
Connolly Network Insight

September 2016 Update

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AT&T's Video Strategy

Since AT&T's acquisition of DirecTV for \$49 billion a year ago, video has clearly become a major pillar of their business going forward. This month, as details of their forthcoming DirecTV Now launch are coming out, their strategy on video is becoming increasingly clear.

Having dipped their toes in the video space with the launch of U-verse several years ago, and never achieving more than 5% marketshare, the DirecTV acquisition has in one step made AT&T the biggest pay TV provider in the country with 25.3 million subs. In 2Q16, video revenues were \$8.9 billion, representing 22% of total revenue. U-verse, with its proprietary software system, has been deemphasized and subscriber counts are falling while satellite subscribers have been grown by 1 million during the past year.

The first step, post DirecTV acquisition for AT&T, was to start bundling video and wireless offerings. An unlimited data wireless offering was targeted to DirecTV subscribers, resulting in over 5 million bundled sign-ups. This still leaves 15 million DirecTV households without AT&T wireless and 21 million AT&T wireless households without DirecTV so there is lots of room for further bundling opportunities.

The next step in AT&T's video progression was the announcement of a set of three streaming services which they did in March of this year. The three services are DirecTV Freeview, an ad supported service; DirecTV Mobile, targeted at smart phones; and the most interesting of the three, DirecTV Now, an app-based service featuring live content from their satellite business.

AT&T entered the streaming video space in 2014, investing \$500 million in Otter Media, a partnership with The Chernin Group. In June of this year, they completed acquisition of QuickPlay Media giving them the technology to deliver the streaming services, as well as support their TV Everywhere offerings.

DirecTV Now will include one or two streams and is ostensibly targeted at the 20 million US households who do not subscribe to pay TV. As Broadband networks continue to increase in speed, however, it is likely a long-term goal of AT&T to migrate their satellite base over to this IP delivered service. It will be very interesting therefore to see the channel content and price points of the DirecTV Now offering.

Announcements have been coming out all month about content being included in the DirecTV Now bundle. All of these deals are multi year and include rights for U-verse, DirecTV, TV Everywhere extensions, and the new DirecTV Now OTT service. Being the largest provider of pay-TV Service gives AT&T a leg up in content pricing negotiations.

Deals so far include HBO, Discovery Communications, NBCUniversal, Scripps, Turner Networks, A & E Networks, and ABC/Disney (including ESPN). This gives them over 100

channels in the bundle. Missing content for a DirecTV satellite replacement product would include CBS, Fox, Viacom and AMC Networks.

AT&T are planning to offer DirecTV Now at a "very very aggressive price point," per their CEO, and will make it a zero-rated service for subscribers on their wireless network. This will differentiate their wireless video offering from Verizon, who are betting heavily on an ad supported, millennial focused Go90 video offering which has so far achieved limited success.

So, will their video bet pay off? Technology is certainly playing in their favor as IP devices and IP networks grow increasingly powerful and consumers use mobile devices for more and more of their daily needs, including all types of video. The marketing clout and brand of AT&T will also play a key role in legitimizing an IP bundled live TV offering even more so than the upcoming Hulu launch. Managing the transition of their existing video base, including both U-verse and satellite-based subscribers, will be messy and will need to be managed carefully.

Virtual - MVPDs

One type of over-the-top service which is garnering huge interest, and represents a potential game changer for the industry is the so-called "Virtual – MVPD." These offerings include live television channels and hence compete more directly with traditional pay-TV offerings than do S-VOD services such as Netflix. Despite industry angst about the growing subscriber base and the impact of these S-VOD services, they are reasonably complementary and do not present an existential threat to the pay-TV operators. V – MVPD's, however, represent a greater challenge.

There are three V-MPDs currently in operation, namely Sony's PlayStation Vue TV, Dish Network's Sling TV and Google's Fiber TV. None of the three, to date, have carved out a significant market share. Sling TV, with prices starting at \$20 per month, is estimated to have about 700,000 subscribers, and has a number of add-on packages for sports, premiums, etc. PlayStation Vue TV starts at \$30 per month and has recently added HBO and Cinemax as optional \$15 per month add-ons. A big limitation for this service is the requirement to have the PlayStation gaming device. Sony has had a major television advertising campaign running in recent months promoting the service. Google's Fiber TV has reportedly gained less than 70,000 subscribers. Despite the slow progress of these three offerings, the competitive situation for Pay TV operators is beginning to heat up.

The two most anticipated V-MVPD launches are DirecTV Now, profiled above, and Hulu, which is planning an early 2017 launch.

Channel content and price points for both of these services need to be studied closely. Which channels make the cut and which fall by the wayside in an effort to be cost-effective yet competitive will potentially change the content landscape going forward. Analyst surveys point to a preferred price point of \$40 or less potentially driving a rollout of up to 15 million subscribers in the US by 2020.

Other entrants include Denver based Layer3 TV (backed by Altice) which launched in Chicago with a high-end "concierge cable" model - 200 HD channels priced at \$75 per month plus add-ons, and CenturyLink which is planning a 17 channel plus locals package as a cheaper alternative to their Prism IPTV service, which will presumably be capped.

