
Estimated Churn by AT&T, Sprint, T-Mobile, Verizon, 2018 and 2019	68
Estimated Smartphone Penetration of Retail Postpaid Subscribers by AT&T, Sprint and Verizon, 2018-2021.....	68
Estimated US Wireless-Only Household Penetration, 2018-2022	68
AT&T, Verizon, T-Mobile, Sprint: Offers & Pricing.....	69
Enter Cable, Dish: Offers & Pricing, Subscriber Counts.....	72

AT&T, Verizon, T-Mobile, Sprint Financial, Subscriber, Spectrum Status	74
SECTION FIVE: PROFILES	78
Altice USA	79
AT&T Inc. / DirecTV	81
CenturyLink Inc.....	86
Charter Communications Inc.....	87
Comcast Corp.....	89
Cox Communications	91
Dish Communications Corp.	92
Frontier Communications Corp	94
Sprint Corp.	96
T-Mobile US Inc.	98
Verizon Communications Inc.....	101

Commentary

Now in its 18th year of publication, **The Battle for the American Couch Potato: Bundling, TV, Internet, Telephone, Wireless** (103 pages) contains analysis of product offers (including prices), strategy, and subscriber/financial performance metrics (including forecasts) by Company & Market. In addition to Convergence analysis, sources include company interviews, annual/quarterly reports & presentations, US Census.

Commentary, please see Table of Contents for what is included in this Report:

Our forecasts assume the coronavirus will not be as major a disruptive force beyond 2020.

We estimate 2019 US Cable, Satellite, Telco TV access revenue declined 3% to \$100.4 billion and forecast a decline of X% to \$X billion in 2020 (hence ARPU should grow X%) and a decline of X% in 2022 to \$X billion. We forecast Cable, Satellite (includes DirecTV / AT&T TV & Dish), Telco will have X%, X%, X% of US TV subscribers YE2020. We estimate X% DVR and X% HD penetration YE2020.

We estimate 2019 saw a decline of 6.358 million US TV subscribers, 2018 a decline of 4.034 million, and we forecast a decline of X million TV subs in 2020 & X million in 2022; hence US TV subscribers declined by 7.1% in 2019, 4.3% in 2018, and we forecast X% in 2020, X% in 2021 and X% in 2022.

As illustrated in our US Cord Cutter / Never Household Model, as of YE2019 we estimate X million US households (36.1% of HHs) did not have a TV subscription with a Cable, Satellite, or Telco TV access provider, up from X million (30.6% of HHs) YE2018, and we forecast X million (X% of HHs) YE2020, and X million (X% of HHs) YE2022. 2019 saw 7.21 million, 2018 5.94 million, and we forecast X million 2020 and X million 2022 cord cutter / never household additions.

Extending out forecasts to YE2025 from YE2019, demonstrates a decline of more than X% of US TV subscribers, over X% of annual TV access revenue, and more than a X of cord cutter / never households.

We estimate 2.74 million US residential broadband subscribers were added in 2019 and revenue grew 8% to \$66.7 billion; we forecast X million additions and \$X billion for 2020, and X million additions on average 2021-2022. Residential broadband subs surpassed TV subs in 2017. We forecast 2022 residential broadband access revenue will X with 2022 TV access revenue.

Cable continues to add the lion's share of residential broadband subs (Telco has lost residential broadband subs every year since 2015). AT&T, CenturyLink & Frontier were responsible for the majority of 2019 Telco broadband losses; we forecast they will contribute the X of losses in 2020 as well.

We estimate 2019 Telco residential wireline telephone line loss was X%, we forecast X% for 2020, whereas we estimate 2019 Cable loss was X% and we forecast X% for 2020. We project Cable will represent X% of US residential wireline telephone subs YE2020. We estimate wireless-only households at X% YE2019 and forecast X% YE2020 and X% YE2022.

Although the four largest carriers weighted wireless service ARPU declined again 2019, wireless service revenue growth was positive. We forecast X ARPU decline and X service revenue growth for 2020.