Potential entrants still include Amazon.com, Google, and Apple, who apparently ran into issues with independent locals during a prior launch plan. Apple have shown no propensity in the past to enter a market without being profitable, so watching it's video plans (or lack thereof) may give an indicator on the overall viability of the virtual MVPD model.

Finally, the addition of Live streaming events to S VOD services will begin to blur the lines between themselves and virtual MVPD services and the resulting success potential for either or both. This will be covered in more detail below.

MSO Wireless Plans

In 2012, Verizon bought a number of AWS spectrum licenses from a consortium of cable companies called SpectrumCo for \$3.6 billion. The MSOs were Comcast, TWC, and Bright House. Cox had already bought out its licenses in a failed attempt to launch its own wireless service. As part of that deal, the MSOs got the right to use Verizon's network in an MVNO arrangement (think private reseller).

Last year, Comcast invoked its MVNO option and this month announced an intent to offer a wireless service by mid 2017. The service will leverage the MVNO deal with Verizon as well as its own 15 million Wi-Fi hot spots to bundle a wireless offering with their existing services. Seventy per cent of Comcast's 28 million customers are multi-service users so adding wireless to the service base seems quite promising. As part of a bundle, pricing can be used to provide an incentive to switch carriers. The double margin stacking will hurt profitability, but high volumes of data running on in-house WiFi would mitigate this penalty. Comcast has also registered to bid on the ongoing 600 MHz auction. Of course, NBC as a broadcaster will be on the receiving end of these bid funds. This bandwidth would be available by 2020 earliest and used for a 5G offering.

So why would Comcast want to enter the highly competitive wireless space? First of all, AT&T, having acquired DirecTV, is squarely in their video space so in a sense they cannot afford to let AT&T become too dominant. Secondly, as 5G wireless technology adds dramatically more bandwidth, particularly in fixed environments, this is not a technology Comcast can afford to ignore. If AT&T legitimizes the virtual MVPD model and this rolls out broadly over wireless networks, Comcast needs to be front and center in that space.

Another potential move for Comcast would be the acquisition of either Sprint or T-Mobile to eliminate the dependence on Verizon and build a more robust offering.

Finally, this month, Charter has also activated their MVNO agreement with Verizon intending to launch a similar service to that of Comcast. This will allow them to have an offering for the 25 million non-customers existing in their recently enhanced (via TWC and Bright House acquisitions) footprint. At the same time, however, Charter has sold 700 MHz spectrum licenses in Montana to T-Mobile.

Digital Video Advertising

The US Pay-TV industry is fueled equally by television advertising and subscription revenues, each running at about \$80 billion last year. While much attention has been placed on cord cutting and cord shaving as a threat to subscription revenues, the threat of digital advertising pulling away revenues from television ads is of equal concern. Per eMarketer, this year, for the first time, US digital ad spending will be greater than TV spending. Many analysts have projected that digital ad growth will drive overall industry growth, with TV spending either growing modestly or staying flat over the next few years. More recently, however, the rapid growth of digital video advertising, particularly on mobile devices, has the potential to change this dynamic. Spending this year on digital ads is expected to be about 37% of the total media ad spending, while television is expected to be about 36%. Of digital ad spending, two thirds of it will be on mobile devices. For the first time, it is expected that display revenue will outpace search revenue. Digital video ad spending is expected to be a little over \$10 billion. These ads are more likely to be brand based rather than action based and hence, of significantly more likelihood to pull away spending from television ads. This is a big reason for the aggressive market cap being placed on Snapchat, for example.

Companies like Twitter, Facebook's Instagram, Facebook Live feeds, and Google are all targeting brand advertisers for ad placements. This is the principal issue to be tracked in terms of the fate of television advertising going forward. Mitigating this threat has been a recent pushback on the entire digital ad category, with fraud, ad blocking, and measurement controversies all raising concern.

As a final note, the social networking sites who are beginning to stream live pay-TV content events such as Thursday night NFL on Twitter and presidential debates on Facebook need to bear close scrutiny.

Network Infrastructure Updates

A number of network infrastructure initiatives were reported this month, including telco, cable, wireless, and long-haul transport.

On the telco front, CenturyLink highlighted a commercial G.fast deployment in Wisconsin providing 500 Mbps service. This technology will enable telcos to remain competitive without having to broadly deploy fiber to the home. A further iteration of G.fast, namely XG-FAST, will allow telcos to achieve 10/1 Gbps speeds.

AT&T is testing their next generation power line technology, Project AirGig, to extend gigabit wireless Internet speeds over existing power lines. No direct electrical connection to the power line is required, eliminating challenges posed by previous BPL technologies. Formal field trials will begin next year.

Meanwhile, with cable operators ramping up 1 Gbps service via DOCSIS 3.1, CableLabs has initiated the spec-writing phase for full duplex DOCSIS 3.1, using digital echo cancellation, to help extend the life of HFC networks even further into the future.

Virtual CCAP Systems are being rolled out by multiple vendors to enable cost-effective ramping of data growth capacity. Systems were announced by Nokia and Casa Systems and were demonstrated at the SCTE Cable-Tec Expo in Philadelphia.

In spite of the huge advances in cost-effective capacity growth demonstrated in broadband networks, it is clear that applications such as VR services will require significant further innovations to keep up with user needs.

On the wireless front, Liberty Global and CableLabs both announced that they have joined the MulteFire Alliance. This organization was formed last year by companies including Nokia, Qualcomm, Ericsson, and Intel and is dedicated to developing and promoting an LTE-based technology for small cells operating solely in unlicensed spectrum.

Verizon announced they plan to conduct commercial trials next year of 5G fixed wireless offerings capable of competing with cable services. As part of their acquisition of XO Communications, Verizon can lease and subsequently buy, XO's 102 LMDS licenses in the 28 GHz and 39 GHz bands giving them a significant advantage in fixed wireless 5G deployments. This competitive threat is another reason Comcast is planning to enter wireless space.

Finally, Google announced it has switched on an undersea fiber optic cable between Japan and Taiwan operating at speeds of up to 26 Terabits per second. Having spent over \$1Billion expanding its data centers in Singapore and Taiwan, faster connections to the US help enable user growth in Asia. This is a growing trend for the BUCs (Billion User Companies). Two thirds of total undersea Atlantic traffic, for example, is now on these private cables.

Facebook and Microsoft are currently partnering on building the "Marea" cable between the US and Spain, running at 160 terabytes per second.

OTT Streaming Status

A number of MSOs have announced this month their intent to integrate Netflix into their guide, including Liberty Global, Rogers, and Charter. They are joining Comcast who have already integrated the service. Clearly, for the MSOs, a “join em don't fight em” strategy makes sense, given the broad success of Netflix. It will be interesting to see when Netflix announces results next month what their growth in the US, following price increase, and internationally, following near global launch, will be. Things could get quite complicated if Netflix or other integrated OTTs decide to carry live pay-TV content.

Several OTT channels have been shut down, including Pivot which was millennial focused, and had spent \$200 million to develop, and shomi, the Rogers/Shaw project in Canada, resulting in \$140 million write down.

Verizon and Hearst announced the launching of Complex Networks, targeted at millennials and consistent with Verizon's strategy to pursue this market segment. Verizon are competing with Google and Facebook for mobile video ad revenue, differentiating themselves from AT&T, who are pursuing a subscription model.

A number of potential sports OTT launches have been discussed, including Amazon, targeting internationally popular sports such as tennis and rugby, and ESPN, looking to provide complementary rather than competing content with it's Broadcast channels (non-major sports).

As pressure mounts on traditional Pay-TV to lower costs, and as V-MPVD packages select essential content, there will be tremendous strain on lower tier and specialty broadcast content for survival. Whether they are able to evolve to OTT offerings or simply shut down will be known within the next year. CW, for example, are effectively opting out of Hulu in favor of a standalone OTT offering.

Apple's Digital Butler

One of the biggest competitive battles for consumer attention in the coming months involves devices interacting conversationally to provide various types of services. These systems utilize "deep learning" based artificial intelligence and build on billions of R&D dollars spent and massive amounts of "training data" by the "BUCs" (Billion User Companies). The goal here is persistent, contextual, hyper-personalization. I call these systems "Digital Butlers."

Apple's offering in this space is Siri, which has gone from a leading position to being somewhat laggard versus systems from Google and Amazon. This is about to change as Apple has put a strong emphasis and resources on regaining dominance with Siri.

At Apple's product launch this month, much attention was given to the iPhone 7 family of smart phones, which is Apple's dominant product category. Also included in this launch, were two very significant and somewhat overlooked introductions. First of all, Apple announced that with iOS 10, Siri will be open to use by third-party developers. This will significantly enhance the value of Siri interactions. Secondly, Apple announced the coming introduction in November of Bluetooth-based AirPods and elimination of the headphone jack on their latest smart phones. Much angst was expressed about this change, with the requirement for adapters to utilize existing headphones. The bigger issue here by far, however, was the availability of Siri interaction directly via the AirPod, which contains a microphone and a purpose built processor. This brings Apple's digital butler into play with the simple double tap of the AirPod. The big unknown here is whether consumers will be content to wear at least one AirPod in their ear persistently to utilize this capability. The potential for ease-of-use in my opinion, however, is enormous. Having spent the last couple of months using Amazon's Echo, I find any other way of pulling up music, news, etc., at home very clumsy and annoying. To extend this ease-of-use wherever I go seems to me to have great potential utility.

This leads to my final point - whether or not consumers will embrace multiple Digital Butler's or standardize on one and hence become a stronger customer to the winning vendor. Time will obviously tell but it will be very important to track the relative success of the Amazon Echo family, Google's forthcoming Home device, Apple's Siri driven AirPod, and whatever Facebook will no doubt launch over the coming few months.